DRAFT

Initial Study/Mitigated Negative Declaration
Park Drive Slope and Drainage Improvement Project

Prepared for:

City of Carlsbad
1635 Faraday Avenue
Carlsbad, California 92008
Contact: Daniel Zimny

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Vanessa Currie

JUNE 2021

TABLE OF CONTENTS

SECTION **PAGE NO.**

APPENDICES

FIGURES

TABLES

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AB	Assembly Bill
ACOE	U.S. Army Corps of Engineers
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CAP	Climate Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbon
CH_4	methane
City	City of Carlsbad
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CUPA	Certified Unified Program Agency
dB	decibel
dBA	A-weighted decibel
DNL	day/night average sound level
EIR	Environmental Impact Report
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
FTA	Federal Transit Administration
GHG	greenhouse gas
HFC	hydrofluorocarbon
HMP	Habitat Management Plan
in/sec	inches per second
JRMP	Jurisdictional Runoff Management Program
LCP	Local Coastal Program
L_{eq}	energy-averaged noise level
MM	Mitigation Measure
MND	Mitigated Negative Declaration
MS4	Municipal Separate Storm Sewer System
MT	metric ton
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
PFC	perfluorocarbons
$PM_{2.5}$	fine particulate matter

Acronym/Abbreviation	Definition
PM_{10}	course particulate matter
PPV	peak particle velocity
Project	Park Drive Slope and Drainage Improvement Project
RAQS	Regional Air Quality Strategies
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SCIC	South Coast Information Center
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminant
VOC	volatile organic compound

Initial Study

1. **PROJECT NAME:** Park Drive Slope and Drainage Improvement Project
2. **PROJECT NO: 11632**
3. **LEAD AGENCY:**
   City of Carlsbad
   1635 Faraday Avenue
   Carlsbad, California 92008
4. **PROJECT APPLICANT:**
   City of Carlsbad
   1635 Faraday Avenue
   Carlsbad, California 92008
5. **LEAD AGENCY CONTACT PERSON:**
   Christina M. Bustamante, Associate Planner; 760-602-4644; Christina.Bustamante@carlsbadca.gov
6. **PROJECT LOCATION:**
   Northeast side of Park Drive between Cove Drive and Bayshore Drive in the City of Carlsbad, San Diego County, California. The Project study area encompasses approximately 5.32 acres, and is located in Section 8, Township 12 South, Range 4 West within the Agua Hedionda Land Grant as shown on the San Luis Rey, California 7.5-minute series U.S. Geological Survey topographic map. APNs intersecting the Project Boundary include, 207-100-57, 207-100-65, 207-100-67, 207-150-57, 207-420-13, 207-420-14, 207-420-15, 207-420-16, 207-420-17, 207-420-18, 207-420-19, 207-420-42.
7. **GENERAL PLAN LAND USE DESIGNATION:**
   R-8, Residential 4–8 du/ac
   R-4, Residential 0–4 du/ac
   OS, Open Space
8. **ZONING:**
   PC, Planned Community
   OS, Open Space
   Deferred Certification Area[1]
9. **PROJECT DESCRIPTION:**
   To address public safety and coastal access issues associated with the failing hillside along Park Drive, the City proposes to remove 600 linear feet (LF) of existing retaining wall and install a new retaining wall, as well as repair portions of the failing slope. The new retaining wall would include approximately 303 LF of Concrete Masonry Unit (CMU) wall/block wall (approximately 2 to 3 feet tall); 179 LF of soldier pile wall (approximately 3 to 10 feet tall); and 336 LF of stepped planter wall (approximately 2 to 10 feet tall). All wall improvements are contained within the City's ROW and the easement areas, including the open space easement, and no permanent impacts to the adjacent private property would occur. Construction impacts would occur within the private property to replace the slope to the existing condition due to the wall replacement.

   Park Drive is a neighborhood connector street, per the City of Carlsbad's General Plan Mobility Element (City of Carlsbad 2015a), that runs parallel to the Agua Hedionda Lagoon in Carlsbad, California. Park Drive provides one lane of travel in each direction, and parking, bike lanes, and sidewalks within the 60-foot-wide right-of-way (ROW) (Figure 1, Project Location). Park Drive is the only connector road to Bayshore Drive, which has the only public boat launch for kayaks and other

[1] Within deferred certification areas, zoning classifications shown on this map are not certified by the California Coastal Commission. Until a Local Coastal Program implementation plan is certified by the California Coastal Commission for these areas, the California Coastal Commission retains authority to issue coastal development permits for development on these properties. The California Coastal Commission will use the City of Carlsbad's zoning as a guide when evaluating proposed coastal development permits within these areas.

