Draft Initial Study and Mitigated Negative Declaration

Moss Street Beach Access Rehabilitation Project

CIP 21-9461

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Prepared for:

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INITIAL STUDY & MITIGATED NEGATIVE DECLARATION, MOSS STREET BEACH ACCESS REHABILITATION PROJECT

Revision	Description	Author		Quality Check		Independent Review	

INITIAL STUDY & MITIGATED NEGATIVE DECLARATION, MOSS STREET BEACH ACCESS REHABILITATION PROJECT

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ACRONYMS

AB	Assembly Bill
AC	asphalt concrete
ADA	Americans with Disabilities Act
AQMP	Air Quality Management Plan
BERD	Built Environment Resource Directory
BMP	Best Management Practices
BSA	Biological Survey Area
CARB	California Air Resources Board
CDFW	California Department of Wildlife
CEQA	California Environmental Quality Act
CIDH	cast-in-drilled-hole
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
CRPR	California Rare Plant Rank
CRWQCB	California Regional Water Quality Control Board
DAMP	Drainage Area Management Plan
EO	Executive Order
ESHA	Environmentally Sensitive Habitat Area
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal year
GHG	Greenhouse gas
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
Lbs	pounds
LBUSD	Laguna Beach Unified School District
LED	light emitting diodes
LEQ	time-equivalent sound level
LMAX	maximum sound level
LOT	Lifeguard Observation Tower
LUE	Land Use Element
LSTs	localized significance thresholds
MBTA	Migratory Bird Treaty Act
MMRP	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MPA	Marine Protected Areas
MT	metric tons
NCCP	Natural Community Conservation Plan

NOI	Notice of Intent
NO_X	nitrous oxides
NPDES	National Pollutant Discharge Elimination System
OPR	Office of Planning and Research
Pb	Lead
PM_{10}	Particulate Matter with diameters that are generally 10 micrometers or smaller
$PM_{2.5}$	Particulate Matter with diameters that are generally 2.5 micrometers or smaller
PMMP	Paleontological Monitoring and Mitigation Plan
PRC	Public Resource Code
RCNM	Roadway Construction Noise Model
RMS	root mean square
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCH	State Clearinghouse
SMR	State Marine Reserve
SO_X	Sulfur oxides
SWPPP	Storm Water Pollution Prevention Plan
USACE	United States Army Corps of Engineers
U.S.C.	U.S. Code (of Federal Regulations)
USFWS	United States Fish and Wildlife Service
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	Worker's Environmental Awareness Program

1.0 INTRODUCTION

The City of Laguna Beach (hereinafter "City") has prepared this Initial Study (IS) and Mitigated Negative Declaration (MND) to evaluate the potentially significant environmental impacts that could occur from the proposed construction and operation of the Moss Street Beach Access Rehabilitation Project (hereinafter referred to as the "proposed Project; Project"). This introductory section briefly describes the agency use of the document and related studies. A detailed project description is presented in Section 2.0 (Project Description) of this document.

Pursuant to §15367 of the California Environmental Quality Act (CEQA) Guidelines, the City is the Lead Agency responsible for preparing this IS/MND to address the potential impacts associated with the proposed Project.

1.1 INCORPORATION BY REFERENCE

Pursuant to CEQA Guidelines, Section 15150, this IS incorporates by reference all or portions of other technical documents that are a matter of public record. Those documents either relate to the proposed Project or provide additional information concerning the environmental setting for it. Where all or a portion of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the text of this IS. This IS also incorporates portions of the City's adopted IS/MND for the Pearl Street Beach Access Rehabilitation Project (SCH No. 2017011040), with a Notice of Determination posted March 27, 2017. The Pearl Street Beach Access Rehabilitation Project consists of a very similar project, as compared to the proposed Project, and is located approximately 0.25 mile from the Project. Therefore, due to the similar characteristics of the two beach access improvement projects, portions of the analyses in the adopted IS/MND include relevant information which can be relied upon for evaluation of Project impacts. CEQA encourages utilizing efficiencies from other similarly situated documentation, and as such, the information and evaluations contained in this IS are based, in part, on the technical studies and/or planning documents that include the Project site or provide information addressing the general Project area. These are identified within the Appendix section of the IS (see Table of Contents) and within Section 4.0, References.

1.2 RESPONSIBLE AGENCIES AND AGENCIES CONSULTED

Responsible agencies include all public agencies other than the Lead Agency that have discretionary approval power over the Project (CEQA Guidelines §15381). Responsible agencies in respect to this project may include:

- California Coastal Commission
- California Regional Water Quality Control Board – San Diego (CRWQCB)

1.3 ENVIRONMENTAL PROCESS AND AGENCY USE OF DOCUMENT

This environmental document has been prepared consistent with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code, §§21000-21177), the CEQA Guidelines, and the City of Laguna Beach CEQA Implementation Handbook. This environmental document is intended to be used as a decision-making tool for the City in considering and acting on the proposed Project. Responsible Agencies (i.e., regulatory agencies) may elect to use this environmental analysis for discretionary actions associated with the implementation of the proposed Project.

This document is intended to provide decision makers and the public with information concerning the potential environmental effects associated with the adoption and implementation of the proposed Project, and potential ways to reduce or avoid possible environmental impacts. The environmental analyses presented in this document primarily focus on the changes in the environment that would result from the project. This environmental document also evaluates all phases of the project including construction and operation.

1.4 ORGANIZATIONS AFFILIATED WITH THE PROJECT

Pursuant to the provisions of the CEQA Guidelines, the City is the Lead Agency for this proposed Project. The proposed Project will be subject to a public hearing which will be heard by the City. Contact persons for the entities involved in the preparation of this IS/MND are:

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1.5 NATIVE AMERICAN CONSULTATION

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The project Area is considered low to moderate for Native American and tribal cultural resources based on the results of the Sacred Lands Files Search, conducted by the Native American Heritage Commission of behalf of the City on April 5, 2021. As part of its Assembly Bill (AB) 52 consultation requirements, on April 29, 2021, the City sent letters to 17 tribal representatives making them aware of the proposed Project. On May 12, 2021, the City received a request for tribal consultation from the Administrative Assistant (no name provided), of the Gabrieleño Band of Mission Indians - Kizh Nation (Tribe), indicating if ground disturbance is proposed, they would like to consult. On May 17, 2021, the City sent correspondence to the Tribe indicating ground disturbance was minimal and mostly in bedrock or previously disturbed/improved ground. To date, no response from the Tribe or other Tribes has been received. The City will continue to communicate any updates during the final design and construction phases to the Tribe and others, if requested.

1.6 FINDINGS FROM THE INITIAL STUDY

Based upon the analysis contained in the IS, the proposed Project would have no impact or a less than significant impact on the following environmental categories listed from Appendix G of the CEQA Guidelines.

- Aesthetics
- Agricultural and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

Based upon the analysis contained in the IS, the proposed Project would have a less than significant with mitigation incorporated impact on the following environmental categories listed from Appendix G of the CEQA Guidelines.

- Biological Resources
- Cultural Resources
- Geology & Soils
- Noise

1.7 PROCESS FOR ADOPTING A MITIGATED NEGATIVE DECLARATION

Based on the responses to the IS checklist questions (described above and analyzed below), the City has determined that a Mitigated Negative Declaration (MND) is the appropriate level of CEQA environmental documentation. As such, prior to adoption of the MND and consideration of the proposed Project, the City

will issue a Notice of Intent (NOI) to Adopt an MND and the Initial Study and will be provided to Responsible Agencies, Trustee Agencies, Agencies with jurisdiction by law, and the public for 30 days to review and comment.

Approval of the proposed Project by the Lead Agency (City) is contingent on adoption of the IS/MND after considering agency and any public comments. By adopting the IS/MND, the Lead Agency certifies that the analyses provided in the IS/MND were reviewed and considered by the City and reflect its independent judgment and analysis.

1.8 MITIGATION MONITORING AND REPORTING PROGRAM

As noted above and contained within the analysis provided below, mitigation measures are required in order to reduce impacts for some environmental parameters analyzed in the IS/MND. These will be included in the Project's Mitigation Monitoring and Reporting Program (MMRP) (see **Appendix A** of this IS/MND) and will be incorporated into the project's overall requirements. The MMRP ensures implementation of the measures being imposed to mitigate or avoid the significant adverse environmental impacts identified through the use of monitoring and reporting. Monitoring is generally an ongoing or periodic process of Project oversight; reporting generally consists of a written compliance review that is presented to the decision-making body (e.g., City Council) or authorized staff person.

The MMRP contains a table which includes the mitigation measures denoting impacts, mitigation measures adopted by the City in connection with approval of the proposed Project, level of significance after mitigation, responsible and monitoring parties, and the Project phase in which the measures are to be implemented.

1.9 PROJECT SCHEDULE

The proposed Project schedule is as follows:

- Fiscal year (FY) 2021-22 – Initiate Final Plans, Specifications, and Estimates Phase
- FY 2021-22 – Ready to Bid
- FY 2022-23 – Complete construction

2.0 PROJECT DESCRIPTION

2.1 PROJECT DESCRIPTION

The Project Description for this environmental document provides an understanding of all components of the Project. The following sections describe the project location, surrounding site uses, and existing site characteristics, as well as Project details.

2.1.1 Project Location and Boundaries

The Moss Street Beach Access Rehabilitation Project is located within the City, south of the Moss Street and Ocean Way intersection; it dead ends at the City Beach, two blocks southwest of South Coast Highway. The street end features a series of existing improvements that are designed to facilitate access to the beach and public viewing of the beach/ocean environment at Moss Street. The existing beach access facility needs rehabilitation and improvement to address accessibility and enhance landscaping to ensure continued beach access safety. Figure 1 (Regional Vicinity Map) illustrates the geographic location of the Project.

2.1.2 Existing Site Characteristics

The Project site is located along the coast of Laguna Beach, surrounded by urban development and in immediate proximity to the City Beach and the Pacific Ocean. The existing beach access is on a steep slope between the beach and roadway and is a popular spot for snorkeling and swimming at this small, secluded beach. Beach access currently consists of concentrated retaining walls and terraced landings from Moss Street adjacent to existing residences, concrete stairs in tight formation with 180-degree turns, and a single 44-step flight of stairs with no landing before ending at the beach. Currently the stairs end short of the beach level, requiring a wooden extension to temporarily address the unsafe condition and provide easier reach to the sand. There is currently no permanent Lifeguard Observation Tower (LOT), only a temporary one with a lifeguard on duty seasonally (Memorial Day to Labor Day) at this beach access point. The temporary LOT is installed and removed seasonally. The Project site is primarily used by the public, including residents and visitors to the City. The surrounding and nearby uses are predominantly residential uses along Coast Highway.

2.1.3 Project Characteristics

To maximize public access to and along the coast of Laguna Beach, the Project proposes to enhance and restore an access area to the beaches and coastal resources of the City. Specifically, a coastal access facility will be restored and enhanced at Moss Street, in the City. The Project will remove the existing walkway, and stairs, replacing these with new stairs and walkways and ramp designed to improve access and increase landscape area. The Project will rehabilitate an existing overlook/view area with more accessible facilities. A new LOT will also be installed. The current model of the LOT being considered is the Front Deck Surveyor JR, consisting of a concrete “caisson” support structure with ladder and rails, and Newport white in color (see Figure 7 for more information and details). The LOT will be

permanently located on the beach with a minimum three feet of freeboard over the mean high tide. It will also be staffed seasonally (Memorial Day through Labor Day) and then closed and secured for the season.

The City's General Plan land use designation and zoning around the Project site are Village Residential and Local Business (on South Coast Highway). The proposed Project uses are consistent with the surrounding land use designations (see Section 3.11, Land Use & Planning). The Project plans for the proposed access and associated amenities are presented in Figure 2 (Concept Plan & Grading Study), Figure 3 (Landscape Concept Plan), Figure 4 (Conceptual Planting Plan), Figure 5 (Planting Palette), and Figure 6 (Sections).

2.1.4 Approvals Required

The Project requires compliance with CEQA and the CEQA Guidelines and that associated with the Planning Commission Design Review and a Coastal Development Permit which will be issued by the City under its certified Local Coastal Program.

2.2 PROJECT CONSTRUCTION & PHASING

The Project is proposed to be constructed as funding becomes available for each coastal access project. Construction is expected to commence in 2022 and be completed by 2023. Below is a brief description of anticipated Project phasing:

- *Mobilization* – This phase would entail mobilization of equipment and personnel to the work site.
- *Clearing & Grubbing* – This phase would include the demolition and removal of the existing wall and stairs, clearing of any conflicting vegetation, trees and associated roots or stumps from the Project site.
- *Grading* – This phase involves making sure that there is a level base and appropriate slopes for the beach access stairs and drainage improvements.
- *Trenching & Structure*s – This phase includes preparing trenches for the relocation of utilities and other underground components of the beach access stairway. It also entails the construction of any above or below ground structures. At the beach level, a cofferdam, or other means of controlling sea water, during foundation and stair and LOT construction will be required.
- *Street Rehabilitation and Signing* – This phase would entail asphalt-concrete (AC) paving repair at street level adjacent to the top-level public viewing area, replacing the drainage inlet, placing a new curb ramp, and placing signage and other features in order to meet required public safety standards and parking requirements.
- *Landscaping & Demobilization* – This phase includes removing equipment, material, and personnel from the worksite and installing the landscaping and associated irrigation (if required), including removal and replacement of trees (if required).

The proposed Project would remove and reconstruct the existing beach access (stairs and viewing platform) located at the western terminus of Moss Street. The Project would entail demolition and disposal of existing walls and stairs. The construction methods would entail the following:

- Cast-In-Drilled-Hole (CIDH) foundations installed with a small drill rig (24-inch diameter piles)
- Spread footing type retaining walls (with a total height of less than eight feet)
- Slab on grade and stair construction
- Concrete forming, reinforcement, and pumping
- Minor associated structural earthwork and grading with a backhoe or small excavator
- Miscellaneous street and storm drain improvements including curb and gutter, storm drain inlets and piping, AC paving, and landscaping and irrigation.
- The LOT will be pre-assembled and placed via crane, after construction of the concrete caisson pier

The concept design preserves the approximate beginning and end of stair elevations; however, locations would need to be changed and realigned. Profile rise and run of the stairs will be controlled by the California Building Code, while the ramp design and landings will be controlled by Americans with Disabilities Act (ADA) requirements. The stairs will end at bedrock elevation to address the current drop off condition and estimated long term beach erosion. The construction duration is estimated to take up to four months to complete.

2.3 CONSTRUCTION VEHICLE ACCESS AND STAGING

Access to Moss Street by residents and contractors during construction would be achieved via South Coast Highway. Moss Street north of Ocean Way would remain open during the construction period. No temporary closure of South Coast Highway is anticipated. However, public access to the beach at Moss Street would not be available until the improvements are completed.

Construction staging and equipment/material storage would be located at the terminus of Moss Street to Ocean Way. There may also be opportunities to allocate construction parking areas on the south side of Moss Street, adjacent to a private tennis court.

2.4 PROJECT HISTORY AND BACKGROUND

The City has 29 pedestrian beach stairways that serve as the primary access to the City's beaches. Due to the harsh marine conditions, the stairways and ramps have deteriorated. The City has rehabilitated a number of the access stairways and associated vista platforms and has beautified the street ends of the access points in projects already completed. This document evaluates the next beach access rehabilitation project the City has planned.

Figure 1. Regional Vicinity Map

2.0 Project Description

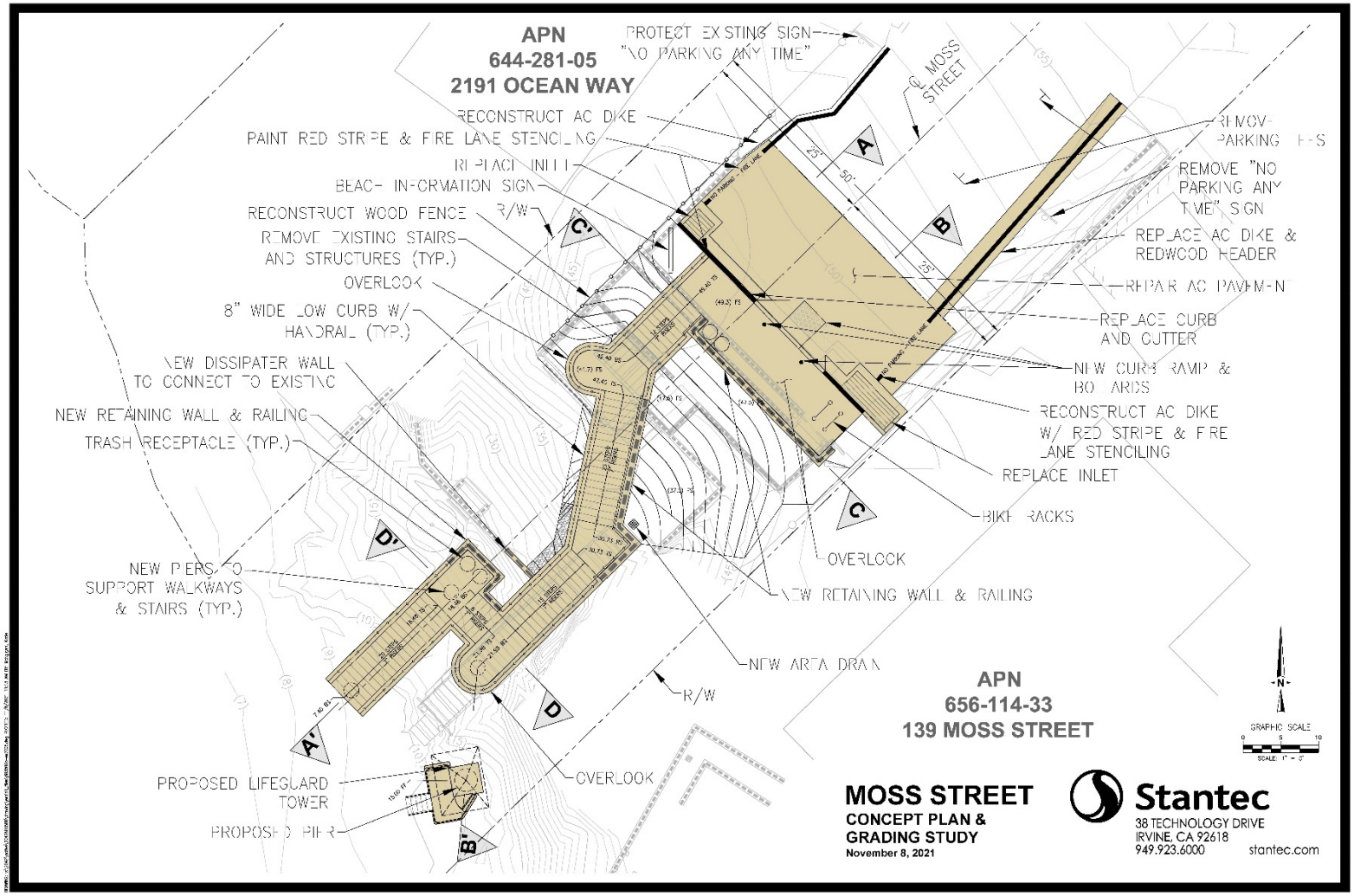

Figure 2. Concept Plan & Grading Study

2.0 Project Description

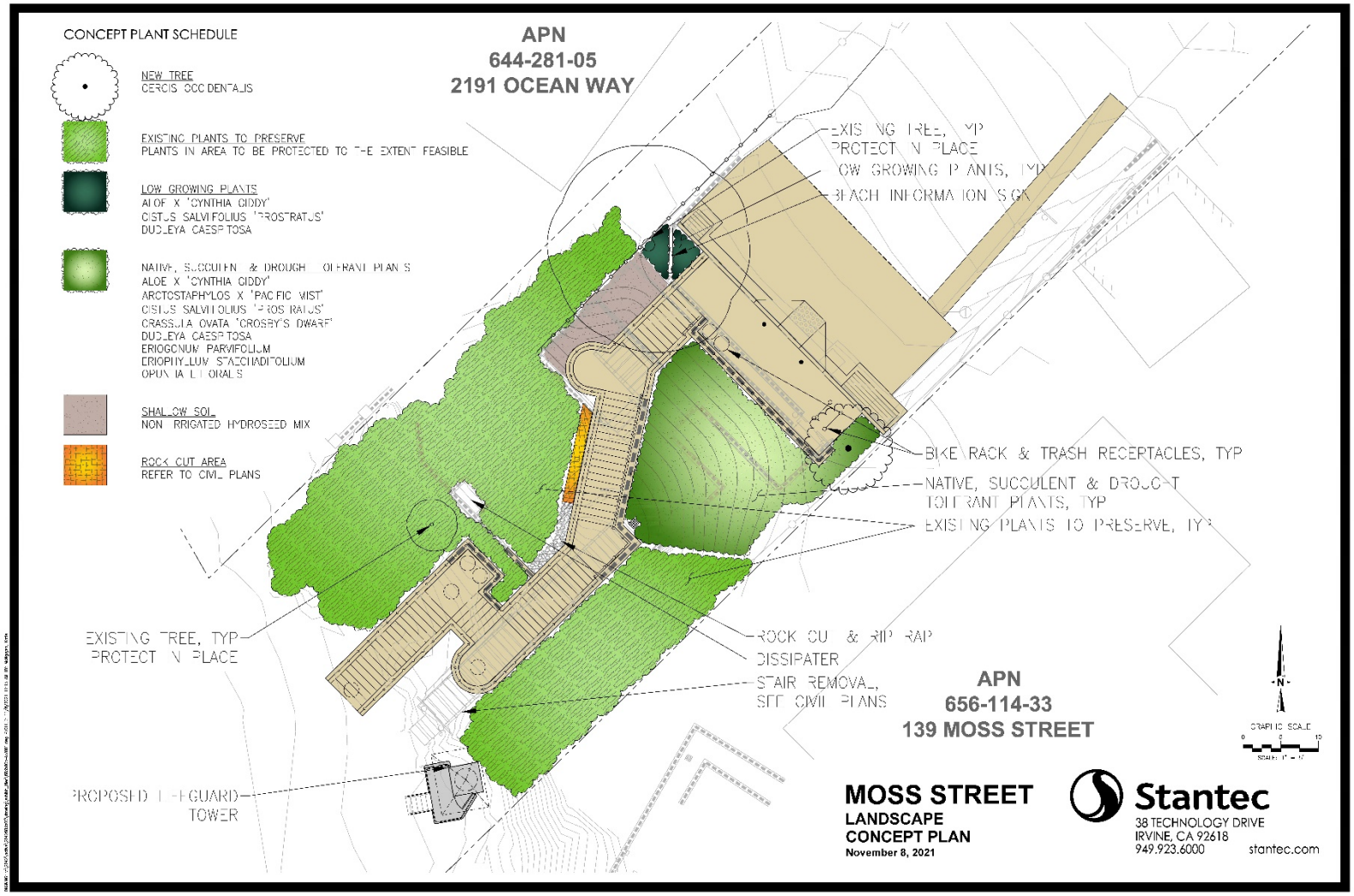

Figure 3. Landscape Concept Plan

Figure 4. Conceptual Planting Plan

2.0 Project Description

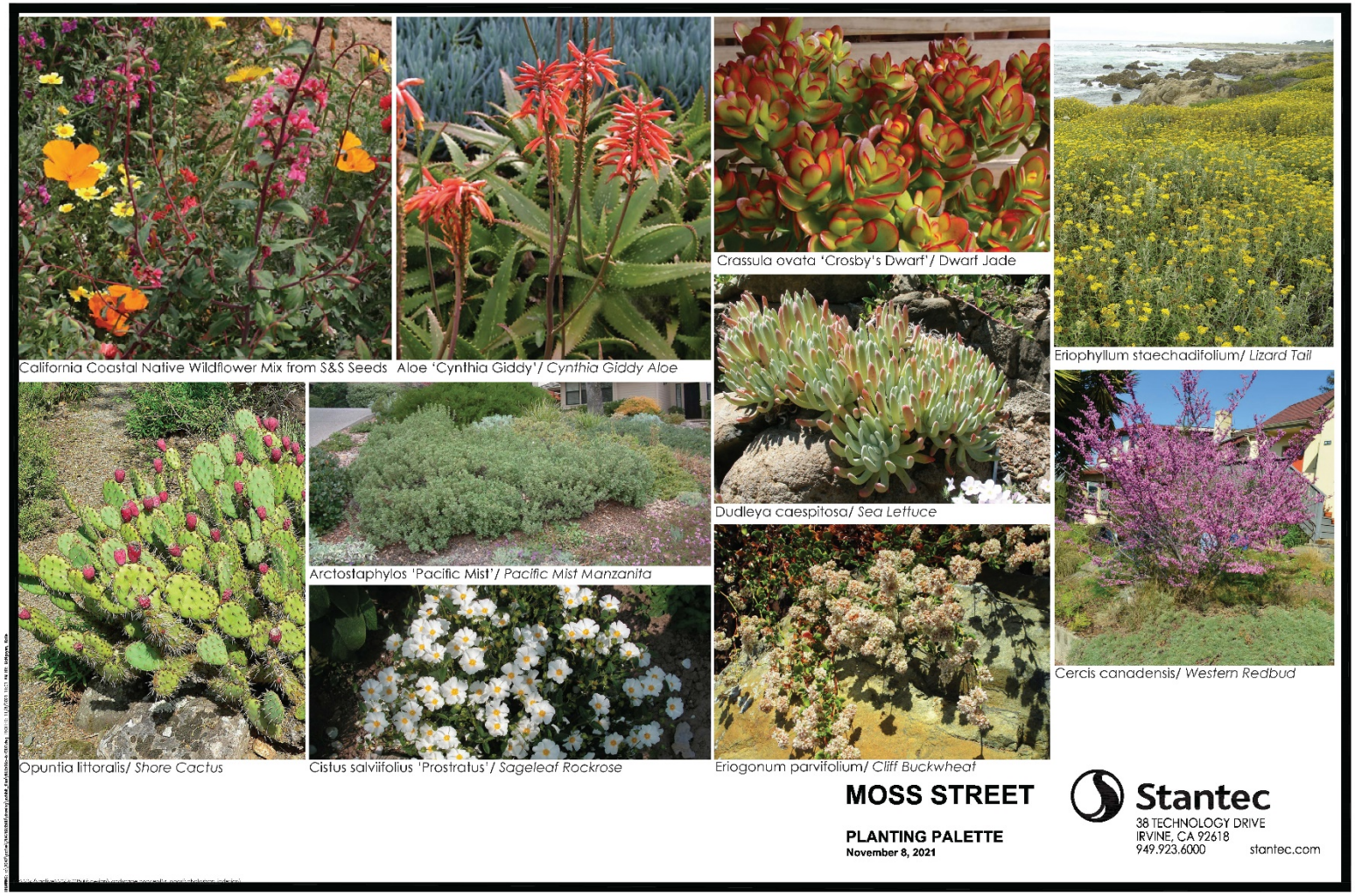

Figure 5. Planting Palette

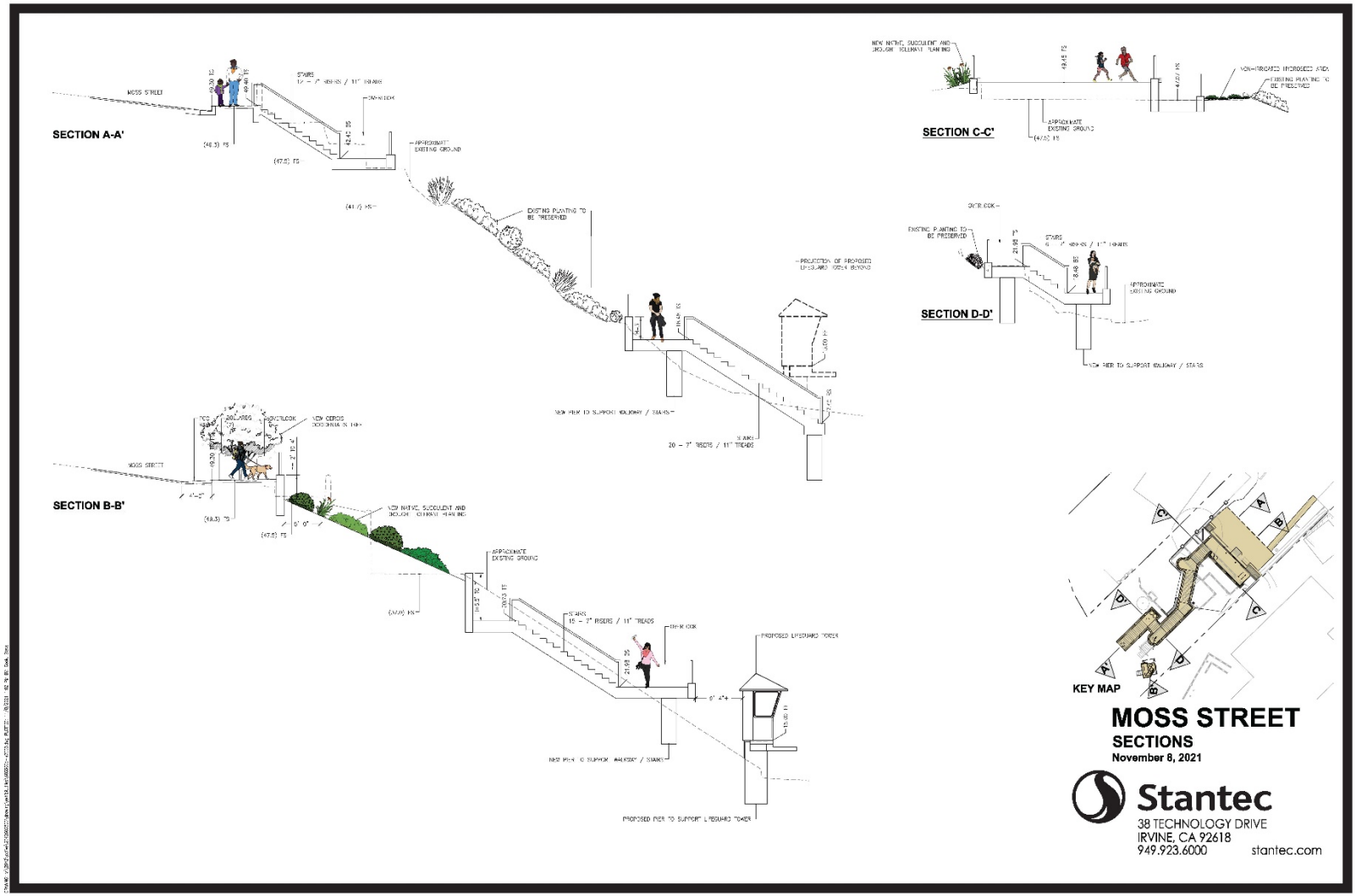

Figure 6. Sections

Figure 7
Photographs of the Site
Site Name: **Moss Street Beach Access Rehabilitation Project - CIP 21-9461**
Photo Source: **City of Laguna Beach**

Stantec

Photo #1: Existing Temporary Moss Street Lifeguard Observation Tower (LOT) and proposed permanent LOT location where City Representative is standing on rock outcropping.

Photo #2: Example permanent LOT on pier foundation. Proposed Moss Street LOT similar but ramp replaced with folding stair accessory.

Figure 7. Photo Log

3.0 IMPACT ANALYSIS

3.1 AESTHETICS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
I. AESTHETICS — Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality??	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

a) Would the project have a substantial adverse effect on a scenic vista? (Less Than Significant Impact)

The proposed Project is located within the City, at the end of Moss Street on the ocean side of South Coast Highway. The Project includes rehabilitation and replacement of existing stairs, a viewing deck, and landscaping associated with coastal access point improvements. The rehabilitated coastal access point will provide controlled direction of areas of interest to enjoy scenic vista corridors of the Pacific Ocean and the City Beach. The proposed improvements will enhance accessibility and provide new railings for increased safety. The Project will also enhance landscaping at the access point. It will also include the installation of a LOT manned by a lifeguard seasonally (Memorial Day through Labor Day). The LOT model proposed is the “Junior”, which is the smallest LOT available and is shown in Figure 7. The options proposed include Front Deck and Stainless-Steel Stairs. Electricity is not proposed to be provided to the LOT; however, the existing telephone line affixed to a pole at the top of the stairs will be placed in a conduit and will run permanently to the new LOT.

The stairways are designed to follow the natural surface of the landform at the access point. The Project includes locations where viewsheds and scenic overlooks of the beach and the Pacific Ocean will be improved and made more accessible.

The Project site is designated as a street right-of-way per the City's General Plan (Figure LU-1 of the General Plan). This designation allows for a range of public uses, which is consistent with the trails/stairways and vista points of the coastal access Project.

The City's General Plan Landscape and Scenic Highways Element identifies Coast Highway as a scenic corridor. The Project site itself is not a designated scenic vista; however, the site is currently developed with a coastal access stairway and a viewing deck, while the lower portion (at the beach) contains a LOT which is seasonally manned by a lifeguard. While the Project area is not a designated scenic vista, the proposed access and scenic vista viewpoints proposed at the Moss Street location will allow both motorist and pedestrian users to continue to enjoy views of the Pacific Ocean and the City Beach. This condition would be similar for the LOT, although it would be a permanent feature and not removed seasonally. Currently, it is installed by Memorial Day and removed by Labor Day, marking the end of the summer season, and is viewed by residents and beachgoers throughout this time period. For motorists, the views would continue to be only experienced momentarily and briefly while driving by, since the area is highly urbanized, and views are typically blocked by residential development. Seasonal views of the LOT would now become permanent and there would be some modification to the base of the cliff rock formation, as it is a result of LOT installation. These view conditions would not change for motorists as a result of Project construction or operation but, the views from the beach would change from seasonally to permanent and residents and beachgoers would see a new permanent structure located at the interface of the cliff face and sand. Project construction activities will be visible from South Coast Highway and this beach segment would result in short-term less than significant impacts, due to short duration of the Project (up to four months of construction). The LOT would not be considered a new element of the beach environment since it is seasonally present but, instead would now be a permanent feature. Moreover, since the existing seasonal LOT is similar in height and mass to the proposed permanent LOT, its permanent construction would not introduce a new element unfamiliar to the existing view experienced by residents or beachgoers. As such, the proposed Project would not result in any long or short-term significant impacts to a scenic vista either during construction or operation. Therefore, impacts would be less than significant, and no mitigation measures are required.

b) Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? (Less Than Significant Impact)

The proposed Project will not substantially damage scenic resources, including, but not limited to trees or rock outcroppings. As previously noted, the proposed Project is designed to rehabilitate and replace an existing coastal access facility and will follow the existing natural slopes. Additionally, the proposed Project will have minimal impacts on views that are within a state scenic highway. Construction equipment will be temporarily visible from South Coast Highway, for up to four months. The permanent LOT would be prefabricated and then installed, by crane, once the caisson is prepared. During operation, existing views would be maintained and enhanced as a result of the improved viewing facilities. As shown in Figure 7, the foundation piling of the LOT would be constructed at the base of the cliff within an existing rock formation, using a concrete caisson. As noted in this figure, the existing stairs previously modified the rock formation during its original construction. The permanent LOT would result in additional minor alterations to the rock face and are needed to provide a suitable foundation for the structure, as it will be

required to withstand sustained erosional forces (e.g., waves, tide, and wind). The construction of the caisson and piling would result in minor impacts to the overall rockface and would not affect adjacent areas. As such, the proposed Project will not result in significant impacts to a scenic resource related to construction or operation. Therefore, impacts would be less than significant, and no mitigation measures are required.

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

Construction activities (e.g., construction equipment, vehicles, supplies/materials, workers) will be visible to the existing surrounding uses (e.g., nearby residences and beachgoers and South Coast Highway) for up to four months during Project construction, and related visual impacts associated with Project construction would be short-term. The Project would not result in a visually intrusive sight to viewers, either during construction or operation, because existing views from passing motorists or pedestrians are fleeting and not expansive or obstructive. Similarly, existing residential views of Moss Street are generally limited, due to the presence of intervening trees and landscaping and the existing access entrance retaining wall. In addition, the permanent presence of the LOT at the base of the cliff would be a familiar feature to area residents and beachgoers since it is already present seasonally (Memorial Day through Labor Day). Its permanent presence would represent a continuation of this existing but seasonal condition and would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. In addition, the Project is intended to connect neighborhoods and the public to the City Beach through a public stairway and an observation deck located within an open space area. The Project would also be compatible with the applicable zoning designation and with the City's General Plan, since it would contain features (landscaping, materials) consistent with the Landscape and Scenic Highways Element. Therefore, the Project is considered visually compatible with the immediate area and will not substantially degrade the visual character or quality of the site and its surroundings, either during construction or operation. Therefore, impacts would be less than significant, and no mitigation measures are required.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (No Impact)

Construction activities would occur during daylight hours and would not require construction at night and/or associated nighttime lighting. During operation, the access points would utilize existing lighting locations and would not change the existing lighting scheme or focus. Similarly, there are no current sources of glare (e.g., windows, reflective materials) onsite at either the viewing deck or stairs or seasonal LOT. Since the site is already developed, there is no additional lighting or glare sources that would be created by the Project. Moreover, the permanent LOT would contain inoperable solar gray color tempered glass windows set at a 15-degree angle with covers (for security) and other non-reflective materials that would not be a new source of substantial glare. No lighting would be provided at the LOT. Therefore, the Project would not create a new source of substantial light or glare that would adversely affect daytime or

nighttime views in the area, either during construction or operation. Therefore, impacts would be less than significant, and no mitigation measures are required.

3.2 AGRICULTURE AND FOREST RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
II. AGRICULTURAL AND FOREST RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined by 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))?	☐	☐	☐	☒
d) Result in loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a) Would the project convert Prime, Unique or Statewide Importance Farmland to non-agricultural use? (No Impact)

Based on review of the California Agricultural Land Evaluation criteria, the Project is not located in, nor is adjacent to, designated agricultural land and therefore would not convert prime, unique, or statewide importance farmland to non-agricultural use. Therefore, no impacts would result, and no mitigation measures are required.

b) Would the project conflict with existing zoning for agricultural use or a Williamson Act contract? (No Impact)

The City of Laguna Beach does not include areas zoned for agricultural use or land subject to a Williamson Act contract. Therefore, no impacts would result, and no mitigation measures are required.

c) Would the project 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)

Based on review of the City's General Plan elements and California Department of Forestry and Fire Protection criteria, the Project is not located in, nor is adjacent to, designated forest land, timberland or zoned for Timberland Production. Therefore, the proposed Project will not conflict with existing zoning, nor cause the rezoning of forest land, timberland, or Timberland Production. Therefore, no impacts would result, and no mitigation measures are required.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use? (No Impact)

While the City of Laguna Beach is located in a hillside area adjacent to the Pacific Ocean, based on review of the Forestry and Fire Protection criteria, the project Area is not located in, nor is adjacent to, designated forest land. As such, the project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impacts would result, and no mitigation measures are required.

e) Would the project 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)

See responses a through d above. Therefore, the proposed Project would not involve 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. Based upon the analysis in this section, no impacts would result, and no mitigation measures are required.

3.3 AIR QUALITY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

The Air Quality and GHG Study performed by Stantec Consulting Services, Inc., dated March 18, 2021, is contained within Appendix B of this IS/MND.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan? (Less than Significant Impact)

The proposed Project is limited to and consists of the rehabilitation of existing beach access infrastructure located at the Project site. The majority of the Project-related emissions would be generated during construction from off-road equipment, as well as fugitive dust from activities on unpaved surfaces/excavation. The evaluation of construction air quality emissions is partially based on information from the Pearl Street Beach Access Rehabilitation Project. Due to the similarities of the two projects, including their construction and operational characteristics, as well as proximate location, the construction emissions of the projects are considered substantially similar in nature. As such, and as permitted by CEQA, the analysis below is partially based on the findings of the adopted Pearl Street Beach Access Rehabilitation Project.

As shown in Table 1, Project construction emissions would be below the applicable SCAQMD mass emissions thresholds of significance. Consequently, Project-related construction emissions would not be expected to conflict with or obstruct implementation of the applicable air quality plan 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.

Table 1. Unmitigated Project Construction Emissions in Comparison to SCAQMD Significance Criteria

Component	VOC	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$	Lead (Pb)
Peak Daily Emissions (lbs/day)							
Regional Thresholds Construction	75	100	150	550	150	55	3
Localized Thresholds Construction	n/a	92	n/a	647	4	3	n/a
Estimated Construction Emissions	1.1	10.4	0.0	8.3	1.6	1.1	n/a
Exceeds Regional Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**	**n/a**

Component	VOC	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$	Lead (Pb)
Peak Daily Emissions (lbs/day)							
Exceeds Localized Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**	**n/a**

SOURCE: Pearl Street Beach Access Rehabilitation Project IS/MND, Hodge & Associates, October 2016, CalEEMod Version 2013.2.2 Construction Estimates

Operational air quality emissions would be similar to current conditions, and no new sources of emissions are anticipated. In addition, although the proposed Project will improve the quality of beach access, it is not anticipated to increase the number of visitors. The accessibility and safety of beach access via the rehabilitated Moss Street entrance will be enhanced, but the overall throughput of users is expected to remain approximately the same, largely due to the fact that the location of the entrance will not change (i.e., will not be moved to an area of greater or lesser population). As such, operational emissions are not considered to result in additional impacts to air quality.

Because Project emissions would not exceed SCAQMD significance criteria during construction or operation, the Project would not conflict with or obstruct implementation of the applicable air quality plan, which is SCAQMD's Air Quality Management Plan (AQMP). Therefore, impacts would be less than significant, and no mitigation measures are required.

b) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? (Less Than Significant Impact)

In accordance with SCAQMD methodology, projects that do not exceed, or can be mitigated to less than the daily threshold values, do not add significantly to a cumulative impact. As discussed above in response a), estimated proposed Project construction emissions are below the applicable SCAQMD regional mass emissions thresholds of significance. The proposed Project would not involve an increase in emissions during operation, as the post-Project condition would be substantially similar to the existing uses. Therefore, the proposed Project would not 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. Therefore, impacts would be less than significant, and no mitigation measures are required.

c) Would the project expose sensitive receptors to substantial pollutant concentrations? (Less Than Significant Impact)

Sensitive receptors are defined as populations that are more susceptible to the effects of pollution than the population at large. Sensitive receptors are facilities that house or attract children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutant. Land uses identified to be sensitive receptors by SCAQMD in the California Air Resources Board's Air Quality Handbook include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The Project site is directly adjacent to sensitive receptors to the north, west, and east, with single-family residences as close as approximately 40 feet from the Project site boundary. Projects that are below the SCAQMD localized significance thresholds (LSTs) would not be expected to expose sensitive receptors to substantial pollutant concentrations. As shown in Table 1, the proposed Project's construction emissions would be below the applicable LSTs; however, these LSTs were derived assuming using a minimum separation of 82 feet between source and receptor. It should be noted that Project-associated emissions are between 2.7 and 80 times below the most conservative published LSTs for the Project site's location. Therefore, the projection that Project emissions will not expose sensitive receptors to substantial pollutant concentrations is considered valid. In addition, to better ensure the safety of nearby receptors, proposed Project construction activities will be conducted in compliance with applicable SCAQMD rules and regulations, including Rule 402 related to nuisance dust emissions. For these reasons, potential impacts are considered to be less than significant, and no mitigation measures are required.

d) Would the project create objectionable odors affecting a substantial number of people? (No Impact)

The SCAQMD has identified land uses that are commonly subject to odor complaints. These land uses include agriculture (farming and livestock), wastewater treatment, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD, 1993). The proposed Project involves minor and short-term conventional construction activities that do not involve any of the SCAQMD identified land uses typically subject to odor complaints or components with the potential to create objectionable odors affecting a substantial number of people. The construction, operation, and maintenance of the proposed Project would not involve the type of land uses or industrial operations typically associated with odor nuisance. Furthermore, there are no land uses typically associated with the generation of nuisance odors in the Project area. Therefore, there would be no impact regarding objectionable odors, and no mitigation measures are required.

3.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES — Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Appendix C of this IS/MND contains the results of the biological resources survey, and which are summarized below.

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (Less Than Significant Impact with Mitigation Incorporated)

Special-Status Plant Species

No special-status plant species were observed during the March 2021 survey. Most of the Special-Status plants known to occur in the region were determined to either have a low potential for occurrence or were not likely to occur at all. Two California Rare Plant Rank (CRPR) (not federally or state listed) species

were determined to have a moderate potential for occurrence; decumbent goldenbush (*Isocoma menziesii* var*. decumbens*) and big-leaved crownbeard (*Verbesina dissita*) which have a CRPR of 1B.2 and 1B.1 respectively.

Special-Status Wildlife Species

No special-status wildlife species were observed during the March 2021 survey. The majority of special-status wildlife known to occur in the region were determined to have no potential for occurrence. The on-site surveys revealed that the habitats within or adjacent to the Project site have low/minimal potential to support (i.e., nesting, foraging, breeding, etc.) the following special-status wildlife species such as but not limited to; Cooper's hawk (*Accipiter cooperii*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), osprey (*Pandion haliaetus*), coastal California gnatcatcher (*Polioptila californica californica*), California least tern (*Sternula antillarum browni*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis*), hoary bat (*Lasiurus cinereus*), Yuma myotis (*Myotis yumanensis*), and big free-tailed bat (*Nyctinomops macrotis*).

In general, direct impacts to special-status plants and terrestrial wildlife include ground-disturbing activities associated with construction of the proposed Project and increased human presence (i.e., crushing, trampling, trapping). Potential indirect impacts include increased noise levels from heavy equipment (wildlife only), increased human disturbance, exposure to fugitive dust, the spread of noxious weeds, and disruption of breeding or foraging activity due to routine maintenance activities (wildlife only). Weed abatement through herbicide application or mechanized tools could also impact special-status species. If the proposed Project construction were to occur during the avian nesting season (generally considered to be between February 15th through September 15th; although some raptors species may nest as early as January), indirect impacts to nesting birds could occur; the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) does not allow for take of migratory birds.

The MBTA makes it unlawful to possess, buy, sell, purchase, barter or “take” any migratory bird listed in Title 50 of the Code of Federal Regulations Part 10. “Take” is defined as possession or destruction of migratory birds, their nests, or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. The MBTA prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary. This act encompasses whole birds, parts of birds, and bird nests and eggs.

If implementation of the proposed Project were to impact special-status species, these impacts would be considered significant. Therefore, Mitigation Measures BIO-1 through BIO-7 would require pre-construction wildlife surveys prior to ground disturbance, relocation of wildlife found within proposed Project impact areas during pre-construction surveys and daily monitoring, a biological monitor during site disturbing activities, implementation of environmental awareness training to educate Project personnel regarding on-site plants and wildlife, implementation of site-wide Best Management Practices (BMPs) (i.e., restriction on open trenches and guidelines for refueling near drainage features), nesting bird surveys and avoidance measures for active nests. These measures would be implemented to mitigate

these potentially significant impacts. Implementation of these Mitigation Measures would ensure that potential impacts to special-status plant and wildlife species are reduced to a less than significant level.

Mitigation Measures

BIO-1 Pre-Construction Surveys (Plants and Wildlife) and Biological Monitoring

Wildlife Surveys: Prior to ground disturbance or vegetation clearing within the Project site, a qualified biologist shall conduct surveys for wildlife (no more than 14 days prior to site disturbing activities) where suitable habitat is present and directly impacted by construction activities. Wildlife found within the Project site or in areas potentially affected by the Project will be relocated to the nearest suitable habitat that will not be affected by the project prior to the start of construction. Special-status species found within a Project impact area shall be relocated by an authorized biologist to suitable habitat outside the impact area.

Plant Surveys: Prior to initial ground disturbance for any areas subject to ground disturbance, the Project proponent shall conduct pre-construction surveys for special-status plant species in all areas subject to ground-disturbing activity, including, but not limited to, slope grading, new access roads, staging areas, and Project construction. The surveys shall be conducted according to protocols established by the United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and California Native Plant Society (CNPS). All listed plant species found shall be marked and avoided. Any populations of special-status plants found during surveys will be fully described, mapped, and a CNPS Field Survey Form or written equivalent shall be prepared.

Prior to site grading, any populations of special-status plant species identified during the surveys shall be protected by a buffer zone. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. The size of the buffer depends upon the proposed use of the immediately adjacent lands and includes consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, physical and chemical characteristics of soils) that are identified by the qualified plant ecologist or botanist. The buffer for herbaceous and shrub species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the City of Laguna Beach. Highly visible flagging shall be placed along the buffer area and remain in good working order during the duration of any construction activities in the area.

Where impacts to listed plants cannot be avoided, the USFWS and/or CDFW shall be consulted for authorization, as appropriate. Additional mitigation measures to protect or restore listed plant species or their habitat, including but not limited to a salvage plan including seed collection and replanting, may be required by the USFWS or CDFW before impacts are authorized.

If non-listed CRPR 1, 2, 3, or 4 plants cannot be avoided, and Project-related impacts result in the loss of 10 percent or more of the local population (i.e., occurrences within ¼ mile of the Project impact location), compensatory mitigation will be required.

Compensation: Compensation will be required for all impacts that exceed the 10 percent threshold (e.g., impacts to 15 percent of a population will only require compensation for 5 percent, the percentage of impacts that exceed the 10 percent threshold). To compensate for permanent impacts to special-status plants (including areas located beneath the arrays), habitat (which may include preservation of areas within the undisturbed areas of the Project footprint, mitigation lands outside of the main Project site, or a combination of both) that is not already public land shall be preserved and managed in perpetuity at a 1:1 mitigation ratio (one acre preserved for each acre impacted). Compensation for temporary impacts shall include land acquisition and/or preservation at a 0.5:1 ratio. The preserved habitat for a significantly impacted plant species shall be of equal or greater habitat quality to the impacted areas in terms of soil features, extent of disturbance, and vegetation structure, and will contain verified extant populations, of the same size or greater, of the special-status plants that are impacted.

Prior to the disturbance of habitat for or take of special-status plants the City of Laguna Beach must present documentation of a recorded conservation easement(s) for all compensation/mitigation lands to the United States Army Corps of Engineers (USACE) and CDFW as applicable. Compensation lands shall be located within the general vicinity of the City of Laguna Beach. An open space easement will be recorded on all property associated with the compensation/mitigation lands to protect the existing plant and wildlife resources in perpetuity. An open space easement can be held by CDFW or an approved land management entity and shall be recorded immediately upon the dedication or acquisition of the land.

Biological Monitoring: A qualified biological monitor, with expertise in the species known to occur or with the potential to occur on the Project site, shall be retained to monitor construction activities. The qualified biologist shall be present during initial ground disturbance for each phase of construction. Once initial ground disturbance is complete, monitoring will occur periodically during all construction activities. The qualified biologist(s) shall be present during all ground-disturbing activities immediately adjacent to, or within habitat that supports populations of listed or special-status species.

If required, during pre-construction surveys and/or required monitoring efforts, the qualified biologist will relocate common and special-status species that enter the Project site; some special-status species may require specific permits prior to handling and/or have established protocols for relocation. Records of all detection, capture and release shall be reported to CDFW.

BIO-2 Environmental Awareness Training

All Project personnel must attend an environmental awareness and compliance training program prior to working on the Project site. The training program shall present the environmental regulations and applicable permit conditions that the Project team shall comply with. The training program shall include applicable measures established for the Project to minimize impacts to water quality and avoid sensitive resources, habitats, and species. Dated sign-in sheets for attendees at these meetings shall be maintained and submitted to the City of Laguna Beach.

BIO-3 Implement Best Management Practices (BMPs)

Grading plans for the Project shall indicate that the Project shall implement the following BMPs:

- Restrict non-essential equipment to the existing roadways and/or ruderal areas to avoid disturbance to native vegetation.
- All excavation, steep-walled holes, or trenches more than six inches in depth will be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth dirt fill or wooden planks. Trenches will also be inspected for entrapped wildlife each morning prior to onset of construction activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they will be thoroughly inspected for entrapped wildlife. Any wildlife discovered will be allowed to escape before construction activities are allowed to resume or removed from the trench or hole by a qualified biologist holding the appropriate permits (if required).
- Minimize mechanical disturbance of soils to reduce impact of habitat manipulation on small mammals, reptiles, and amphibians.
- Removal/disturbance of vegetation shall be minimized to the greatest extent feasible.
- Install and maintain appropriate erosion/sediment control measures, as needed, throughout the duration of work activities.
- Vehicles shall not be driven, or equipment operated, in water covered/wetted portions any potentially jurisdictional feature, except as otherwise provided for in the permits/agreements from the CDFW, USACE, California Coastal Commission, and/or Regional Water Quality Control Board (RWQCB).
- No vehicles or equipment shall be refueled within 100 feet of an ephemeral drainage or wetland unless a bermed and lined refueling area is constructed. Spill kits shall be maintained on site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven and/or operated within or adjacent to drainages or wetlands shall be checked and maintained daily to prevent leaks of materials.

BIO-4 Nesting Bird Surveys and Avoidance Measures

Prior to initial site disturbance/issuance of grading permits, seasonally timed presence/absence surveys for nesting birds shall be conducted by a qualified biologist. If construction activities carry over into a second nesting season(s) the surveys will need to be completed annually until the Project is complete. A minimum of three survey events, three days apart shall be conducted (with the last survey no more than three days prior to the start of site disturbance), if construction is scheduled to begin during avian nesting season (February 15th through September 15th); surveys for raptors shall be conducted from January 1st to August 15th. Surveys shall be conducted within 500 feet of all Project activities.

If special-status species are observed, consultation with USFWS and/or CDFW is required. If breeding birds with active nests are found prior to or during construction, a qualified biological monitor shall establish a 300-foot buffer around the nest and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. The prescribed buffers may be adjusted by the qualified biologist based on existing conditions around the nest, planned construction activities, tolerance

of the species, and other pertinent factors. The qualified biologist shall conduct regular monitoring of the nest to determine success/failure and to ensure that Project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. If construction occurs outside of avian nesting season, only a single presence/absence survey will be required.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (Less Than Significant Impact with Mitigation Incorporated)

Special-status natural communities are defined by CDFW (2009) as, "...communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." All vegetation within the state is ranked with an "S" rank; however, only those that are of special concern (S1-S3 rank) are generally evaluated under CEQA. Based on this ranking, none of the vegetation communities on the project site are sensitive. Table 2 provides a breakout of the potential impacts by vegetation and land cover types.

Table 2. Vegetation and Land Cover Types and Impact Acreages

Vegetation Community/Land Cover Type	Permanent Project Impacts (acres)
Disturbed Quailbush Scrub	0.02
Beach/Bluffs	0.08
Open Ocean	0.00
Disturbed/Developed	0.07
Total	0.16

Construction of the proposed Project would remove vegetation, alter soil conditions, and have the potential to result in the loss of native seed banks within portions of the Biological Survey Area (BSA). Construction activities could also result in the spread of noxious weeds within the Project site and adjacent habitats. During operation and maintenance of the Project, impacts would occur during routine maintenance activities and could include trampling or crushing of native vegetation by foot traffic, alterations in topography and hydrology, increased erosion and sedimentation, and the introduction of non-native, invasive plants due to increased human presence on foot or equipment.

Impacts to habitat areas identified as an Environmentally Sensitive Habitat Area (ESHA) would also be considered a significant impact. Based on surveys conducted within the BSA, areas mapped as disturbed quailbush scrub (*Atriplex lentiformis* shrubland alliance) that would be permanently impacted by proposed construction activities may meet the requirements to constitute an ESHA. According to Land Use Element (LUE) Policy 10.3, all new development projects that have potentially negative impacts on ESHAs shall emphasize impact avoidance over mitigation.[1] Any mitigation required due to an unavoidable negative impact should be located on-site. Any off-site mitigation should be located within the City's boundaries and near the Project site. To the extent practicable, the planting palette will incorporate quailbush into the

[1] City of Laguna Beach General Plan, Land Use Element, adopted February 7, 2012.

planting scheme. It should be noted that the planting palette contains a number of native plants suitable for the proposed Project site.

Mitigation Measure BIO-5 below, which include minimizing vegetation removal and compensation for impacts to native vegetation communities would be implemented to mitigate these potential impacts. In addition, BIO-2 and BIO-3 would require environmental awareness training for all Project personnel and implementation of best management practices (i.e., establishment of construction exclusion zones). Implementation of these measures would ensure that potential impacts to sensitive habitats, including ESHA, are reduced to a less than significant level.

Mitigation Measures

BIO-5 Vegetation Removal and Replacement

Construction activities shall be done in such a manner as to minimize the removal of native vegetation. If native vegetation removal cannot be avoided, and the removal is approved by the City of Laguna Beach, the impacted plant communities shall be replaced at a mitigation ratio of 1:1. Sensitive communities, including jurisdictional wetlands, shall be replaced at a mitigation ration of 3:1. The compensation for the loss of habitats may be achieved either by a) on-site habitat creation or enhancement of impacted communities with similar species compositions to those present prior to construction provided sufficient space and compatibility in the planting palette exists, b) off-site creation or enhancement of quailbush scrub within the City of Laguna Beach, or c) participation in an established mitigation bank program.

Prior to the removal of native vegetation, if on or off-site mitigation is required, a Habitat Mitigation and Monitoring Plan shall be prepared that will guide all restoration and monitoring activities. This plan shall include, at a minimum, the following:

- Proposed species list for creation/enhancement
- Planting/seeding methodology
- Irrigation plan
- Weeding schedule
- Success criteria
- Monitoring methodology and schedule and
- Reporting requirements.

c) 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)

The only potentially jurisdictional aquatic features observed during the March 2021 survey was the Pacific Ocean. The proposed Project including the installation of the LOT would occur above and out of the mean high tide line and would therefore not impact potentially jurisdictional federal waters. No portions of the Project area exhibited features that would be potentially jurisdictional and therefore no impacts would occur, and no mitigation measures are required.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (Less Than Significant Impact)

Wildlife movement corridors are defined on both a regional and on a local scale. Regionally, the proposed Project does not fall within a movement corridor. On a local basis, the beach and ocean allow for wildlife movement. Migratory birds may use the Project site and vicinity for breeding, nesting, and foraging, or as transient rest sites during migration flights. Because the project is small and of a short duration, impacts to 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 site would be minor and would be less than significant. Therefore, no mitigation measures are required.

e) Would the project conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance? (No Impact)

The City's General Plan/Open Space-Conservation Element focuses on preservation of natural resources, managed production of resources, outdoor recreation, public health and safety, and the conservation, development, and utilization of natural resources. The boundaries of this planning area correlate to the boundaries of the Laguna Canyon watershed. The General Plan describes robust vegetation and wildlife in the City's open space and undeveloped areas, including threatened or endangered species that are known to occur in the City[2].

However, the General Plan targets "High Value" and "Very High Value" areas for protection and areas bordering those areas for special study of potential impacts from development on the high value areas. The Project site is in a completely developed area that includes existing public coastal access facilities that are proposed for renovation. The Project site has been previously developed in conjunction with City's efforts to create access to the City Beach and the Pacific Ocean. The Project site is biologically simplified and is of low faunal carrying capacity. The Project site at present does not contain any protected species, nor is it near high or very high value areas depicted in the City's General Plan.

The implementation of the proposed Project (beach access rehabilitation) will not conflict with any local policies or ordinance protecting said resources (e.g., trees). No protected trees were observed at the site. Therefore, the proposed Project will not conflict with any policies or ordinance pertaining to biological resources and therefore, no impacts would result, and no mitigation measures are required.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (No Impacts)

The California Marine Life Protection Act was passed in 1999 by the CDFW and the California State Parks to create a statewide network of Marine Protected Areas (MPA). The MPAs were created to protect California's marine life and habitats, marine ecosystems, and marine natural heritage and to improve educational, recreational, and study opportunities. The Project area falls within the Laguna Beach State

[2] City of Laguna Beach. 1993. Laguna Beach General Plan – Open Space/Conservation. https://lagunabeachcity.net/civicax/filebank/blobdload.aspx?BlobID=23913. Accessed March 2021.

Marine Reserve (SMR) boundary. According to the CDFW, within a SMR it is unlawful to injure, damage, take, or possess any geological, cultural, or living marine resource unless there is a specific scientific collecting permit issued by CDFW. During construction activities, it is anticipated that aquatic species may occur in the adjacent nearshore vicinity of the proposed Project, but outside of the Project impact area, and would therefore not be affected by construction activities. No adverse effects are anticipated from construction activities that will impact populations of the protected species within Laguna Beach SMR. Therefore, no impacts would result, and no mitigation measures are required.

While the Project occurs within the boundaries of the County of Orange Central and Coastal Subregion Natural Community Conservation Plan (NCCP) it would not conflict with any of the plan's requirements. Therefore, this proposed Project will not conflict with the provisions of an adopted Habitat Conservation Plan, NCCP, or other approved local, regional, or state habitat conservation plan. Therefore, no impacts would result, and no mitigation measures are required.

3.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
V. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

This section addresses potential impacts to cultural resources, both historical and archaeological, that could result from the proposed Project. A memorandum was prepared by Stantec Consulting Services Inc. (Stantec) in June 2021 that analyzes whether the proposed Project would impact historical resources as defined by CEQA. The following analysis is based on information provided in this memorandum, which is included in Appendix D of this IS/MND.

To prepare this memorandum, Stantec conducted a field inspection of the Project site and immediate vicinity, requested a records search from the South-Central Coastal Information Center (SCCIC), consulted the California Built Environment Resource Directory (BERD), as well as reviewed the Laguna Beach Historic Register. Stantec also conducted research into the history of the beach access stair on the Project site and reviewed ordinances, statutes, regulations, bulletins, and technical materials relating to national, state, and local historic preservation designations to evaluate the significance and integrity of the Moss Street beach access stair as a potential historical resource.

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? (Less Than Significant Impact)

The proposed Project would demolish the existing Moss Street beach access stair located on the Project site. This structure is not currently listed under national, state, or local landmark or historic district programs and is not included as significant in any historic resource surveys or the area. The existing stair was constructed sometime between 1955 and 1963. As the structure is over 50 years of age, Stantec prepared a brief evaluation of its eligibility for listing in the National Register of Historic Places (National Register), California Register of Historical Resources (California Register), and City of Laguna Beach Historic Register. After careful inspection, investigation, and evaluation, Stantec concluded that the existing beach access stair is ineligible for listing due to a lack of significance.

Stantec established a study area (Study Area) to account for potential impacts on historical resources in the vicinity. The Study Area includes the Project site and parcels within a 100-foot radius. Stantec also reviewed existing information to determine if there are any listed or previously surveyed historical resources within the Study Area. Two historical resources listed in the Laguna Beach Historic Register were identified, 2191 Ocean Way and 2192 Ocean Way. 2191 Ocean Way is located immediately to the north of the Project site on the north side of Moss Street. 2192 Ocean Way is located to the northeast of the Project site on the northeast corner of Moss Street and Ocean Way.

The threshold for determining significant impacts on historical resources in the State CEQA Guidelines is whether the proposed project would cause a substantial adverse change, which is defined as demolition, destruction, relocation, or alteration of the resource or its immediate vicinity such that the historical resource is materially impaired (Title 14 CCR Section 15064.5[b][1]). As the existing Moss Street beach access stair on the Project site that would be removed does not meet the definition of a historical resource according to CEQA, the Project would have no direct impacts on historical resources. Indirect impacts on historical resources were also analyzed. The new Moss Street beach access stair would introduce a new visual element to the immediate surroundings of the two historical resources, 2191 and 2192 Ocean Way; however, the proposed Project would not result in a substantial adverse change of a historical resource pursuant to Title 14 California Section 15064.5. Therefore, the indirect impact to the historical resources would be less than significant, and no mitigation measures are required.

b) Would the project cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5? (Less Than Significant Impact with Mitigation Incorporated)

An archival record search and literature review and Native American consultation were performed as part of the cultural resources inventory for the project. No archaeological resources were identified within the project area. The Project site is already developed with coastal access facilities such as a stairway. The Project proposes to rehabilitate and renovate an existing beach stairway leading to the City Beach and the Pacific Ocean. The proposed Project is therefore not anticipated to have an impact on any known or potential archaeological resources.

However, subsurface construction activities associated with the proposed Project could potentially damage or destroy previously undiscovered unique archaeological resources. Consistent with the City's

General Plan, a mitigation measure is presented below to reduce potential impacts to cultural resources in the unlikely event said resources are discovered or disturbed during minor grading or construction activities associated with implementation of the Project. Therefore, Mitigation Measure CUL-1 is proposed requiring implementation of standard inadvertent discovery procedures to reduce potential impacts to previously undiscovered subsurface unique archaeological resources. With the implementation of Mitigation Measure CUL-1, potential impacts would be reduced to a less than significant level. The mitigation measures presented below have been included to ensure that any potential significant impacts to cultural resources can be avoided or reduced to a less than significant level.

CUL-1 Cultural Materials Discovered During Construction

If any cultural resource is encountered during ground disturbance or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archaeologist approved by the City shall be retained by the contract to evaluate the finds, evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation 523 series forms, and develop and carry out a program of mitigation as appropriate. The archaeologist shall determine whether the resource requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the resource is determined to be eligible for listing on the California Register of Historical Resources as a unique archaeological resource as defined in Public Resource Code (PRC) Section 15064.5, the archaeologist shall develop a plan for the treatment of the resource. The plan shall contain appropriate mitigation measures, including avoidance, preservation in place, data recovery excavation, or other appropriate measures outlined in Public Resources Code Section 21083.2.

c) Would the project disturb any human remains, including those interred outside formal cemeteries? (Less Than Significant Impact)

There are no known human remains within the Project area, and there are no indications that the Project location has been used for burial purposes in the past. Therefore, it is unlikely that human remains would be encountered during construction. However, although ground disturbance and subsurface construction activities associated with the proposed Project could potentially disturb previously undiscovered human burial sites, compliance with Section 7050.5 of the California Health and Safety Code and PRC 5097.98 would reduce impacts to less than significant.

3.6 ENERGY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VI. ENERGY — Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (Less Than Significant)

Energy in the form of electricity and transportation fuel would be expended to construct the proposed Project. However, the amount of consumption would be minor in comparison to the number of available resources. In addition, modern construction equipment has been designed to be more efficient, due to energy reduction requirements by state and federal regulations. Moreover, equipment would not be permitted to remain idling while not is use, which would further reduce the consumption of energy resources. During operation, energy consumption would be limited to beach access lights and would employ light emitting diodes (LEDs), which have very low electricity requirements and would be more efficient than the ones currently being used. The new permanent LOT would not include an electrical connection. Therefore, impacts would be less than significant, and no mitigation measures are required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (No Impact)

The City does not have an adopted Energy Plan; however, local jurisdictions, including the City, are actively seeking to eliminate energy waste, improve the efficiency with which energy is used, encourage the use of renewable energy, such as the sun and wind, and increase awareness of energy issues in the City. These measures serve as the basis of a road map for integrating comprehensive alternative strategies into the community in ways that make economic sense and help the City in adapting to the changing climate. They also assist to reduce energy use related to buildings, reduced vehicle emissions, and lighting maintained and operated by the City and Southern California Edison. As the Project consists of the rehabilitation of public access stairs to the beach, there are no characteristics of the Project that would result in a conflict or obstruction with a state or local plan related to renewable energy or energy efficiency. Therefore, no impacts would result, and no mitigation measures are required.

3.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VII. GEOLOGY AND SOILS — Would the project:				
a) Directly or indirectly cause 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?	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on strata 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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. The 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? (Less Than Significant Impact)

The City, as well as most of Southern California, is in a region of historical seismic activity. No known active fault systems are located within the limits of the City or the Project site. Therefore, no part of the City has been delineated on the Alquist-Priolo Earthquake Fault Zone map. However, the City is in a

region with several active faults. The most significant faults potentially affecting the City on a regional basis are the Newport-Inglewood Fault, the Whittier-Elsinore Fault, and the San Jacinto Fault. There are also distant faults that could affect the City by generating a powerful shock, such as the San Andreas Fault and the San Jacinto Fault, two great faults that have historically shown activity.

The Newport-Inglewood Fault runs north-south, approximately three miles west of the City. Therefore, based on the foregoing analysis, the proposed Project will not result in any significant impacts in relation to a rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, and no mitigation measures are required.

ii. Strong seismic ground shaking? (Less Than Significant Impact)

There are active or potentially active fault systems that can affect the City, including the Project site. The most significant known active faults include the Newport-Inglewood Fault and the Whittier-Elsinore Fault. The closest approach of an active fault to the Project site is the Newport- Inglewood fault, which is located approximately three miles to the west of the City. The potential for damage resulting from seismic-related events exists within the City, as it does throughout Southern California. Seismic hazards include ground shaking, ground failure, ground displacement, tsunamis, and seiches. The site is expected to be subject to moderate to severe ground shaking from a regional seismic event within the Project life of the proposed beach access stairs and viewing deck and permanent LOT. The Newport-Inglewood Fault Zone and the Whittier-Elsinore Fault Zone have the greatest potential for causing earthquake damage related to ground shaking at the Project site. However, the proposed Project includes no habitable structures that would be impacted by a seismic event. Therefore, impacts would be less than significant, and no mitigation measures are required.

iii. Seismic-related ground failure, including liquefaction? (Less Than Significant Impact)

According to the Geologic Hazard Zones Map in the City General Plan, Safety Element, the site is not located within a potential liquefaction zone. The proposed Project entails the rehabilitation of beach access amenities, replacing existing non-habitable structures as part of the Project. Therefore, all potential impacts relative to this topic are considered less than significant, and no mitigation measures are required.

iv. Landslides? (Less Than Significant Impact)

According to the Geologic Hazard Zones Map of the City General Plan, Safety Element, the Project site is not located within a potential landslide zone. The proposed Project entails the rehabilitation of beach access amenities, replacing existing non-habitable structures as part of the Project. Therefore, all potential impacts relative to this topic are considered less than significant, and no mitigation measures are required.

b) Would the project result in substantial soil erosion or the loss of topsoil? (Less Than Significant)

The proposed Project would modify, but largely maintain, the natural contours and slopes of the property to replace the public beach access point. Construction activities would not result in substantial soil

erosion or loss of topsoil, nor would this be expected during operation. The replacement stairway and deck would be constructed generally on the site of the existing beach access amenities and the permanent LOT would be constructed at the base of the cliff using an existing rock formation, in order to construct the caisson and piling. In addition, the proposed Project would be required to adhere to the City's Grading Manual, which includes measures to address and control erosion and siltation. Therefore, impacts would be less than significant, and no mitigation measures are required.

c) 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 Impact)

According to the Geologic Hazard Zones Map of the City General Plan, Safety Element, the Project site is not located within or subject to an off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, impacts would be less than significant, and no mitigation measures are required.

d) Would the project 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)

The Project proposes replacement of existing beach access amenities and a permanent LOT and includes no habitable structures. In addition, an analysis of the on-site soils indicates they are not considered expansive, as defined in Table 18-1-B of the Uniform Building Code (1994). Therefore, no significant impacts relative to this topic are anticipated due to Project implementation, and no mitigation measures are required.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? (No Impact)

The proposed Project involves replacement of existing public beach access facilities and a permanent LOT; as such, the Project does not involve issues pertaining to soils incapable of supporting septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur, and no mitigation measures are required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Less than Significant with Mitigation)

A Paleontological Resource Assessment was prepared for the proposed Project and is contained within Appendix E of this IS/MND. The results of this assessment indicate that two geologic units are present in the Project area: old lacustrine, playa, and estuarine deposits and the San Onofre Breccia, both of which are assessed as having high paleontological potential. As the proposed Project will require some soil disturbance, impacts to potential paleontological resources is considered potentially significant. However, with the implementation of the following mitigation measures, these impacts would be reduced to less than significant levels:

GEO–1 Paleontological Monitoring & Mitigation Plan

A paleontologist meeting professional standards as defined by Murphey et al. (2019) shall be retained to oversee all aspects of paleontological mitigation, including the development and implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the final Project plans that provides for paleontological monitoring of earthwork and ground disturbing activities into undisturbed geologic units with high paleontological potential, to be conducted by a paleontological monitor meeting industry standards (Murphey et al. 2019). The PMMP should also include provisions for a Worker's Environmental Awareness Program (WEAP) training that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.

GEO–2 Paleontological Monitoring

In the event that paleontological resources are encountered during construction activities, all work must stop in the immediate vicinity of the finds while the paleontological monitor documents the find. The designated project paleontologist shall assess the find. Should the qualified paleontologist assess the find as significant, the find shall be collected and curated in an accredited repository along with all necessary associated data.

3.8 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS — Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

The analysis and conclusions contained in this section are derived from Appendix B (Air Quality and Greenhouse Gas Study for the Moss Street Rehabilitation Project) of this IS/MND.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Less Than Significant Impact)

The proposed Project is limited to and consists of rehabilitating the existing beach access infrastructure and a new permanent LOT located at the Project site. The proposed Project would generate greenhouse gas (GHG) emissions during construction from off-road equipment and on-road vehicle exhaust from worker vehicles and materials delivery. There would be no increase in operational GHG emissions. As such, operational GHG emissions are not considered to result in additional potential impacts to climate change; Therefore, no mitigation measures are required.

Table 3 below, presents a summary of the estimated total GHG emissions that would likely result from Project implementation.

Table 3. Total Estimated Project GHG Emissions

Project Phase	CO_2e
Construction Emissions (lbs/day)	1,708.8
Construction Emissions (Total Metric Tons)	93
Construction Emissions (Total Metric Tons; amortized over 30 years)	3.1
Operation Emissions (annual)	No increase
Interim SCAQMD Threshold (Total Metric Tons)	3,000
Project Emissions Exceed SCAQMD Threshold?	No

As shown in Table 3, construction of the proposed Project would emit an estimated 93 metric tons (MT) of carbon dioxide equivalent (CO_2e). When the emissions are amortized over 30 years, in accordance with SCAQMD guidance, the 30-year annualized value is 3.1 MT of CO_2e per year. The 3.1 metric tons addition of CO_2e emissions is less than the 3,000 MT CO_2e significance threshold. As such, the proposed Project would not generate GHG emissions, either directly or indirectly, that would have a substantial adverse effect on the environment. Therefore, potential impacts would be less than significant, and no mitigation measures are required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Less Than Significant Impact)

The State Legislature Enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, which was signed on September 27, 2006, to further the goals of Executive Order (EO) S-3-05 (Health and Safety Code, S38500 et seq.). AB 32 requires the California Air Resources Board (CARB) to adopt statewide GHG emissions limits to achieve statewide GHG emissions levels at the same levels they were atmospherically in 1990 by the year 2020. A longer-range goal requires an 80 percent reduction in GHG emissions from 1990 levels by 2050. CARB adopted the 2020 statewide target and mandatory reporting requirements in December 2007 and the Scoping Plan in December 2008. SB 32, signed on September 8, 2016, expands on the mandate of AB 32, requiring CARB to ensure that state GHG emissions are reduced to 40 percent below the 1990 emission level by year 2030. Section 38566 is added to the current Health and Safety Code, which states “the State board shall ensure that Statewide greenhouse gas emissions are reduced to at least 40 percent below the Statewide greenhouse gas emissions limit no later than December 31, 2030”.

The proposed Project does not include stationary sources of GHG emissions and is not subject to compliance with AB 32’s cap-and-trade program. The City has enacted a Climate Protection Action Plan to reduce overall City emissions by seven percent below 1990 levels. The City’s plan is specific to the reduction of GHG associated with buildings, transportation and land use, government operations, commercial operations, and water management. Specific reduction measures for land use encourage the use of drought-tolerant plant materials and low water irrigation techniques, as well as transformation of

public land into areas with shade trees, bike racks, and accommodations for pedestrians. Some of these features have been proposed for the Project. The proposed Project's use of fuels during construction would be consistent with existing regulations related to low carbon fuel standards achieved through regulations placed on the fuel manufacturing and supply industry. Considering the above, as well as the fact that the proposed Project's GHG emissions would be below SCAQMD's thresholds of significance, the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Potential impacts would be less than significant, and no mitigation measures are required.

3.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
IX. 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?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) For a project located within an airport land use compatibility plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

The proposed Project would not result in any significant impacts to hazards and hazardous materials. The Project site is currently developed with coastal access stairs and a viewing deck, and the proposed

Project will rehabilitate and/or replace those structures and include a new permanent LOT. Construction activities are the primary sources of hazardous materials during the Project's construction phase.

The subject Project site is not on a list of hazardous materials sites compiled pursuant to California Government Code §65962.5. Based on a review of the State of California Water Resource Control Board's (SWRCB's) GeoTracker online environmental database, there are no sites with an open case status within 1,000 feet of the proposed Project. The closest listed sites have a case closed status and are not considered to represent an environmental risk related to construction and operation of the Project. A summary of these listings and their location relative to the proposed Project is summarized below:

- **M B M Aut**o, 1890 South Coast Highway, Laguna Beach, CA 92651 (Approximately 1,100 feet north northwest of the Project)

  This site was subject to an unauthorized release from a leaking underground storage tank in 1991 that was subject to corrective action (soil vapor extraction and soil excavation) under the regulatory oversight of the Orange County Health Care Agency. The status of the site is listed as case closed, as of August 6, 2001. Based on the status and distance from the proposed Project, this site does not represent a risk for the proposed Project.

- **Texaco**, 1833 South Coast Highway, Laguna Beach, CA 92651 (Approximately 1,500 feet north northwest of the Project)

  This site was subject to an unauthorized release from a leaking underground storage tank in 1991 that was subject to corrective action (free product removal, soil vapor extraction, soil excavation and in-situ chemical treatment) under the regulatory oversight of the Orange County Health Care Agency. The status of the site is listed as case closed, as of October 20, 2017. Based on the status and distance from the proposed Project, this site does not represent a risk for the proposed Project.

- **Laguna Auto Service**, 1779 South Coast Highway, Laguna Beach, CA 92651 (Approximately 1,500 feet to the north northwest of the Project)

  This Project site was subject to an unauthorized release from a leaking underground storage tank in 1990. The site was managed under the regulatory oversight of the Orange County Health Care Agency. The status of the site is listed as case closed, as of December 23, 1998. Based on the status and distance from the proposed Project, this site does not represent a risk for the proposed Project.

a) Would the project create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials? (Less Than Significant Impact)

The Project proposes to rehabilitate a beach access facility and construct a new permanent LOT at Moss Street, near South Coast Highway. The proposed Project does not include the routine transport, use, or disposal of hazardous materials that could create a significant hazard to the public or the environment. The proposed Project involves the construction of a beach access stairway and a viewing deck on the Project site. The proposed Project would not create a significant hazard to the public or the environment

through routine transport, use, or disposal of hazardous materials. Therefore, impacts would be less than significant, and no mitigation measures are required.

b) Would the 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 Impact)

The proposed Project will not be a generator of hazardous materials. No significant hazardous materials would be stored or handled on-site associated with the operational characteristics of the proposed Project. However, construction equipment will be operating on the Project site, and temporary storage of hazardous materials (such as fuels, lubricants, and cleaning solutions) on the site could occur. Project construction would include short-term use of construction equipment that will produce emissions. Additionally, in relation to construction activities, the proper use and maintenance of equipment, along with the use of BMPs, greatly reduces the potential risk of spills and releases that can result in impacts to soil and/or groundwater. Therefore, adherence to standard and required ordinances and laws would reduce impacts to less than significant and no mitigation measures are required.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (No Impact)

There are no existing or proposed public schools within one-quarter mile of the site. The proposed beach access stairway and viewing deck will not emit hazardous emissions or involve hazardous or acutely hazardous materials, substances, or waste. Therefore, there is no impact to schools related to hazardous emissions or hazardous or acutely hazardous materials, and no mitigation measures are required.

d) Would the project be located on a site which is included on a list of hazardous materials sites which complied 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)

The location of the site is not included on a list of hazardous materials sites compiled pursuant to California Government Code §65962.5. As mentioned above, there are no open case sites close to the proposed Project that have the potential to impact the proposed Project. In addition, the Project itself will not result in any impacts relative to hazardous materials sites. Therefore, no impacts would result, and no mitigation measures are required.

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 or excessive noise for people residing or working in the project area. (No Impact)

The proposed Project is not located within an airport land use plan, nor within two miles of a public or public use airport. Therefore, no impacts related to a safety hazard or excess noise for people residing or working in the area would result. Therefore, no impacts would result, and no mitigation measures are required.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (No Impact)

The proposed Project involves rehabilitation and replacement of an existing beach public access stairway and a viewing deck and new permanent LOT. There is nothing associated with the proposed Project (construction or operation) that would impede implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan. The proposed Project will not result in any impacts to an adopted emergency response plan or an emergency evacuation plan. Therefore, no impacts would result, and no mitigation measures are required.

g) Would the project Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (No Impact)

The proposed Project is not located in a developed area that is identified as a very high fire hazard severity zone. It is not adjacent to wildlands, such as some of the City neighborhoods adjacent to the Laguna Greenbelt wildland areas. The proposed Project includes no habitable structures that would require Uniform Fire Code standards. The proposed Project includes rehabilitation of a beach public access point that involves a stairway and a viewing deck leading to the City Beach and the construction of a new permanent LOT. The proposed Project does not propose any features that would impair implementation of or physically interfere with emergency response or evacuation. Therefore, the proposed Project will not result in an impact associated with wildland fires, and no mitigation measures are required.

3.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would	☐	☐	☒	☐
i. result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a) Would the project violate any water quality standards or waste discharge requirements? (Less Than Significant Impact)

The Moss Street site is developed and will continue to remain so when the beach access facilities renovation Project is completed. Portions of the City (including the Project site) are located in the Laguna Coastal Streams Watershed. The Project area is under the jurisdiction of the Regional Water Quality Control Board (RWQCB), San Diego Region, for issues related to water quality. The San Diego Region includes cities and municipalities in a portion of south Orange County (including the City), Riverside County and San Diego County. Each of the nine Regional Boards within California is required to adopt a Water Quality Control Plan, or Basin Plan. Each Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; (3) describes implementation programs to meet the objectives and protect the beneficial uses of all waters in the region; and (4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan.