non-motorized vessels on Agua Hedionda Lagoon. Bayshore Drive also provides beach access for fishing and other shoreline recreation. Currently, the hillside along the northeast side of Park Drive between Cove Drive and Bayshore Drive experiences significant erosion and drainage issues that affect the function of the roadway and sidewalk, and the safety of pedestrians, cyclists, and drivers, particularly during and after rain events. Road widening in the late 1980s cut the toe of the slope along the northeast side of the road, after which the slope began to show erosion issues, in turn prompting construction of the retaining wall several years later. Over the years, the deposition of sediment along the sidewalk and roadway has created a safety hazard, restricted public access to local public beach areas, and created a maintenance burden for the City of Carlsbad (City). In addition, the existing retaining wall shows signs of structural failure, likely due to ineffective drainage measures, which has affected its function and longevity (please refer to Figure 2, Existing Site Photos).

The proposed Park Drive Slope and Drainage Improvement Project (Project) is needed to stabilize the slope along the north side of Park Drive and to mitigate surface (surficial slaking, sloughing, and erosion) and deeper-seated instability. Weakly cemented friable sandstone is exposed at the face of the slope, which is prone to surface-water-induced erosion, as evidenced by the deep rills in the face of the slope. This erosion creates a large volume of sediment loss. Slope failure and sediment loss from the hillside repeatedly occurs during rain events, requiring the City to close the sidewalk and roadway on a regular basis to clean up large volumes of debris.

Dating back to 2004, the City has recorded work orders and service requests every year to clean up debris within the Project site. Figure 2 depicts sediment deposition along Park Drive after a storm event in December 2018. The closure of the sidewalk, bicycle lane, and roadway caused by the sediment deposition impacts the public's beach access and presents continuous safety hazards. These closures occur multiple times a year after even small rain events. This erosion creates a large volume of sediment loss that was estimated to be an average of 35 cubic yards per year. In addition, slope stability analyses completed for the Alternatives Analysis indicated that portions of the slope do not meet generally accepted minimum standards (Dudek 2019). In addition to the slope stability considerations, the existing retaining wall requires replacement because structural failure increases each year. Figure 2 depicts degradation of the existing retaining wall. Portions of the block wall are degrading to the point where the steel rebar is exposed, and portions of the retaining wall are beginning to lean toward the sidewalk. Failure of the retaining wall could result in additional slope instability issues and would be further exacerbated by storm events, and would require a long-term closure of the sidewalk, bicycle lane, and portions of the roadway until emergency repair could be completed.

The proposed wall design includes several types of retaining walls based on the varying site conditions, easements, and access. For this analysis, the Project site has been sectioned into three improvement zones: Zone A, B, and C, which are shown in Figure 3, Proposed Improvement Zones, and described below.

Zone A

Zone A is located within the Park Drive ROW (Assessor's Parcel Number 20-101-01) and private property (Assessor's Parcel Number 207-100-57) within the open space easement and 25-foot-wide storm drain easement (Doc. No. 85-207258). Zone A is located at the southeast end of the Project site and currently consists of an approximately 1.5 to 1 (horizontal to vertical [1.5:1]) slope with a low retaining wall approximately 2 to 5 feet high (refer to Figure 4, Improvement Zone A). In most portions of this zone, the soil has eroded down to parent material, with little to no topsoil present. The overtopping of the sediment-laden flows, as well as the runoff from the hillside, is straining the existing wall in this area.

Proposed Zone A improvements would include an approximately 330-linear-foot stepped planter block wall with geogrid reinforcement. The geogrid wall in Zone A would replace the existing wall at a maximum height of 12 feet. The geogrid-reinforced segmental retaining wall would consist of masonry facing blocks with proprietary means of vegetating the face, supported by a geogrid-reinforced soil mass behind the wall to create a gravity retaining wall. The slope behind the wall would be contour graded to a 2:1 slope (horizontal to vertical inclination). The slope height within Zone A is approximately 30 feet. The wall would be constructed in incremental lifts consisting of stacked masonry facing blocks connected to geogrid reinforcing layers that are embedded in structural backfill behind the wall facing. The geogrid wall would be planted with native and drought-tolerant species and would be maintained by the City. A brow ditch would be located at the top of the 2:1 slope and at the top of the wall to safely convey stormwater runoff to the existing storm drain system. Although erosion is expected to decrease substantially, the potential for erosion would not be eliminated entirely by removing the stormwater runoff from the face of the slope using the brow ditch at the top of the slope. Revegetation of coastal sage scrub along the hillside would commence once construction is complete. Mitigation efforts through revegetation would result in no-net-loss to coastal sage scrub.