There is a Drainage Area Management Plan (DAMP) which is implemented by the cities (including Laguna Beach), County of Orange, and Orange County Flood Control District. The DAMP was prepared in compliance with specific requirements of the National Pollutant Discharge Elimination System (NPDES) storm water program. The DAMP includes a wide range of BMPs and control techniques to further reduce the number of pollutants entering the storm drain system.

The City prepared the Laguna Coastal Streams Watershed Workplan, which is updated each year. Previous water quality studies prepared by "Heal the Beach" and the County of Orange have found that the water quality in the Pacific Ocean along the Laguna Coastal Streams Watershed consistently ranks among the cleanest in Southern California, with regard to meeting ocean plan objectives.

Construction activity includes any work associated with minor grading and construction of the Project site. This includes demolishing and removing some of the existing stairway and viewing deck from the existing coastal access location covered by the Project. Due to the minor soil disturbance associated with construction activity, there is a potential for some sediment to be transported from the construction site into receiving waters, such as the Pacific Ocean. Other potential pollutants include metals and fuels from vehicles and heavy equipment.

In accordance with NPDES regulations, the State of California requires that any construction activity disturbing one acre or more of soil comply with the State General Construction Activity Storm Water Permit (Water Quality Order 99-08-DWQ). However, the total Moss Street beach access facility renovation Project will disturb less than one acre of soil.

Nevertheless, the Project will be conditioned to implement BMPs during construction activities. The purpose of implementing BMPs is to prevent all construction pollutants from contacting storm water and to keep all erosion products from moving off-site into receiving waters.

Certain discharges of non-storm water, such as irrigation, pipe flushing and testing, are permitted, as long as they do not cause or contribute to a violation of any water quality standard; violate any provision of the General Permit; or require a non-storm water permit (such as those issued by the San Diego RWQCB). Typical construction BMPs required by the NPDES permit and the pollutants they target are shown in Table 4. Due to the type of Project proposed and its characteristics (beach access facility rehabilitation), not all of the typical construction BMPs identified in Table 4 are applicable to the Project (e.g., storm drain inlets).

Pollutants associated with the Project could include sediments (soil disturbance), nutrients (fertilizers, eroded soils), metals (vehicles), oil, and grease (vehicles).

Table 4. Typical Construction Best Management Practices

Construction BMPs for incorporation, where applicable, into the Storm Water Pollution Prevention Plan (SWPPP)	Sediment	Nutrients	Pathogens	Pesticides	Metals	Other
Soil and slope stabilization utilizing the appropriate combination of natural and synthetic mattings, geotextiles, mulches, and temporary and permanent seeding.	X	X			X	
Temporary desilting basins constructed where necessary and consisting of ponds with outflow pipes designed to retain or detain runoff sufficiently to allow sediment to settle.	X	X			X	

Construction BMPs for incorporation, where applicable, into the Storm Water Pollution Prevention Plan (SWPPP)	Sediment	Nutrients	Pathogens	Pesticides	Metals	Other
Storm drain inlet protection utilizing an appropriate combination of barrier devices such as sandbags, straw rolls, hay bales, fiber rolls, gravel, silt fencing, screens, and temporary drain signs (raising awareness and limiting construction wastes from entering the storm drain system).	X	X			X	Trash
Energy dissipation devices installed where necessary and consisting of physical devices such as rock, riprap, and concrete rubble intended to prevent scour of downstream areas.	X	X			X	
On-site dust control and street sweeping employed when and where necessary, paying close attention to paved areas and areas susceptible to wind erosion (such as soil stockpiles).	X	X			X	Trash
Stabilized construction entrance consisting of pads of aggregate and located where traffic enters public rights-of-way; when and where necessary, wash racks or tire rinsing may be employed (tire rinse waters being directed through on-site sediment control devices).	X				X	
Diversion structures consisting of devices such as silt fencing, temporary or permanent channels, V ditches, earthen dikes, downdrains, straw bales, and sandbag check dams should be utilized where necessary to divert storm water flows from disturbed areas.	X				X	Trash
Adherence to Groundwater Extraction Permit by conducting required testing, monitoring, and discharge provisions for activities, including dewatering and foundation dewatering.	X				X	
Construction housekeeping practices consisting of practices such as barricading catch basins and manholes during paving activities; utilizing plastic sheeting, secondary containment, or bermed areas for construction materials when necessary; removing construction debris in a timely fashion; designating and lining concrete washout areas; and berming or locating sanitary facilities away from paved areas.	X		X		X	Trash

Construction BMPs for incorporation, where applicable, into the Storm Water Pollution Prevention Plan (SWPPP)	Sediment	Nutrients	Pathogens	Pesticides	Metals	Other
Fertilizer, pesticide, and soil amendment management, including not over applying such materials.		X		X		

Source: California Storm Water BMP Handbooks (2003)

Because the proposed Project would be required to adhere to standard measures to protect water quality, impacts would be less than significant, and no mitigation measures are required.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (Less Than Significant Impact)

The Project site is located on developed land, and the subject property will remain developed after implementation of the Project. The overall amounts of impervious surfaces, both existing and proposed, would largely remain the same and would not change substantially, such that a considerably measurable difference would occur. The proposed Project will not impact groundwater supplies or interfere with groundwater recharge. Therefore, the proposed Project would result in less than significant impacts on groundwater, and no mitigation measured are required.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would (Less Than Significant Impact):

i. result in substantial erosion or siltation on- or off-site?

The proposed Project will not result in a significant change to the drainage pattern of the Project site. The existing contours would largely remain the same, and the overall amount of impervious surfaces would be about the same in area. The proposed Project would not involve the alteration of the course of a stream or river in a manner that would result in substantial erosion or siltation on-site or off-site. The beach access rehabilitation Project is planned to follow the natural contours and slopes of the property. Therefore, the proposed Project would result in less than significant impacts related to erosion or siltation on-site or off-site, and no mitigation measures are required.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Miscellaneous street and storm drain improvements, including curb and gutter, storm drain inlets, and piping, are proposed. These improvements would be adequately sized to capture and convey the projected stormflows and would not result in flooding either on- or off-site. The proposed Project will not

alter the course of a stream or a river. Therefore, the proposed Project would result in less than significant impacts, and no mitigation measures are required.

iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Refer to responses a and c(ii), above.

Therefore, Project impacts associated with runoff would be less than significant, and no mitigation measures are required.

iv. impede or redirect flood flows?

Refer to responses a and c(ii), above.

Therefore, Project impacts associated with impeding or redirecting flood flows would be less than significant, and no mitigation measures are required.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (Less Than Significant Impact)

Because the site is located near the Pacific Ocean on the coastal bluffs, it is anticipated that the Project site could potentially experience impacts associated with inundation by tsunami. Most likely a tsunami run-up would reach only part way up the stairway leading to the beach. The Project itself does not expose people or structures to a significant risk involving flooding, or flooding, as a result of the failure of a levee or dam since it is a restoration of beach access facilities that already exist. Additionally, the City has emergency procedures in the event of a major event (e.g., flooding, earthquake, evacuation plans). Therefore, impacts associated with inundation by seiche, tsunami, or mudflow would be less than significant, and no mitigation measures are required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (Less Than Significant Impact)

The proposed Project will be required to comply with all existing requirements regarding water quality. In addition, as noted in response b, above, the proposed Project would result in less than significant impacts related to groundwater recharge. Therefore, impacts related to obstructing the implementation of a water quality control plan or groundwater management plan would be less than significant, and no mitigation measures are required.

3.11 LAND USE AND PLANNING

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XI. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

a) Would the project physically divide an established community? (No Impact)

The Project site is currently developed. The Project provides rehabilitation and/or replacement of a beach public access facility at Moss Street along the beach. Development of the proposed Project will not physically divide an established community, because the access area currently exists and is designed to connect coastal areas to the public. Therefore, no impacts relative to this topic are anticipated, and no mitigation measures are required.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (No Impact)

The access point is located within the public street right of way that terminates at the City Beach at Moss Street. Therefore, there is no General Plan land use designation for the site. The proposed Project will provide connections between neighborhoods and transportation facilities, to the City Beach and the Pacific Ocean. The proposed Project is consistent with the City's General Plan Open Space/Conservation Element, which call for retaining and improving existing public beach access facilities in the City[3]. The proposed Project is also compatible with surrounding land uses. A consistency analysis is presented below in Table 5.

Table 5: Land Use Element & Coastal Land Use Plan Consistency Analysis

Policy	Consistency Determination
Land Use Element (LUE) Policy 7.3: *Design and site new development to protect natural and environmentally sensitive resources, such as areas of unique scenic quality, public views, and visual compatibility with surrounding uses and to minimize natural landform alterations.*	**Consistent** – The proposed Project would represent a continuation of the existing uses but would provide enhanced and safer access to the beach for beachgoers. As noted in Section 3.1 (Aesthetics), the analysis determined that the proposed Project would not result in any long or short-term significant impacts to a scenic vista, scenic resource, degrade the existing visual character or quality of public views of the site and

[3] City of Laguna Beach, Open Space/Conservation Element, Policy 3-A, page 21.

Policy	Consistency Determination
	its surroundings, or create a new source of substantial light or glare which would adversely affect day or nighttime views in the area either during construction or operation. Therefore, impacts would be less than significant, and no mitigation measures are required.
LUE Action 7.3.2: *Review all applications for new development to determine potential threats from coastal and other hazards*	**Consistent** – The proposed Project would be subject to all discretionary requirement for this type of project. In addition, as noted in Section 3.7 (Geology & Soils), the proposed Project would be subject to similar risks (e.g., wildland fires, tsunamis, earthquake faults, coastal erosion) as those already experienced by residents and structures contained within the City and therefore, impacts would be less than significant, and no mitigation measures are required.
LUE Action 7.3.3: *Design and site new development to avoid hazardous areas and minimize risks to life and property from coastal and other hazards*	**Consistent** – The proposed Project represents a continuation of the existing uses but would introduce a new permanent LOT in lieu of a seasonally installed unit. In addition, as noted in Section 3.7 (Geology & Soils), the proposed Project would be subject to similar risks (e.g., wildland fires, tsunamis, earthquake faults, coastal erosion) as those already experienced by residents and structures contained within the City and therefore, impacts would be less than significant, and no mitigation measures are required.
LUE Action 7.3.4: *Require new development to assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs*	**Consistent** – The proposed Project represents a continuation of the existing uses but would introduce a new permanent LOT in lieu of a seasonally installed unit. In addition, as noted in Section 3.7 (Geology & Soils), the proposed Project would be subject to similar risks (e.g., wildland fires, tsunamis, earthquake faults, coastal erosion) as those already experienced by residents and structures contained within the City. In addition, the bluff was substantially altered during initial construction of the access stairs and the installation of the permanent LOT would not substantially or significantly alter the existing condition since only a small portion of the existing rock outcrop at the base of the cliff would be affected. Therefore, impacts would be less than significant, and no mitigation measures are required.
LUE Action 7.3.9: *Ensure that new development, major remodels, and additions to existing structures on oceanfront and oceanfront bluff sites do not rely on existing or future bluff/shoreline protection devices to establish*	**Consistent** – The proposed Project includes the rehabilitation of existing structures but also introduces a new permanent LOT in lieu of the seasonal unit. The proposed Project is not and is not expected to experience significant coastal bluff

Policy	Consistency Determination
geologic stability or protection from coastal hazards. A condition of the permit for all such new development on bluff property shall expressly require waiver of any such rights to a new bluff/shoreline protection device in the future and recording of said waiver on the title of the property as a deed restriction	retreat and the proposed structures would be constructed consistent with the required building code and consider such factors as coastal erosion (e.g., wind, wave, tide) in their design and construction. As noted in Section 3.7 (Geology & Soils) impacts would be less than significant, and no mitigation measures are required. In addition, if required, the proposed Project would be subject to all relevant permit requirements on the title of the property as a deed restriction.
LUE Action 7.3.11: *Require all coastal development permit applications for new development on an oceanfront or on an oceanfront bluff property subject to wave action to assess the potential for flooding or damage from waves, storm surge, or seiches, through a wave uprush and impact report prepared by a licensed civil engineer with expertise in coastal processes. The conditions that shall be considered in a wave uprush study are: a seasonally eroded beach combined with long-term (75 years) erosion; high tide conditions, combined with long-term (75 year) projections for sea level rise; storm waves from a 100-year event or a storm that compares to the 1982/83 El Niño event*	**Consistent** – The proposed Project would require a Coastal Development Permit and as such would be subject to all required reviews and clearances. The proposed Project represents a continuation of the existing uses, although a new permanent LOT (in lieu of a seasonal one) would be constructed at the base of the cliff with a caisson and piling. The design of the beach access facilities and permanent LOT have considered and would be subject construction techniques in the building code that consider coastal erosion (e.g., wind, waves, tide) and have been designed to address these in order to minimize damage and maximize their longevity and safety.
LUE Action 7.3.12: *Site and design new structures to avoid the need for shoreline and/or oceanfront bluff protective devices during the economic life of the structure (75 years)*	**Consistent** – The proposed Project has been designed to consider coastal erosion and is not dependent on the need for shoreline and/or oceanfront bluff protective devices.
LUE Action 7.3.18: *Site and design new oceanfront and oceanfront bluff development and bluff/shoreline protective devices where that siting/design takes into account predicted future changes in sea level. In particular, an acceleration of the historic rate of sea level rise shall be considered and based upon up-to-date scientific papers and studies, agency guidance (such as the 2010 Sea Level Guidance from the California Ocean Protection Council), and reports by national and international groups such as the National Research Council and the Intergovernmental Panel on Climate Change. Consistent with all provisions of the LCP, new structures shall be set back a sufficient distance landward to eliminate or minimize, to the maximum extent feasible, hazards associated with anticipated sea level rise over the expected economic life of the structure*	**Consistent** – The proposed Project has been designed to consider coastal erosion and is not dependent on the need for shoreline and/or oceanfront bluff protective devices and has considered the future impact of sea level change.
LUE Policy 7.4: *Ensure that development, including subdivisions, new building sites and remodels with building additions, is evaluated to*	**Consistent** – As noted in Section 3.4 (Biological Resources), no Special-Status plant species were observed during the March 2021 survey. The

Policy	Consistency Determination
ascertain potential negative impacts on natural resources. Proposed development shall emphasize impact avoidance over impact mitigation. Any mitigation required due to an unavoidable negative impact should be located on-site, where feasible. Any off-site mitigation should be located within the City's boundaries close to the project, where feasible	majority of Special-Status plants or animals known to occur in the region were determined to either have a low potential for occurrence or were not likely to occur at all. Further, impacts to vegetation and land uses were minor (0.16 acre). As such, it was determined the proposed Project would result in less than significant impacts with the incorporation of mitigation measures.
Open Space and Conservation Element (OSC) Policy 1E: *Prohibit the construction of buildings and other man-made structures on the sandy portion of the beach unless necessary for public health and safety*	**Consistent** – The proposed Project would rehabilitate the existing beach access which consists of viewing platforms and stairs. The stairs in their current condition are unsafe and do not reach the sand, and therefore, create a safety hazard and do not allow for a safe transition between the stair height and sand. In addition, a temporary (seasonal) LOT is installed from Memorial Day to Labor Day at the base of the bluffs and is manned by a lifeguard. A new permanent LOT would be installed and manned seasonally allowing for continued public safety at this beach access location. The proposed Project is, therefore, a necessary public health and safety component of the City's overall beach access program.
OSC Policy 1.5H*: Construction and grading activities on the beach shall be staged and phased to minimize interference with public use*	**Consistent** – With the exception of construction of the caisson and piling associated with the new permanent LOT and lower portion stairs, no construction or grading activities are proposed on the beach. However, because the cliff face provides the only access point to the beach, construction activities would prohibit public use of this area during the construction period (up to 12 months) while the existing facilities are demolished and rebuilt.
OSC Policy 4G*: Ensure that all development minimizes erosion, sedimentation, and other pollutants in runoff from construction-related activities to the maximum extent practicable. Ensure that development minimizes land disturbance activities during construction (e.g., clearing, grading and cut-and-fill), especially in erosive areas (including steep slopes, unstable areas, and erosive soils), to minimize the impacts on water quality*	**Consistent** – As noted in Section 3.10 (Hydrology & Water Quality) impacts related to erosion would be addressed through standard permit requirements and therefore, less than significant impacts would result, and no mitigation measures are required.
OSC Policy 7A: *Preserve to the maximum extent feasible the quality of public views from the hillsides and along the City's shoreline*	**Consistent** – As noted in Section 3.1 (Aesthetics) temporary and permanent impacts associated with the proposed Project would result but would be less than significant. The existing views from the bluff area and beach would be preserved and would not substantially change or introduce new elements that are not already present. In the case

Policy	Consistency Determination
	of the permanent LOT component, this would change from seasonally present to a permanent presence and would be similar in scale and massing as the temporary structure.
OSC Policy 7K: *Preserve as much as possible the natural character of the landscape (including coastal bluffs, hillsides and ridgelines) by requiring proposed development plans to preserve and enhance scenic and conservation values to the maximum extent possible, to minimize impacts on soil mantle, vegetation cover, water resources, physiographic features, erosion problems, and require recontouring and replanting where the natural landscape has been disturbed*	**Consistent** – The proposed Project represents a rehabilitation of the existing structures located on the bluff and at its base and would not introduce new or unfamiliar elements to this portion of the bluff or beach. As noted in Section 3.1 (Aesthetics) and Section 2.0 (Project Description) the plant material would be compatible with the bluff and beach environment and would not create erosion problems or replanting of natural landscape or its associated disturbance.
OSC Policy 10A: *Require that plan review procedures recognize and avoid geologically unstable areas, flood-prone lands, and slopes subject to erosion and slippage*	**Consistent** – The proposed Project represents a continuation of the existing uses but would introduce a new permanent LOT in lieu of a seasonally installed unit. In addition, as noted in Section 3.7 (Geology & Soils), the proposed Project would be subject to similar risks (e.g., wildland fires, tsunamis, earthquake faults, coastal erosion) as those already experienced by residents and structures contained within the City. In addition, the bluff was substantially altered during initial construction of the access stairs and the installation of the permanent LOT would not substantially or significantly alter the existing condition since only a small portion of the existing rock outcrop at the base of the cliff would be affected. Therefore, impacts would be less than significant, and no mitigation measures are required.
Section 30212.5: *Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise of overcrowding or overuse by the public of any single area.*	**Consistent** - The proposed Project would improve and enhance existing coastal access at the Moss Street beach access point. It would also include the installation of a permanent LOT in lieu of seasonally (Memorial Day through Labor Day) and would be staffed during this time period. During the construction period, the public would not be able to access the Moss Street beach access point. Beachgoers would be required to access alternative locations (e.g., Pearl Street, Victoria Beach).
Section 30240(A): *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.*	**Consistent** - As noted in Section 3.4 (Biological Resources) no special-status plant species were observed during the March 2021 survey. Most of the Special-Status plants known to occur in the region were determined to either have a low potential for occurrence or were not likely to occur at all. No special-status wildlife species were

Policy	Consistency Determination
	observed during the March 2021 survey. The majority of special-status wildlife known to occur in the region were determined to have no potential for occurrence. Based on surveys conducted within the BSA, areas mapped as disturbed quailbush scrub (*Atriplex lentiformis* shrubland alliance) that would be permanently impacted by proposed construction activities may meet the requirements to constitute an ESHA. The landscaping palette includes the use of native plants (see Figure 5) which would contribute to enhancement of native species and habitats.
Section 30244: *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*	**Consistent** - An archival record search and literature review and Native American consultation were performed as part of the cultural resources inventory for the project. No archaeological resources were identified within the project area. The Project site is already developed with coastal access facilities such as a stairway. A Paleontological Resource Assessment was prepared for the proposed Project and is contained within Appendix E of this IS/MND. The results of this assessment indicate that two geologic units are present in the Project area: old lacustrine, playa, and estuarine deposits and the San Onofre Breccia, both of which are assessed as having high paleontological potential. As the proposed Project will require some soil disturbance, impacts to potential paleontological resources is considered potentially significant. However, with the implementation of the following mitigation measures, these impacts would be reduced to less than significant levels with the implementation of Mitigation Measure GEO–1 Paleontological Monitoring & Mitigation Plan.
Section 30251. *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views 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…shall be subordinate to the character of its setting.*	**Consistent** - The proposed Project entails the improvement and enhancement of existing coastal access facilities and the permanent installation of a LOT. As noted in Section 3.1 (Aesthetics), the Project includes locations where viewsheds and scenic overlooks of the beach and the Pacific Ocean will be improved and made more accessible. While the Project area is not a designated scenic vista, the proposed access and scenic vista viewpoints proposed at the Moss Street location will allow both motorist and pedestrian users to continue to enjoy views of the Pacific Ocean and the City Beach. This condition would be similar for the LOT, although it would be a permanent feature and not removed seasonally.

Policy	Consistency Determination
	Currently, it is installed by Memorial Day and removed by Labor Day, marking the end of the summer season, and is viewed by residents and beachgoers throughout this time period. During the construction period, viewers would see the presence of materials, workers, and equipment.
Section 30210: *In carrying out the requirement of Section 2 of Article XV of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*	**Consistent** - The proposed Project would provide improved and enhanced existing coastal access at the Moss Street beach access point. Signage noting access points would be conspicuously posted and beachgoers would continue to have access.
Section 30211: *Development shall not interfere with the public's right of access to the sea where acquired through use, custom, or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*	**Consistent** - The proposed Project would provide improved and enhanced existing coastal access at the Moss Street beach access point. Currently, the stairway stops short of the sand, creating an unsafe condition. The proposed Project would remedy this condition and allow patrons to continue to access and use the dry sand and rocky coastal beach area to the first line of vegetation.

The proposed Project would also be consistent with the City's certified Local Coastal Program. It is not anticipated that the proposed Project will result in any impacts due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and no mitigation measures are required.

3.12 MINERAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XII. MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (No Impact)

The site is currently developed with a public access stairway and a viewing deck that promotes public access to the City Beach and the Pacific Ocean. There is also a seasonally installed LOT. The Project

site is not located within a known and/or designated mineral resources area. Therefore, no loss of availability of known mineral resources would result, and no mitigation measures are required.

b) Would the project 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)

The City's General Plan does not delineate any locally important mineral resource in the Project area. Therefore, the proposed Project will not result in any significant impacts to a locally important mineral resource. Therefore, no impacts would result, and no mitigation measures are required.

3.13 NOISE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XIII. NOISE — Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The analysis and conclusions in this section are based upon information contained in Appendix F (Noise Analysis Report) of this IS/MND.

a) 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 with Mitigation Incorporated)

Short-Term Construction Noise

Temporary construction noise impacts vary because the noise generated from construction equipment ranges widely as a function of the equipment used and its activity level. Because of issues with terrain, access, and slope, there is a minimal quantity of heavy construction equipment anticipated for the proposed Project activities.

To approximate noise levels resulting from the short-term construction of the project, the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) was used. The RCNM is used as the FHWA's national standard for predicting noise generated from construction. The RCNM analysis

includes the calculation of noise levels at a defined distance for a variety of construction equipment. The spreadsheet inputs include acoustical use factors and distance to receptors and calculates the expected Lmax[4] and Leq[5] values at a selected receptor.

The noisiest construction activities for the proposed improvements would be the removal of some hardscape elements, such as retaining walls and paving. This task typically requires jackhammers and debris loaders. If three pieces of demolition equipment (a jackhammer, backhoe, and air compressor) were to operate within 100 feet of a residence, the RCNM model predicts that the total noise level could be as high as 77 dB(A) Leq[6] for the combined noise signature of the equipment. It is unlikely that three pieces of large equipment could operate simultaneously adjacent to an individual residence (defined as sensitive receptors for the purposes of noise analysis) for a period of time. Therefore, this scenario is representative of maximal noise.

The jackhammer represents the dominant noise source for this project and adds 10 dB(A) to the noise signature over an air compressor and backhoe. Jackhammers are only used to demolish existing masonry which is a short-term activity. Without the jackhammer, expected noise levels would be reduced to approximately 71 dB(A). Because each piece of equipment will only spend a short duration in proximity to any single residence, equipment noise nuisance would be sporadic and brief. Additionally, construction noise is generally stationary and would, therefore, attenuate by 6 dB for every doubling of distance from any receptor. Therefore, noise levels at a single receptor are greatly reduced, as work progresses away from any individual residence.

Exterior to interior noise attenuation in modern stucco homes with double paned windows is approximately 30 dB(A) with windows closed. Therefore, an exterior noise level of 75 dB(A) would be reduced to an interior noise level of 45 dB(A). Such a noise level should be less than that experienced from an operating dishwasher in an adjacent room and should not interfere with conversation. With closed windows and doors, off-road equipment nuisance noise could be reduced acceptable levels when the jackhammer is not in use. During brief periods of jackhammering, a perceived temporary nuisance could be created at an adjacent residence, even with closed windows.

Although noise levels from construction could create a perceived nuisance, increases in noise levels from construction activity would be temporary. All construction activities at the site would also be limited by conditions on construction permits requiring compliance with the City's Noise Ordinance. Allowable hours of construction are between the hours of 7:30 a.m. and 6:00 p.m., Monday through Friday. No work is permitted on Saturdays, Sundays, and Federal Holidays. In addition, to ensure that no potential

[4] Note: The LMAX, or Maximum Sound Level, descriptor is the highest sound level measured during a single noise event (such as a vehicle pass by), in which the sound level changes value as time goes on. The maximum sound level is important in judging the interference caused by a noise event with common activities. Source: https://www.fhwa.dot.gov/Environment/noise/resources/fhwahep17053.pdf, accessed July 19, 2021.
[5] Note: LEQ, or Time-Equivalent Sound Level is a measure of sound energy. Source: https://www.fhwa.dot.gov/Environment/noise/resources/fhwahep17053.pdf, accessed July 19, 2021.
[6] Note: dB(A) Leq means the time-weighted average of the level of sound in decibels on scale A which is relatable to human hearing. Source: https://nyaaya.org/questions/category/noise-pollution/how-are-noise-limits-measured-what-does-dba-leq-mean/. Accessed on July 19, 2021.

significant noise impacts result due to the construction of the proposed Project (and consistent with City requirements), the following recommended Mitigation Measure NOI-1 will reduce noise levels to a less than significant level.

NOI-1 Construction Activity

During construction activities, the following construction practices are recommended:

a) Stockpiling and staging activities should be located as far as practicable from dwellings.

b) All mobile equipment shall have properly operating and maintained mufflers.

c) Require that construction activities employ feasible and practical techniques to minimize noise impacts on adjacent uses. Particular emphasis shall be placed on the restriction of hours in which work other than emergency work may occur.

d) As a condition of approval, non-emergency construction activities adjacent to existing noise-sensitive uses shall be limited to daylight hours between the hours of 7:30 a.m. and 6:00 p.m. Monday through Friday. No work is permitted on Saturdays, Sundays, and federal holidays.

e) Construct temporary enclosures around exceptionally noisy activities. For example, shields can be used around pavement breakers such as jackhammers.

f) Select quieter demolition methods when possible.

g) Notify adjacent homes near any hardscape demolition activities as to time and place to allow residents to adjust their schedule to avoid noise disruption.

Long-Term Noise Impacts

Improved beach access is not expected to create any measurable increase in beach visitors. A few more visitors may partake of enhanced overlooks or seating than current users, and a few more persons with disabilities may visit the access points that are currently not accessible. No new vehicle traffic is expected at the various beach access points. Therefore, no measurable noise impact will result from project implementation. Any impact potential will derive exclusively from construction activities.

Therefore, based on the above analysis and with incorporation of the required mitigation measure, it is not anticipated that the proposed Project would result in any significant impacts related to noise.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? (Less Than Significant Impact with Mitigation Incorporated)

See response to Section 3.12.1.2 above and the recommended mitigation measure.

The Project will include site demolition/preparation and construction activities. Typical background vibration levels in residential areas are usually 50 VdB or lower, which is below the threshold of human

perception. Perceptible vibration levels inside residences are typically attributed to the operation of heating and air conditioning systems, door slams, or street traffic. Construction activities and street traffic are some of the most common external sources of vibration that can be perceptible inside residences.

Construction activities generate groundborne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of groundborne vibration can include experiences such as discernible movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Vibration-related problems generally occur due to resonances in the structural components of a building because structures amplify groundborne vibration. Within the "soft" sedimentary surfaces of much of Southern California, ground vibration is quickly damped out. Groundborne vibration is almost never annoying to people who are outdoors.[7]

Groundborne vibrations from construction activities rarely reach levels that can damage structures. Because vibration is typically not an issue, very few jurisdictions have adopted vibration significance thresholds. Vibration thresholds have been adopted for major public works construction projects, but these relate mostly to structural protection (cracking foundations or stucco) rather than to human annoyance.

Vibration is commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object. RMS velocities are expressed in units of vibration decibels. The range of vibration decibels (VdB) is as follows:

- 65 VdB: threshold of human perception
- 72 VdB: annoyance due to frequent events
- 80 VdB: annoyance due to infrequent events
- 94-98 VdB: minor cosmetic damage

To determine potential impacts of the Project's construction activities, estimates of vibration levels induced by the construction equipment anticipated for project use at various distances are presented in Table 6.

Table 6. Vibration Level Estimates in Vibration Decibels (VdB)

Equipment	Approximate Vibration Levels at 25 feet	Approximate Vibration Levels at 50 feet	Approximate Vibration Levels at 100 feet
Jackhammer	79	73	67
Small bulldozer	58	52	46

Source: FTA Transit Noise & Vibration Assessment, Section 7, Noise and Vibration During Construction, 2018

[7] Federal Transit Administration Transit Noise and Vibration Assessment, Section 7, Noise and Vibration During Construction, 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, Last Accessed March 16, 2021.

The on-site construction equipment that will create the maximum potential vibration is a jackhammer. The stated vibration source level in the FTA Handbook for such equipment is 73 VdB at 50 feet from the source and decays to 67 VdB by 100 feet. At 50 feet from possibly adjacent homes, residents might be able to marginally feel a faint tremble, but vibration levels are far below the damage threshold.

Therefore, construction activities are typical for the type of development proposed (beach access stairway), and as such, nearby uses (e.g., existing residences) will not experience excessive groundborne vibration or groundborne noise levels. Therefore, impacts would be less than significant with incorporation of Mitigation Measure NOI-1.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (No Impact)

The Project site is not within an airport land use plan and is not within two miles of a public airport. In addition, the proposed Project site is not within the vicinity of a private airstrip. Therefore, no impact would result, and no mitigation measures are required.

3.14 POPULATION AND HOUSING

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. POPULATION AND HOUSING — Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (No Impact)

The proposed Project consists of renovation of public beach access amenities within the existing street right of way and the permanent construction of a LOT at the base of the cliffs. The Project site is in an area surrounded by urban development where infrastructure exists. No significant new infrastructure will be required for the proposed Project. The Project will not induce substantial population growth in the area, either directly or indirectly, beyond that already contemplated per the City's General Plan, and county and state population/housing projections. Therefore, no impact would result, and no mitigation measures are required.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (No Impact)

The proposed Project does not involve elimination of any existing housing. The Project site is developed with existing beach access facilities and, the proposed Project will not displace any existing housing. Therefore, no impacts would result, and no mitigation measures are required.

3.15 PUBLIC SERVICES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XV. PUBLIC SERVICES — Would the project:				
a) 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:				
i. Fire protection?	☐	☐	☒	☐
ii. Police protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government 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?

Public services are already being provided to the City and to the Project site. It is not anticipated that the proposed Project would result in substantial adverse impacts to public services, because it is already being serviced by public services and would not result in an increase of beach visitors.

i. Fire protection? (Less Than Significant Impact)

The Laguna Beach Fire Department provides fire protection and emergency response services for the City. Response times to the site are dependent on various factors. Response time is generally five minutes or less.[8] Emergency calls receive the quickest response times with alarm calls and non-

[8] Source: Pearl Street Beach Access Rehabilitation Project (SCH No. 2017011040), 2017.

emergency calls having longer response times respectively. The availability of personnel and extenuating circumstances may further affect response times. The closest Laguna Beach fire station (Fire Station 1) to the site (approximately 1.5 miles) is located at 501 Forest Avenue, in the downtown village next to City Hall. The proposed Project will renovate the public coastal access point that will connect with existing recreational areas and facilities that are already served by the Laguna Beach Fire Department. Due to the Project characteristics and considering that the Project is replacing and enhancing existing beach access, it is not anticipated that there would be any resulting significant impacts relative to fire protection services and/or facilities, and no mitigation measures are required.

ii. Police protection? Less Than Significant Impact)

Law enforcement services are provided by the Laguna Beach Police Department, located at 505 Forest Avenue or approximately 1.5 miles from the project Site . The site is already developed with a beach access stairway and a viewing deck, and therefore, demand for police protection is not anticipated to be significantly affected as a result of the proposed Project. The proposed Project is consistent with the City's General Plan and will not substantially increase demand for police services beyond what is currently provided for the existing Project site. Therefore, less than significant impacts are anticipated, and no mitigation measures are required.

iii. Schools? (No Impact)

The Project site is located in the Laguna Beach Unified School District (LBUSD). Due to the Project characteristics (renovation of existing beach access amenities at Moss Street), the Project will not result in any increased generation of students that could impact enrollment at LBUSD schools. Therefore, the proposed Project will not result in any significant impacts to schools, and no mitigation measures are required.

iv. Parks (No Impact)

The City's General Plan Open Space/Conservation Element policies identify that retaining and improving existing public beach access in the City is a priority[9]. The Project will facilitate public access to beach and coastal resources by renovating an existing stairway and a viewing deck. The Project would enhance access to the beach, which is public recreational facility. Due to the use proposed (beach access), the Project is not anticipated to result in any significant impacts to existing neighborhood and regional parks and recreational facilities, and no mitigation measures are required.

v. Other public facilities? (No Impact)

The Project site is already developed with coastal access amenities. The proposed Project will provide renovated beach access facilities at Moss Street near South Coast Highway. Project development would not result in any significant impact to public facilities. Public facilities already occur adjacent to the Project area, such as existing City beaches, recreational areas, public transportation, utilities and public services.

[9] City of Laguna Beach, Open Space/Conservation Element, Policy 3-A, page 21.

Therefore, no significant impacts relative to other public facilities would result, and no mitigation measures are required.

3.16 RECREATION

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. RECREATION — Would the project:				
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

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)

The Project itself will not generate residents (or increase the population), and therefore, create a resulting demand for parks and recreational facilities. The Project proposes the rehabilitation of an existing beach access stairway and a viewing deck and a permanent LOT that ties together existing recreational areas and facilities. It should be noted that access to the beach via the current stairways would not be available for the duration of the construction period. It is anticipated current patrons of Moss Street Beach would seek access to other adjacent beaches (e.g., Pearl Street, Victoria Beach) during the construction period. There are a number of City beaches located within close proximity to the proposed Project that could accommodate this additional demand. It should be noted that this additional demand on adjacent beaches would be largely limited to the summer season (Memorial Day through Labor Day). Moreover, provided construction is completed prior to this period, no additional demand on adjacent beaches would occur. The proposed Project would not result in any potential significant increases in demand for the use of existing recreation facilities. Therefore, less than significant impacts would result, and no mitigation measures are required.

b) Does the project include recreational facilities or require the construction of or expansion of recreational facilities which might have an adverse physical effect on the environment? (No Impact)

The proposed Project involves the rehabilitation of an existing beach access stairway and a viewing deck and permanent LOT. It does not include the construction or expansion of recreational facilities and would not result in use by visitors or residents that would result in adverse physical effects on the environment. The proposed Project would provide a beneficial impact on recreational facilities by enabling continuing opportunities to access and enjoyment of the recreational areas of the City that currently exist, including

the beach and Pacific Ocean. It should be noted that access to the beach via the current stairways would not be available for the duration of the construction period. However, the majority of the demand for beach access is limited to the summer season (Memorial Day through Labor Day). Moreover, provided construction is completed prior to this period, no additional demand on adjacent beaches would occur. Therefore, the proposed Project would not result in any significant impacts, and no mitigation measures are required.

3.17 TRANSPORTATION

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. TRANSPORTATION — Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☒	☐

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? (Less Than Significant Impact)

The proposed Project will renovate an existing beach access facility that connects the public with the City Beach and the Pacific Ocean and construction of a permanent LOT. The coastal access stairway and the viewing deck will be directly accessible from the adjacent residential neighborhoods and visitor-serving commercial uses located along South Coast Highway. Parking areas already exist in proximity to the stairway and viewing deck, and no additional parking would be provided by the Project. The proposed Project is consistent with City and coastal policies regarding beach access; therefore, no significant impacts regarding conflicts with existing policies are anticipated with implementation of the proposed Project.

The proposed Project will result in minor short-term construction-related traffic in association with construction workers, delivery of construction equipment, and minor earthwork/grading site preparation activities. Given the proximity of the Project site to South Coast Highway, a Construction Traffic Control Plan to reduce potential short-term construction related impacts, will be required by the City was part of project approval. Therefore, a less than significant impact would result, and no mitigation measures are required.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? (No Impact)

As the Project is a pedestrian and safety project, per CEQA Guidelines section 15064.3 subdivision (b)(2), projects that do not increase vehicle miles traveled (VMT) should be presumed to cause a less than significant transportation impact. Guidance provided by the Governor's Office of Planning and Research (OPR) states that transportation projects should be analyzed on the basis of VMT increases from induced travel, but that "rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets", including "assets that serve bicycle and pedestrian facilities", which do not add additional motor vehicle capacity, generally should not require an induced travel analysis.[10] The OPR guidance further states that "active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation." Since the Project consists of replacement and improvements to an existing pedestrian asset, and is not expected to induce additional vehicle trips, it is presumed the Project will have no impact relative to CEQA Guidelines section 15064.3 subdivision (b), and no mitigation measures are required.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (No Impact)

The proposed Project consists of a replacement of an existing pedestrian facility and construction of a permanent LOT. The proposed Project will be constructed in accordance with all applicable design guidelines and City codes; therefore, the proposed Project will not substantially increase hazards due to a geometric design feature. The proposed Project does not propose any modification to existing driveways or roadways other than what is related to the pedestrian facility. The Project, as proposed, would not result in any impacts relative to design features or incompatible uses, and no mitigation measures are required.

d) Would the project result in inadequate emergency access? (Less Than Significant Impact)

The proposed Project does not result in any type of development or action that would result in inadequate emergency access. The proposed renovation of access facilities at Moss Street will facilitate access to the beach and the Pacific Ocean. South Coast Highway is a designated evacuation route, but the proposed Project would not impact the street's use as an emergency evacuation route. Therefore, the proposed Project would result in less than significant impacts to emergency access, and no mitigation measures are required.

[10] Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, State of California, December 2018.

3.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES — Would the project: cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) 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	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) 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 (No Impact)

The area is considered low to moderate for Native American and tribal cultural resources based on the results of the Sacred Lands Files Search, conducted by the Native American Heritage Commission of behalf of the City, on April 5, 2021. As part of its AB 52 consultation requirements, on April 29, 2021, the City sent out letters to tribal representatives making them aware of the proposed Project. On May 12, 2021, the City received a request for tribal consultation from the Administrative Assistant (no name provided), of the Gabrieleño Band of Mission Indians - Kizh Nation (Tribe). In the request, the Administrative Assistant noted that the proposed Project is located within their Ancestral Tribal Territory and requested consultation. On May 17, 2021, the City sent correspondence to the Tribe indicating ground disturbance was minimal and mostly in bedrock or previously disturbed/improved ground. To date, no response from the Tribe or other Tribes has been received. The City will continue to communicate any updates during the final design and construction phases to the Tribe and others, if requested. Therefore, there would be no impact, and no mitigation measures are required.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources

Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. (No Impact)

See response 3.17, a above.

As discussed above, there would be no impact in this regard, as there is no substantial evidence of the existence of tribal cultural resources in the Project area, and no mitigation measure are required.