Zone B

The majority of Zone B is within private property, which limits options where the permanent impacts are contained within the existing ROW and easements (please refer to Figure 5, Improvement Zone B). Understanding that reduction of the current public access is unfavorable, options for this zone to replace the existing retaining wall in kind at its existing height are limited.

Proposed improvements for Zone B include installation of an approximately 10-foot-tall solider pile and lagging type retaining wall to replace approximately 180 linear feet of the existing retaining wall in this area. The soldier piles would be drilled behind the existing wall along the majority of the alignment, and sections of the existing wall would be demolished from the top down to allow the lagging to be installed while maintaining the stability of the slope behind the wall. Once the lagging is installed, a finish would be installed on the face of the wall to mimic the existing block wall's look and color. The proposed retaining wall in Zone B would minimize the temporary construction impacts on the existing slope. At either end of the solider pile and lagging retaining wall in Zone B, the wall would tie into the proposed wall in Zone A to the southeast, and transition into the proposed wall in Zone C to the north.

Zone C

Zone C is located at the north end of the Project site (please refer to Figure 6, Improvement Zone C). Proposed improvements for Zone C would include installation of a 2-foot-tall block wall approximately 300 feet in length. Additionally, a drainage ditch and sediment trapping best management practice is proposed to reduce the potential deposition of sediment from the slope on the sidewalk after storm events and to reduce the sediment that reaches the storm drain system and ultimately discharges into the Agua Hedionda Lagoon. The drainage ditch and screen wall would collect the eroded slope material until City crews are able to remove it. The proposed wall in Zone C would tie into the existing wall located at the north end of the Project site and is intended to be of similar color and type. The proposed 2-foot-tall wall in Zone C would transition into the proposed solider pile wall in Zone B. Similar to Zone B, the majority of Zone C is within private property, and the options are limited to improvements that can be made within the ROW.

10. ENVIRONMENTAL SETTING/SURROUNDING LAND USES:

The Project site is surrounded by single-family residential to the north, and open space to the northeast and northwest. Park Drive borders the southern boundary of the Project site, and multi-family and single-family residences reside just west of Park Drive. Agua Hedionda Lagoon is approximately 520 feet southwest of the Project site.

11. OTHER REQUIRED AGENCY APPROVALS

California Coastal Commission, Coastal Development Permit

City of Carlsbad Planning Permits:

Habitat Management Plan (HMP) Permit No. 2020-0006

Hill Side Development Permit (HDP) No. 2020-0003

City of Carlsbad Engineering Permits:

Capital Improvement Project (CIP) No. 6611

12. CALIFORNIA NATIVE AMERICAN TRIBES CONSULTATION.

a. Have California Native American Tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1?

☒ **Yes** ☐ **No**

b. 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.?

☒ **Yes** ☐ **No**

13. PREVIOUS ENVIRONMENTAL DOCUMENTATION: In August 2018 a pre-application package was submitted to the California Coastal Commission from the City to help gain a deeper understanding of the Project so the California Coastal Commission could provide City staff with further direction prior to the Coastal Development Permit application. The contents of the pre-application package included an Alternatives Analysis (Dudek 2019), 30% Design Submittal, a Draft Geotechnical Report prepared by Group Delta, an Archaeological Assessment prepared by LSA, a Paleontological Resources Assessment prepared by LSA, a Final Biotechnical Report prepared by LSA, and a summary of City operation and maintenance crew work order and service request related to the Project site.

14. SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The summary of environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," or "Less Than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ **Aesthetics**	☐ **Greenhouse Gas Emissions**	☐ **Public Services**
☐ **Agriculture & Forestry Resources**	☒ **Hazards/Hazardous Materials**	☐ **Recreation**
☐ **Air Quality**	☒ **Hydrology/Water Quality**	☒ **Transportation**
☒ **Biological Resources**	☐ **Land Use & Planning**	☒ **Tribal Cultural Resources**
☒ **Cultural Resources**	☐ **Mineral Resources**	☐ **Utilities/Service Systems**
☐ **Energy**	☒ **Noise**	☐ **Wildfire**
☒ **Geology/Soils**	☐ **Population & Housing**	☐ **Mandatory Findings of Significance**

15. PREPARATION: The Initial Study for the subject project was prepared by:

DUDEK	December 2020
"[Planner- Name, title, or Consultant]"	Date

16. DETERMINATION: *(to be completed by Lead Agency)*
On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described herein have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact(s)" on the environment, but at least one potentially significant impact 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described herein. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project. Therefore, nothing further is required.