3.19 UTILITY AND SERVICE SYSTEMS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS — Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (No Impact)

The proposed Project entails improved beach access and construction of a permanent LOT and does not include the construction or residential or commercial uses, thereby requiring the construction or expansion of water, wastewater treatment, electric power, natural gas or communication facilities to serve these uses. Therefore, no impacts would result, and no mitigation measures are required.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? (Less than Significant Impact)

The proposed Project entails improved beach access and construction of a permanent LOT and does not include the construction or residential or commercial uses, thereby requiring substantial water supplies. Landscaping would be reinstalled but would not utilize large quantities of water since much of this would either utilize a City-approved drought tolerant plants palette, combined with a drip and/or spray irrigation system. The proposed landscaping would be comprised of drought-tolerant species, thereby reducing the amount of water required, compared to existing conditions. Therefore, a less than significant impact would occur, and no mitigation measures are required.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (No Impact)

The proposed Project entails improved beach access and construction of a permanent LOT and does not include the construction or residential or commercial uses, and as such, would not generate wastewater. Therefore, no impact would occur, and no mitigation measures are required.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (Less than Significant Impact)

During construction, the proposed Project would generate solid waste associated with removal of the stairs, viewing platform, dirt, and landscaping modifications. There are also additional construction-related materials that would generate solid waste. The amount of waste generated during construction would be minor and would not be beyond the capacity of local landfills. In addition, the proposed Project would be required to adhere to local and state construction-related debris recycling and waste diversion and disposal requirements as part of permit approvals. These requirements would assist in reducing the amount of construction-related solid waste being transported to area landfills. Therefore, a less than significant impact would occur, and no mitigation measures are required.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (No Impact)

See response 13.8, d) above. The Project would comply with all federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, no impact would result, and no mitigation measures are required.

3.20 WILDFIRE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XX. WILDFIRE — If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

a) Substantially impair an adopted emergency response plan or emergency evacuation plan? (Less Than Significant Impact)

A review of the City of Laguna Beach General Plan's Safety Element indicates the City has considered emergency access issues throughout its jurisdiction and has developed programs and mechanisms to address this (e.g., access planning, upgrading roadway deficiencies, no parking zones, public access easements)[11]. The project Site is not identified as a designated evacuation route and is not located along an impaired access road. The proposed Project includes the rehabilitation of an existing beach access and viewing deck and permanent LOT and would include short-term construction activities, including construction equipment. However, the proposed Project would be required to adhere to traffic safety requirements, including a Traffic Management Plan, provided one is required by the City. Based upon the analysis above, the proposed Project would result in a less than significant impact and no mitigation measures are required.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? (Less Than Significant Impact)

A review of the City's General Plan Safety Element indicates the entire City is designated as being in a Very High Fire Hazard Severity Zone[12]. To address this, the City has adopted special building

[11] City of Laguna Beach General Plan, Safety Element, pages 8-9.
[12] City of Laguna Beach General Plan, Safety Element, pages 47-48.

requirements in its hazardous fire area (wildland/urban interface zone) that exceed the UBC requirements, implemented a fuel management program for vegetation and brush, and restricted the use of certain plant species (e.g., pine, cypress, cedar, junipers, acacia, bougainvillea, eucalyptus). Combined, these measures have assisted the City in reducing the potential for impacts due to wildfire. The proposed Project is located within an urbanized environment and does not contain highly flammable fuels and is not part of the wildlands/urban interface zone. Construction equipment would be normally equipped with spark arrestors and other safety features to reduce the potential for fire. Therefore, the proposed Project would not be expected to result in conditions that would exacerbate wildfire risk, expose project occupants to these risks or to pollutant concentrations or the spread of wildfire, and as such, less than significant impacts would result and no mitigation measures are required.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? (No Impact)

The proposed Project includes the rehabilitation of an existing beach access and viewing deck and permanent LOT. It does not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. As noted in responses a) and b) above, the proposed Project would include short-term construction activities only, including the use of construction equipment and which would normally be equipped with safety features to reduce the potential for sparks and resulting fire. In addition, the project Site is not located within an wildlands/urban interface zone which contains high levels of fuel or brush. Therefore, no impacts would occur, and no mitigation measures are required.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? (Less Than Significant Impact)

Although the entire City of Laguna Beach is considered a High Fire Hazard Zone, the proposed Project is situated within an urbanized portion of the City and is not located within an wildlands/urban interface area and therefore, the risk of wildfire originating from this area is considered low. Although the project Site is flat, it does include slope areas associated with the bluff face, where the existing viewing platform is proposed to be rehabilitated and the associated access stairs. Because the project Site is downslope from the wildlands/urban interface zone where a potential wildfire could originate the proposed Project in and of itself, would not generate significant risks including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Moreover, pending a post-fire event in the vicinity of the proposed Project, the City would take appropriate measures to properly assess and evaluate the project Site to ensure the viewing platform and associated beach access stairs were safe to access and use. Therefore, impacts would be less than significant, and no mitigation measures are required.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number, or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? (Less than Significant with Mitigation Incorporated)

The analysis contained within Section 3.4 (Biological Resources) indicates that the project site assessment revealed that the majority of special-status wildlife known to occur in the general region had a “low” or “no” potential of occurrence within the BSA, due to the developed nature of habitats within the BSA. Similarly, due to the developed nature of the BSA, only two special status plant species was determined to have a low potential for occurrence or were not likely at all to occur. During construction, if these activities occur during the avian nesting season, the proposed Project could be in conflict with the MBTA. The analysis also determined no riparian habitat or other sensitive communities are present within the BSA. Because construction activities would remove vegetation (non-native/ornamental) these activities could result in the spread of noxious weeds within the project site and adjacent areas. Further, the analysis determined that with the implementation of mitigation measures BIO-1 through BIO-5, impacts would be less than significant.

As noted in Section 3.5 (Cultural Resources), the analysis determined no built environment historical resources would be affected, including the beach access stairs and viewing platform and two adjacent

residences both of which are listed on the Laguna Beach Historic Register. Moreover, the records searches conducted at the SCCIC for the proposed Project determined there were no known archaeological resources identified for the area and therefore, no impacts to potential archaeological resources would result with proposed Project implementation. However, subsurface construction activities associated with the proposed Project could potentially damage or destroy previously undiscovered unique archaeological resources and therefore, a mitigation measure was recommended to reduce impacts to less than significant levels. With the implementation of mitigation measure CUL-1, impacts would be less than significant.

As part of its AB 52 consultation requirements, on April 29, 2021, the City sent out letters to tribal representatives making them aware of the proposed Project. On May 12, 2021, the City received a request for tribal consultation from the Administrative Assistant (no name provided), of the Gabrieleno Band of Mission Indians - Kizh Nation (Tribe). In the request, the Administrative Assistant noted that the proposed Project is located within their Ancestral Tribal Territory and requested consultation. On May 17, 2021, the City sent correspondence to the Tribe indicating ground disturbance was minimal and mostly in bedrock or previously disturbed/improved ground. To date, no response from the Tribe or other Tribes has been received. The City will continue to communicate any updates during the final design and construction phases to the Tribe and others, if requested. Therefore, there would be no impact, and no mitigation measures are required.

b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals? (Less Than Significant Impact)

The proposed Project would not increase environmental impacts after mitigation measures are incorporated, the incremental contribution to cumulative impacts would be anticipated as less than significant. The proposed Project is part of a City-wide beach access rehabilitation program that includes some 29 beach access points. As noted in the analysis contained in the IS/MND, the proposed Project is not anticipated to substantially increase the number of beach patrons to the detriment of the environment, but instead would largely remain the same, based upon existing conditions. Therefore, the proposed Project would result in less than significant impacts and no mitigation measures are required beyond those already identified in the IS/MND.

c) Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Less Than Significant Impact)

As discussed in Sections 3.1 through 3.20 of this IS, no environmental effects were identified as having any potentially significant impacts after mitigation measures were incorporated. As such, no environmental factors or effects were found to cause a substantial adverse effect on human beings, either directly or indirectly. Therefore, impacts would be less than significant, and no mitigation measures are required beyond those already identified in the IS/MND.

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5.0 REFERENCES

The following references were used in part in whole to prepare this IS/MND.

1. City of Laguna Beach Initial Study and Mitigated Negative Declaration Pearl Street Beach Access Rehabilitation Project, dated October 2016
2. Assembly Bill AB 32 Global Warming Solutions Act of 2006.
3. Air Quality and GHG Impact Analysis: Pearl Street Beach Access, by Giroux & Associates, dated September 15, 2016.
4. Cultural Resources Assessment for Proposed Replacement of Beach Access Stairs at Pearl Street, City of Laguna Beach, by Archaeological Resource Management Corporation, dated July 28, 2016.
5. Noise Impact Analysis: Pearl Street Beach Access, by Giroux & Associates, dated September 15, 2016.
6. California Environmental Quality Act as amended January 1, 2021. §§21000-21178 of the Public Resources Code, State of California.
7. City of Laguna Beach General Plan.
8. City of Laguna Beach Zoning Code Map.
9. Guidelines for California Environmental Quality Act as amended January 1, 2021. §15000-
10. City of Laguna Beach General Plan, Open Space Conservation Element, updated 2006.
11. City of Laguna Beach General Plan, Safety Element, adopted June 6, 1995.
12. City of Laguna Beach General Plan, Scenic Highways Element, adopted April 2, 1975.
13. City of Laguna Beach General Plan, Land Use Element, adopted February 7, 2012.
14. City of Laguna Beach General Plan, Noise Element, adopted March 15, 2005.
15. Drainage Area Management Plan (DAMP), adopted by County of Orange July 1, 2003.
16. GeoTracker
17. City of Laguna Beach General Plan, Transportation, Circulation and Growth Management Element, June 1, 1999
18. City of Laguna Beach, Water Quality Division Website

Appendix A MITIGATION MONITORING & REPORTING PROGRAM

Appendix A
Mitigation Monitoring and Reporting Program

Impacts	Mitigation Measure	Responsible/Monitoring Party	Monitoring Action or Implementation Stage
Biological Resources			
The analysis contained within the Section 3.4 (Biological Resources) indicates that the proposed Project has a “low” or “no” potential to affect sensitive species and associated habitats, due to the developed nature of the area. It also determined that during construction, if activities occur during the avian nesting season, the proposed Project could be in conflict with the MBTA. The analysis also determined no riparian habitat or other sensitive communities are present within the BSA.	**BIO-1 Pre-Construction Surveys (Plants and Wildlife) and Biological Monitoring** **Wildlife Surveys:** Prior to ground disturbance or vegetation clearing within the Project site, a qualified biologist shall conduct surveys for wildlife (no more than 14 days prior to site disturbing activities) where suitable habitat is present and directly impacted by construction activities. Wildlife found within the Project site or in areas potentially affected by the Project will be relocated to the nearest suitable habitat that will not be affected by the project prior to the start of construction. Special-status species found within a Project impact area shall be relocated by an authorized biologist to suitable habitat outside the impact area. **Plant Surveys:** Prior to initial ground disturbance for any areas subject to ground disturbance, the Project proponent shall conduct pre-construction surveys for special-status plant species in all areas subject to ground-disturbing activity, including, but not limited to, slope grading, new access roads, staging areas, and Project construction. The surveys shall be conducted according to protocols established by the United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and California Native Plant Society (CNPS). All listed plant species found shall be marked and avoided. Any populations of special-status plants found during surveys will be fully described, mapped, and a CNPS Field Survey Form or written equivalent shall be prepared. Prior to site grading, any populations of special-status plant species identified during the surveys shall be protected by a buffer zone. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. The size of the buffer depends upon the proposed use of the immediately adjacent lands and includes consideration of the plant’s ecological requirements (e.g., sunlight, moisture, shade tolerance, physical and chemical	City of Laguna Beach Public Works Department Engineering Division	Prior to earthmoving activities or construction and then during initial ground disturbing activities, and periodically, as needed thereafter.

Impacts	Mitigation Measure	Responsible/Monitoring Party	Monitoring Action or Implementation Stage
	characteristics of soils) that are identified by the qualified plant ecologist or botanist. The buffer for herbaceous and shrub species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the City of Laguna Beach. Highly visible flagging shall be placed along the buffer area and remain in good working order during the duration of any construction activities in the area. Where impacts to listed plants cannot be avoided, the USFWS and/or CDFW shall be consulted for authorization, as appropriate. Additional mitigation measures to protect or restore listed plant species or their habitat, including but not limited to a salvage plan including seed collection and replanting, may be required by the USFWS or CDFW before impacts are authorized. If non-listed CRPR 1, 2, 3, or 4 plants cannot be avoided, and Project-related impacts result in the loss of 10 percent or more of the local population (i.e., occurrences within ¼ mile of the Project impact location), compensatory mitigation will be required. **Compensation:** Compensation will be required for all impacts that exceed the 10 percent threshold (e.g., impacts to 15 percent of a population will only require compensation for 5 percent, the percentage of impacts that exceed the 10 percent threshold). To compensate for permanent impacts to special-status plants (including areas located beneath the arrays), habitat (which may include preservation of areas within the undisturbed areas of the Project footprint, mitigation lands outside of the main Project site, or a combination of both) that is not already public land shall be preserved and managed in perpetuity at a 1:1 mitigation ratio (one acre preserved for each acre impacted). Compensation for temporary impacts shall include land acquisition and/or preservation at a 0.5:1 ratio. The preserved habitat for a significantly impacted plant species shall be of equal or greater habitat quality to the impacted areas in terms of soil features, extent of disturbance, and vegetation structure, and will contain verified extant populations, of the same size or greater, of the special-status plants that are impacted. Prior to the disturbance of habitat for or take of special-status plants the City of Laguna Beach must present documentation of a recorded conservation easement(s) for all compensation/mitigation lands to the		

Impacts	Mitigation Measure	Responsible/Monitoring Party	Monitoring Action or Implementation Stage
	United States Army Corps of Engineers (USACE) and CDFW as applicable. Compensation lands shall be located within the general vicinity of the City of Laguna Beach. An open space easement will be recorded on all property associated with the compensation/mitigation lands to protect the existing plant and wildlife resources in perpetuity. An open space easement can be held by CDFW or an approved land management entity and shall be recorded immediately upon the dedication or acquisition of the land. **Biological Monitoring:** A qualified biological monitor, with expertise in the species known to occur or with the potential to occur on the Project site, shall be retained to monitor construction activities. The qualified biologist shall be present during initial ground disturbance for each phase of construction. Once initial ground disturbance is complete, monitoring will occur periodically during all construction activities. The qualified biologist(s) shall be present during all ground-disturbing activities immediately adjacent to, or within habitat that supports populations of listed or special-status species. If required, during pre-construction surveys and/or required monitoring efforts, the qualified biologist will relocate common and special-status species that enter the Project site; some special-status species may require specific permits prior to handling and/or have established protocols for relocation. Records of all detection, capture and release shall be reported to CDFW.		
	BIO-2 Environmental Awareness Training All Project personnel must attend an environmental awareness and compliance training program prior to working on the Project site. The training program shall present the environmental regulations and applicable permit conditions that the Project team shall comply with. The training program shall include applicable measures established for the Project to minimize impacts to water quality and avoid sensitive resources, habitats, and species. Dated sign-in sheets for attendees at these meetings shall be maintained and submitted to the City of Laguna Beach.	City of Laguna Beach Public Works Department Engineering Division	Initial training prior to construction and administered as needed, provided new contractor/staff access the work site area.
	BIO-3 Implement Best Management Practices (BMPs) Grading plans for the Project shall indicate that the Project shall implement the following BMPs:	City of Laguna Beach Public Works Department Engineering Division	Prior to and during construction.

Impacts	Mitigation Measure	Responsible/Monitoring Party	Monitoring Action or Implementation Stage
	• Restrict non-essential equipment to the existing roadways and/or ruderal areas to avoid disturbance to native vegetation. • All excavation, steep-walled holes, or trenches more than six inches in depth will be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth dirt fill or wooden planks. Trenches will also be inspected for entrapped wildlife each morning prior to onset of construction activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they will be thoroughly inspected for entrapped wildlife. Any wildlife discovered will be allowed to escape before construction activities are allowed to resume or removed from the trench or hole by a qualified biologist holding the appropriate permits (if required). • Minimize mechanical disturbance of soils to reduce impact of habitat manipulation on small mammals, reptiles, and amphibians. • Removal/disturbance of vegetation shall be minimized to the greatest extent feasible. • Install and maintain appropriate erosion/sediment control measures, as needed, throughout the duration of work activities. • Vehicles shall not be driven, or equipment operated, in water covered/wetted portions any potentially jurisdictional feature, except as otherwise provided for in the permits/agreements from the CDFW, USACE, California Coastal Commission, and/or Regional Water Quality Control Board (RWQCB). • No vehicles or equipment shall be refueled within 100 feet of an ephemeral drainage or wetland unless a		

Impacts	Mitigation Measure	Responsible/Monitoring Party	Monitoring Action or Implementation Stage
	bermed and lined refueling area is constructed. Spill kits shall be maintained on site in sufficient quantity to accommodate at least three complete vehicle tank failures of 50 gallons each. Any vehicles driven and/or operated within or adjacent to drainages or wetlands shall be checked and maintained daily to prevent leaks of materials.		
	BIO-4 Nesting Bird Surveys and Avoidance Measures Prior to initial site disturbance/issuance of grading permits, seasonally timed presence/absence surveys for nesting birds shall be conducted by a qualified biologist. If construction activities carry over into a second nesting season(s) the surveys will need to be completed annually until the Project is complete. A minimum of three survey events, three days apart shall be conducted (with the last survey no more than three days prior to the start of site disturbance), if construction is scheduled to begin during avian nesting season (February 15th through September 15th); surveys for raptors shall be conducted from January 1st to August 15th. Surveys shall be conducted within 500 feet of all Project activities. If special-status species are observed, consultation with USFWS and/or CDFW is required. If breeding birds with active nests are found prior to or during construction, a qualified biological monitor shall establish a 300-foot buffer around the nest and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. The prescribed buffers may be adjusted by the qualified biologist based on existing conditions around the nest, planned construction activities, tolerance of the species, and other pertinent factors. The qualified biologist shall conduct regular monitoring of the nest to determine success/failure and to ensure that Project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. If construction occurs outside of avian nesting season, only a single presence/absence survey will be required.	City of Laguna Beach Public Works Department Engineering Division	Prior to earthmoving activities or construction.

Impacts	Mitigation Measure	Responsible/Monitoring Party	Monitoring Action or Implementation Stage
Cultural Resources			
As noted in Section 3.5 (Cultural Resources), the analysis determined no built environment historical resources would be affected, including the beach access stairs and viewing platform and two adjacent residences both of which are listed on the Laguna Beach Historic Register. Moreover, the records searches conducted at the SCCIC for the proposed Project determined there were no known archaeological resources identified for the area and therefore, no impacts to potential archaeological resources would result with proposed Project implementation. However, subsurface construction activities associated with the proposed Project could potentially damage or destroy previously undiscovered unique archaeological resources and therefore, a mitigation measure was recommended to reduce impacts to less than significant levels. With the implementation of mitigation measure CUL-1, impacts would be less than significant. As part of its AB 52 consultation requirements, on April 29, 2021, the City sent out letters to tribal representatives making them aware of the proposed Project. On	**CUL-1 Cultural Materials Discovered During Construction** If any cultural resource is encountered during ground disturbance or subsurface construction activities (e.g., trenching, grading), all construction activities within a 50-foot radius of the identified potential resource shall cease until a qualified archaeologist approved by the City shall be retained by the contract to evaluate the finds, evaluates the item for its significance and records the item on the appropriate State Department of Parks and Recreation 523 series forms, and develop and carry out a program of mitigation as appropriate. The archaeologist shall determine whether the resource requires further study. If, after the qualified archaeologist conducts appropriate technical analyses, the resource is determined to be eligible for listing on the California Register of Historical Resources as a unique archaeological resource as defined in Public Resource Code (PRC) Section 15064.5, the archaeologist shall develop a plan for the treatment of the resource. The plan shall contain appropriate mitigation measures, including avoidance, preservation in place, data recovery excavation, or other appropriate measures outlined in Public Resources Code Section 21083.2.	City of Laguna Beach Public Works Department Engineering Division	Prior to construction and grading activities.

Impacts	Mitigation Measure	Responsible/Monitoring Party	Monitoring Action or Implementation Stage
May 12, 2021, the City received a request for tribal consultation from the Administrative Assistant (no name provided), of the Gabrieleno Band of Mission Indians - Kizh Nation (Tribe). In the request, the Administrative Assistant noted that the proposed Project is located within their Ancestral Tribal Territory and requested consultation. On May 17, 2021, the City sent correspondence to the Tribe indicating ground disturbance was minimal and mostly in bedrock or previously disturbed/improved ground. To date, no response from the Tribe or other Tribes has been received. The City will continue to communicate any updates during the final design and construction phases to the Tribe and others, if requested. Therefore, there would be no impact, and no mitigation measures are required.			

Impacts	Mitigation Measure	Responsible/Monitoring Party	Monitoring Action or Implementation Stage
Geology & Soils			
A Paleontological Resource Assessment was prepared for the proposed Project. The results of this assessment indicate that two geologic units are present in the Project area: old lacustrine, playa, and estuarine deposits and the San Onofre Breccia, both of which are assessed as having high paleontological potential. As the proposed Project will require some soil disturbance, impacts to potential paleontological resources is considered potentially significant. However, with the implementation of the following mitigation measures, these impacts would be reduced to less than significant levels.	**GEO–1 Paleontological Monitoring & Mitigation Plan** A paleontologist meeting professional standards as defined by Murphey et al. (2019) shall be retained to oversee all aspects of paleontological mitigation, including the development and implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the final Project plans that provides for paleontological monitoring of earthwork and ground disturbing activities into undisturbed geologic units with high paleontological potential, to be conducted by a paleontological monitor meeting industry standards (Murphey et al. 2019). The PMMP should also include provisions for a Worker's Environmental Awareness Program (WEAP) training that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.	City of Laguna Beach Public Works Department Engineering Division	Prior to construction and grading and soil removal.
	GEO–2 Paleontological Monitoring In the event that paleontological resources are encountered during construction activities, all work must stop in the immediate vicinity of the finds while the paleontological monitor documents the find. The designated project paleontologist shall assess the find. Should the qualified paleontologist assess the find as significant, the find shall be collected and curated in an accredited repository along with all necessary associated data	City of Laguna Beach Public Works Department Engineering Division	Prior to construction and grading and soil removal.

Impacts	Mitigation Measure	Responsible/Monitoring Party	Monitoring Action or Implementation Stage
Noise			
As noted in Section 3.13 (Noise), during brief periods of jackhammering, a perceived temporary nuisance could be created at an adjacent residence, even with closed windows. Although noise levels from construction could create a perceived nuisance, increases in noise levels from construction activity would be temporary. All construction activities at the site would also be limited by conditions on construction permits requiring compliance with the City's Noise Ordinance. Allowable hours of construction are between the hours of 7:30 a.m. and 6:00 p.m., Monday through Friday. No work is permitted on Saturdays, Sundays, and Federal Holidays. In addition, to ensure that no potential significant noise impacts result due to the construction of the proposed Project (and consistent with City requirements) a construction period noise mitigation measure is recommended to reduce impacts to a less than significant level.	**NOI-1 Construction Activity** During construction activities, the following construction practices are recommended: a) Stockpiling and staging activities should be located as far as practicable from dwellings. b) All mobile equipment shall have properly operating and maintained mufflers. c) Require that construction activities employ feasible and practical techniques to minimize noise impacts on adjacent uses. Particular emphasis shall be placed on the restriction of hours in which work other than emergency work may occur. d) As a condition of approval, non-emergency construction activities adjacent to existing noise-sensitive uses shall be limited to daylight hours between the hours of 7:30 a.m. and 6:00 p.m. Monday through Friday. No work is permitted on Saturdays, Sundays, and federal holidays. e) Construct temporary enclosures around exceptionally noisy activities. For example, shields can be used around pavement breakers such as jackhammers. f) Select quieter demolition methods when possible. g) Notify adjacent homes near any hardscape demolition activities as to time and place to allow residents to adjust their schedule to avoid noise disruption.	City of Laguna Beach Public Works Department Engineering Division	During construction activities

Appendix B AIR QUALITY & GREENHOUSE GAS STUDY

Air Quality and Greenhouse Gas Study

Moss Street Beach Access Rehabilitation Project

March 18, 2021

Lead Agency:

City of Laguna Beach
505 Forest Avenue
Laguna Beach, California, 92651

Proponent:

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Abbreviations

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CH_4	methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalents
GHG	Greenhouse Gas
H_2S	Hydrogen Sulfide
IS/MND	Initial Study/Mitigated Negative Declaration
LST	Localized Significance Thresholds
MMT	million metric tons
MPO	metropolitan planning organizations
MT	metric tons
N/A	not applicable
NAAQS	National Ambient Air Quality Standards
NO_X	nitrogen oxides
NO_2	nitrogen dioxide
O_3	ozone
PFC	perfluorinated chemicals
PM_{10}	Particulate Matter less than 10 microns in diameter
$PM_{2.5}$	Particulate Matter less than 2.5 microns in diameter
ppm	parts per million
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF_6	sulfur hexafluoride
SO_2	Sulfur Dioxide
USEPA	United States Environmental Protection Agency

1.0 PROJECT OVERVIEW

The Moss Street Beach Access project (Project) in the City of Laguna Beach (City) intends to rehabilitate existing beach access infrastructure located at the south end of Moss Street at the intersection with Ocean Way, near the South Coast Highway (Figure 1). The access is on a steep slope between the beach and roadway and currently consists of retaining walls, terraced landings, and concrete steps. The Project will remove and replace the ramps, stairs, and railings and will include landscaping and irrigation.

2.0 PROJECT DESCRIPTION

As of October 2016 there were 29 beach access stairways in the City (Hodge & Associates [H&A], 2016). The Project will consist of the rehabilitation of the beach access stairway located on Moss Street. A similar rehabilitation project was completed by H&A within the last five years at Pearl Street, located approximately 0.25 miles from the Project site. The Pearl Street rehabilitation project consisted of the replacement of existing stairs, piers, and paving and including the installation of new overlooks, bike racks, and landscaping. In 2016, the City had prepared and circulated an Initial Study / Mitigated Negative Declaration (IS/MND) completed by H&A for the Pearl Street Beach Access Rehabilitation. A comparison of the Pearl and Moss Street Rehabilitation Projects is provided as **Table 1** below.

Table 1: Comparison of Pearl Street and Moss Street Beach Access Rehabilitation

Rehabilitation	Pearl Street Beach Access	Moss Street Beach Access
Replacement of Paving	X	X
Retaining Wall Replacement	X	X
Replacement of ~60 stairs	X	X
Replacement of Piers	X	X
Installation of Guard Rails	X	X
New Landscaping	X	X
New Overlooks	X	X
New Trash Receptacle	X	X
New Bike Racks	X	X
Duration of Construction	Four Months	Four Months
Total Area to be Disturbed	<1 Acre	<1 Acre

Based on the similarity and proximity of the Pearl Street Beach Access Rehabilitation IS/MND to the Project, Stantec believes that much of the information, including assumptions and estimated emissions, remain valid and can largely be applied to the Project. In addition, because the California Environmental Quality Act (CEQA) encourages the use of existing CEQA documentation, Stantec has made use of the data presented in the IS/MND for this *Air Quality and Greenhouse Gas Study*. As such, construction and grading activities are expected to take approximately four months and utilize the equipment shown below in **Table 2**.

Table 2: Proposed Construction Equipment and Quantity

Equipment	Quantity
drill rig	1
air compressor	1
loader/backhoe	1

3.0 EVALUATION OF ENVIRONMENTAL IMPACTS

This document evaluates potential air quality and greenhouse gas emissions impacts related to the Project.

3.1 AIR QUALITY

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☐	☒

3.1.1 Discussion:

The Project site is located within Orange County and the South Coast Air Basin (SCAB). Regulatory oversight authority regarding air quality rests at the local, state, and federal levels with the South Coast Air Quality Management District (SCAQMD), California Air Resources Board (CARB), and U.S. Environmental Protection Agency (USEPA), respectively. The SCAB incorporates approximately 12,000 square miles, consisting of Orange County and the urbanized areas of San Bernardino, Riverside, and Los Angeles Counties. The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of

extremely hot weather, winter storms, or Santa Ana winds. The SCAB is classified as a dry-hot desert climate (SCAQMD 1993).

Ambient air quality is determined by comparing pollutant levels in ambient air samples to national and state standards. These standards are established by the USEPA and CARB at levels determined to be protective of public health and welfare, with an adequate margin of safety. California Ambient Air Quality Standards (CAAQS) were established in 1967, whereas National Ambient Air Quality Standards (NAAQS) were first established by the federal Clean Air Act of 1970. California standards are generally more stringent than national standards.

Air quality standards specify the upper limits of pollutant concentrations, over defined durations, in ambient air, consistent with the management goal of preventing specific harmful effects. There are national and state standards for the six "criteria pollutants": ozone (O_3); carbon monoxide (CO); nitrogen dioxide (NO_2); suspended particulate matters including fine particulate matter with an aerodynamic diameter of less than 2.5 microns ($PM_{2.5}$), and respirable particulate matter with an aerodynamic diameter of less than 10 microns (PM_{10}); sulfur dioxide (SO_2); lead (Pb). Nitrogen oxides (NO_X) and volatile organic compounds (VOCs) are of particular interest as they are precursors to ozone formation. California has established ambient air quality standards for criteria pollutants, as well as visibility reducing particles; sulfates, hydrogen sulfide (H_2S); and vinyl chloride.

The USEPA and CARB determine the air quality attainment status relative to the level of pollutants in designated areas by comparing local ambient air quality measurements from state or local ambient air monitoring stations with the NAAQS and CAAQS. Non-attainment status indicates that ambient measurements for a given pollutant in that area exceed the NAAQS and/or CAAQS. Consistent with federal requirements, an unclassifiable designation is treated as an attainment designation. **Table 3** presents the federal and state attainment status for the project area which is in the County within the SCAB.

Table 3: Attainment Status of Orange County within South Coast Air Basin

Pollutant	Federal Designation	State Designation
Ozone (O_3)	Non-Attainment (Extreme)	Non-Attainment
Particulate Matter (PM_{10})	Attainment/Maintenance	Non-Attainment
Particulate Matter ($PM_{2.5}$)	Non-Attainment (Serious)	Non-Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead (Pb)	Non-Attainment	Attainment
Hydrogen Sulfide (H_2S)	*	Attainment
Sulfates	*	Attainment
Visibility Reducing Particles	*	Attainment

Source: SCAQMD, 2018
Notes: (*) = Not Applicable/ No Federal Standards.

As shown in **Table 3**, the Project is in an area designated non-attainment for both the federal and state standards for O_3 and $PM_{2.5}$, the state standard for PM_{10}, and the federal standard for lead. Because the SCAB currently exceeds these state and federal ambient air quality standards, the SCAQMD is required to implement strategies to reduce pollutant levels to recognized acceptable standards. The SCAQMD in

conjunction with the Southern California Association of Governments (SCAG), CARB, and USEPA recently prepared the 2016 Air Quality Management Plan (AQMP) (SCAQMD, 2017).

The CARB-maintained air monitoring stations measure SCAB air pollutant levels. The monitoring station that is located closest to the project study area is the Mission Viejo station, located at 26081 Via Pimiento, Mission Viejo, California 92691, which is approximately 12 miles northeast of the Project site. The available data for this location includes measurements for ozone, $PM_{2.5}$, and PM_{10} from 2017 to 2019.

Table 4: Summary of Ambient Air Quality at Mission Viejo Monitoring Station

Pollutant	Year		
	2017	2018	2019
Ozone			
Maximum 1-hr Concentration (ppm)	0.103	0.121	0.106
Days exceeding California Ambient Air Quality Standards (CAAQS) (0.09 parts per million [ppm])	3	2	3
Days exceeding National Ambient Air Quality Standards (NAAQS) (no standard)	0	0	0
State Maximum 8-hour concentration (ppm)	0.084	0.088	0.088
National Maximum 8-hour concentration (ppm)	0.083	0.088	0.087
Days exceeding CAAQS (0.070 ppm)	27	10	11
Days exceeding NAAQS (0.070 ppm)	25	9	11
$PM_{2.5}$			
National Maximum 24-hour concentration (micrograms per cubic meter [µg/m^3])	19.5	38.9	20.8
State Maximum 24-hour concentration (micrograms per cubic meter [µg/m^3])	19.5	38.9	20.8
Measured Days exceeding NAAQS (35 µg/m^3)	0	1	0
National Annual Average (AAM) (µg/m^3)	*	*	7.1
Does measured AAM exceed NAAQS (15 µg/m^3)?	*	*	No
State AAM (µg/m^3)	*	*	*
Does measured AAM exceed CAAQS (12 µg/m^3)?	*	*	*
PM_{10}			
National Maximum 24-hour concentration (µg/m^3)	58.2	55.6	45.1
State Maximum 24-hour concentration (µg/m^3)	58.2	55.6	44.2
Measured Days exceeding NAAQS (150 µg/m^3)	0	0	0
Measured Days exceeding CAAQS (50 µg/m^3)	1	1	0
National Annual Average (AAM) (µg/m^3)	18.8	19.5	17.1
Does measured AAM exceed NAAQS (no standard)?	No	No	No
State AAM (µg/m^3)	18.8	19.1	16.7
Does measured AAM exceed CAAQS (20 µg/m^3)?	No	No	No
NO_2 (not measured at Mission Viejo monitoring station)			
CO (not measured at Mission Viejo monitoring station)			
SO_2 (not measured at Mission Viejo monitoring station)			
HS (not measured at Mission Viejo monitoring station)			
SOURCE: California Air Resources Board. Accessed March 11, 2021. Top 4 Summary: Select Pollutant, Years, & Area. https://www.arb.ca.gov/adam/topfour/topfourdisplay.php * Denotes insufficient data.			

The SCAQMD in conjunction with the Southern California Association of Governments (SCAG), CARB, and USEPA recently prepared the 2016 Air Quality Management Plan (AQMP) (SCAQMD, 2017). The purpose

of the 2016 AQMP is to provide a comprehensive and integrated program to lead the SCAB into compliance with the federal ozone and particulate matter standards. The 2016 AQMP accounts for projected population growth, predicted future emissions in energy and transportation demand, and determined control strategies for the eventual achievement of NAAQS attainment designation. These control strategies are either organized into the SCAQMD rules and regulations, or otherwise set forth as formal SCAQMD recommendations to other agencies. The 2016 AQMP includes policies that are consistent with the SCAQMD and specify review according to the recommendations of SCAQMD guidelines. Other policies are aimed at reducing transportation emissions and emissions from major stationary sources.

The Project would be subject to the following general SCAQMD rules and regulations:

Regulatory IV – Prohibitions

- Rule 401 – Visible Emissions: prohibits discharges of visible air contaminants that occlude the air beyond certain thresholds;
- Rule 402 – Nuisance: prohibits discharges of air contaminants that cause "injury, detriment, nuisance, or annoyance" to the public; and
- Rule 403 – Fugitive Dust: prohibits discharges of fugitive dust that exceed certain thresholds.

The SCAQMD has adopted regional and Localized Significance Thresholds (LSTs) to determine the significance of a project's potential air quality impacts. Separate thresholds of significance have been adopted for the construction and operation phases of projects. The LSTs were developed by the SCAQMD to assist lead agencies in analyzing localized air quality impacts from projects. LSTs look-up tables for one-, two-, and five-acre proposed projects emitting CO, nitrogen oxides (NO_x), $PM_{2.5}$ or PM_{10} were prepared for easy reference according to source receptor area. The LSTs methodology and associated mass rates are not applicable to mobile sources travelling over the roadways. It should be noted that SCAQMD does not mandate LSTs for new construction projects; more importantly, LSTs are a voluntary approach to be implemented at the discretion of local agencies (SCAQMD, 2008).

Table 5 below, presents the regional and voluntary LSTs applied to the Project and used for purposes of this analysis. These LSTs are based on a one-acre site with a 25-meter receptor distance in the Central Orange County Coastal area. The closest sensitive receptor is approximately 40 feet from the Project site.

Table 5: SCAQMD Air Quality Significance Thresholds (Mass Daily Thresholds)

Regional Thresholds (lbs/day)	VOC	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$	Lead (Pb)
Construction	75	100	150	550	150	55	3
Operation	55	55	150	550	150	55	3
Localized Thresholds (lbs/day)[1]	**VOC**	**NO_X**	**SO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**Lead (Pb)**
Construction	N/A	92	N/A	647	4	3	N/A
Operation	N/A	92	N/A	647	1	1	N/A
SOURCE: SCAQMD Air Quality Significance (Mass Daily) Regional Thresholds, 1993; SCAQMD Mass Rate LST Lookup Tables, Appendix C, 2008							

Table 5: SCAQMD Air Quality Significance Thresholds (Mass Daily Thresholds)

Regional Thresholds (lbs/day)	VOC	NO_X	SO_X	CO	PM_{10}	$PM_{2.5}$	Lead (Pb)
Notes: 1. Localized significance thresholds are from the SCAQMD lookup tables for Source Area 20 (Central Orange County Coastal) assuming a one-acre project site and a distance to the nearest sensitive receptor of 25 meters. 2. N/A = not applicable							

As previously discussed, results from the Pearl Street Beach Access Rehabilitation IS/MND have been used to aid in emissions estimation for the Project. These results are considered applicable based on the similarity of the scope of work, the proximity of project locations, and the date of the analysis. Pearl Street Beach Access Rehabilitation construction emissions were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planning, and environmental professionals to quantify potential criteria air pollutant emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations including vehicle use, off-road equipment, fugitive dust, off-gas from asphalt and landscaping maintenance. Default data (i.e., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered an accurate and comprehensive tool for quantifying air quality impacts from land use projects throughout California. The Pearl Street Beach Access Rehabilitation IS/MND CalEEMod modeling results, including assumptions and defaults used by H&A, are provided in Attachment A.

It should be noted that since the 2016 submittal of the Pearl Street Beach Access Rehabilitation IS/MND CalEEMod has been updated to version 2016.3.2. The update primarily consisted of changes to the program interface, addition of construction equipment, revision to some greenhouse gas mitigation measures, and unpaved road dust recalculation options for SLOAPCD and SMAQMD. These changes would not have substantively changed the emissions estimates of the 2016 IS/MND submittal, likely emissions would be greater in 2016 when compared to 2021 because some older equipment engines in the 2016 calendar year fleet have been replaced with newer, more efficient equipment engines in the 2021 calendar year fleet. Consequently, the results of the Pearl Street Beach Access Rehabilitation IS/MND are applicable to the Project and are likely conservative.

Estimated unmitigated Project construction emissions are based on the results of the Pearl Street Beach Access Rehabilitation IS/MND and are summarized below in **Table 6**. Detailed emission estimates and assumptions are provided in **Appendix A**. The Project does not include a source of lead emissions.

Table 6: Unmitigated Project Construction Emissions in Comparison to SCAQMD Significance Criteria

	Peak Daily Emissions (lbs/day)						
Component	**VOC**	**NO_X**	**SO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**Lead (Pb)**
Regional Thresholds Construction	75	100	150	550	150	55	3
Localized Thresholds Construction	n/a	92	n/a	647	4	3	n/a

Table 6: Unmitigated Project Construction Emissions in Comparison to SCAQMD Significance Criteria

	Peak Daily Emissions (lbs/day)						
Component	**VOC**	**NO_X**	**SO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**	**Lead (Pb)**
Estimated Construction Emissions	1.1	10.4	0.0	8.3	1.6	1.1	n/a
Exceeds Regional Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**	**n/a**
Exceeds Localized Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**	**n/a**
SOURCE: Pearl Street Beach Access Rehabilitation Project IS/MND, Hodge & Associates, October 2016, CalEEMod Version 2013.2.2 Construction Estimates							

3.1.2 Explanations:

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

Less than Significant Impact. The Project is limited to and consists of the rehabilitation of existing beach access infrastructure located at the Project site. The majority of Project associated emissions would be generated during construction from off-road equipment as well as fugitive dust from activities on unpaved surfaces/excavation. As shown in **Table 6**, Project construction emissions are below the applicable SCAQMD mass emissions thresholds of significance. Consequently, construction associated emissions would not be expected to conflict with or obstruct implementation of the applicable air quality plan 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.

There is not expected to be an increase in operation phase emissions because emission causing activities are not expected during the operational phase. In addition, although the Project will improve the quality of beach access, it is not anticipated to affect the quantity. The accessibility and safety of beach access via the rehabilitated Moss Street entrance will be enhanced, but the overall throughput of users is expected to remain approximately the same -largely because the location of the entrance will not change (will not be moved to an area of greater or lesser population). As such, operation phase emissions are not considered to result in additional impacts to air quality.

Because Project emissions would not conflict with or obstruct implementation of the AQMP, the impacts are considered to be less than significant.

b. 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 Impact. In accordance with SCAQMD methodology, projects that do not exceed, or can be mitigated to less than the daily threshold values do not add significantly to a cumulative impact. As discussed above in response a), estimated Project construction emissions are below the applicable SCAQMD regional mass emissions thresholds of significance. The Project would not involve an increase in operation phase emissions. The proposed Project would not 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 and potential impacts are considered to be less than significant.

c. Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. Sensitive receptors are defined as populations that are more susceptible to the effects of pollution than the population at large. Sensitive receptors are facilities that house or attract children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutant. Land uses identified to be sensitive receptors by SCAQMD in the CARB's Air Quality Handbook include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The Project site is directly adjacent to sensitive receptors to the north, west, and east with single-family residences as close as approximately 40 feet to the Project site boundary. Projects that are below the SCAQMD LSTs would not be expected to expose sensitive receptors to substantial pollutant concentrations. As shown in **Table 6**, the Project's construction emissions would be below the applicable LSTs, however these LSTs were derived assuming using a minimum separation of 82 feet between source and receptor. It should be noted that Project associated emissions are between 2.7 and 80 times below the most conservative, published, LSTs for the Project site's location. Therefore, the projection that Project emissions will not expose sensitive receptors to substantial pollutant concentrations is considered valid. In addition, to better ensure the safety of nearby receptors, Project construction activities will be conducted such that the Project is in compliance with SCAQMD Rule 402. For these reasons, potential impacts are considered to be less than significant.

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

No Impact. The SCAQMD has identified land uses commonly subject to odor complaints. These land uses include agriculture (farming and livestock), wastewater treatment, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD, 1993). The Project involves minor and short-term conventional construction activities that do not involve any of the SCAQMD identified land uses subject to odor complaints or components with the potential to create objectionable odors affecting a substantial number of people. The construction, operation, and maintenance of the proposed project would not involve the type of land uses or industrial operations typically associated with odor nuisance. There are no land uses typically associated with the generation of nuisance odors in the project study area. Therefore, there would be no impact regarding other emissions. No further analysis is warranted.

3.2 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.2.1 Discussion:

Greenhouse gases (GHGs), are gases that trap heat in the atmosphere comparable to a greenhouse, which captures and traps radiant energy. GHGs are emitted by both natural processes and human activities. The accumulation of greenhouse gases in the atmosphere regulates the earth's temperature. Global warming is the observed increase in average temperature of the earth's surface and atmosphere.

The six major GHGs are carbon dioxide (CO_2), methane (CH_4), NO_2, sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), and perfluorocarbon (PFCs). The GHGs absorb longwave radiant energy emitted by the Earth, which warms the atmosphere. The GHGs emit longwave radiation both upward to space and back down toward the surface of the Earth. The downward part of this longwave radiation emitted by the atmosphere is known as the "greenhouse effect." However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. Emissions from human activities, such as fossil fuel combustion for electricity production and vehicles, have elevated the concentration of these gases in the atmosphere.

The California Air Pollution Control Officers Association (CAPCOA), in its 2008 *Report on Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, stated:

> *"While it may be true that many GHG sources are individually too small to make any noticeable difference to climate change, it is also true that the countless small sources around the globe combine to produce a very substantial portion of total GHG emissions."*

The following plans and rules have been implemented by local governments to help control GHG emissions.

California Global Warming Solution Act of 2006 (AB32):

Under Assembly Bill (AB) 32, CARB is responsible for monitoring and reducing GHG emissions in the state and for establishing a statewide GHG emissions cap for 2020 that is based on 1990 emissions levels. CARB has adopted the AB 32 Climate Change Scoping Plan (Scoping Plan), which contains the main strategies

for California to implement to reduce CO_2 equivalent (CO_2e) emissions by 169 million metric tons (MMT) from the state's projected 2020 emissions level of 596 MMT CO_2e under a business-as-usual scenario (CARB, 2017). The Scoping Plan breaks down the amount of GHG emissions reductions the CARB recommends for each emissions sector of the state's GHG inventory but does not directly discuss GHG emissions generated by construction activities.

Senate Bills (SB) 97 and 375:

- Pursuant to Senate Bill (SB) 97, the State Office of Planning and Research prepared, and the Natural Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. Effective as of March 2010, the revisions to the CEQA Environmental Checklist Form (Appendix G) and the Energy Conservation Appendix (Appendix F) provide a framework to address global climate change impacts in the CEQA process; State CEQA Guidelines section 15064.4 was also added to provide an approach for assessing impacts from GHGs.

- SB375 (effective January 1, 2009) requires CARB to develop regional reduction targets for GHG emissions and prompted the creation of regional land use and transportation plans to reduce emissions from passenger vehicle use throughout the state. The targets apply to the regions covered by California's 18 metropolitan planning organizations (MPOs). The 18 MPOs must develop regional land use and transportation plans and demonstrate an ability to attain the proposed reduction targets by 2020 and 2035.

The SCAQMD has proposed a "bright-line" screening level threshold of 3,000 metric tons/year CO_2e for all non-industrial land use types. This bright-line threshold is based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, Less than Significant impact on GHG emissions. SCAQMD's guidelines for analyzing a project's GHG impacts is to amortize project emissions over the life of the project, as defined as a 30-year period, add them to annual operation phase emissions and compare the emissions to the 3,000 metric tons/year CO_2e threshold of significance level to determine significance (SCAQMD 2008).

Many California counties and cities have developed climate action plans focusing on reducing GHGs from local sources, to facilitate meeting the state reduction targets of AB 32. To date, the County has not adopted a Climate Action Plan. It should be noted that the City has implemented a Climate Protection Action Plan to reduce manmade greenhouse gas emissions 7% below 1990 levels.

3.2.2 Explanations:

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

Less than Significant Impact. The Project is limited to and consists of rehabilitating the existing beach access infrastructure located at the Project site. The Project would generate GHG emissions during

construction from off-road equipment and on-road vehicle exhaust from worker vehicles and materials delivery. There would be no increase in operation phase emissions. As such, operation phase emissions are not considered to result in additional potential impacts to climate change.

As previously discussed in Section 3.1.2, results from the Pearl Street Beach Access Rehabilitation IS/MND are considered similar to the Project and have been used for purposes of evaluating potential GHG impacts of the Project. Detailed GHG emissions estimates for the Pearl Street Beach Access Rehabilitation IS/MND are included in **Appendix A**. **Table 7** below, presents a summary of the estimated total GHG emissions that would likely result from Project implementation.

Table 7: Total Estimated Project GHG Emissions

Project Phase	CO_2e	
Construction Emissions (lbs/day)[1]	1,708.8	
Construction Emissions (Total Metric Tons)	93	
Construction Emissions (Total Metric Tons; amortized over 30 years)	3.1	
Operation Emissions (annual)	No increase	
Interim SCAQMD Threshold (Total Metric Tons)		**3,000**
Project Emissions Exceed SCAQMD Threshold?		**No**

1= Based on 2016 Pearl Street Beach Access Rehabilitation IS/MND

As shown in **Table 7**, construction of the Project would emit an estimated 93 metric tons (MT) of CO_2e. When the emissions are amortized over 30 years in accordance with SCAQMD guidance, the 30-year annualized value is 3.1 MT of CO_2e per year. The 3.1 metric tons addition of CO_2e emissions is less than the 3,000 MT CO_2e significance threshold and the Project would therefore not generate greenhouse gas emissions, either directly or indirectly, that would have a substantial adverse effect on the environment and potential impacts would be less than significant.

b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. The State Legislature, enacted AB 32, the California Global Warming Solutions Act of 2006 which was signed on September 27, 2006, to further the goals of EO S-3-05 (Health and Safety Code, S38500 et seq.). AB 32 requires CARB to adopt statewide GHG emissions limits to achieve statewide GHG emissions levels at the same levels they were atmospherically in 1990 by the year 2020. A longer-range goal requires an 80% reduction in GHG emissions from 1990 levels by 2050. CARB adopted the 2020 statewide target and mandatory reporting requirements in December 2007 and the Scoping Plan in December 2008. SB 32, signed on September 8, 2016, expands on the mandate of AB 32 requiring CARB to ensure that state GHG emissions are reduced to 40 percent below the 1990 emission level by year 2030. Section 38566 is added to the current Health and Safety Code, which states “the State board shall ensure that Statewide greenhouse gas emissions are reduced to at

least 40 percent below the Statewide greenhouse gas emissions limit no later than December 31, 2030".

The Project does not include stationary sources of GHG emissions and is not subject to compliance with AB 32's cap-and-trade program. The City has enacted a Climate Protection Action Plan to reduce overall City emissions by 7% below 1990 levels. The City's plan is specific to the reduction of GHG associated with: buildings, transportation and land use, government operations, commercial operations, and water management. Specific reduction measures for land use encourage the use of drought-tolerant plant materials and low water irrigation techniques as well as transformation of public land into areas with shade trees, bike racks, and accommodations for pedestrians. These measures have been proposed for the Project. The Project's use of fuels during construction would be consistent with existing regulations related to low carbon fuel standards achieved through regulations placed on the fuel manufacturing and supply industry. Considering the above, as well as that the Project's GHG emissions would be below SCAQMD's thresholds of significance, the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Potential impacts would be less than significant.

4.0 REFERENCES

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Figures

Figure 1: Project Location

Project Location

0 250 500 Feet

(At original document size of 8.5x11)
1:6,000

N

Stantec

Project Location
Moss Street, City of Laguna Beach, Orange County, CA

Prepared by DL on 2021-03-15
TR by ST on 2021-03-15
IR by BG on 2021-03-15

Client/Project
2042603500
City of Laguna Beach
Moss Street Beach Access Rehabilitation
Air Quality Study

Figure No.
1

Title
Project Location Map

Notes
1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
2. Data Sources: Stantec 2021.
3. Background: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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Appendix A

AIR QUALITY and GHG IMPACT ANALYSES

PEARL STREET BEACH ACCESS

LAGUNA BEACH, CALIFORNIA

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Date:

September 15, 2016

Project No.: P16-051 A

METEOROLOGY / CLIMATE

The climate of the South-Central Orange County Coast, as with all of Southern California, is dominated by the strength and position of the semi-permanent high-pressure center over the Pacific Ocean near Hawaii. It creates cool summers, mild winters, infrequent rainfall, cool daytime sea breezes, comfortable humidity levels and ample sunshine. Unfortunately, the same atmospheric processes that create the desirable living climate combine to restrict the ability of the atmosphere to disperse the air pollution generated by the large population attracted in part by the comfortable climate. Portions of the Los Angeles Basin therefore experience some of the worst air quality in the nation for certain pollutants.

Temperatures in Laguna Beach average 62°F annually. Daily and seasonal oscillations of temperature are small because of the moderating effects of the nearby oceanic heat reservoir. In contrast to the steady temperature regime, rainfall is highly variable, and confined almost exclusively to the "rainy" period from early November to mid-April. Rainfall in the project area averages around 12 inches annually with January typically being the wettest month of the year.

Winds near the project site display several characteristic patterns. During the day, especially in summer, winds are from the west at 7-9 miles per hour. At night, especially in winter, the land becomes cooler than the ocean and an offshore wind of 3-5 miles per hour develops. After sunrise, the wind direction rotates through the southeast and south at 5-7 miles per hour until the west wind again becomes dominant in the early afternoon. One other important wind pattern occurs when a high pressure center forms over the western United States and creates strong, hot, dry, gusty, Santa Ana winds from the northeast and east across Orange County.

The net effect of the area wind pattern is that any locally generated air pollutant emissions will be carried from east to west at night and then reverse from west to east by day. Although the daytime wind-speeds are generally stronger and therefore better ventilate the project area, the offshore flow, once well-organized late in the evening and during the night, is also strong enough to minimize any significant localized air stagnation. The least ventilated period is typically during the morning and evening transition when winds become near calm until the new flow component becomes fully established.

In addition to winds that govern the horizontal rate and trajectory of any air pollutants, Southern California experiences several characteristic temperature inversions that control the vertical depth through which pollutants can be mixed. The daytime onshore flow of marine air is capped by a massive dome of warm air that acts like a giant lid over the basin. As the clean ocean air moves inland, pollutants are continually added from below without any dilution from above. As this layer slows down in inland valleys of the basin and undergoes photochemical transformations under abundant sunlight, it creates very unhealthful levels of smog (mainly ozone).

A second inversion forms at night as cool air pools in low elevations while the air aloft remains warm. Shallow radiation inversions are formed (especially in winter) that trap pollutants near intensive traffic sources such as freeways, shopping centers, etc., and form localized violations of clean air standards called "hot spots." Although inversions are found during all seasons of the

year, the regional capping inversion is far more prevalent in summer while the localized radiation inversions are strongest in winter. The strong seasonal split in inversion intensity thus contributes significantly to the completely different air quality climate found in summer in the project vicinity than in winter. Because traffic concentrations in the project area are only moderate, and because individual cars are becoming progressively "cleaner," air quality concerns in the project area are more centered on the regional, summertime intrusion of photochemical smog (ozone) rather than on any winter micro-scale stagnation conditions.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people 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, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to “non-attainment” for the 8-hour ozone standard.

Table 1

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards** [1]		**National Standards** [2]		
		Concentration [3]	**Method** [4]	**Primary** [3,5]	**Secondary** [3,6]	**Method** [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[10]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

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Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone 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 PM10, 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 PM2.5, 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. Contact the U.S. EPA for further clarification and current national policies.

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

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

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

    Note that 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.

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

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide ($NO_{2)}$ that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO_2 standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2030.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO_2) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO_2) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO_2 is typically not a problem pollutant.

BASELINE AIR QUALITY

Existing and probable future levels of air quality in the project area can be best inferred from ambient air quality measurements conducted by the SCAQMD at its Mission Viejo monitoring station at 26081 Via Pera. Monitoring at this station includes both regional pollutants such as dust and smog, as well as primary vehicular pollutants such as carbon monoxide. The nearest station monitoring for NO_2 is at the Anaheim station. Table 3 summarizes the last five years of published data from these monitoring stations. The following conclusions can be drawn from this data:

a. Photochemical smog (ozone) levels occasionally exceed standards. The 8-hour state ozone standard has been exceeded an less than two percent of all days in the past five years near Mission Viejo while the 1-hour state standard has been violated an average of one percent of all days. While ozone levels are still high, they are much lower than 10 to 20 years ago. For several years, the station at El Toro had the worst smog of any station in Orange County. In the last decade, however, Mission Viejo, and by inference all of South Orange County had some of the lowest smog readings on record.

b. Measurements of carbon monoxide show very low baseline levels in comparison to the most stringent one- and eight-hour standards.

c. Respirable dust (PM-10) levels very rarely exceed the state standard, while the less stringent federal PM-10 standard has never been violated since PM-10 measurements began at El Toro/ Mission Viejo.

d. The federal fine particulate (PM-2.5) standard of 35 $\mu g/m^3$ for 24-hours has not been exceeded during any measurement days in the last five years.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future. Historical monitoring data from San Juan Capistrano showed that air quality becomes incrementally better in moving south along I-5 through the Saddleback Valley. Baseline air quality in the project vicinity is likely even better than the mostly healthful levels shown in Table 3.

Table 3
Air Quality Monitoring Summary (2010-2014)
(Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)
(Entries shown as fractions = samples exceeding standard/samples taken)

Pollutant/Standard	2010	2011	2012	2013	2014
Ozone					
1-Hour > 0.09 ppm (S)	2	0	2	2	4
8-Hour > 0.07 ppm (S)	2	5	6	5	10
8- Hour > 0.075 ppm (F)	2	2	1	2	5
Max. 1-Hour Conc. (ppm)	0.117	0.094	0.096	0.104	0.115
Max. 8-Hour Conc. (ppm)	0.082	0.083	0.078	0.082	0.088
Carbon Monoxide					
1-hour > 20. ppm (S)	0	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0	0
Max 8-hour Conc. (ppm)	0.9	1.0	0.8	1.3	0.7
Nitrogen Dioxide					
1-Hour > 0.18 ppm (S)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.073	0.074	0.059	0.082	0.084
Inhalable Particulates (PM-10)					
24-hour > 50 $\mu g/m^3$ (S)	0/58	0/61	0/60	1/61	0/60
24-hour > 150 $\mu g/m^3$ (F)	0/58	0/61	0/60	0/61	0/60
Max. 24-Hr. Conc. ($\mu g/m^3$)	34.	47.	37.	51.	41.
Ultra-Fine Particulates (PM-2.5)					
24-Hour > 35 $\mu g/m^3$ (F)	0/116	0/110	0/123	0/117	0/xx
Max. 24-Hr. Conc. ($\mu g/m^3$)	20.	33.	28.	28.	25.

xx= data not available
S=State, F= Federal
Source: South Coast Air Quality Management District, Mission Viejo Monitoring Station (Ozone, CO, PM-10 and PM-2.5), Anaheim Station (NO_2).
DATA: www.arb.ca.gov/adam/

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NOx) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. The attainment date was anticipated to "slip" from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 requires control technologies that do not exist yet, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation will allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification sets a later attainment deadline (2024), but also requires the air basin to adopt even more stringent emissions controls.

Table 4

South Coast Air Basin Emissions Forecasts (Emissions in tons/day)

Pollutant	2012[a]	2015[b]	2020[b]	2025[b]	2030
NOx	512	451	357	289	266
VOC	466	429	400	393	393
PM-10	154	155	161	165	170
PM-2.5	68	67	67	68	170

[a]2012 Base Year.
[b]With current emissions reduction programs and adopted growth forecasts.
Source: California Air Resources Board, 2013 Almanac of CEPAM

In other air quality attainment plan reviews, EPA has disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA has stated that the current attainment plan relies on PM-2.5 control regulations that have not yet been approved or implemented. It is expected that a number of rules that are pending approval will remove the identified deficiencies. If these issues are not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the ARB submittal to EPA as part of the California State Implementation Plan (SIP) is expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked almost ten years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the 2012 AQMP contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP is believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP must therefore be adopted in 2016. Planning for the 2016 AQMP is currently on-going. The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2037
Annual PM-2.5 (12 μg/m^3)	2025
8-hour ozone (80 ppb)	2024 (old standard)
8-hour ozone (75 ppb)	2032 (current standard)
1-hour ozone (120 ppb)	2032 (rescinded standard)
24-hour PM-2.5 (35 μg/m^3)	2019

The key challenge is that NOx emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional NOx control measures are adopted and implemented, attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing costal access improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered "significant" if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

a. Conflicts with or obstructs implementation of the applicable air quality plan.

b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.

c. Results in a cumulatively considerable net increase of any criteria pollutants 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).

d. Exposes sensitive receptors to substantial pollutant concentrations.

e. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based

upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation

- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.

- Project could generate vehicle trips that cause a CO hot spot.

The SCAQMD CEQA Handbook also identifies various secondary significance criteria related to toxic, hazardous or odorous air contaminants. Except for the small diameter particulate matter ("PM-2.5") fraction of diesel exhaust generated by heavy construction equipment, there are no secondary impact indicators associated with residential project construction and subsequent occupancy.

For diesel particulate matter (DPM) exhaust emissions, adopted policies require the gradual conversion of delivery fleets to diesel alternatives, or the use of cleaner diesel engines whose emissions are demonstrated to be as low as those from alternative fuels. Similarly, off-road equipment used in construction activities is also becoming progressively cleaner every year. If phased project development occurs in the more distant future, DPM emissions from project construction equipment will be correspondingly less. Because health risks from toxic air contaminants (TAC's) are cumulative over an assumed 70-year lifespan, measurable off-site public health risk from diesel TAC exposure would occur for only a brief portion of a project lifetime, and only in dilute quantity.

SENSITIVE RECEPTORS

Air quality impacts are analyzed relative to those persons with the greatest sensitivity to air pollution exposure. Such persons are called "sensitive receptors." Sensitive population groups include young children, the elderly and the acutely and chronically ill (especially those with cardio-respiratory disease).

Residential areas are considered to be sensitive to air pollution exposure because they may be occupied for extended periods, and residents may be outdoors when exposure is highest. Schools are similarly considered to be sensitive receptors. The proposed project site is surrounded by residential uses on the inland sides. These uses are considered the closest sensitive receptors.

CONSTRUCTION ACTIVITY IMPACTS

Improved beach access is not expected to create any measurable increase in beach visitors. A few more visitors may partake of enhanced overlooks or seating than current users, and a few more persons with disabilities may visit the access points that are currently not accessible. No operational air quality impacts will result from project implementation. Any impact potential will derive exclusively from construction activities.

Dust is typically the primary concern during construction of new buildings. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). These parameters are not known with any reasonable certainty prior to project development and may change from day to day. Any assignment of specific parameters to an unknown future date is speculative and conjectural.

Because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal "default" factor based on the area disturbed assuming that all other input parameters into emission rate prediction fall into midrange average values. This assumption may or may not be totally applicable to site-specific conditions on the proposed project site. As noted previously, emissions estimation for project-specific fugitive dust sources is therefore characterized by a considerable degree of imprecision.

Average daily PM-10 emissions during site grading and other disturbance are shown in the CalEEMod2013.2.2 computer model to be about 10 pounds per acre. This estimate presumes the use of reasonably available control measures (RACMs). The SCAQMD requires the use of best available control measures (BACMs) for fugitive dust from construction activities.

Current research in particulate-exposure health suggests that the most adverse effects derive from ultra-small diameter particulate matter comprised of chemically reactive pollutants such as sulfates, nitrates or organic material. A national clean air standard for particulate matter of 2.5 microns or smaller in diameter (called "PM-2.5") was adopted in 1997. A limited amount of construction activity particulate matter is in the PM-2.5 range. PM-2.5 emissions are estimated to comprise 10-20 percent of PM-10.

In addition to fine particles that remain suspended in the atmosphere semi-indefinitely, construction activities generate many larger particles with shorter atmospheric residence times. This dust is comprised mainly of large diameter inert silicates that are chemically non-reactive and are further readily filtered out by human breathing passages. These fugitive dust particles are therefore more of a potential soiling nuisance as they settle out on parked cars, outdoor furniture or landscape foliage rather than any adverse health hazard.

CalEEMod was developed by the SCAQMD to provide a model by which to calculate construction emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The project proposes to restore and enhance coastal access facilities at Pearl Street. Although exhaust emissions will result from on and off-site equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. The CalEEMod2013.2.2 computer model was used to calculate emissions from the prototype construction equipment fleet and schedule identified by project engineering as indicated in Table 6.

Table 6

CalEEMod Construction Activity Equipment Fleet and Workdays

Grading and Construction 4 months	1 Drill Rig
	1 Air Compressor (for Jack Hammer)
	1 Loader/Backhoe

Utilizing the indicated equipment fleet shown in Tables 6 the following worst case daily construction emissions are calculated by CalEEMod and are listed in Table 7.

Table 7

Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5	CO_2 (e)
2017	1.1	10.4	8.3	0.0	1.6	1.1	1,708.8
SCAQMD Thresholds	75	100	550	150	150	55	-

Source: CalEEMod.2013.2.2 output in appendix

Peak daily construction activity emissions are below their respective SCAQMD CEQA significance thresholds without the need for any additional mitigation.

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LST screening tables are available various source-receptor distances. For this project the most stringent receptor distance of 25 meters was selected for analysis to represent impact on residences adjacent to the project sites.

LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this analysis the most stringent threshold for a 1 acre site was utilized. The following thresholds and emissions in Table 8 are determined (pounds per day).

Table 8
LST and Project Emissions (pounds/day)

LST 1.0 acres/25 meters Central Coastal OC	CO	NO_2	PM-10	PM-2.5
	647	92	4	3
Max On-Site Emissions 2017	8	10	2	1

CalEEMod Output in Appendix

LSTs for the nearest residential use were compared to the maximum daily construction activities. As seen above, all emissions are below the LST thresholds for construction.

CONSTRUCTION EMISSIONS MITIGATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, mitigation through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin and because of the proximity of existing homes. Recommended mitigation includes:

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Prepare and implement a high wind dust control plan.
- Stabilize previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces as needed to avoid visible dust.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone.
- Cover all trucks hauling dirt, sand, or loose material.
- Sweep streets daily if visible soil material is carried out from the construction site

Similarly, ozone precursor emissions (ROG and NOx) are calculated to be below SCAQMD CEQA thresholds during construction. However, because of the non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Recommended combustion emissions control includes:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3-rated or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

GREENHOUSE GAS EMISSIONS

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been

developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

Greenhouse Gas Emissions Significance Thresholds

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,

- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to "select the model or methodology it considers most appropriate." The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO_2 equivalent/year. In September 2010, the Working Group released revisions which recommended a threshold of 3,000 MT CO_2e for all land use types. This 3,000 MT/year recommendation has been used as a guideline for this analysis.

Construction Activity GHG Emissions

The build-out timetable is estimated by CalEEMod to be approximately four months. During project construction, the CalEEMod computer model predicts that the construction activities will generate the annual CO_2(e) emissions identified in Table 9. Because the SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime, the amortized annual total is also presented.

Table 9
Construction Emissions (Metric Tons CO_2(e))

Year 2017	65.5
Amoritized	2.2
Significance Threshold	3,000

*CalEEMod Output provided in appendix

GHG impacts from construction are considered less-than-significant.

APPENDIX

CALEEMOD2013.2.2 COMPUTER MODEL OUTPUT

- Daily Emissions (lbs per day)
- Annual Emissions (tons per year)

Pearl St Beach Access

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.10	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Beach Access Improvement Project

Construction Phase - Modeled under grading, 85 days

Off-road Equipment - 2 loader/backhoes, 1 air compressor for jackhammer, 1 drill rig all 6 hrs per day

Trips and VMT - 20 worker trips (10 workers), 2 vendor trips per day

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	85.00
tblConstructionPhase	PhaseEndDate	4/28/2017	4/30/2017
tblLandUse	LotAcreage	0.00	0.10
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.1329	10.4218	8.3148	0.0175	0.9888	0.6193	1.6081	0.4766	0.5836	1.0603	0.0000	1,700.5641	1,700.5641	0.3928	0.0000	1,708.8134
Total	**1.1329**	**10.4218**	**8.3148**	**0.0175**	**0.9888**	**0.6193**	**1.6081**	**0.4766**	**0.5836**	**1.0603**	**0.0000**	**1,700.5641**	**1,700.5641**	**0.3928**	**0.0000**	**1,708.8134**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.1329	4.8180	8.3148	0.0175	0.5748	0.6193	1.1941	0.2491	0.5836	0.8327	0.0000	1,700.5641	1,700.5641	0.3928	0.0000	1,708.8134
Total	**1.1329**	**4.8180**	**8.3148**	**0.0175**	**0.5748**	**0.6193**	**1.1941**	**0.2491**	**0.5836**	**0.8327**	**0.0000**	**1,700.5641**	**1,700.5641**	**0.3928**	**0.0000**	**1,708.8134**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**53.77**	**0.00**	**0.00**	**41.87**	**0.00**	**25.75**	**47.75**	**0.00**	**21.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	4/30/2017	5	85	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	6.00	205	0.50
Grading	Air Compressors	1	6.00	78	0.48
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.0427	10.1696	6.9531	0.0142		0.6150	0.6150		0.5797	0.5797		1,428.8191	1,428.8191	0.3813		1,436.8257
Total	**1.0427**	**10.1696**	**6.9531**	**0.0142**	**0.7528**	**0.6150**	**1.3678**	**0.4138**	**0.5797**	**0.9934**		**1,428.8191**	**1,428.8191**	**0.3813**		**1,436.8257**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0153	0.1582	0.1876	4.3000e-004	0.0125	2.5200e-003	0.0150	3.5600e-003	2.3100e-003	5.8800e-003		42.9334	42.9334	3.0000e-004		42.9398
Worker	0.0749	0.0940	1.1741	2.8300e-003	0.2236	1.8000e-003	0.2254	0.0593	1.6600e-003	0.0610		228.8115	228.8115	0.0113		229.0479
Total	**0.0902**	**0.2522**	**1.3617**	**3.2600e-003**	**0.2361**	**4.3200e-003**	**0.2404**	**0.0629**	**3.9700e-003**	**0.0668**		**271.7449**	**271.7449**	**0.0116**		**271.9877**

3.2 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	1.0427	4.5658	6.9531	0.0142		0.6150	0.6150		0.5797	0.5797	0.0000	1,428.8191	1,428.8191	0.3813		1,436.8257
Total	**1.0427**	**4.5658**	**6.9531**	**0.0142**	**0.3387**	**0.6150**	**0.9537**	**0.1862**	**0.5797**	**0.7659**	**0.0000**	**1,428.8191**	**1,428.8191**	**0.3813**		**1,436.8257**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0153	0.1582	0.1876	4.3000e-004	0.0125	2.5200e-003	0.0150	3.5600e-003	2.3100e-003	5.8800e-003		42.9334	42.9334	3.0000e-004		42.9398
Worker	0.0749	0.0940	1.1741	2.8300e-003	0.2236	1.8000e-003	0.2254	0.0593	1.6600e-003	0.0610		228.8115	228.8115	0.0113		229.0479
Total	**0.0902**	**0.2522**	**1.3617**	**3.2600e-003**	**0.2361**	**4.3200e-003**	**0.2404**	**0.0629**	**3.9700e-003**	**0.0668**		**271.7449**	**271.7449**	**0.0116**		**271.9877**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Pearl St Beach Access

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.10	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Beach Access Improvement Project

Construction Phase - Modeled under grading, 85 days

Off-road Equipment - 2 loader/backhoes, 1 air compressor for jackhammer, 1 drill rig all 6 hrs per day

Trips and VMT - 20 worker trips (10 workers), 2 vendor trips per day

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	85.00
tblConstructionPhase	PhaseEndDate	4/28/2017	4/30/2017
tblLandUse	LotAcreage	0.00	0.10
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0481	0.4438	0.3519	7.4000e-004	0.0418	0.0263	0.0682	0.0202	0.0248	0.0450	0.0000	65.1398	65.1398	0.0152	0.0000	65.4579
Total	**0.0481**	**0.4438**	**0.3519**	**7.4000e-004**	**0.0418**	**0.0263**	**0.0682**	**0.0202**	**0.0248**	**0.0450**	**0.0000**	**65.1398**	**65.1398**	**0.0152**	**0.0000**	**65.4579**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0481	0.2056	0.3519	7.4000e-004	0.0243	0.0263	0.0506	0.0105	0.0248	0.0353	0.0000	65.1397	65.1397	0.0152	0.0000	65.4578
Total	**0.0481**	**0.2056**	**0.3519**	**7.4000e-004**	**0.0243**	**0.0263**	**0.0506**	**0.0105**	**0.0248**	**0.0353**	**0.0000**	**65.1397**	**65.1397**	**0.0152**	**0.0000**	**65.4578**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**53.67**	**0.00**	**0.00**	**42.04**	**0.00**	**25.81**	**47.85**	**0.00**	**21.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2017	4/30/2017	5	85	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	6.00	205	0.50
Grading	Air Compressors	1	6.00	78	0.48
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	20.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0320	0.0000	0.0320	0.0176	0.0000	0.0176	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0443	0.4322	0.2955	6.0000e-004		0.0261	0.0261		0.0246	0.0246	0.0000	55.0886	55.0886	0.0147	0.0000	55.3973
Total	**0.0443**	**0.4322**	**0.2955**	**6.0000e-004**	**0.0320**	**0.0261**	**0.0581**	**0.0176**	**0.0246**	**0.0422**	**0.0000**	**55.0886**	**55.0886**	**0.0147**	**0.0000**	**55.3973**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.9000e-004	7.0200e-003	9.3900e-003	2.0000e-005	5.2000e-004	1.1000e-004	6.3000e-004	1.5000e-004	1.0000e-004	2.5000e-004	0.0000	1.6495	1.6495	1.0000e-005	0.0000	1.6497
Worker	3.0500e-003	4.5200e-003	0.0470	1.1000e-004	9.3300e-003	8.0000e-005	9.4000e-003	2.4800e-003	7.0000e-005	2.5500e-003	0.0000	8.4017	8.4017	4.3000e-004	0.0000	8.4108
Total	**3.7400e-003**	**0.0115**	**0.0564**	**1.3000e-004**	**9.8500e-003**	**1.9000e-004**	**0.0100**	**2.6300e-003**	**1.7000e-004**	**2.8000e-003**	**0.0000**	**10.0512**	**10.0512**	**4.4000e-004**	**0.0000**	**10.0606**

3.2 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0144	0.0000	0.0144	7.9100e-003	0.0000	7.9100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0443	0.1941	0.2955	6.0000e-004		0.0261	0.0261		0.0246	0.0246	0.0000	55.0886	55.0886	0.0147	0.0000	55.3973
Total	**0.0443**	**0.1941**	**0.2955**	**6.0000e-004**	**0.0144**	**0.0261**	**0.0405**	**7.9100e-003**	**0.0246**	**0.0326**	**0.0000**	**55.0886**	**55.0886**	**0.0147**	**0.0000**	**55.3973**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.9000e-004	7.0200e-003	9.3900e-003	2.0000e-005	5.2000e-004	1.1000e-004	6.3000e-004	1.5000e-004	1.0000e-004	2.5000e-004	0.0000	1.6495	1.6495	1.0000e-005	0.0000	1.6497
Worker	3.0500e-003	4.5200e-003	0.0470	1.1000e-004	9.3300e-003	8.0000e-005	9.4000e-003	2.4800e-003	7.0000e-005	2.5500e-003	0.0000	8.4017	8.4017	4.3000e-004	0.0000	8.4108
Total	**3.7400e-003**	**0.0115**	**0.0564**	**1.3000e-004**	**9.8500e-003**	**1.9000e-004**	**0.0100**	**2.6300e-003**	**1.7000e-004**	**2.8000e-003**	**0.0000**	**10.0512**	**10.0512**	**4.4000e-004**	**0.0000**	**10.0606**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix C BIOLOGICAL RESOURCES SURVEY RESULTS

Stantec

Memo

To:	Gill Ruiz Stantec	From:	Jared Varonin Stantec
File:	2042603500	Date:	July 19, 2021

Reference: Moss Street Beach Access Rehabilitation Project

To support the preparation of the Initial Study Mitigated Negative Declaration for the Moss Street Beach Assess Rehabilitation Project (Project) a baseline biological survey of the Project and adjacent areas was conducted on March 16, 2021. This memorandum summarizes the results of the survey and desktop review conducted in support of the proposed Project.

Mapping of plant communities followed the classification system described in the second edition of *A Manual of California Vegetation* (Sawyer et al. 2009[1]). Species' scientific and common names correspond to those described in the second edition of *The Jepson Manual* (Baldwin et al. 2012[2]). One vegetation community described by Sawyer et al. 2009 and three other land cover types were mapped within the proposed Project site and a 300-foot buffer (Biological Study Area or BSA); refer to Appendix A Figure 1.

VEGETATION COMMUNITIES

DISTURBED QUAILBUSH SCRUB (ATRIPLEX LENTIFORMIS SHRUBLAND ALLIANCE)

A small patch of quailbush scrub occurs within the central portion of the BSA; this community is dominated by quailbush (*Atriplex lentiformis*). Mulefat (*Baccharis salicifolia*) and ngaio tree (*Myoporum laetum*) were also present within this community.

LAND COVER TYPES

BEACH/BLUFFS

This land cover type is found at the bottom of the beach access staircase and includes the rocky bluffs/cliffs above the ocean, large rocks, sandy areas, and the Pacific Ocean.

OPEN OCEAN

This land cover type encompasses the open water areas of the Pacific Ocean.

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[1] Sawyer et al. 2009. Manual of California Vegetation, 2nd edition: Online Manual. http://vegetation.cnps.org/. . Accessed March 2021.

[2] Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, D.H. Wilken (eds.) 2012. The Jepson Manual: Vascular Plants of California, 2nd ed. University Press, Berkeley, California.

Reference: **Moss Street Beach Access Rehabilitation Project**

DISTURBED/DEVELOPED

This land cover type was used to map portions of the BSA that are disturbed or developed; these areas are generally located west of the beach areas. Paved roads and residential areas dominate this land cover type.

JURISDICTIONAL WATERS AND WETLANDS

Based on the data collected in the field, other than the Pacific Ocean itself, there are no jurisdictional features within the BSA. There is a single concrete-lined drainage, that collects runoff from the adjacent roads, and traverses southwest on Moss Street into a storm drain; this drain outlets to the Pacific Ocean. The storm drain outlets on rocky bluffs above the water line and is not directly connected to the Pacific Ocean. However, no portion of the Project area meets the three criteria for federal wetlands (dominance of hydrophytic vegetation, evidence of wetland hydrology, and hydric soils), and no surface water was present during the survey event.

According to the National Wetlands Inventory, the BSA includes and is adjacent to estuarine and marine wetlands categorized as M2RSP (marine, intertidal, rocky shore, and irregularly flooded), M2RSN (marine, intertidal, rocky shore, and regularly flooded), M2USP (marine, intertidal, unconsolidated shore, and irregularly flooded), and M2USN (marine, intertidal, unconsolidated shore, and regularly flooded)(United States Fish and Wildlife Service, 2021[3]).

COMMON WILDLIFE

Common wildlife directly observed onsite was limited to four birds; brown pelican (*Pelecanus occidentalis*), California gull (*Larus californicus*), and double-crested cormorant (*Phalacrocorax auratus*); no other wildlife species were observed during the March 16, 2021 survey event. Common species known to occur in the general area, but not observed, include (but are not limited to) long-billed curlew (*Numenius americanus*), western gull (*Larus occidentalis*), American crow (*Corvus brachyrhynchos*), and house finch (*Haemorhous mexicanus*).

SPECIAL-STATUS WILDLIFE

Special-status taxa include those listed as threatened or endangered under the FESA or CESA, taxa proposed for such listing, Species of Special Concern, and other taxa that have been identified by USFWS, CDFW, or local jurisdictions as unique or rare and that have the potential to occur within the BSA.

The CNDDB was queried for occurrences of special-status wildlife taxa within the USGS topographical quadrangles in which the BSA occurs and the eight surrounding quadrangles. Table 1 in Attachment B summarizes the special-status wildlife taxa known to occur regionally and their potential for occurrence in the BSA (Attachment A, Figures 2 and 4 provide a depiction of previously reported species locations). Each of the

[3] United States Fish and Wildlife Service. 2021. National Wetlands Inventory. https://www.fws.gov/wetlands/index.html. Accessed March 2021.

taxa identified in the database reviews/searches were assessed for its potential to occur within the BSA based on the following criteria:

- **Present**: Taxa (or sign) were observed in the BSA or in the same watershed (aquatic taxa only) during the most recent surveys, or a population has been acknowledged by CDFW, USFWS, or local experts.
- **High**: Habitat (including soils) for the taxa occurs onsite, and a known occurrence occurs within the BSA or adjacent areas (within 5 miles of the BSA) within the past 20 years; however, these taxa were not detected during the most recent surveys.
- **Moderate**: Habitat (including soils) for the taxa occurs onsite, and a known regional record occurs within the database search, but not within 5 miles of the BSA or within the past 20 years; or a known occurrence occurs within 5 miles of the BSA and within the past 20 years and marginal or limited amounts of habitat occurs onsite; or the taxa's range includes the geographic area and suitable habitat exists.
- **Low**: Limited habitat for the taxa occurs within the BSA and no known occurrences were found within the database search and the taxa's range includes the geographic area.
- **Not Likely to Occur**: The environmental conditions associated with taxa presence do not occur within the BSA.

Based on the results of the literature and database review (see Attachment B), a total of 52 special-status wildlife species were found to historically occur within 10 miles of the BSA. These species were evaluated for their potential to occur in the proposed Project area based on considerations of local records, habitat conditions, and environmental requirements. After this review, ten special-status wildlife species were considered to have some potential to occur at or near the proposed Project site. No special-status wildlife species or their sign were observed during the March 16, 2021 survey.

SPECIAL-STATUS PLANTS

Table 2 in Attachment C presents a list of special-status plants, including federally and state listed species and CRPR 1-4 species that are known to occur within 10 miles of the BSA or within the USGS 7.5-minute quadrangles including and surrounding the BSA (refer to Attachment C, Figures 3 and 4 provide a depiction of known species locations).

Record searches of the CNDDB, the CNPS Online Inventory, and the Consortium of Critical Herbaria was performed for special-status plant taxa. Each of the taxa identified in the record searches was assessed for their potential to occur within the BSA based on the following criteria:

- **Present**: Taxa were observed within the BSA during recent botanical surveys or population has been acknowledged by CDFW, USFWS, or local experts.
- **High**: Both a documented recent record (within 10 years) exists of the taxa within the BSA or immediate vicinity (approximately 5 miles) and the environmental conditions (including soil type) associated with taxa presence occur within the BSA.

- **Moderate**: Both a documented recent record (within 10 years) exists of the taxa within the BSA or the immediate vicinity (approximately 5 miles) and the environmental conditions associated with taxa presence are marginal or limited within the BSA, or the BSA is located within the known current distribution of the taxa and the environmental conditions (including soil type) associated with taxa presence occur within the BSA.
- **Low**: A historical record (over 10 years) exists of the taxa within the BSA or general vicinity (approximately 10 miles), and the environmental conditions (including soil type) associated with taxa presence are marginal or limited within the BSA.
- **Not Likely to Occur**: The environmental conditions associated with taxa presence do not occur within the BSA.

Based on the results of the literature and database (see Attachment C), a total of 32 special-status plant species were found to historically occur within 10 miles of the Project area. These species were evaluated for their potential to occur in the proposed Project area based on considerations of local records, habitat conditions, and environmental requirements. After this evaluation, 7 special-status plant species were considered to have some potential to occur at or near the proposed Project site. No special-status plant species or their sign ere observed during the March 2021 survey.

SPECIAL-STATUS NATURAL COMMUNITIES

Special-status natural communities are defined by CDFW (2009) as, "...communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." All vegetation within the state is ranked with an "S" rank; however, only those that are of special concern (S1-S3 rank) are evaluated under CEQA. None of the vegetation communities identified within the BSA are listed as sensitive. Quailbush scrub (*Atriplex lentiformis* Shrubland Alliance), the only vegetation community mapped within the BSA, has a state rank of S4/Apparently secure; at a fairly low risk of extirpation in the jurisdiction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.

The Laguna Beach General Plan Land Use Element (date) defines environmental sensitive habitat areas (ESHA) as the following:

environmentally sensitive area as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

ESHAs are areas in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. The small area of quailbush scrub within the BSA may meet the definition of ESHA as presented above.

Reference: **Moss Street Beach Access Rehabilitation Project**

DESIGNATED CRITICAL HABITAT

Designated Critical Habitat (DCH) is defined by the USFWS (2020b) as, "…a term defined and used in the FESA. It is specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. DCH may also include areas that are not currently occupied by the species but will be needed for its recovery."

There is no DCH mapped within the BSA. The nearest mapped DCH for wildlife species is approximately 1.3 miles to the southeast for tidewater goby and approximately 1.3 miles to the southeast for coastal California gnatcatcher; suitable habitat for these species is not present in the BSA. DCH for one plant species, thread-leaved brodia, occurs approximately 2.3 miles to the east; suitable habitat and substrate is not present within the BSA.

Stantec Consulting Services Inc.

Jared Varonin CRAM, CFP
Principal Biologist, Ecosystems Practice Leader

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Attachment: Attachment A – Figures
Attachment B – Known and Potential Occurrences of Special-Status Plant Taxa within the Biological Study Area
Attachment C– Known and Potential Occurrences of Special-Status Wildlife Taxa within the Biological Study Area

Project Site

Biological Survey Area

Vegetation Types

Saltbush Scrub

Beach/Bluffs

Open Ocean

Disturbed/Developed

Notes

1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet

2. Data Sources: Stantec 2021

3. Background: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

0 90 180 Feet

(At original document size of 8.5x11)
1:2,400

N

Stantec

Project Location
Laguna Beach,
Orange County, CA

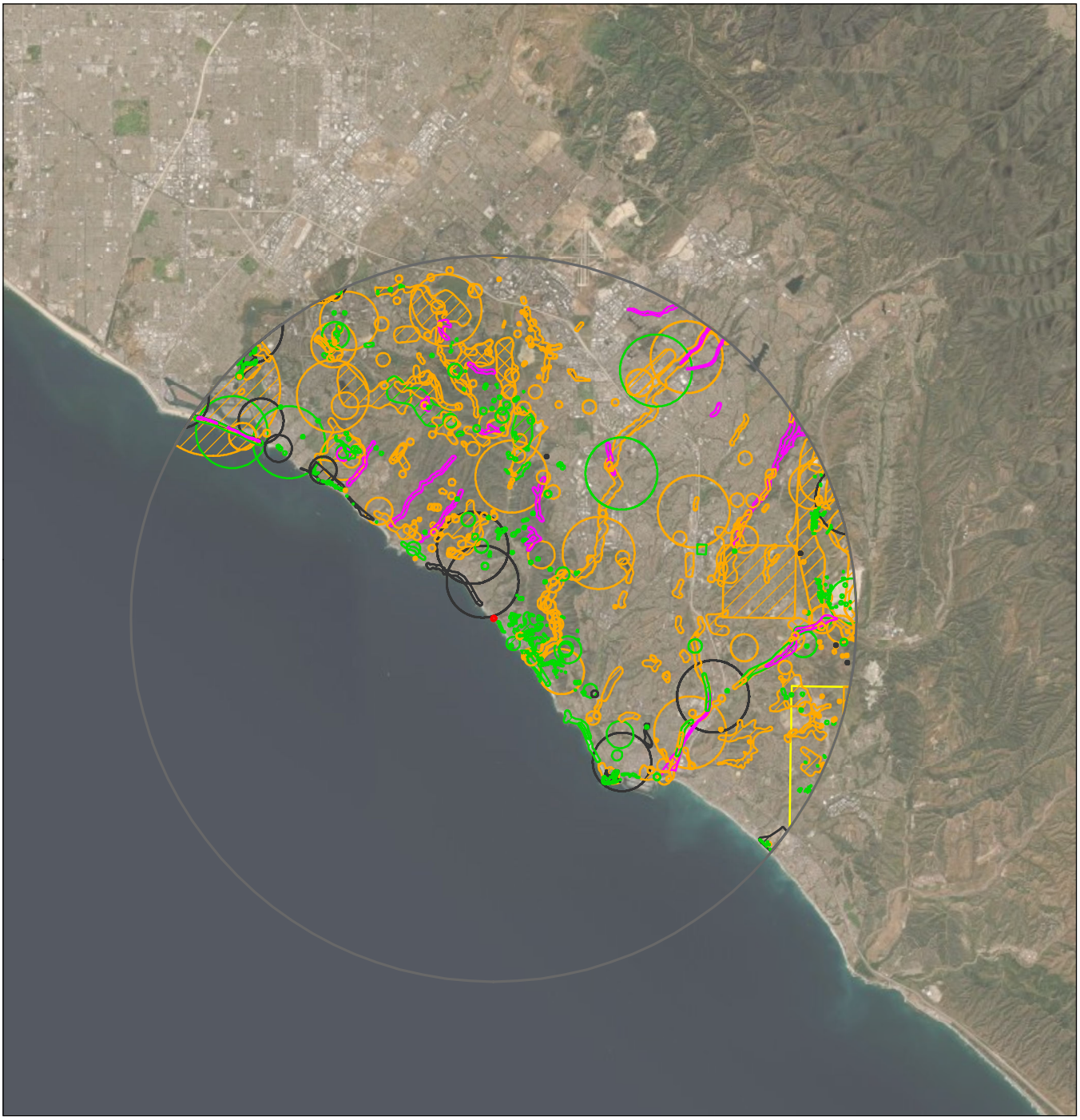
Prepared by KM on 2021-03-31
TR by ST on 2021-03-31
IR by JV on 2021-04-01

Client/Project 2042603500 REVA
City of Laguna Beach
Moss Street Beach Access Rehabilitation Project
Initial Study and Mitigated Negative Declaration

Figure No.
1

Title
Vegetation Communities and Land Cover Types

V:\1858\Active\2042603500 MossStreet\mxd\Vegetation 033122021.mxd Revised: 2021-07-16 By: Dalaw



Project Site
10 Mile Search Radius

Symbology

Plant (80m)
Plant (specific)
Plant (non-specific)
Plant (circular)
Animal (80m)
Animal (specific)
Animal (non-specific)
Animal (circular)
Terrestrial Comm. (specific)
Terrestrial Comm. (circular)
Multiple (80m)
Multiple (specific)
Multiple (non-specific)
Multiple (circular)
Sensitive EO's (Commercial only)

0 3,400 6,800 metres

(At original document size of 8.5x11)
1:268,080

N

Stantec

Notes

1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
2. Data Sources: CNDDB, 28 February 2021
3. Background: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Project Location
Laguna Beach,
Orange County, CA

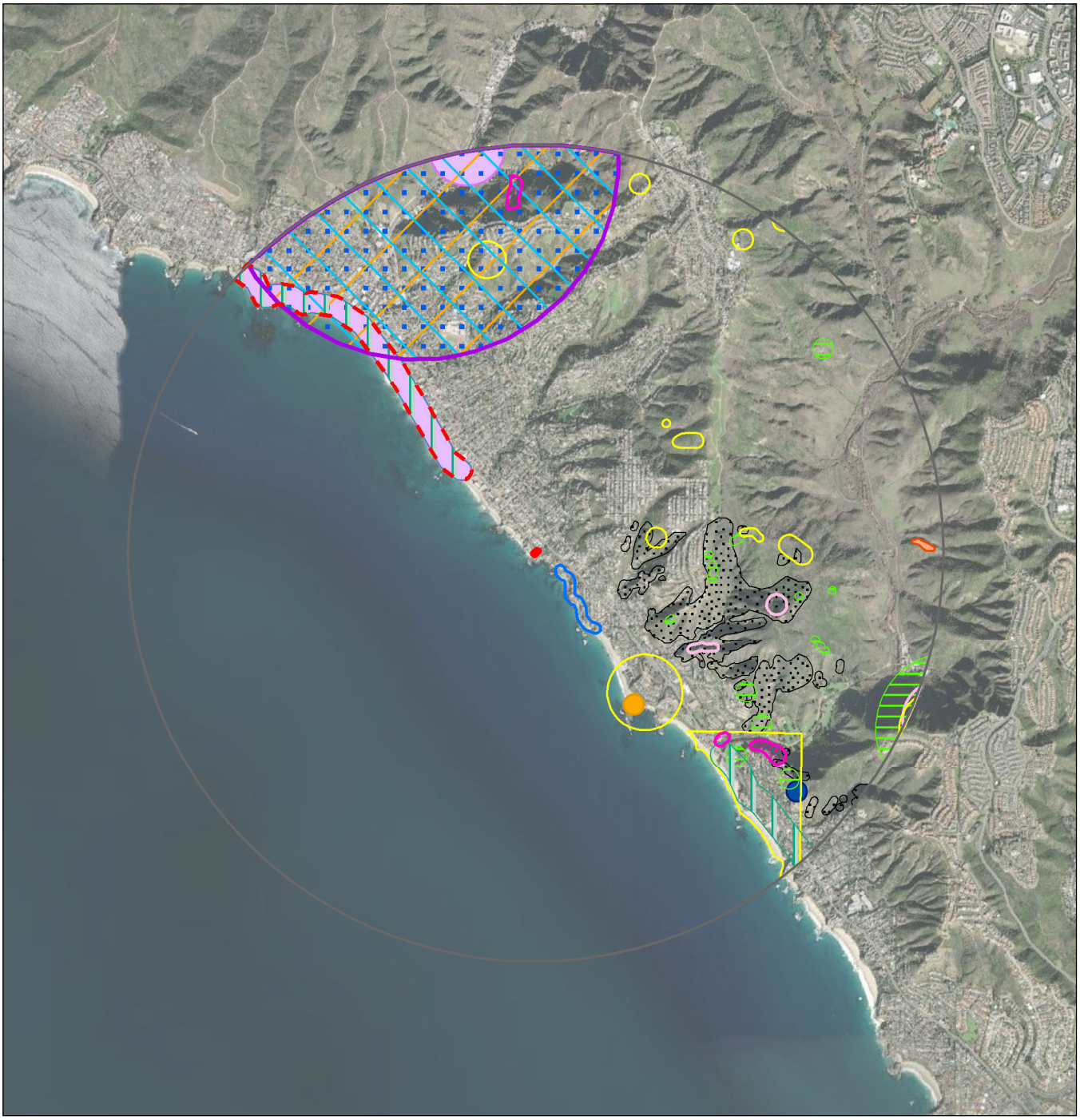
Prepared by DL on 2021-07-15
TR by SET on 2021-07-15
IR by JV on 2021-07-15

Client/Project
2042603500
City of Laguna Beach
Moss Street Beach Access Rehabilitation Project
Initial Study and Mitigated Negative Declaration

Figure No.
2

Title
10 Mile CNDDB Search

V:\1858\Active\2042603500_MossStreet\mxd\10MileCNDDB_03312021.mxd Revised: 2021-07-16 By: Dalaw



Project Site
2 Mile Search Radius

Plants

Coulter's saltbush
Davidson's saltscale
Laguna Beach dudleya
Nuttall's scrub oak
Orcutt's pincushion
Parish's brittlescale
aphanisma
big-leaved crownbeard
cliff spurge
decumbent goldenbush
intermediate mariposa-lily
many-stemmed dudleya
mesa horkelia
prostrate vernal pool navarretia
south coast saltscale
summer holly

0 1,900 3,800 Feet

(At original document size of 8.5x11)
1:48,000

N

Stantec

Project Location
Laguna Beach,
Orange County, CA

Prepared by DL on 2021-07-15
TR by SET on 2021-07-15
IR by JV on 2021-07-15

Client/Project
City of Laguna Beach
Moss Street Beach Access Rehabilitation Project
Initial Study and Mitigated Negative Declaration

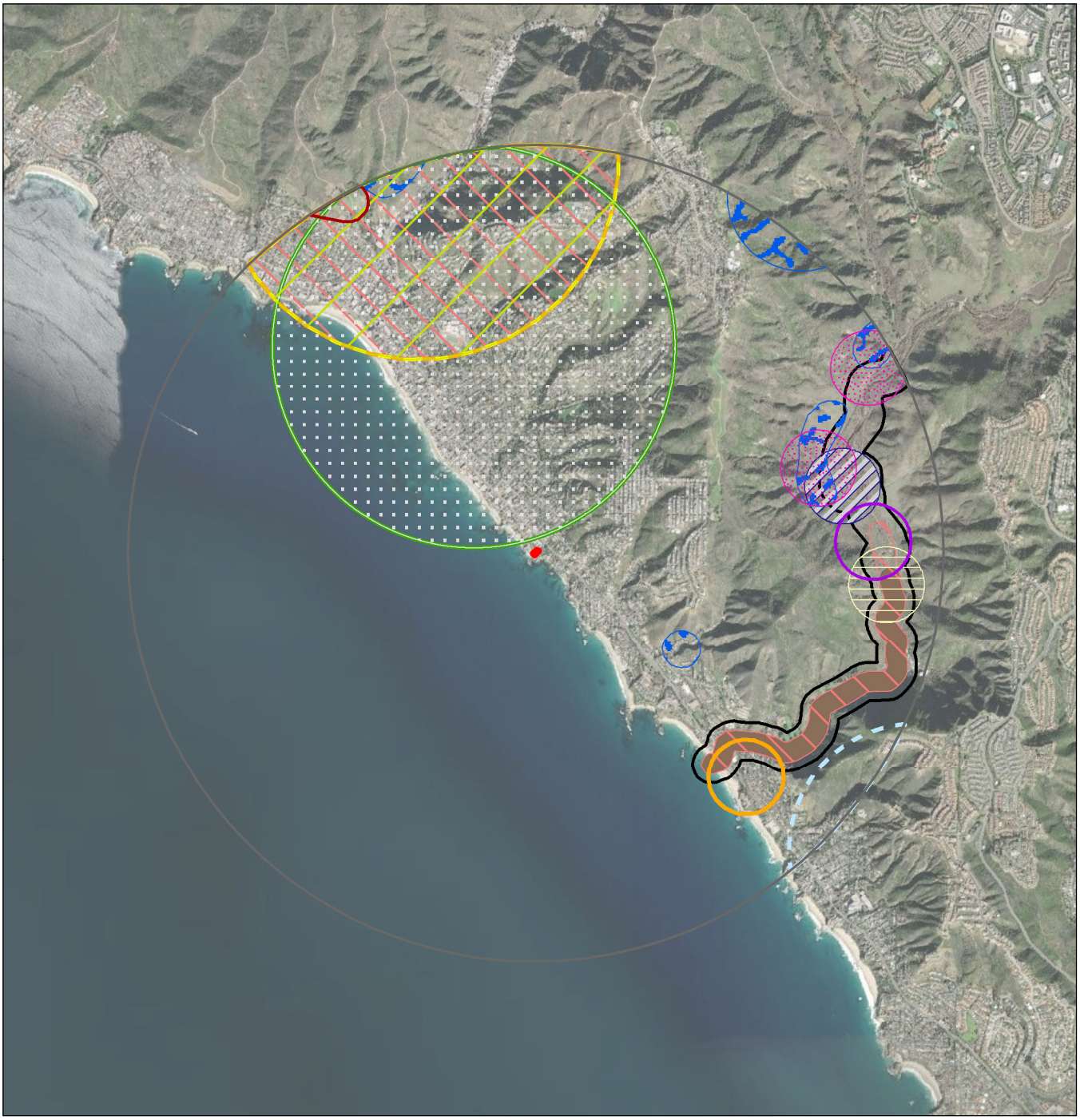
2042603500 REVA

Figure No.
3

Title
2 Mile CNDDB Search - Plants

Notes
1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
2. Data Sources: CNDDB, 28 February 2021
3. Background: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

V:\1858\Active\2042603500_MossStreet\mxd\2MileCNDDB_03312021.mxd Revised: 2021-07-16 By: Dalaw



Project Site
2 Mile Search Radius

Animals

Cooper's hawk
Crotch bumble bee
Southern California legless lizard
coast horned lizard
coastal California gnatcatcher
coastal cactus wren
coastal whiptail
least Bell's vireo
orange-throated whiptail
southern California rufous-crowned sparrow
steelhead - southern California DPS
tidewater goby
tricolored blackbird
western pond turtle
western spadefoot

0 1,900 3,800 Feet

(At original document size of 8.5x11)
1:48,000

N

Stantec

Project Location
Laguna Beach,
Orange County, CA

Prepared by DL on 2021-07-15
TR by SET on 2021-07-15
IR by JV on 2021-07-15

Client/Project
City of Laguna Beach
Moss Street Beach Access Rehabilitation Project
Initial Study and Mitigated Negative Declaration

2042603500 REVA

Figure No.
4

Title
2 Mile CNDDB Search - Animals

Notes
1. Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet
2. Data Sources: CNDDB, 28 February 2021
3. Background: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Table 1: Known and Potential Occurrences of Special-Status Plant Taxa within the Biological Study Area

Species	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Aphanisma blitoides aphanisma	**1B.2, S2**	Coastal bluff scrub, coastal dunes, coastal scrub; about 1-305 m.	Feb - Jun	**Not Likely to Occur:** Limited suitable habitat and substrate is present within the BSA. The nearest recorded occurrence is immediately south of BSA however it was from 1932.
Atriplex coulteri Coulter's saltbush	**1B.2, S1S2**	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland, ocean bluffs, ridgetops, as well as alkaline low places; alkaline, dry, or clay soils; 2-460 m.	Mar-Oct	**Not Likely to Occur:** Limited suitable habitat and substrate is present within the BSA. The nearest recorded occurrence is immediately north of BSA however it was from 1918.
Atriplex pacifica south coast saltscale	**1B.2, S2**	Coastal bluff scrub, coastal dunes, coastal scrub, playas; about 0-140 m.	Mar-Oct	**Not Likely to Occur:** Limited suitable habitat and substrate is present within the BSA. The nearest recorded occurrence is immediately north of BSA however it was from 1927.
Atriplex parishii Parish's brittlescale	**1B.1, S1**	Native to central and southern California often found in dry lake beds, playas, and ephemeral vernal pools; chenopod scrub; saline and alkaline soils; 0-470 m.	Jun-Oct	**Not Likely to Occur:** Limited suitable habitat and substrate is present within the BSA. The nearest recorded occurrence immediately north of BSA however it was from 1907.
Atriplex serenana var. *davidsonii* Davidson's saltscale	**1B.2, S1**	Coastal scrub, bluffs, chenopod scrub, playas, and vernal pools from southern California to Baja California, Mexico; alkaline soils; 10-200 m.	Apr-Oct	**Not Likely to Occur:** Limited suitable habitat and substrate is present within the BSA. The nearest recorded occurrence is immediately north of BSA however it is historic in nature from an unknown date.
Brodiaea filifolia thread-leaved brodiaea	**FT, FE, 1B.1, S2**	Perennial bulbiferous herb generally blooming found in chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools – in association with clay substrates; 25--860 m.	Mar-Jun	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. The nearest recorded occurrence is approximately 2.5 miles east of the BSA from 2010.
Calochortus weedii var. intermedius intermediate mariposa-lily	**1B.2, S2**	Perennial bulbiferous herb generally found within chaparral, coastal scrub and alley and foothill grassland with rocky and calcareous substrates; < 680 m.	May-Jul	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. The nearest recorded occurrence is approximately 2.5 miles east of the BSA from 2010.

Species	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Centromadia parryi ssp. australis southern tarplant	**1B.1, S2**	Marshes and swamps (margins), valley and foothill grasslands (vernally mesic), and vernal pools; often in disturbed sites near the coast at marsh edges; also, in alkaline soils sometimes with saltgrass; 0-480 m.	May-Nov	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. There are multiple occurrences of this species approximately 0.75 – 1.0 miles east and southeast of the BSA from 2015.
Chaenactis glabriuscula var. orcuttiana Orcutt's pincushion	**1B.1, S1**	Brackish water habitats along the California Coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels; < 100 m..	Jan-Aug	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. There are multiple occurrences of this species approximately 0.5 – 1.3 miles north and south of the BSA from 1921 and 1934.
Chloropyron maritimum ssp. maritimum salt marsh bird's-beak	**FE, SE, 1B.2, S1**	Coastal dunes, marshes, and swamps (coastal salt); 0-30 m.	May-Oct (Nov)	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. The nearest recorded occurrence is approximately 9.5 miles north of the BSA from 2018.
Comarostaphylis diversifolia ssp. diversifolia summer holly	**1B.2, S2**	Perennial evergreen shrub generally found in chaparral and cismontane woodland; 100--550 m.	Apr-Jun	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. The nearest recorded is approximately 1.2 miles southeast of BSA from 2000.
Dudleya blochmaniae ssp. blochmaniae Blochman's dudleya	**1B.1, S2**	Rocky, often clay or serpentinite; coastal bluff scrub, chaparral, coastal scrub, valley and foothill grassland; 5-450 m.	Apr-Jun	**Low:** Limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 3.5 miles southeast of BSA from 1952.
Dudleya multicaulis many-stemmed dudleya	**1B.2, S2**	Chaparral, Coastal scrub, Valley and foothill grassland; often clay/perennial herb; < 600 m.	May-June	**Low:** Limited suitable habitat and substrate is present within the BSA. There are multiple occurrences of this species within approximately one mile of the BSA with the most recent being from 2005.
Dudleya stolonifera Laguna Beach dudleya	**FT, ST, 1B.1, S1**	Perennial stoloniferous herb generally found within rocky chaparral, cismontane woodland, coastal scrub, and alley and foothill grassland vegetation communities; < 250 m.	May-Jul	**Low:** Limited suitable habitat and substrate is present within the BSA. There closest known occurrence of this species is approximately 1.2 miles southeast of the BSA from 1993.

Species	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Euphorbia misera cliff spurge	**2B.2, S2**	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub; rocky/perennial shrub/ (Oct); < 500 m.	Jan–Aug	**Low:** Limited suitable habitat and substrate is present within the BSA. There closest known occurrence of this species is approximately 1.6 miles southeast of the BSA from 1999.
Harpagonella palmeri Palmer's grapplinghook	**4.2, S3**	Chaparral, coastal sage scrub, valley and foothill grassland. Occurring in clay soils; < 1000 m.	Mar-Apr	**Not Likely to Occur:** Very limed suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 5.3 miles southeast of BSA from 1986.
Helianthus nuttallii ssp. parishii Los Angeles sunflower	**1A, SX**	Historically in Los Angeles, Orange, Riverside, and San Bernardino counties; marshes and swamps (coastal salt and freshwater); still presumed to be extinct;10-1525 m.	Aug-Oct	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. The nearest recorded is approximately 9.5 miles north of BSA from 1933.
Horkelia cuneata var. puberula mesa horkelia	**1B.1, S1**	Perennial herb; sandy or gravely soils in chaparral, woodlands, and coastal scrub. San Luis Obispo County south to San Diego County, from about 230 to 2,700 ft. elev.	Feb–Sept	**Not Likely to Occur:** Very limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 1.0 miles north of BSA from 1954.
Isocoma menziesii var. decumbens decumbent goldenbush	**1B.2, S2**	Coastal scrub, chaparral. Sandy soils; often in disturbed sites; <200 m.	Apr-Nov	**Moderate:** Very limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 0.75 miles southeast of BSA from 2018.
Lasthenia glabrata ssp. coulteri Coulter's goldfields	**1B.1, S2**	Marshes and swamps (coastal salt), playas, coastal dunes, coastal sage scrub, valley and foothill grassland, and vernal pools; usually found on clay and alkaline soils in playas, sinks, and grasslands; 1-1,375 m.	Feb-Jun	**Not Likely to Occur:** Very limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 6.0 miles north of BSA from 1997.
Lepidium virginicum var. *robinsonii* Robinson's pepper-*grass*	**S3, 4.3**	Chaparral, coastal scrub, and shrubland; dry soils; 1-885 m.	Jan-Jul	**Not Likely to Occur:** Very limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 6.08.5 miles north of BSA from 2003.

Species	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Nama stenocarpa mud nama	**2B.2, S1S2**	Marshes and swamps, lake shores, riverbanks, intermittently wet areas; 5-500 m.	Jan-Jul	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. The nearest recorded is approximately 8.5 miles north of BSA from 2003.
Navarretia prostrata prostrate vernal pool navarretia	**1B.2, S2**	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps; alkaline soils in grassland, or in vernal pools; mesic, alkaline sites; 3-1235 m.;	Apr-Jun	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. The nearest recorded is approximately 1.0 miles north of BSA from 1890.
Nemacaulis denudata var. denudate coast woolly-heads	**1B.2, S2**	Coastal dunes and beaches; <100 m.	Mar-Aug	**Low:** Suitable beach habitat is present within the BSA. The nearest recorded is approximately 8 miles north of BSA from 1986.
Pentachaeta aurea ssp. allenii Allen's pentachaeta	**1B.1, S1**	Openings in coastal sage scrub and valley and foothill grassland. Elevation range 75- 520m.	Mar-May	**Not Likely to Occur:** Very limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 5.0 miles southeast of BSA from 1994.
Pseudognaphalium leucocephalum white rabbit-tobacco	**2B.2, S2**	Chaparral, cismontane woodland, coastal scrub, riparian woodland, dry stream bottoms, and canyon bottoms; sandy and gravelly substrates; 0-2100 m.	(Jul) Aug-Nov (Dec)	**Not Likely to Occur:** Very limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 6.0 miles east of BSA from 2004.
Quercus dumosa Nuttall's scrub oak	**1B.1, S3**	Closed-cone coniferous forest, chaparral, and coastal sage scrub. Occurring on sandy, clay loam soils; < 200 m..	Mar-May	**Not Likely to Occur:** Very limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 2.0 miles east of BSA from 1982.
Senecio aphanactis chaparral ragwort	**2B.2, S2**	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 m.	Jan-Apr (May)	**Not Likely to Occur:** Very limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 5.5 miles south of BSA from 1983.
Sidalcea neomexicana salt spring checkerbloom	**2B.2, S2**	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub; alkali springs and marshes; 15-1530 m.	March-June	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. The nearest recorded is approximately 9.0 miles east of BSA from 2014.

Species	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Suaeda esteroa estuary seablite	**1B.2, S2**	Marshes and swamps; coastal salt marshes in clay, silt, and sand substrates; 0-80 m.	(May) Jul-Oct (Jan)	**Not Likely to Occur:** Suitable habitat and substrate is not present within the BSA. The nearest recorded is approximately 8.0 miles northwest of BSA from 1938.
Symphyotrichum defoliatum San Bernardino aster	**1B.2, S2**	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland; vernally mesic grassland or near ditches, streams and springs; disturbed areas; 3-2045 m.	July-Nov	**Not Likely to Occur:** Very limited suitable habitat and substrate is present within the BSA. The nearest recorded is approximately 9.5 miles northwest of BSA from 1933.
Verbesina dissita big-leaved crownbeard	**1B.1, S1**	Southern maritime chaparral, coastal sage scrub; < 200 m.	May-Aug	**Moderate:** Very limited suitable habitat and substrate is present within the BSA. There are multiple occurrences of this species within 0.5 – 2.0 miles southeast of the BSA from 2016.

Status Codes

Federal Designation

FE = Federally Endangered

FT = Federally Threatened

FC = Federal Candidate Species for Listing

CDFW State Designation

SE = State Endangered

SR = State Rare

ST = State Threatened

SX: Presumed Extirpated

State Ranking

S1 = Critically Imperiled

S2 = Imperiled

S3 = Vulnerable

S4 = Apparently Secure

S5 - Secure

CNPS CRPR Designation

1A = Plants considered by the CNPS to be extinct in California

1B = Plants rare, threatened, or endangered in California and elsewhere.

2A. Presumed extinct in California, extant and more common elsewhere

2B. Rare or Endangered in California, more common elsewhere

3. Plants for which we need more information - Review list

4. Plants of limited distribution - Watch list

.1 = Seriously threatened in California (high degree/immediacy of threat).

.2 = Fairly threatened in California (moderate degree/immediacy of threat).

.3 = Not very threatened in California (low degree or immediacy of threats or no current threats known)

BSA = Biological Study Area

m = meter

Table 2: Known and Potential Occurrences of Special-Status Wildlife Taxa within the Biological Study Area

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
INVERTEBRATES					
Bombus crotchii	Crotch bumble bee	**SC, S1S2**	Coastal California east to the sierra-cascade crest and south into Mexico. Food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 1 mile north of the BSA; however, this occurrence was recorded in 1919.	**Not Likely to Occur**
Branchinecta sandiegonensis	San Diego fairy shrimp	**FE, SA, S2**	This species is a vernal pool habitat specialist found in small, shallow vernal pools but can also be found in ditches and road ruts that support suitable conditions.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 8.5 miles east of the BSA from 2012.	**Not Likely to Occur**
Cicindela hirticollis gravida	sandy beach tiger beetle	**SA, S2**	Extirpated from most sites but documented extant populations from north of San Francisco to Mexico. Occurs in areas adjacent to non-brackish water in clean, dry, light-colored sand in the upper zones and coastal sand dunes. Forages in open unvegetated areas such as marsh pannes and levees. Burrows are located in moist soils that are far enough away from water bodies to avoid being inundated with water.	Sand dune habitat is not present within the BSA; tidal influence in the area likely precludes suitable burrowing habitat. The nearest and most recently recorded occurrence is approximately 8.0 miles north of the BSA from 1955.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Cicindela latesignata latesignata	western beach tiger beetle	**SA, S1**	Open, unvegetated areas in or near salt marshes.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 8.0 miles north of the BSA from an unknown historic date.	**Not Likely to Occur**
Coelus globosus	globose dune beetle	**SA, S1S2**	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 8.0 miles north of the BSA from 1937.	**Not Likely to Occur**
Danaus plexippus (pop. 1)	monarch butterfly – California overwintering population	**SA, S2S3**	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation. Roosts located in wind-protected tree groves (eucalyptus, pine, cypress), with nectar and water sources nearby.	Suitable habitat does not occur within the BSA. The nearest and most recently recorded occurrence is approximately 2.6 miles northwest of the BSA from 1990.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Habroscelimorpha gabbii	western tidal-flat tiger beetle	**SA, S1**	Salty coastal habitats including salt marshes, tidal flats, and beaches.	Suitable beach habitat is present within the BSA. The nearest and most recently recorded occurrence is approximately 8.0 miles north of the BSA from 1949.	**Not Likely to Occur**
Streptocephalus woottoni	Riverside fairy shrimp	**FE, S1S2**	Endemic to western Riverside, Orange and San Diego Counties. Prefers swales/basins in grassland and coastal sage scrub. Inhabit seasonal pools filled by winter/spring rains. Typically hatch in warm water later in the season.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 8.5 miles east of the BSA from 2010.	**Not Likely to Occur**
Tryonia imitator	mimic tryonia (=California brackishwater snail)	**SA, S2**	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in brackish water in a variety of sediment types; able to withstand a wide range of salinities.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 10 miles northwest of the BSA from 1996.	**Not Likely to Occur**
FISH					
Eucyclogobius newberryi	tidewater goby	**FE, S3**	Brackish water habitats along the California Coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 1.2 miles southeast of the BSA from 1996.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Gila orcuttii	arroyo chub	**SSC, S2**	Native to streams from Malibu creek to San Luis Rey river basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins. Found in habitats characterized by slow-moving water, mud or sand substrate, and depths greater than 40 cm. Most abundant in low gradient pools that support at least some aquatic vegetation. Feeds heavily on aquatic vegetation and associated invertebrates. Most spawning occurs in habitats with low velocity, such as pools or edge waters	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 5.3 miles east of the BSA from 1975.	**Not Likely to Occur**
Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	**FE, SA, S1**	Inhabits seasonally accessible rivers and streams with gravel for spawning. Requires sufficient flows in their natal streams to be able to return from oceans and lakes to spawn. Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerance to warmer water and more variable conditions	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 1.2 miles southeast of the BSA from 1972.	**Not Likely to Occur**
AMPHIBIANS					
Anaxyrus californicus	arroyo toad	**FE, SSC, S2S3**	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash; rivers with sandy banks, willows, cottonwoods, and/or sycamores.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 9.0 miles east of the BSA from 2001.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Spea hammondii	western spadefoot	**SSC, S3**	Occurs in the Central Valley and adjacent foothills and the non-desert areas of Southern California and Baja California, Mexico. Grassland habitats, valley-foothill hardwood woodlands, and coastal sage scrub. Vernal pools and other temporary rain pools, cattle tanks, and occasionally pools of intermittent streams are essential for breeding and egg-laying. Burrows in loose soils during dry season.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 1.7 miles southeast of the BSA from 1967.	**Not Likely to Occur**
REPTILES					
Anniella stebbinsi	southern California legless lizard	**SSC, SA, S3**	Generally, south of the transverse range, extending to northwestern Baja California, Mexico. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations occur in the Tehachapi and Piute mountains in Kern County. Occurs in a variety of habitats; generally, in moist, loose soils as they prefer soils with a high moisture content.	Limited suitable habitat is present within the BSA. The nearest recorded occurrence is immediately north of the BSA; however, this occurrence was recorded well over 100 years ago in 1917.	**Not Likely to Occur**
Arizona elegans occidentalis	California glossy snake	**SSC, S2**	Generally found in arid scrub, rocky washes, grasslands, and chaparral.	Limited suitable habitat is present within the BSA. The nearest recorded occurrence is approximately 5.5 miles east of the BSA; however, this occurrence was recorded well over 500 years ago in 1946.	**Not Likely to Occur**
Aspidoscelis hyperythra	orange-throated whiptail	**WL, S2S3**	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slope of the mountains . Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Limited suitable habitat is present within the BSA. The nearest recorded occurrence is approximately 1.3 miles east of the BSA from 1990.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Aspidoscelis tigris stejnegeri	coastal whiptail	**SSC, S3**	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	Limited suitable habitat is present within the BSA. The nearest recorded occurrence is approximately 1.5 miles east of the BSA from 2001.	**Not Likely to Occur**
Crotalus ruber	red-diamond rattlesnake	**SSC, S3**	Inhabits arid scrub, coastal chaparral, oak and pine woodlands, rocky grassland, cultivated areas.	Limited suitable habitat is present within the BSA. The nearest recorded occurrence is approximately 4.5 miles east of the BSA from 1975.	**Not Likely to Occur**
Emys marmorata	western pond turtle	**SSC, S3**	A thoroughly aquatic turtle of small ponds and lakes, marshes, permanent and ephemeral shallow wetlands, stock ponds, reservoirs, treatment lagoons, irrigation ditches, and slow-moving permanent or intermittent rivers, streams, usually with aquatic vegetation, below 6000 feet elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometer from water for egg-laying. Abundant cover necessary including logs, rocks, and submerged vegetation.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 1.2 miles south of the BSA from 1972.	**Not Likely to Occur**
Phrynosoma blainvillii	coast horned lizard	**SSC, S3S4**	Primarily in sandy soil in open areas, especially sandy washes and floodplains, in many plant communities. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and an abundant supply of ants or other insects. Main prey item is harvester ants. Occurs west of the deserts from northern Baja California, Mexico north to Shasta County below 2,400 m (8,000 feet) elevation.	Suitable is not present within the BSA. The nearest and most recently recorded occurrence is approximately 1.4 miles east of the BSA from 1972.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Thamnophis hammondii	two-striped gartersnake	**SSC, S3S4**	Coastal California from vicinity of Salinas to northwest Baja California, Mexico. From sea level to about 7000 feet. elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Suitable is not present within the BSA. The nearest and most recently recorded occurrences are approximately 7.5 miles east of the BSA from 1996 and 2005.	**Not Likely to Occur**
BIRDS					
Accipiter cooperii	Cooper's hawk	**WL, S4**	Woodland, chiefly of open, interrupted, or marginal type; nest sites mainly in riparian growths of deciduous trees.	Limited suitable habitat is present within the BSA. The nearest recorded occurrence is approximately 1 mile to the north of the BSA from 1972.	**Low (nesting and foraging)**
Agelaius tricolor	tricolored blackbird	**ST, BCC, S1S2**	Highly colonial species, most numerous in the Central Valley and vicinity, and largely endemic to California. Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herbs. Forages in grassland and cropland habitats with insect prey within a few kilometers of the colony. They are itinerant breeders, nesting more than once at different locations during the breeding season.	Suitable is not present within the BSA. The nearest recorded occurrence is immediately north and adjacent to the BSA from 1936.	**Not Likely to Occur**
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	**WL, S3**	Resident in southern Calif. coastal sage scrub and sparse mixed chap-arral; frequents relatively steep, often rocky hillsides with grass and forb patches.	Limited suitable habitat is present within the BSA. There are multiple occurrences of this species approximately 1.5 miles to the east of the BSA from 2001.	**Low (nesting and foraging)**
Ammodramus savannarum	grasshopper sparrow	**SSC, S3**	Open grassland and prairies with patches of bare ground.	Suitable is not present within the BSA. The nearest recorded occurrence is approximately 7 miles north of the BSA from 2003.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Athene cunicularia	burrowing owl	**SSC, BCC, S3**	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Owls are found in microhabitats highly altered by humans, including flood risk management and irrigation basins, dikes, banks, abandoned fields surrounded by agriculture, and road cuts and margins. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel (*Otospermophilus beecheyi*).	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 8 miles north of the BSA in 1990.	**Not Likely to Occur**
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	**BCC, SSC, S3**	Inhabits coastal sage scrub, nesting almost exclusively in thickets of coastal cholla (*Cylindropuntia prolifera*) and prickly pear (*Opuntia littoralis* or *Opuntia oricola*), typically below 500 feet elevation.	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 1.8 miles north of the BSA in 2001.	**Not Likely to Occur**
Charadrius nivosus nivosus	western snowy plover	**FE, BCC, SSC, S2**	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Limited suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 8.0 miles north of the BSA in 2013.	**Not Likely to Occur**
Coturnicops noveboracensis	yellow rail	**BCC, SSC, S1S2**	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 8.0 miles north of the BSA in 1896.	**Not Likely to Occur**
Elanus leucurus	white-tailed kite	**FP, S3S4**	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Limited suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 3.0 miles south of the BSA in 2008.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Empidonax traillii extimus	southwestern willow flycatcher	**FE, SE, S1**	Rare and local breeder in extensive riparian areas of dense willows or (rarely) tamarisk, usually with standing water, in the southwestern U.S.	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 10.0 miles southeast of the BSA in 2018.	**Not Likely to Occur**
Eremophila alpestris actia	California horned lark	**WL, S4**	Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, “bald” hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 7.0 miles north of the BSA in 2004.	**Not Likely to Occur**
Icteria virens	yellow-breasted chat	**SSC, S3**	Inhabits riparian thickets of willow and other brushy tangles near water courses; nests in low, dense riparian vegetation; nests and forages within 10 feet of ground.	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 3.6 miles north of the BSA from an unknown date.	**Not Likely to Occur**
Laterallus jamaicensis coturniculus	California black rail	**BCC, SE, FP, S1**	Nests in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation.	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 9.6 miles north of the BSA from 2009.	**Not Likely to Occur**
Pandion haliaetus	osprey	**WL, S4**	Forages and nests along rivers, lakes, and reservoirs.	Limited suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 9.6 miles north of the BSA in 2017.	**Low (foraging)/Not Likely to Occur (nesting)**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Passerculus sandwichensis beldingi	Belding's savannah sparrow	**SE, S3**	Locally common non-migratory resident of coastal saltmarsh. An obligate breeder in middle elevation saltmarsh, nearly always characterized by pickleweed (Salicornia spp.), either in tidal situations or non-tidal alkaline flats nearby. Foraging primarily stems from saltmarsh and mudflat, individuals, particularly post-breeding birds, can be found foraging in a wide variety of habitats including upper marsh, adjacent ruderal and ornamental vegetation, open beach and mudflat, and even dirt and gravel parking lots.	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 6.5 miles east of the BSA from 2006.	**Not Likely to Occur**
Polioptila californica californica	coastal California gnatcatcher	**FT, SSC, S2**	Obligate, permanent resident of coastal sage scrub below 2500 feet in southern California. Low, coastal sage scrub in arid washes and on mesas and slopes with California sagebrush (*Artemisia californica*) as a dominant or co-dominant species. Not all areas classified as coastal sage scrub are occupied.	Suitable habitat does not occur within the BSA. There are multiple occurrences within approximately 1.5 miles north, east, and south of the BSA from dates as recent as 2019.	**Low (foraging)/Not Likely to Occur (nesting)**
Rallus obsoletus levipes	light-footed Ridgway's rail	**FE, SE, FP, S1**	Found in salt marshes where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover, feeds on mollusks and crustaceans.	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 9.5 miles north of the BSA from 2008.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Riparia riparia	bank swallow	**ST, S2**	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole. Forage in open areas and avoid places with tree cover	Suitable habitat does not occur within the BSA. The nearest recorded occurrence is approximately 10.0 miles north of the BSA from 1916.	**Not Likely to Occur**
Setophaga petechia	yellow warbler	**SSC, BCC, S3S4**	Inhabits riparian plant associations near water. Nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Also, nestsing and forages in willow shrubs and thickets and in other riparian plants including cottonwoods, sycamores, ash, and alders.	Suitable nesting and foraging habitat is not present within the BSA. The nearest and most recently recorded occurrence is approximately 4 miles north of the BSA in 2016.	**Not Likely to Occur**
Sternula antillarum browni	California least tern	**FE, SE, FP, S2**	Nests on sandy upper ocean beaches, open barren sites, and occasionally uses mudflats. Forages on adjacent surf line, estuaries, or the open ocean where fish is abundant. Colonies are located near the ocean shoreline (within 0.5 miles [about 800 meters]), typically on nearly flat, loose sandy substrates with lightly scattered short vegetation and debris, although some colonies have been located on hard-packed surfaces, even unused asphalt. Colony sites must provide access to the shoreline for juveniles and must be relatively free of predators or the colony may abandon breeding efforts before completion.	Limited suitable nesting and foraging habitat is present within the BSA. The nearest and most recently recorded occurrence is approximately 8 miles northwest of the BSA in 1947.	**Low (nesting and foraging)**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Vireo bellii pusillus	least Bell's vireo	**FE, SE, S2**	Spring and summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 feet. Often inhabits structurally diverse woodlands along watercourses including cottonwood-willow and oak woodlands and mulefat scrub. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, mulefat, or mesquite.	Suitable nesting and foraging habitat is not present within the BSA. The nearest and most recently recorded occurrence is approximately 4 miles north of the BSA in 2018.	**Not Likely to Occur**
MAMMALS					
Antrozous pallidus	pallid bat	**SSC, S3**	Inhabits desert, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Suitable roosting habitat does not occur within the BSA; however, limited suitable foraging may be present. The nearest recorded occurrence is approximately 9 miles east of the BSA from 1998.	**Low (foraging)/ Not Likely to Occur (roosting)**
Chaetodipus californicus femoralis	Dulzura pocket mouse	**SSC, S3**	Variety of habitats including coastal scrub, chaparral and grassland in san Diego County. Attracted to grass-chaparral edges.	Suitable habitat does not occur within the BSA. The nearest and most recently recorded occurrence is approximately 4.5 miles southeast of the BSA from 1932.	**Not Likely to Occur**
Eumops perotis californicus	western mastiff bat	**SSC, S3S4**	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral. Roosts in crevices in cliff faces, high buildings, bridges, trees, and tunnels. In California, most records are from rocky areas at low elevations.	Limited suitable roosting habitat may be present along the rocky bluffs above the ocean within the BSA; limited suitable foraging may be present. The nearest recorded occurrence is approximately 9 miles east of the BSA from 1998.	**Low (foraging)/ Not Likely to Occur (roosting)**
Lasiurus cinereus	hoary bat	**SA, S4**	Forages over a wide range of habitats but prefers open habitats with access to water and trees for roosting. Typically, solitary, roosting in the foliage of shrubs or coniferous and deciduous trees. Roosts are usually near the edge of a clearing.	Suitable roosting habitat does not occur within the BSA; however, limited suitable foraging may be present. The nearest recorded occurrence is approximately 10 miles north of the BSA from 1990.	**Low (foraging)/ Not Likely to Occur (roosting)**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	**Common Name**				
Myotis yumanensis	Yuma myotis	**SA, S4**	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees.	Limited suitable roosting habitat may be present along the rocky bluffs above the ocean within the BSA; limited suitable foraging may be present. The nearest recorded occurrence is approximately 6 miles east of the BSA from 1997.	**Low (foraging)/ Not Likely to Occur (roosting)**
Neotoma lepida intermedia	San Diego desert woodrat	**SSC, S3S4**	Coastal scrub of southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes, as well as in desert scrub, coastal sage scrub, and chaparral.	Suitable habitat does not occur within the BSA. The nearest and most recently recorded occurrence is approximately 5 miles southeast of the BSA from 2002.	**Not Likely to Occur**
Nyctinomops macrotis	big free-tailed bat	**SSC, S3**	Occurs in low-lying arid areas in southern California. Prefers rugged, rocky terrain. Often forages over water sources. Roosts in buildings, caves, and occasionally in holes in trees. Also roosts in crevices in high cliffs or rock outcrops.	Limited suitable roosting habitat may be present along the rocky bluffs above the ocean within the BSA; limited suitable foraging may be present. The nearest recorded occurrence is approximately 7 miles north of the BSA from 1998.	**Low (foraging)/ Not Likely to Occur (roosting)**
Perognathus longimembris pacificus	Pacific pocket mouse	**FE, SSC, S1**	Occurs in low-lying arid areas in southern California. Prefers rugged, rocky terrain. Often forages over water sources. Roosts in buildings, caves, and occasionally in holes in trees. Also roosts in crevices in high cliffs or rock outcrops.	Limited suitable roosting habitat may be present along the rocky bluffs above the ocean within the BSA. The nearest recorded occurrence is approximately 5.2 miles southeast of the BSA from 1999.	**Not Likely to Occur**
Sorex ornatus salicornicus	southern California saltmarsh shrew	**SSC, S1**	Coastal marshes in Los Angeles, Orange, and Ventura counties. Requires dense vegetation and woody debris for cover.	Suitable habitat does not occur within the BSA. The nearest and most recently recorded occurrence is approximately 9.5 miles north of the BSA from 1933.	**Not Likely to Occur**

Taxa		Status	Habitat Type	Comments	Occurrence Potential
Scientific Name	Common Name				

Federal Rankings:

FE = Federally Endangered

FD = Federally Delisted

FC = Federal Candidate Species for Listing

BCC = USFWS Bird of Conservation Concern

State Rankings:

S1 = Critically Imperiled

S2 = Imperiled

S3 = Vulnerable

S4 = Apparently Secure

S5 - Secure

SC = State Candidate for Listing

SD = State Delisted

SA = CDFW Special Animal

SE = State Endangered

ST = State Threatened

FP= Fully Protected

SSC = Species of Special Concern

WL = Watchlist

BSA=Biological Study Area

CNDDB =California Natural Diversity Database

Appendix D CULTURAL RESOURCES MEMORANDUM

Stantec

Memo

To:	City of Laguna Beach	From:	Emily Rinaldi, Architectural Historian Stantec Consulting Services Inc.
File:	Moss Street Beach Access Rehabilitation Project	Date:	June 8, 2021

Reference: Moss Street Beach Access Rehabilitation Project

The purpose of this memorandum is to analyze whether the Moss Street Beach Access Rehabilitation Project (Project) would impact historical resources as defined by the California Environmental Quality Act (CEQA). The Project site is located at the west end of Moss Street in the City of Laguna Beach to the west of the intersection with Ocean Way. It is situated within the public right-of-way and occupied by a beach access stair.

Stantec Consulting Services Inc. (Stantec) was retained to identify historical resources on and in the vicinity of the Project site, to assess any potential impacts the Project may have on identified historical resources, and to recommend mitigation measures as appropriate. The following memorandum includes a brief description of the project and project site, methodology to identify historical resources, description of identified historical resources, and an analysis of potential Project impacts on historical resources. Emily Rinaldi, Stantec Architectural Historian, was responsible for the preparation of this memorandum. She fulfills the qualifications for an architectural historian outlined in the Secretary of the Interior's Professional Qualifications Standards (SOI Qualifications), Title 36 of the Code of Federal Regulations, Part 61.

DESCRIPTION OF PROJECT SITE

The Project site is located along the coast of Laguna Beach, surrounded by residential development and in immediate proximity to the City Beach and the Pacific Ocean. The beach access stair is on a steep slope between the beach and roadway. The access consists of concrete retaining walls and terraced landings from Moss Street adjacent to residential houses, concrete stairs in tight formation with 180-degree turns, and a single 44-step flight of stairs with no landing before ending at the beach (see Figures 1–3). Currently the stair ends short of the beach level, requiring a wooden extension to temporarily address this unsafe condition (see Figure 4).

Figure 1: View of entrance to Moss Street beach access stair, looking west (Stantec, June 2021)

Figure 2: View of stair landing and retaining walls, looking northwest (Stantec, June 2021)

Reference: **Moss Street Beach Access Rehabilitation Project**

Figure 3: View of beach access stair, looking west (Stantec, June 2021)

Figure 4: View of beach access stair, looking east (Stantec, June 2021)

DESCRIPTION OF PROJECT

To maximize public access to and along the coast of Laguna Beach, the Project proposes to enhance and restore an access area to the beaches and coastal resources of the City. Specifically, a coastal access facility will be restored and enhanced at Moss Street in the City of Laguna Beach. The Project would remove existing ramps, walls, walkway, and stairs, replacing these with new stairs and walkways designed to improve access and increased landscape area. The Project would rehabilitate an existing overlook/view area with more accessible facilities. The construction method would entail the following:

- Cast-In-Drilled-Hole (CIDH) foundations installed with a small drill rig (24-inch diameter piles);
- Spread footing type retaining walls (with a total height of less than 8 feet);
- Slab on grade and stair construction;
- Concrete forming, reinforcement, and pumping;
- Minor associated structural earthwork and grading with a backhoe or small excavator;
- Miscellaneous street and storm drain improvements including curb and gutter, storm drain inlets and piping, and asphalt-concrete (AC) paving, and landscaping and irrigation.

The new stair would be constructed at the approximate beginning and end of the existing stair elevations and locations but would entail a different alignment. Profile rise and run of the stairs will be controlled by American's with Disabilities Act (ADA) requirements while providing additional landings. The stairs will end at bedrock elevation to address the current drop off condition and estimated long term beach erosion.

Reference: **Moss Street Beach Access Rehabilitation Project**

METHODOLOGY

To prepare this memorandum, Stantec performed the following tasks:

- Conducted a field inspection of the Project site and vicinity, during which Stantec determined the scope of the study. Digital photographs of the existing beach access stair on the Project site and exteriors of buildings within the immediate vicinity were taken during the field inspection.
- Identified a study area (Study Area) as the Project site as well as parcels within a 100-foot radius (see Figure 5). This Study Area was established to account for potential impacts on historical resources in the vicinity. Parcels beyond this Study Area were not included because the Project would have no potential to directly or indirectly impact the buildings on these distant parcels or their surrounding setting. The buildings and streets immediately surrounding the Project site create a geographic and visual separation between the parcels beyond the Study Area and the Project site. The Project site therefore cannot be reasonably considered part of the environmental setting of historical resources beyond the Study Area due to this intervening space.
- Reviewed existing information to determine if there are any listed or previously surveyed historical resources within the Study Area. The following sources were consulted:
    - Requested a records search from the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on April 30, 2021. The purpose of this search was to determine whether or not the Study Area contained any properties that were currently listed under national, state, or local landmark or historic district programs and whether or not it contained properties that have been previously identified or evaluated as potential historical resources. This involved a review of the California Historic Resources Inventory System (CHRIS), which includes data on properties listed and determined eligible for listing in the National Register of Historic Places (National Register), listed and determined eligible for listing in the California Register of Historical Resources (California Register), California Registered Historical Landmarks, Points of Historical Interest, as well as properties that have been evaluated in historic resource surveys and other planning activities. See Attachment A for a full summary of the records search results.
    - Consulted the California Built Environment Resource Directory (BERD), which is maintained by the California Office of Historic Preservation (OHP), to determine if the Project area or immediate vicinity contains any properties listed and determined eligible for listing in the National Register, listed and determined eligible for listing in the California Register, or that had been evaluated in historic resource surveys and other planning activities.
    - Consulted the Laguna Beach Historic Register to determine if the Project area or immediate vicinity contains any properties listed by the City of Laguna Beach.
- Conducted research into the history of the beach access stair on the Project site. Sources referenced included newspaper archives and Sanborn Fire Insurance maps available through the Los Angeles Public Library, as well as historic aerial photographs available through the University of California, Santa Barbara.
- Reviewed and analyzed ordinances, statutes, regulations, bulletins, and technical materials relating to national, state, and local historic preservation designations, and assessment processes and

programs to evaluate the significance and integrity of the Moss Street beach access stair as a potential historical resource.

REGULATORY FRAMEWORK

Generally, a lead agency must consider a property a historical resource under CEQA if it is eligible for listing in the California Register, which is modeled after the National Register. Furthermore, a property is presumed to be historically significant if it is listed in a local register of historical resources or has been identified as historically significant in a historic resources survey (provided certain statutory criteria and requirements are satisfied) unless a preponderance of evidence demonstrates that the property is not historically or culturally significant. A lead agency may also treat a resource as historic if it meets statutory requirements and substantial evidence supports the conclusion.

National Register of Historic Places

The National Historic Preservation Act (NHPA) of 1966, as amended, authorized the creation of the National Register. The National Register is "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[1] For a property to be considered for inclusion in the National Register, it must typically be at least 50 years old and meet one or more of the four criteria for evaluation set forth in 36 Code of Federal Regulations (CFR) Part 60.4, as follows:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of design, setting, materials, workmanship, feeling, and association and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction; or

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

A property must also be significant within a historic context under one or more of the criteria listed above. “National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation” states that the significance of a historic property can be judged only when it is evaluated within its historic context. Historic contexts are “those patterns, themes, or trends in history by which a specific...property or site is understood and its meaning...is made clear.”[2] A property must therefore represent an important aspect of the area’s history or prehistory.

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[1] Title 36 Code of Federal Regulations (CFR) Part 60.2.
[2] “National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation,” U.S. Department of the Interior, National Park Service, Cultural Resources, eds. Patrick Andrus and Rebecca Shrimpton, accessed June 7, 2021, https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf, 7-8.

Reference: **Moss Street Beach Access Rehabilitation Project**

In addition to possessing significance, a property must possess integrity, defined by seven aspects as follows:

> Location: the place where the historic property was constructed or the place where the historic event took place.
>
> Design: the composition of elements that constitute the form, plan, space, structure, and style of a property.
>
> Setting: the physical environment of a historic property that illustrates the character of the place.
>
> Materials: the physical elements combined in a particular pattern or configuration.
>
> Workmanship: the physical evidence of the crafts of a particular culture or people during any given period of history.
>
> Feeling: the quality that a historic property has in evoking the aesthetic or historic sense of a past period of time.
>
> Association: the direct link between a property and the event or person for which the property is significant.[3]

California Register of Historical Resources

The California Register was established in 1992 by Assembly Bill 2881. It 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.[4] The criteria for eligibility of listing in the California Register are based upon National Register criteria, but are identified as 1-4 instead of A-D. To be eligible for listing in the California Register, a property generally must be at least 50 years of age and must possess significance at the local, state, or national level, under one or more of the following four criteria:

1. 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; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. 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; or
4. It has yielded, or has the potential to yield, information important in the prehistory or history of the local area, California, or the nation.

Like the National Register, properties eligible for listing in the California Register may include buildings, sites, structures, objects, and historic districts. While the enabling legislation for the California Register is less rigorous with regard to the issue of integrity, there is the expectation that properties retain enough of their

[3] "National Register Bulletin 15," 44.
[4] PRC Section 5024.1(a).

historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance.[5]

Evaluations for the California Register are based upon the evaluation instructions and classification system prescribed by the California OHP in its "Instructions for Recording Historical Resources," which include Status Codes for use in classifying potential historical resources. These Status Codes are used statewide in the preparation of historical resource surveys and evaluation reports. The specific Status Codes referred to in this analysis are as follows:

3S Appears eligible for the National Register as an individual property through survey evaluation.

5S1 Individual property that is listed or designated locally.

5S2 Individual property that is eligible for local listing or designation.

5D2 Contributor to a district that is eligible for local listing or designation.

6Y Determined ineligible for the National Register by consensus through Section 106 process. Not evaluated for the California Register or local listing.

The California Register may also include properties identified during historic resource surveys. However, the survey must meet all of the following criteria:

1. The survey has been or will be included in the State Historic Resources Inventory;
2. The survey and the survey documentation were prepared in accordance with office [SOHP] procedures and requirements;
3. The resource is evaluated and determined by the office [SOHP] to have a significance rating of Category 1 to 5 on a DPR Form 523; and
4. If the survey is five or more years old at the time of its nomination for inclusion in the California Register, 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.[6]

Laguna Beach Historic Preservation Ordinance

The City of Laguna Beach adopted the Historic Preservation Ordinance in 1989. The Ordinance established the Laguna Beach Historic Register. To be listed in the historic register, a property must be at least fifty years

[5] "California Office of Historic Preservation Technical Assistance Series #7: How to Nominate a Resource to the Calfironai Register of Historical Resources," California Office of Historic Preservation, accessed June 7, 2021, https://ohp.parks.ca.gov/pages/1056/files/07_TAB%207%20How%20To%20Nominate%20A%20Property%20to%20California%20Register.pdf, 11.
[6] PRC Section 5024.1.

old, retain its appearance and architectural integrity under Criterion A, as well as meet at least one of Criteria B, C, D, E, and/or F as outlined below:

A. Structures that most retain their original appearance and architectural integrity using the rating system of "E," "K" and "C" as described in the historic resources element of the general plan;

B. Structures that most represent character, interest or value as part of the heritage of the city;

C. The location as a site of significant historic event;

D. The identification with a person or persons or groups who significantly contributed to the culture and development of the city;

E. The exemplification of a particular architectural style or way of life important to the city;

F. The embodiment of elements of outstanding attention to architectural design, detail, materials or craftsmanship.

A revised Ordinance was recently adopted by the City Council in 2020; however, these changes will not go into effect until approved by the California Coastal Commission, which has not approved the revisions to the Ordinance as of the date of this memorandum.

PREVIOUSLY IDENTIFIED RESOURCES IN THE STUDY AREA

There are seven previously identified resources located within the Study Area (Table 1 and Figure 5). Two are listed in the City of Laguna Beach Historic Register, the Ark (2191 Ocean Way) and 2192 Ocean Way. The remainder were previously surveyed as part of the City's 1981 Historic Resource Inventory, a citywide historic resources survey conducted in 1980–1981. According to the definition of a CEQA historical resource, properties included in a local register are "presumed" historical resources or also known as presumptive historical resources.[7] In Laguna Beach, the City treats properties listed in the Historic Register as historical resources; however, the City does not consider properties only identified in the 1981 Historic Resource Inventory to meet the definition of a CEQA presumptive historical resource. Therefore, only the two resources listed in the City's Historic Register, 2191 and 2192 Ocean Way, are historical resources as defined by CEQA. Neither are located on the Project site. Please see Attachment A for a full summary of the records search results.

[7] PRC Section 5024.1 and 14 CCR Section 4850 & Section 15064.5(a)(2).

Reference: **Moss Street Beach Access Rehabilitation Project**

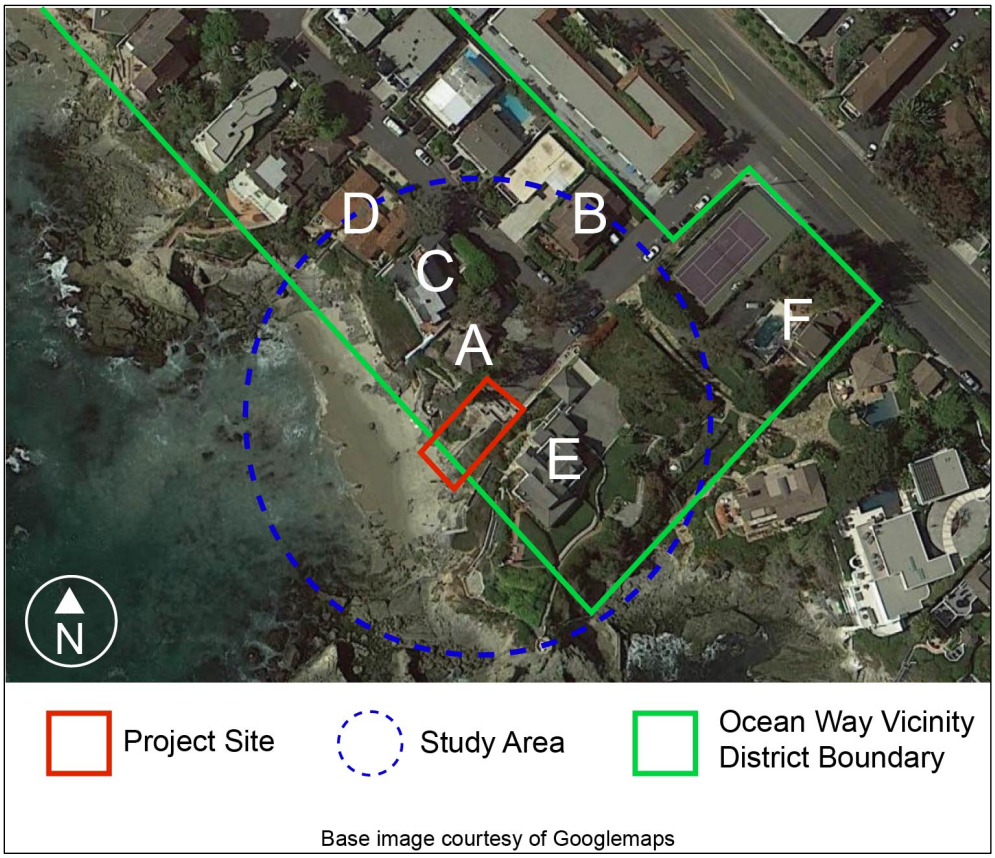

Figure 5: Identified Resources in Study Area

Table 1. Identified Resources in Study Area

Map Ref. No.	APN	Address	Name	Year Built	OHP Status Code	Year Recorded/ Listed
A	644-281-05	2191 Ocean Way	The Ark	1924	3S; 5S1	1989
B	644-282-05	2192 Ocean Way	N/A	1927	3S; 5S1	1989
C	644-281-04	2173 Ocean Way	N/A	1916	5D2	1980

Reference: **Moss Street Beach Access Rehabilitation Project**

Map Ref. No.	APN	Address	Name	Year Built	OHP Status Code	Year Recorded/ Listed
D	644-281-03	2149 Ocean Way	N/A	1925	5D2	1980
E	656-114-33	139 Moss Street	Col. House Home; Moss Point Home	1917	3S	1980
F	656-114-34	161 Moss Street	N/A	1917	6Y	1980
N/A	Multiple	Approximately Pearl Street to Moss Street	Ocean Way Vicinity	c. 1905–1940	5S2	1980

Figure 6: 2191 Ocean Way, south elevation, view looking north (Stantec, June 2021)

A. The Ark, 2191 Ocean Way

The Ark is located immediately to the north of the Project site on the north side of Moss Street (see Figure 6). It is a two-story single-family residence constructed in 1924. It was designed by architect Jean L. Egasse to look like a boat. The property was listed in the City of Laguna Beach Historic Register in 1989 with a rating of "E" or "Exceptional," which indicates the property is in excellent condition and unique.

Figure 7: 2192 Ocean Way, east and south elevations, view looking east (Stantec, June 2021)

B. 2192 Ocean Way

2192 Ocean Way is located to the northeast of the Project site on the east side of Ocean Way at the intersection with Moss Street. It is a Craftsman-style two-story single-family residence constructed in 1927. The property was listed in the City of Laguna Beach Historic Register in 1989 with a rating of "E" or "Exceptional," which indicates the property is in excellent condition and unique.

Reference: **Moss Street Beach Access Rehabilitation Project**

HISTORY OF LAGUNA BEACH[8]

Laguna Beach and her sister community South Laguna together now form the City of Laguna Beach. Northern Laguna Beach was once part of the Rancho San Joaquin land grant, while the downtown area and southern area (formerly South Laguna) were leftover government land available for homesteading. Following passage of the Timber-Culture Act in 1871, many families headed west to stake out 160-acre claims, and plant 10 acres of trees as required, almost always eucalyptus trees. The trees were a bust for lumber, and the groves grew so dense that they had to be cut down to provide room for the developing community. William and Nathaniel Brooks, brothers who arrived in 1876, were the first homesteaders in Laguna Beach. William filed on 169.24 acres at Arch Beach (present Diamond Street) and developed a subdivision. His brother Nathaniel brought water via a series of pipes and tunnels to Arch Beach for the subdivision. They were bought out temporarily by Hubbard Goff who in 1886 opened the first hotel in Laguna Beach, the Arch Beach Hotel.

During the boom years of the 1880s Arch Beach formed a separate community with its own post office opened in 1889. Laguna got its own post office in 1891, but it was called “Lagona”, a corruption of the Spanish word for lagoon. South Laguna was late in having a post office. It opened in 1933 under the name “Three Arches”. A write-in vote the following year chose the name of South Laguna instead.

John Damron acquired property near the mouth of Laguna Canyon in 1878. The land included Temple Hills and the flats above Arch Beach. George Rogers bought Damron’s holdings and developed the acreage. He built a school to educate his children and hired a teacher. Other pupils attended this first version of a public school in Laguna Beach. The Mormons built a second school in 1888 near their settlement at the intersection of Laguna Canyon Road and El Toro Road. The school was operated until 1892 when it was moved, along with the Mormons, inland to the community of El Toro. It was known as the Niguel District School. The school was later moved to the Canyon Acres area of Laguna and eventually became first a church and then the art studio of Joseph Kleitsch.

A third school was built in 1908 over an old cemetery and later moved to its present location where it became home to the American Legion. Grading for a new school in 1928 unearthed the grave of Captain Oliver Brooks whose remains were reburied in Santa Ana. The present high school was built in 1935. Prior to that date students were transported to Tustin High.

Laguna Beach opened its second hotel, Hotel Laguna, in 1889. Built by Henry Goff, it was purchased by Joseph Yoch. He took sections of the defunct Arch Beach Hotel and added them to his establishment to make a massive structure comprising 30 bedrooms and two bathrooms. After the building was condemned in 1928, the present Hotel Laguna was built on the same location.

Among the early residents of Laguna Beach were Oscar Warling and Fred Trefren, operators of a stage line to Santa Ana and El Toro from 1884 to 1901. John N. Isch ran the livery stable and a grocery store that provided self-service and pay-later amenities and the only telephone in the community for many years. Another important early settler was Elmer Jahraus who opened a cigar factory and a lumber company. The ease of obtaining building materials contributed mightily to the expansion of Laguna Beach in the early part of the century. In the same time period, South Laguna was home to homesteaders who raised beans and

[8] Excerpted from Carol R. Demcak, Archaeological Resource Management Corporation, Cultural Resources Assessment for Proposed Replacement of Beach Access Stairs at Pearl Street, City of Laguna Beach, California, Prepared for Hodge and Associates, July 28, 2016, 6–7.

melons. The area had a narrow escape from urbanization when in 1889 the Santa Fe Railroad announced plans to lay tracks on Goff Island (now Treasure Island), planning a depot and resort on their newly acquired land. The plan fell through and the railroad line ran inland instead. When the depression of the 1890s came, it effectively killed development of South Laguna. North Laguna, or Laguna Cliffs, was subdivided in 1905 by Howard Heisler, L.C. McKnight, and the Thumb Brothers. They laid out right-angle streets and piped in water from Laguna Canyon to service the homes.

Laguna Beach has become the focal point for arts and crafts in Orange County. This reputation began in the early part of the century when the first artists began to arrive and set up their easels. News of this charming village spread, and more and more artists flocked to Laguna. The first exhibition was held in 1918, setting the stage for the Laguna Beach Art Association and Museum of Art. The City is home to the Festival of the Arts and Pageant of the Masters that is known internationally.

Despite considerable growth and commercial development, Laguna Beach retains much of its village character. Its relative isolation has helped to keep it out of the wider urban development of surrounding cities.

HISTORY AND EVALUATION OF MOSS STREET BEACH ACCESS STAIR

The City of Laguna Beach currently maintains 29 beach accessways, which provide public access to approximately 47 acres of beach along 4.3 linear miles of coastline. Based on a review of historic aerial photographs, public beach accessways appear to have primarily consisted of maintained dirt trails through the 1950s after which new beach access stairs, paths, and viewing platforms were constructed by the City. The viewing platform and stair at Moss Street were constructed sometime between 1955 and 1963 (see Figures 8–9). In recent years, the City has demolished and replaced several of the beach access stairs previously built in between the mid-1950s and early 1960s. These include the Thalia Street, Pearl Street, Oak Street, Mountain Road, Agate Street, and Circle Way beach access stairs, amongst others.

Figure 8: 1955 aerial photograph, future location of Moss Street beach access stair circled in red (UCSB)

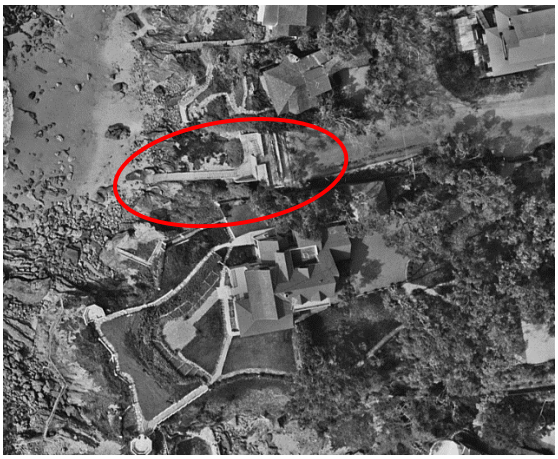

Figure 9: 1963 aerial photograph, Moss Street beach access stair circled in red (UCSB)

The Moss Street beach access stair is not currently listed under national, state, or local landmark programs, nor has it been identified as eligible for such designation in a historic resources survey. Because the stair would be demolished as part of the Project and is over 50 years of age, Stantec completed a brief evaluation for listing in the National Register, California Register, and local register as part of the environmental review of the Project in compliance with CEQA.

Reference: Moss Street Beach Access Rehabilitation Project

To be eligible under Criterion A, a property must have a direct association with events that have made a significant contribution to the broad patterns of our history. The most applicable context for evaluating the Moss Street beach access stair is the History of Laguna Beach.

Properties associated with early development in this area of Laguna Beach were generally constructed between the early 1900s and 1920s. The Moss Street beach access stair was constructed sometime between 1955 and 1963 and does not represent a very early period of development in this area. It is instead associated with an ongoing trend in the construction of upgrades to public infrastructure such as streets and sidewalks by the City of Laguna Beach following World War II. "National Register Bulletin 15" states that a "mere association with historic events or trends is not enough […] to qualify under Criterion A: a property's specific association must be considered important as well."[9] Research did not reveal that the Moss Street beach access stair has any significant associations within the context of the History of Laguna Beach. Rather, it represents one of several public infrastructure projects constructed during this period, including the construction of many of the existing beach access stairs along the City's coastline. Therefore, it does not appear to be significant under Criterion A.

Criterion B states that to be eligible, a property must be associated with the lives of persons significant in our past. Research did not reveal the name of any person or persons associated with the Moss Street beach access stair. Due to this lack of available information, it is reasonable to assume that no individuals of historic significance were associated with the structure. Therefore, the Moss Street beach access stair does not appear to be significant under Criterion B.

A property can be eligible under Criterion C if it embodies the distinctive characteristics of a type, period, or method of construction, represents the work of a master, possesses high artistic values, or lastly, represents a significant and distinguishable entity whose components may lack individual distinction.

The Moss Street beach access stair does not embody the distinctive characteristics that would make it significant as an example of any one particular style or method of construction. It is therefore not an important example within the context of a specific architectural style and does not demonstrate any innovative, important, or outstanding design features. Research did not reveal the name of an architect, engineer, or contractor associated with the design and construction of the structure. It is unlikely, given the stair's appearance, that it is representative of the work of a master architect or builder. The possession of high artistic values refers to a building or structure's articulation of a particular concept of design so fully that it expresses an aesthetic ideal.[10] A building or structure eligible under this aspect of Criterion C would need to possess ornamentation and detail to lend it high artistic value, which the Moss Street beach access stair does not possess.

The last aspect of Criterion C is generally applied to historic districts. The Moss Street beach access stair is located within the boundary of the Ocean Way Vicinity, a potential historic district identified in the 1980-1981 citywide historic resources survey. As noted above, the City does not consider properties only identified in the 1981 Historic Resource Inventory to meet the definition of a CEQA presumptive historical resource. Additionally, this potential historic district does not appear to have been formally evaluated using national, state, and local criteria and standards for evaluation in a survey or other professional evaluation in accordance with current cultural resource management standards. Nevertheless, even if the Ocean Way Vicinity is a potential historic district, the Moss Street beach access stair would likely not contribute to its

[9] "National Register Bulletin 15," 12.
[10] "National Register Bulletin 15," 20.

significance. The period of significance for the Ocean Way Vicinity identified on the 1981 California Department of Parks and Recreation (DPR) Form is 1905 to 1940, and the Moss Street beach access stair was constructed after the end of this period of significance.[11]

For all the reasons outlined above, the Moss Street beach access does not appear to be significant under Criterion C.

To be eligible for listing under Criterion D, a property's physical material must have yielded, or may be likely to yield, information important to history or prehistory. This generally applies to archaeological resources but may apply to a built resource in instances where a resource may contain important information about such topics as construction techniques or human activity. In any case, the resource must be the principal source of information. This is unlikely to be true for a beach access stair from the postwar period. Therefore, the Moss Street beach access stair does not appear to be significant under Criterion D.

The Moss Street beach access stair does not appear to be significant under any of the National Register criteria. Because the California Register and Laguna Beach Historic Register criteria are similar to that of the National Register, the Moss Street beach access stair appears to be ineligible for the California Register and Laguna Beach Historic Register for the same reasons outlined above. Additionally, because the Moss Street beach access stair does not appear to be significant under any national, state, or local criteria, it has no period of significance and its integrity does not require examination.

PROJECT IMPACTS

Thresholds for Project Impacts

The State CEQA Guidelines set the standard for determining whether a proposed project will result in a "substantial adverse change" in the significance of historical resources in Title 14 CCR Section 15064.5(b), which states:

> A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

Title 14 CCR Section 15064.5(b)(1) further clarifies "substantial adverse change" as follows:

> Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

Title 14 CCR Section 15064.5(b)(2) in turn explains that a historical resource is "materially impaired" when a project:

> Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

[11] Kathleen Les, Environmental Coalition, "Ocean Way Vicinity," California Department of Parks and Recreation (DPR) Form, May 1981.

As such, the test for determining whether or not a proposed project will have a significant impact on an identified historical resource is whether or not the project will alter in an adverse manner the physical integrity of the historical resource such that it would no longer be eligible for listing in the NRHP or CRHR or other landmark programs such as the City of Laguna Beach Historic Register.

This analysis considers direct and indirect impacts to historical resources using the following definitions of each:

- Direct or primary impacts are caused by the project and occur at the same time and place (14 CCR Section 15358 [a][1]).
- Indirect impacts, or secondary effects, are reasonably foreseeable and caused by a project but occur at a different time or place (14 CCR Section 15358 [a][2]).

Analysis of Project Impacts

The Project would have no direct impacts on historical resources. There are no historical resources on the Project site and no historical resources would be demolished, destroyed, relocated, or altered as a result of the Project. Therefore, this memorandum only analyzes the potential for the Project to result in indirect impacts on the historical resources in the vicinity. As described above, there are two historical resources in the Study Area: 2191 Ocean Way and 2192 Ocean Way. 2191 Ocean Way is located immediately north of the Project site, while 2192 Ocean Way is located to the northwest across the street from the Project site.

In determining the potential impact of adjacent new construction on the historical resources in the Study Area, the central question is whether the new Moss Street beach access stair would cause a "material impairment" to the significance of the two nearby historical resources. Material impairment occurs where a project demolishes or alters the physical characteristics that convey the significance of a historical resource and that justify its inclusion in or eligibility of inclusion in national, state, or local landmark or historic district programs pursuant to the requirements of CEQA. Such an effect would only occur if the historical resources in the Study Area no longer retained sufficient integrity to convey their significance. The significance of the historical resources in the Study Area are described above.

According to National Register Bulletin 15, there are seven aspects of integrity: feeling, association, workmanship, location, design, setting, and materials. The Project would not have any impact on the identified historical resources' physical characteristics that convey their historic significance and justify their inclusion in, or eligibility for, applicable landmark designation programs. Because the proposed Project would not alter physical characteristics of the historical resources, the only relevant aspect with respect to the impact of the new Moss Street beach access stair on these historical resources is setting. Setting refers to the character of the place in which the historical resource is situated within the boundaries of the property as well as the resource's broader surroundings. This analysis considers whether the integrity of setting of the two historical would be so diminished by the new construction that they would no longer qualify as historical resources under national, state, or local landmark programs.

The Project site is located outside the parcel boundaries of 2191 Ocean Way and 2192 Ocean Way; therefore, the Project would not impact the integrity of immediate setting of the two historical resources. The historical resources' broader setting, namely their relationship to their surrounding features, has already been altered by new construction. 2191 Ocean Way and 2192 Ocean Way were originally completed in the 1920s. Since that period, features within the public right-of-way have been removed and replaced. The existing

Reference: **Moss Street Beach Access Rehabilitation Project**

asphalt paving, streetlights, and the Moss Street beach access stair are all non-original. The integrity of setting within the public right-of-way has been diminished overall by these changes. It lacks a distinct or cohesive character and does not contribute to the significance of the two historical resources.

The Project would introduce a new visual element to the Study Area, but the introduction of additional modern features to the public right-of-way would not diminish the integrity of the historical resources to the degree that they would no longer convey their significance. As noted above, the broad setting within the public right-of-way does not contribute to the significance of the two historical resources. Furthermore, the views of the two historical resources would not be obscured as a result of the Project. Both would remain highly visible and continue to be prominent features of the blocks on which they are located. Therefore, the Project would not result in a substantial adverse change to the immediate surroundings of these historical resources to the degree that they would no longer be eligible for listing under national, state, or local landmark programs.

CONCLUSIONS

The Project would have no direct impacts on historical resources. There are no historical resources on the Project site and no historical resources would be demolished, destroyed, altered, or relocated as a result of the Project. Indirect impacts on historical resources were also analyzed. The new Moss Street beach access stair would introduce a new visual element to the immediate surroundings of the historical resources; however, the Project would not result in a substantial adverse change to the integrity of the identified historical resources to the degree that they would no longer be eligible for listing as a historical resource defined by CEQA. Therefore, the indirect impacts to the historical resources would be less than significant. No mitigation is required or recommended.

Stantec Consulting Services Inc.

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Attachment A: Records Search Results Summary

Reference: **Moss Street Beach Access Rehabilitation Project**

ATTACHMENT A: RECORDS SEARCH RESULTS SUMMARY

A records search was conducted by the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on April 30, 2021. The purpose of this search was to determine the proximity of previously documented cultural resources to the Project Area that could guide future planning and development efforts as part of the Project. The records search included a review of all recorded historic and prehistoric cultural resources situated within a ¼-mile radius of the Project Area, as well as a review of known cultural resource surveys and excavation reports. The following sources of information were consulted as part of the records search:

- National Register of Historic Places (NRHP)
- California Register of Historical Resources (CRHR)
- California Inventory of Historic Resources (CHRI)
- California Historical Landmarks (CHL) list
- California Points of Historical Interest (CPHI) list
- California Office of Historic Preservation (OHP) records

Stantec consulted the California Office of Historic Preservation (OHP) Built Environment Resource Directory (BERD), which is maintained by the California Office of Historic Preservation (OHP), to determine if the Project area or immediate vicinity contains any properties listed and determined eligible for listing in the National Register, listed and determined eligible for listing in the California Register, or that had been evaluated in historic resource surveys and other planning activities. Stantec also consulted the Laguna Beach Historic Register to determine if the Project area or immediate vicinity contains any properties listed by the City of Laguna Beach.

The records search identified one resource within the Project Area and four within the immediate vicinity or 100 feet from the Project Area (see Tables A1 and A3). The records search also identified one previous cultural resource study conducted within the Project Area and four within a ¼-mile radius of the Project Area (see Tables A2 and A4).

TABLE A1: KNOWN CULTURAL RESOURCES WITHIN THE PROJECT AREA

Primary No.	Other IDs	Type	Age	Attribute codes	OHP Status Code
P-30-158189	Ocean Way Vicinity	District	Historic	HP02; HP03; HP05; HP06	5S2

Reference: **Moss Street Beach Access Rehabilitation Project**

TABLE A2: CULTURAL RESOURCE PROJECTS PREVIOUSLY CONDUCTED WITHIN THE PROJECT AREA

Report No.	Year	Author(s)	Title	Affiliation	Resources
OR-04179	2008	Anonymous	Laguna Beach Historic Resources Inventory	City of Laguna Beach	30-157939

TABLE A3: KNOWN CULTURAL RESOURCES WITHIN 100-FEET OF THE PROJECT AREA

Primary No.	Other IDs	Type	Age	Attribute codes	OHP Status Code
P-30-158180	The Ark/2191 Ocean Way	Building	Historic	HP02	3S/5S1
P-30-158182	139 Moss Street	Building	Historic	HP02	3S
P-30-158179	2173 Ocean Way	Building	Historic	HP02	5D2
P-30-158181	2192 Ocean Way	Building	Historic	HP02	3S/5S1

TABLE A4: CULTURAL RESOURCE PROJECTS PREVIOUSLY CONDUCTED WITHIN A ¼-MILE RADIUS OF THE PROJECT AREA

Report No.	Year	Author(s)	Title	Affiliation	Resources
OR-01926	1977	Ezell, Paul H. and Carrico, Richard L.	Archaeological Survey Report of Aliso Water Management Agency Project Committees 7, 11-A and 15	Westec Service, Inc.	30-000009, 30-000074, 30-000109, 30-000280, 30-000281, 30-000285, 30-000286, 30-000334, 30-000335, 30-000576, 30-000577, 30-000578, 30-000583, 30-000596, 30-001683
OR-01147	1991	Whitney-Desautels, Nancy A. and Fred Sundberg	Archaeological Survey of the Diamond/Crestview Study Area Laguna Beach Orange County, California	Scientific Resource Surveys, Inc.	None
OR-04082	1987	Pierson, Larry, Shiner, Gerald,	California Outer Continental Shelf, Archaeological Resource Study:	PS Associates	None

		and Slater, Richard	Morro Bay to Mexican Border, Final Report		
OR-02815	2002	Shepard, Richard S.	Historic Property Survey Report for the Laguna Beach Urban Runoff Diversion Project Laguna Beach, Orange County California	Chambers Group, Inc.	19-000755

REFERENCES

Anonymous
2008 *Laguna Beach Historic Resources Inventory*. Report on file at the South Central Coastal Information Center.

Ezell, Paul H. and Carrico, Richard L.
1977 *Archaeological Survey Report of Aliso Water Management Agency Project Committees 7, 11-A and 15*. Report on file at the South Central Coastal Information Center.

Pierson, Larry, Shiner, Gerald, and Slater, Richard
1987 *California Outer Continental Shelf, Archaeological Resource Study: Morro Bay to Mexican Border, Final Report*. Report on file at the South Central Coastal Information Center.

Shepard, Richard S.
2002 *Historic Property Survey Report for the Laguna Beach Urban Runoff Diversion Project Laguna Beach, Orange County California*. Report on file at the South Central Coastal Information Center.

Whitney-Desautels, Nancy A. and Fred Sundberg
1991 *Archaeological Survey of the Diamond/Crestview Study Area Laguna Beach Orange County, California*. Report on file at the South Central Coastal Information Center.

Appendix E PALEONTOLOGICAL RESOURCE ASSESSMENT

Draft Paleontological Resource Assessment for the Moss Street Beach Access Rehabilitation Project, City of Laguna Beach, California

July 19, 2021

Prepared for:

City of Laguna Beach
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Laguna Beach, California, 92651

Prepared by:

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DRAFT PALEONTOLOGICAL RESOURCE ASSESSMENT FOR THE MOSS STREET BEACH ACCESS REHABILITATION PROJECT, CITY OF LAGUNA BEACH, CALIFORNIA

This document entitled Draft Paleontological Resource Assessment for the Moss Street Beach Access Rehabilitation Project, City of Laguna Beach, California was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of City of Laguna Beach (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by _____
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(signature)
Gilberto Ruiz, Principal Environmental Planner

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Executive Summary

Stantec Consulting Services, Inc. (Stantec) conducted a paleontological resources assessment on behalf of the City of Laguna Beach for the Moss Street Beach Access Rehabilitation Project (the Project) located at the terminus of Moss Street in the City of Laguna Beach in Orange County, California. This paleontological study was conducted in support of City of Laguna Beach for the proposed rehabilitation of the existing beach access improvements.

Because the proposed Project may require construction and grading permits from the City of Laguna Beach, it is subject to compliance with the California Environmental Quality Act (CEQA) requirements regarding the Project's potential impacts on paleontological resources. As part of CEQA compliance, a paleontological resources assessment was conducted to determine potential impacts of the proposed Project on paleontological resources.

This paleontological resource investigation consisted of a museum records search from the Natural History Museum of Los Angeles County of the Project Area and vicinity, as well as a review of the most recent geologic mapping and relevant scientific literature. This research was used to assign paleontological potential rankings of the Society of Vertebrate Paleontology (2010) to the geologic units present in the Project Area, either at the surface or in the subsurface. The results of this assessment indicate that two geologic units are present in the Project Area: old lacustrine, playa, and estuarine deposits and the San Onofre Breccia, both of which are assessed as having high paleontological potential. As the Project may require a grading permit, additional mitigation measures may be required to satisfy CEQA requirements that protect paleontological resources. In order to avoid impacts to paleontological resources, Stantec recommends the following mitigation measures be implemented once the Project design is finalized:

1. A paleontologist meeting professional standards as defined by Murphey et al. (2019) shall be retained to oversee all aspects of paleontological mitigation, including the development and implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the final Project plans that provides for paleontological monitoring of earthwork and ground disturbing activities into undisturbed geologic units with high paleontological potential, to be conducted by a paleontological monitor meeting industry standards (Murphey et al. 2019). The PMMP should also include provisions for a Worker’s Environmental Awareness Program (WEAP) training that communicates requirements and procedures for the inadvertent discovery of paleontological resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.

2. In the event that paleontological resources are encountered during construction activities, all work must stop in the immediate vicinity of the finds while the paleontological monitor documents the find. The designated Project paleontologist shall assess the find. Should the qualified paleontologist assess the find as significant, the find shall be collected and curated in an accredited repository along with all necessary associated data.

Based on the findings in this study and the implementation of the above mitigation measures, the proposed Project should not cause an adverse impact to paleontological resources. Therefore, no additional paleontological resource studies are recommended or required at this time. Changes to the Project plans from those assessed in this study will require additional assessment for impacts to paleontological resources.

Abbreviations

CEQA	California Environmental Quality Act
LACM	Natural History Museum of Los Angeles County
SVP	Society of Vertebrate Paleontology

Glossary

Paleontological Resource	Any evidence of ancient life. This includes the remains of the body of an organism, such as bones, skin impressions, shell, or leaves, as well as traces of an organism's activity, such as footprints or burrows, called trace fossils, and relevant associated geologic data. Also referred to as fossils.

1.0 INTRODUCTION

Stantec Consulting Services, Inc. (Stantec) conducted a paleontological resources assessment on behalf of the City of Laguna Beach for the Moss Street Beach Access Rehabilitation Project (the Project) located at the southern terminus of Moss Street in the City of Laguna Beach in Orange County, California. This paleontological study was conducted in support of City of Laguna Beach for the proposed comprehensive rehabilitation of the existing beach access improvements.

Because the proposed Project may require construction and grading permits from the City of Laguna Beach, it is subject to compliance with the California Environmental Quality Act (CEQA) requirements regarding the Project's potential impacts on paleontological resources. As part of CEQA compliance, a paleontological resources assessment was conducted to determine potential impacts of the proposed Project on paleontological resources.

1.1 PROJECT DESCRIPTION

1.1.1 Project Location and Boundaries

The Moss Street Beach Access Rehabilitation Project is located within the City of Laguna Beach at the south end of Moss Street at its intersection with Ocean Way, just one block southwest of South Coast Highway where it dead ends into the City Beach. The street end features a series of existing improvements that are designed to facilitate access to the beach and public viewing of the beach/ocean environment at Moss Street. Specifically, the Project Area is located in a portion of Sections 36, Township 7 South, Range 9 West, as depicted on the Laguna Beach, CA USGS 7.5-minute series topographic quadrangle (Figure 1).

1.1.2 Existing Site Characteristics

The Project site is located along the coast of Laguna Beach, surrounded by urban development and in immediate proximity to the City Beach and the Pacific Ocean. The existing beach access is on a steep slope between the beach and roadway and is a popular spot for snorkeling and swimming at this small, secluded beach. Beach access currently consists of concentrated retaining walls and terraced landings from Moss Street adjacent to existing residences, concrete stairs in tight formation with 180-degree turns, and a single 44-step flight of stairs with no landing before ending at the beach. Currently the stairs end short of the beach level, requiring a wooden extension to temporarily address the unsafe condition and provide easier reach to the sand. The Project site is primarily used by the public, including residents and visitors to the City of Laguna Beach. The surrounding and nearby uses are predominately residential uses along Pacific Coast Highway.

1.1.3 Project Construction & phasing

The Project is proposed to be constructed as funding becomes available for each coastal access project. Construction is expected to commence on the Project in 2022. Below is a brief description of the Project phasing:

- *Mobilization* – This phase would entail mobilization of equipment and personnel to the work site.
- *Clearing & Grubbing* – This phase would include the demolition and removal of the existing wall and stairs, clearing of any vegetation, trees and associated roots or stumps from the Project site.
- *Grading* – This phase involves making sure that there is a level base and appropriate slopes for the beach access stairs and drainage improvements.
- *Trenching & Structure*s – This phase includes preparing trenches for the relocation of utilities and other underground components of the beach access stairway. It also entails the construction of any above or below ground structures. At the beach level, a cofferdam, or other means of controlling sea water during foundation and stair construction, will be required.
- *Street Rehabilitation and Signing* – This phase would entail asphalt-concrete (AC) paving repair at street level adjacent to the top level public viewing area, replacing the drainage inlet, placing a new curb ramp, placing signage and other features in order to meet required public safety standards, and parking.
- *Landscaping & Demobilization* – This phase includes removing equipment, material, and personnel from the worksite and installing the landscaping and associated irrigation (if required), including removal and replacement of trees (if required).

The proposed Project would remove and reconstruct the existing beach access (stairs and viewing platform) located at the western terminus of Moss Street. The Project would entail demolition and disposal of existing walls and stairs. The construction methods would entail the following:

- Cast-In-Drilled-Hole (CIDH) foundations installed with a small drill rig (24-inch diameter piles)
- Spread footing type retaining walls (with a total height of less than eight feet)
- Slab on grade and stair construction
- Concrete forming, reinforcement, and pumping
- Minor associated structural earthwork and grading with a backhoe or small excavator
- Miscellaneous street and storm drain improvements including curb and gutter, storm drain inlets and piping, AC paving, and landscaping and irrigation.

Introduction

The concept design preserves the approximate beginning and end of stair elevations; however, locations would need to be changed and realigned. Profile rise and run of the stairs will be controlled by Americans with Disabilities Act (ADA) requirements while providing additional landings. The stairs will end at bedrock elevation to address the current drop off condition and estimated long term beach erosion. The construction duration is estimated to take up to four months to complete.

Introduction

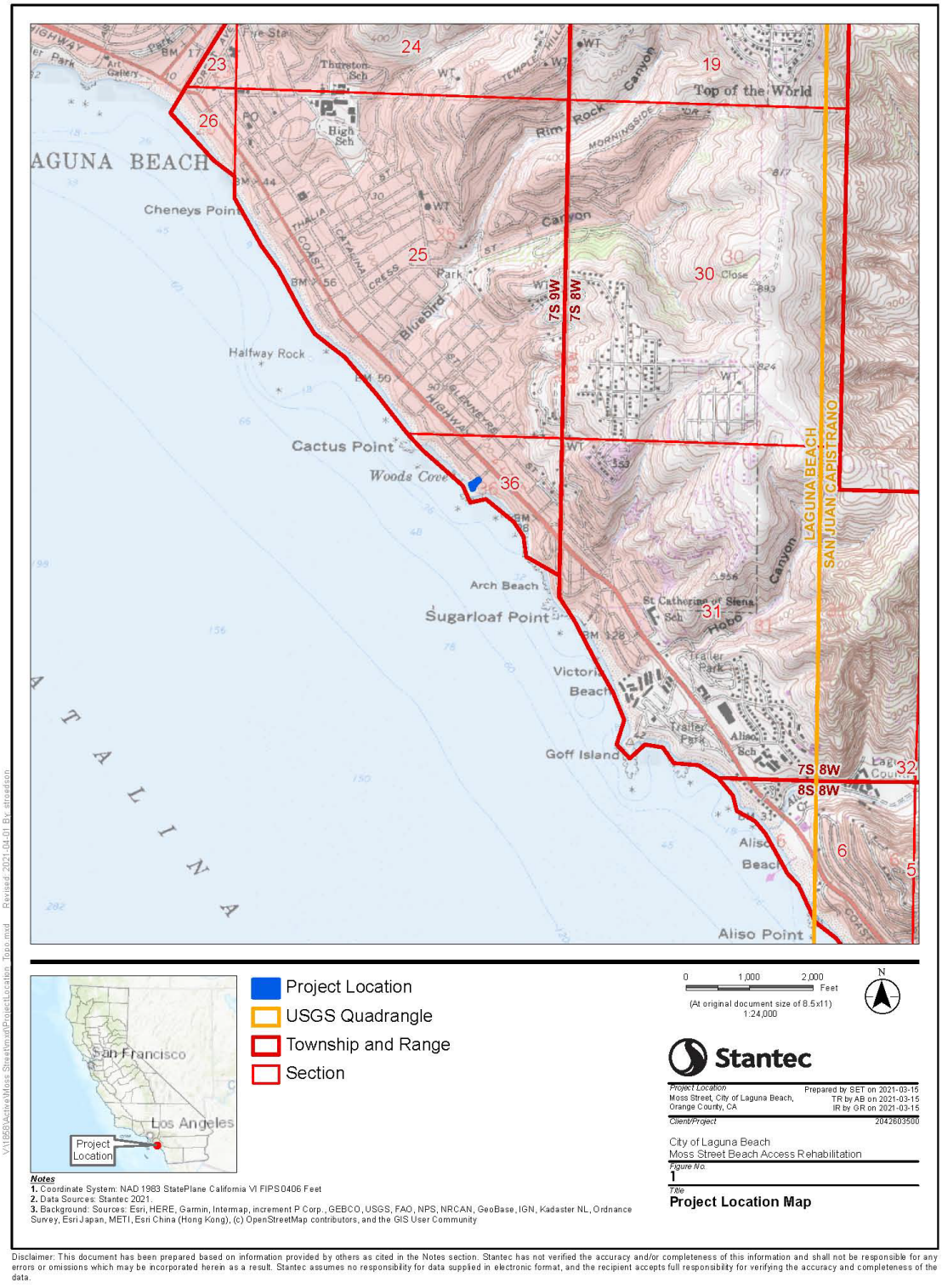

Figure 1. Moss Street location map.

1.2 PALEONTOLOGICAL RESOURCES

Paleontological resources, or fossils, are any evidence of ancient life. This includes the remains of the body of an organism, such as bones, skin impressions, shell, or leaves, as well as traces of an organism's activity, such as footprints or burrows, called trace fossils. In addition to the fossils themselves, geologic context is an important component of paleontological resources, and includes the stratigraphic placement of the fossil as well as the lithology of the rock in order to assess paleoecologic setting, depositional environment, and taphonomy. Fossils are protected by federal, state, and local regulations as nonrenewable natural resources.

The Society of Vertebrate Paleontology (SVP) defines significant paleontological resources as

> "identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years)" [SVP 2010].

It should be noted that the threshold for significance varies with a variety of factors, including geologic unit, geographic area, and the current state of scientific research, and may also vary between different agencies (Murphey et al. 2019).

2.0 REGULATORY FRAMEWORK

California and the City of Laguna Beach have enacted laws and regulations that provide for the protection of paleontological resources. This investigation was conducted to meet these requirements regarding paleontological resources on the lands proposed for development. It is expected that any potential adverse impacts arising from any proposed development activities will be contained within the Project Area, as shown in Figures 1 and 2.

2.1 STATE OF CALIFORNIA

2.1.1 California Environmental Quality Act

CEQA (Public Resources Code [PRC] Section 21000 et seq) requires that before approving most discretionary projects, the Lead Agency must identify and examine any significant adverse environmental effects that may result from activities associated with such projects. As updated in 2016, CEQA separates the consideration of paleontological resources from cultural resources (PRC Section 21083.09). The Appendix G checklist (Title 14, Division 6, Chapter 3, California Code of Regulations [CCR] 15000 et seq.) requires an answer to the question, "Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" Under these requirements, Stantec has

conducted a paleontological resources assessment to determine impacts of the proposed Project on paleontological resources within the Project Area.

2.1.2 Public Resources Code

The California Public Resources Code (PRC) (Chapter 1.7, Sections 5097 and 30244) includes additional state-level requirements for the assessment and management of paleontological resources. These statutes require reasonable mitigation of adverse impacts to paleontological resources resulting from development on state lands, define the removal of paleontological sites or features from state lands as a misdemeanor, and prohibit the removal of any paleontological site or feature from state land without permission of the applicable jurisdictional agency.

2.1.3 California Coastal Act, Section 30244

The California Coastal Act authorizes the California Coastal Commission to protect paleontological resources in Section 30244, which states, “Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.”

2.2 LOCAL REGULATIONS

2.2.1 City of Laguna Beach General Plan

The Open Space and Conservation Element of the City of Laguna Beach General Plan (2012) recognizes the importance of paleontological resources with two policies that provide for their protection:

> **12A**. Promote the conservation of land having archaeological and/or paleontological importance, for its value to scientific research and to better understand the cultural history of Laguna Beach and environs; and
>
> **12D**. Preserve cultural/scientific sites, including geologically unique formations having archaeological significance.

3.0 PROFESSIONAL STANDARDS

The SVP (2010), the Bureau of Land Management (BLM) (2016) and a number of scientific studies (Eisentraut and Cooper 2002; Murphey et al. 2019; Scott and Springer 2003) have developed guidelines for professional qualifications, conducting paleontological assessments, and developing mitigation measures for the protection of paleontological resources. These guidelines are broadly similar, and include the use of museum records searches, scientific literature reviews, and, in some cases, field surveys to assess the potential of an area to preserve paleontological resources. Should there be potential for significant resources to be impacted, accepted mitigation measures include paleontological monitoring, data recordation of all fossils encountered, collection and curation of significant fossils and

associated data, and in some cases screening of sediment for microfossils. This study has been conducted in accordance with these guidelines and the recommendations provided herein meet these standards.

4.0 GEOLOGIC SETTING

The Project Area is located in the northern Peninsular Ranges geomorphic province. The Peninsular Ranges formed as a volcanic island arc collided with the west coast of North America and was accreted onto the margin of the continent, resulting in the expansion of the continent westward. The Peninsular Ranges are part of a larger subduction zone that extends all along western North America, with this particular geomorphic province extending from the Los Angeles Basin in the north to Baja in the south, and extending to Santa Catalina, Santa Barbara, San Nicolas, and San Clemente Islands on the west and the Colorado Desert on the east (Norris and Webb 1990). The core of the Peninsular Ranges formed as the core of a magmatic arc in the Mesozoic that resulted from active subduction along the Pacific Plate boundary (Harden 2004).

Two main batholiths of plutonic rock form the core of the Peninsular Ranges. The western batholith, where the Project Area is located, was emplaced first and is 140 – 105 million years old (Ma) and consists of mafic plutonic rocks, while the eastern batholith is 99 – 92 Ma and consists of silica-rich granodiorites and tonalities (Kimbrough et al. 2001). These plutonic rocks intruded into the older rocks of a Paleozoic carbonate platform, heavily metamorphosing them (Harden 2004). There was volcanic activity associated with the subduction zone as well, with the Santiago Peak Volcanics deposited from 130 – 120 Ma as primarily andesitic and silicic flows, that were then metamorphosed by the ongoing batholith emplacement (Fife et al. 1967). Later in the Cretaceous, marine sedimentary rocks accumulated over the plutons and volcanic rocks, deposited as turbidity currents in what was an ocean at the time (Kimbrough et al. 2001). These rocks are in turn overlain by more recent sedimentary deposits leading up to the present day, that have been heavily uplifted and faulted by tectonic activity throughout the Cenozoic. These deposits were marine through the Eocene and then shifted to terrestrial volcanic and sedimentary strata by the Oligocene and lower Miocene (Powell 1993).

Locally, the Project Area is located on the coast at the base of the San Joaquin Hills. The San Joaquin Hills form the southern boundary of the Los Angeles Basin, and are some of the northern-most hills of the Peninsular Ranges province. The basement rock complex is called the Catalina Schist, thinly-foliated metamorphic rocks that are best seen on Catalina Island, and are buried within the core of the mountains on most of the mainland (Vedder 1970). The basement complex is covered by approximately 1.5 km of Cenozoic-aged sedimentary rocks that are primarily marine in origin that have been uplifted over the last 120,000 years (Grant et al. 1999). An important feature of the San Joaquin Hills is a series of eight prominent wave-cut terraces that date to the Pleistocene (Vedder 1970), one of which forms the cliff that the Project Area traverses.

5.0 METHODOLOGY

The paleontological resource assessment reported herein consisted of a records search from the Natural History Museum of Los Angeles County (LACM) as well as a review of the relevant scientific literature and the most recent geologic mapping. To assess if paleontological resources are likely to be encountered in any given area, the paleontological potential of the geologic units present in the area is assessed. Paleontological potential of a geologic unit consists of both (a) the potential for yielding abundant vertebrate fossils or for yielding significant vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data (SVP 2010). Unlike archaeological resources that often have a limited aerial extent, paleontological resources may occur throughout a geologic unit, and so paleontological potential is assessed for the unit as a whole. Provided below is the methodology used during the current study to assess the potential of the Project to impact paleontological resources.

5.1 RECORDS SEARCH

A records search of the Project Area and vicinity was requested from the LACM on March 30, 2021, with the results received from the LACM on April 2, 2021. The search returned the closest known paleontological localities of the LACM to the Project Area from geologic units that are present at the Project Area, either at the surface or in the subsurface.

5.2 SCIENTIFIC LITERATURE REVIEW

In order to assess the paleontological potential of the Project Area, the most recent geologic mapping (Bedroussian et al. 2012; Morton and Miller 2006) was consulted to identify all geologic units present at the surface or likely present in the subsurface. The scientific literature was then consulted to determine the history of each of these units for preserving fossil resources.

5.3 PALEONTOLOGICAL RESOURCES ASSESSMENT

The results of the museum records search and the scientific literature review were used to assign the paleontological potential rankings of the SVP (2010) to the geologic units present in the Project Area. These rankings are designed to inform the development of appropriate mitigation measures for the protection of paleontological resources and are widely accepted as industry standards in paleontological mitigation (Murphey et al. 2019; Scott and Springer 2003). These rankings are as follows:

> **High Potential.** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rock units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations that are temporally or lithologically suitable for the preservation of fossils (e.g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded

point bar sandstones, fine-grained marine sandstones, etc.), some volcaniclastic formations (e.g., ashes or tephras), and some low-grade metamorphic rocks.

Undetermined Potential. Rock units for which little information is available in the literature or museum records concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study and field work is necessary to determine if these rock units have high or low potential to contain significant paleontological resources.

Low Potential. Rock units that are poorly represented by fossil specimens in institutional collections or, based on general scientific consensus, only preserve fossils in rare circumstances (e.g., basalt flows or Recent colluvium) have low paleontological potential.

No Potential. Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites).

6.0 RESULTS

The results of the paleontological potential assessment are described below.

6.1 PROJECT AREA GEOLOGY

Geologic mapping by Bedrossian et al. (2012) and Morton and Miller (2006) indicate the surface of the Project Area consists of two geologic units: old lacustrine, playa, and estuarine terrace deposits and the San Onofre Breccia (Figure 2). These geologic units range in age from the Late Pleistocene to approximately 16 Ma and are described below.

Old Lacustrine, Playa, and Estuarine Deposits (Qop in Figure 2). The northern-most end of the Project Area consists of sedimentary units from terrestrial lacustrine and playa settings as well as estuarine (or paralic) deposits (Bedrossian et al. 2012). These deposits consist of interfingering terrestrial and marine sediments that date from the Pleistocene and form broad terraces along the Southern California coast that have been uplifted episodically by tectonic activity (McNeilan et al. 1996). In the Project Area and vicinity these terraces are primarily marine deposits that were deposited in the shallow subtidal and intertidal zones, and date from 120,000 – 413,000 years ago (Morton and Miller 2006). These sediments are generally poorly-sorted silt, sand, and cobbles (Morton and Miller 2006).

San Onofre Breccia (Tss in Figure 3). Coarse-grained sedimentary formations (Bedrossian et al. 2012) identified as the San Onofre Breccia (Morton and Miller 2006) make up the majority portion of the Project Area. The San Onofre Breccia consists of marine breccia and conglomerate of predominately blueschist clasts with scattered sandstone, siltstone, and mudstone lenses that

RESULTS

Figure 2. Geologic map of the Project Area and vicinity, after Bedrossian et al. (2012).

formed from the erosion and deposition of the Catalina Schist during the middle Miocene, approximately 14-16 Ma (Morton and Miller 2006).

6.2 PALEONTOLOGICAL POTENTIAL OF GEOLOGIC UNITS IN THE PROJECT AREA

In order to assess the potential of the geologic units present at the surface or in the subsurface to preserve fossil resources, Stantec conducted a review of the relevant scientific literature and requested a records search from the LACM (Table 1). The results of this investigation are described below for each of the geologic units in the Project Area (Table 2).

Old Lacustrine, Playa, and Estuarine Deposits (Qop in Figure 3). These terrace deposits date from the Late Pleistocene, ranging from 120,000 – 143,000 years old, making this unit old enough to preserve fossil resources. Furthermore, these deposits are well known to preserve fossil resources in Southern California, including in the vicinity of the Project Area. The LACM has a number of fossil localities in Pleistocene terrace deposits from Southern California, the closest of which is from the hills from around Laguna Beach, where invertebrates including the chestnut cowrie (*Neobernaya*) were collected (LACM 2021; Table 1).Other LACM localities include a mammoth collected from an unknown depth in Pleistocene terraces 6 km southeast of the Project Area and a highly productive locality in Long Beach where dozens of fossils of invertebrates and fish including sharks, rays, perch, and others were collected (LACM 2021). A review of the scientific literature indicates that these deposits are well known for preserving fossil resources in Southern California, such as the most diverse assemblage of fossil marine fish of any Cenozoic period in the western United States (Long 1993). Terrace deposits have also yielded a diverse fauna of nearshore marine invertebrates such as crabs, snails, bivalves, gastropods, and echinoids (Kennedy 1975, Morton and Miller 2006, Valentine 1989, Woodring 1957) and both marine and terrestrial vertebrates, such as sharks, bony fish, whales, amphibians, reptiles, birds, antelopes, mammoth, dire wolves, rodents, and bison (Barnes and McLeod 1984, Fitch 1967, Kennedy 1975, Woodring 1957). This extensive fossil record, in particular the diverse invertebrate assemblage, has been important for reconstructing changes in shallow marine ecosystems as the climate has changed since the Pleistocene (DeBusk et al. 2009, Jacobs 2005, Powell and Stevens 2000). Given the extensive record of significant fossils recovered from terrace deposits like those in the Project Area, this unit is assessed as having high paleontological potential.

San Onofre Breccia (Tss in Figure 3). The San Onofre Breccia dates from the Miocene and was deposited from 14-16 Ma. The San Onofre Breccia is not known for abundant fossil preservation but has been documented to preserve significant invertebrate and vertebrate fossils in Southern California. The closest San Onofre Breccia locality known to the LACM comes from 4.6 km southeast of the Project Area where invertebrates were collected, with an additional locality known on Dana Point (LACM 2021). A locality dating to the Miocene is known from Laguna Beach (LACM 2021); while data on this site is limited, given the widespread occurrence of the San Onofre Breccia in Laguna Beach and the lack of many other Miocene-aged sediments

in the area, it is entirely likely this locality is also from the San Onofre Breccia. A review of the scientific literature indicates that invertebrate macrofossils including gastropods and bivalves like scallops and oysters (Boundy-Sanders et al. 1987, Shapiro 1998, Stuart 1979) are known from the formation, as well as mammal fossils that have not been described to date (Deméré and Walsh 1993). While fossils are not common from this unit, the presence of rare vertebrates indicates there is the potential for significant fossils to be preserved, and the rarity of fossils from this unit in general lends further significance to any fossils that might be present in this unit. Therefore, this unit is assessed as having high paleontological potential.

Table 1 Summary of the records search from the LACM

Locality Number	Geologic Unit	Age	Taxa	Approximate Location
LACMIP 12	Unknown formation	Pleistocene	Invertebrates (*Neobemaya spadicea*)	Hills near Laguna Beach (more precise information not available)
LACM VP 1115	Terrace deposits	Pleistocene	Mammoth (*Mammuthus*)	Approximately 5.9 km SE of the Project Area; near Salt Creek Trail in Salt Creek Corridor Regional Park
LACM IP 10036	Terrace deposits	Pleistocene	Decapods (Decapoda), barnacles (Sessilia), gastropods (*Borsonella*, *Fissurella*, *Hipponix*, *Lottia*), bivalves (*Tellina* , *Tivela, Tresus, Yoldia*)	Approximately 6.8 km SE of Project Area; Monarch Beach Development, near intersection of Niguel Rd and Camino del Avion
LACM VP 7739	Terrace deposits	Pleistocene	Invertebrates (snails; clams; tusk shells; barnacles; crabs; sea urchins); requiem shark (*Carcharhinus*), Spotted cusk eel (*Chilara*), croakers (*Genyonemus, Seriphus*), school shark (*Galeorhinus*), righteye flounder (*Glyptocephalus*), guitarfish (*Rhinobatos*), toadfish (*Porichthys*), perch (Cymatogaster, Damalichthys), bullhead shark (*Heterodontus*), ray (Dasyatis, *Myliobatus, Raja*), surfperch (*Embiotoca, Hyperprosopon, Micrometrus*), flatfish (*Citharichthys*), leopard shark (*Triakis*), slender sole (*Lyopsetta*), dogfish shark (*Squalus*), skate (*Squatina*), barracuda (*Sphyraena*)	Approximately 44 km NW of the Project Area; Bluff Park (on the beach adjacent to the eastern half of the southern edge of the parking lot)
LACMIP 2951	Unknown formation	Miocene	Invertebrates (unspecified)	Near Laguna Beach (more precise location information not available)
LACM IP 6997	San Onofre Breccia	Miocene	Invertebrates (unspecified)	Approximately 4.6 km SE of Project Area; S slope of ridge adjacent to Laguna Ridge Trail, near end of Seaway Dr; Laguna Hills

recommendations and management considerations

Locality Number	Geologic Unit	Age	Taxa	Approximate Location
LACM IP 24377	San Onofre Breccia	Miocene	Invertebrates (unspecified)	Approximately 9 km SE of Project Area; Dana Point

Table 2 Paleontological potential of geologic units within the Project Area

Geologic Unit	Age	Occurrence within Project Area	Paleontological Potential*
Old Lacustrine, Playa, and Estuarine Deposits	Pleistocene	Northern-most end of Project Area	High
San Onofre Breccia	Middle Miocene	Majority of Project Area	High

**ranking based on the SVP (2010) classifications*

7.0 RECOMMENDATIONS AND MANAGEMENT CONSIDERATIONS

As part of the current paleontological assessment, a records search from the LACM and a review of geologic mapping and the scientific literature were conducted in order to assess the potential of the geologic units in the Project Area to preserve paleontological resources. The results of this assessment show that the following geologic units are present in the Project Area:

- Old Lacustrine, Playa, and Estuarine Deposits – high paleontological potential; and
- San Onofre Breccia – high paleontological potential.

Should Project-related activities encounter paleontological resources, the damage or destruction of those resources would constitute an adverse impact under CEQA. Because the Project may require special permits from the City of Laguna Beach, and in order to adhere to State and City guidelines regarding paleontological resources, Stantec recommends the following mitigation measures be implemented once the Project design is finalized:

1. A paleontologist meeting professional standards as defined by Murphey et al. (2019) shall be retained to oversee all aspects of paleontological mitigation, including the development and implementation of a Paleontological Monitoring and Mitigation Plan (PMMP) tailored to the final Project plans that provides for paleontological monitoring of earthwork and ground disturbing activities into undisturbed geologic units with high paleontological potential, to be conducted by a paleontological monitor meeting industry standards (Murphey et al. 2019). The PMMP should also include provisions for a Worker's Environmental Awareness Program (WEAP) training that communicates requirements and procedures for the inadvertent discovery of paleontological

resources during construction, to be delivered by the paleontological monitor to the construction crew prior to the onset of ground disturbance.

2. In the event that paleontological resources are encountered during construction activities, all work must stop in the immediate vicinity of the finds while the paleontological monitor documents the find. The designated Project paleontologist shall assess the find. Should the qualified paleontologist assess the find as significant, the find shall be collected and curated in an accredited repository along with all necessary associated data.

These recommendations meet the standards of the SVP (2010) and conform to industry best practices (e.g., Murphey et al. 2019; Scott and Springer 2003) Based on the findings in this study the proposed Project will not cause an adverse impact to paleontological resources with the incorporation of the above mitigation recommendations. Therefore, no additional paleontological resources studies are recommended or required at this time. Should the Project location or plans change, this assessment will need to be revised to address those changes.

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Appendix A NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY PALEONTOLOGICAL RECORDS SEARCH RESULTS

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

April 2, 2021

Stantec
Attn: Alyssa Bell

re: Paleontological resources for the Moss Street Rehabilitation Project (Project Number 2042603500)

Dear Alyssa:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Moss Street Rehabilitation project area as outlined on the portion of the Laguna Beach USGS topographic quadrangle map that you sent to me via e-mail on March 30, 2021. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County.

Locality Number	Location	Formation	Taxa	Depth
LACMIP 12	Hills near Laguna Beach	Unknown formation (Pleistocene)	Invertebrates (*Neobemaya spadicea*)	Unknown
LACMIP 2951	Near Laguna Beach (more precise location information not available)	Unknown formation (Miocene)	Invertebrates (unspecified)	Unknown
LACM IP 6997	S slope of ridge adjacent to Laguna RidgeTrail, near end of Seaway Dr; Laguna Hills	San Onofre Breccia	Invertebrates (unspecified)	Unknown
LACM VP 1115	near Salt Creek Trail in Salt Creek Corridor Regional Park; San Joaquin Hills	Pleistocene terrace deposit	Mammoth (*Mammuthus*)	Unknown
LACM IP 10036	Monarch Beach Development, near intersection of Niguel Rd and Camino del Avion	Pleistocene terrace deposits	Decapods indeterminate (Decapoda), barnacles (Sessila), gastropods (Borsonella, Fissurella, Hipponix, *Lottia*), (*Tellina*), bivalves (*Tivela*, *Tresus*, *Yoldia*)	Unknown (collected during trenching)

LACM IP 24377	Dana Point	San Onofre Breccia (Red and gray; sandy and earthy schist breccia)	Invertebrates (unspecified)	Unknown
LACM VP 7739	Bluff Park (on the beach adjacent to the eastern half of the southern edge of the parking lot); Long Beach	Late Pleistocene* coastal deposits (dark gray massive sandy silt)	Invertebrates (snails; clams; tusk shells; barnacles; crabs; sea urchins); requiem shark (*Carcharhinus*), Spotted cusk eel (*Chilara*), croakers (*Genyonemus, Seriphus*), school shark (*Galeorhinus*), righteye flounder (*Glyptocephalus*), guitarfish (*Rhinobatos*), toadfish (*Porichthys*), perch (Cymatogaster, Damalichthys), bullhead shark (*Heterodontus*), ray (Dasyatis, *Myliobatus, Raja*), surfperch (*Embiotoca, Hyperprosopon, Micrometrus*), flatfish (*Citharichthys*), leopard shark (*Triakis*), slender sole (*Lyopsetta*), dogfish shark (*Squalus*), skate (*Squatina*), barracuda (*Sphyraena*)	56 ft bgs

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface
**specimens were collected from 25 ft below carbon-14 accelerator mass spectrometry date of 43180 +/-710 years.*

This records search covers only the records of the Natural History Museum of Los Angeles County ("NHMLA"). It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,

Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice

Appendix F NOISE IMPACT SUPPLEMENTAL INFORMATION

Noise Fundamentals and Terminology

Noise is generally defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of a proposed project.

Sound is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an existing sound level.

Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called A-weighting, written as dB(A) and referred to as A-weighted decibels. There is a strong correlation between A-weighted sound levels and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. Table 1 summarizes typical A-weighted sound levels for different common noise sources.

Table 1 Typical A-Weighted Sound Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	-110-	Rock band
Jet flyover at 1,000 Feet		
	-100-	
Gas lawnmower at 3 Feet		
	-90-	
Diesel truck at 50 Feet at 50 MPH		Food blender at 3 Feet
Noisy urban area, daytime	-80-	Garbage Disposal at 3 Feet
Gas lawnmower, 100 Feet		
Commercial area	-70-	Vacuum Cleaner at 10 Feet
Heavy traffic at 300 Feet		Normal Speech at 3 Feet
	-60-	
Quiet urban daytime		Large business office
	-50-	Dishwasher in next room
Quiet urban nighttime		
Quiet suburban nighttime	-40-	Theater, large conference room (Background)
	-30-	
Quiet rural nighttime		Library
	-20-	Bedroom at night, concert hall (Background)
	-10-	
		Broadcast/recording studio
	-0-	

Source: Caltrans, Technical Noise Supplement Traffic Noise Analysis Protocol, September 2013 (https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf)

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (Leq), the minimum and maximum sound levels (Lmin and Lmax), percentile-exceeded sound levels (such as L10, L20), the day-night sound level (Ldn), and the community noise equivalent level (CNEL). Ldn and CNEL values often differ by less than 1 dB. As a matter of practice, Ldn and CNEL values are considered to be equivalent and are treated as such in this assessment. Table 2 defines sound measurements and other terminology used in this report.

Table 2 Definition of Sound Measurements

Sound Measurements	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dB(A))	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

Sound Measurements	Definition
Maximum Sound Level (Lmax)	The maximum sound level measured during the measurement period.
Minimum Sound Level (Lmin)	The minimum sound level measured during the measurement period.
Equivalent Sound Level (Leq)	The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-Exceeded Sound Level (Lxx)	The sound level exceeded xx % of a specific time period. L10 is the sound level exceeded 10% of the time. L90 is the sound level exceeded 90% of the time. L90 is often considered to be representative of the background noise level in a given area.
Day-Night Level (Ldn)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Peak Particle Velocity (PPV)	A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/second.
Frequency: Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Source: Federal Highway Administration Construction Noise Handbook, 2006[1]

With respect to how humans perceive and react to changes in noise levels, a 1 dB(A) increase is imperceptible, a 3 dB(A) increase is barely perceptible, a 5 dB(A) increase is clearly noticeable, and a 10 dB(A) increase is subjectively perceived as approximately twice as loud. These subjective reactions to changes in noise levels were developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broadband noise and to changes in levels of a given noise source. These statistical indicators are thought to be most applicable to noise levels in the range of 50 to 70 dB(A), as this is the usual range of voice and interior noise levels. Numbers of agencies and municipalities have developed or adopted noise level standards, consistent with these and other similar studies to help prevent annoyance and to protect against the degradation of the existing noise environment.

For a point source such as a stationary compressor or construction equipment, sound attenuates based on geometry at a rate of 6 dB per doubling of distance. For a line source such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance. Atmospheric conditions including wind, temperature gradients, and humidity can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs

[1] https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook02.cfm, Last Accessed March 16, 2021.

acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a slightly greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1–2 dB per doubling of distance. Barriers, such as buildings and topography that block the line of sight between a source and receiver, also increase the attenuation of sound over distance.

Decibel Addition

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one source produces a sound pressure level of 70 dB(A), two identical sources would combine to produce 73 dB(A). The cumulative sound level of any number of sources can be determined using decibel addition.

Vibration Standards

Vibration is like noise such that noise involves a source, a transmission path, and a receiver. While related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system that is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. Vibration is commonly expressed in terms of the root mean square (RMS) velocity of a vibrating object. RMS velocities are expressed in units of vibration decibels. The range of vibration decibels (VdB) is as follows:

65 VdB	- threshold of human perception
72 VdB	- annoyance due to frequent events
80 VdB	- annoyance due to infrequent events
94-98 VdB	- minor cosmetic damage

The operation of heavy construction equipment, particularly pile driving and other impact devices, such as pavement breakers and jackhammers, create seismic waves that radiate along the surface of the ground and downward into the earth. These surface waves can be felt as ground vibration. Vibration from the operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Varying geology and distance will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will decrease with increasing distance. Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities.

Table 3 contains the construction noise calculation for the proposed Project.

Figure 3 RCNM Construction Noise Calculation

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 3/16/2021
Case Description: Moss St Beach Access Rehabilitation - Demolition Equipment

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Residence	Residential	65	65	65

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Jackhammer	Yes	20		88.9	100	0
Backhoe	No	40		77.6	100	0
Compressor (air)	No	40		77.7	100	0

Results

	Calculated (dBA)	
Equipment	Lmax	Leq
Jackhammer	82.9	75.9
Backhoe	71.5	67.6
Compressor (air)	71.6	67.7
Total	**83.5**	**77**