17. ENVIRONMENTAL DETERMINATION: The initial study for this project has been reviewed and the environmental determination, indicated above, is hereby approved.

Don Neu 7-23-2021

Don Neu, City Planner Date

18. **APPLICANT CONCURRENCE WITH MITIGATION MEASURES:** This is to certify that I have reviewed the mitigation measures in the Initial Study and concur with the addition of these measures to the project.

Daniel Zimny 7/23/2021

Daniel Zimny, Associate Engineer — Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Less than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a. Earlier Analysis Used. Identify and state where they are available for review.
    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significant.
9. Tribal consultation, if requested as provided in Public Resources Code Section 21080.3.1, must begin prior to release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. Information provided through tribal consultation may inform the lead agency's assessment as to whether tribal cultural resources are present, and the significance of any potential impacts to such resources. Prior to beginning consultation, lead agencies may request information from the Native American Heritage Commission regarding its Sacred Lands File, per Public Resources Code sections 5097.9 and 5097.94, as well as the California Historical Resources Information System administered by the California Office of Historic Preservation.

I. Aesthetics

I. AESTHETICS Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 and glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a) ***Less than Significant Impact***. Scenic vistas are typically associated with natural landforms such as mountains, foothills, ridgelines, and coastlines. Scenic vistas in the City of Carlsbad (City) consist of the scenic corridors and views to and from the coastline, open spaces, and hillsides (City of Carlsbad 2015b). The Park Drive Slope and Drainage Improvement Project (Project) site is located along Park Drive between Cove Drive and Bayshore Drive on the northeast side of the roadway. The Project site is surrounded by single-family residences upslope to the east/northeast and along Park Drive to the north and south, and multi-family and single-family residences to the west, across Park Drive. The Project site is located within the Coastal Zone, approximately 0.12 miles east of Agua Hedionda Lagoon, and approximately 1.2 miles east of the Pacific Ocean. Access to Agua Hedionda Lagoon from Marina Drive is adjacent to the Project site. Agua Hedionda Lagoon offers public amenities such as hiking trails, scenic views, fishing, and water recreation. The City's Local Coastal Program (LCP) (City of Carlsbad 2019a) states that the viewshed to lagoon shorelines are important resources, and scenic and visual qualities of the lagoon should be retained through established LCP requirements related to setbacks, preservation of slope areas, preservation of lagoon and riparian habitats, enhancement of the lagoon environments, and controlled grading. According to the Exhibit K, Agua Hedionda Vista Points, of the LCP, there are no designated vista points within the Project site, nor would any designated vista points be impacted by Project construction (City of Carlsbad 2019a).

The viewshed experienced from the Project site is dominated by views of two- to three-story residential buildings and their associated landscaping and parking area. During construction of the Project, beach access via Marina Drive would not be restricted, and the Project would not use equipment or erect structures that would obscure or substantially interrupt any existing views of the ocean or Agua Hedionda Lagoon for surrounding residents. Upon completion of the Project, the proposed retaining wall would not impact any existing views. Figure 7, Proposed Retaining Wall, depicts a visual simulation of the proposed wall. The proposed retaining wall improvements would

involve minimal structural change while reducing the erosion spillover onto the Park Drive sidewalk during storm events. Considering the nature and location of the Project, impacts to scenic vistas would be less than significant.

b) ***No Impact.*** The Project site is located within a predominately urbanized area. There are no officially designated scenic highways in the City of Carlsbad (Caltrans 2015). The closest designated highway is a portion of Interstate 5, located approximately 0.5 miles west of the Project site, which is an eligible State Scenic Highway (Caltrans 2015). However, no highways in Carlsbad are included on the Caltrans list of officially designated or eligible scenic highways (City of Carlsbad 2014a). The El Camino Real roadway corridor is also considered a scenic roadway as areas adjacent to the roadway provide rolling hillsides and diverse views (City of Carlsbad 2014a). El Camino Real is located approximately 1 mile east of the Project site. Due to the intervening urban environment, vegetation/landscaping, and natural topography between the Project site and Interstate 5 and the Project site and El Camino Real, the Project would not be visible from the nearest eligible state scenic highway or City-designated scenic roadway. Additionally, there are no designated scenic resources, including trees, rock outcroppings, or historic buildings, on the Project site or along Park Drive that would be impacted due to Project implementation. For the reasons stated above, no impacts to scenic resources within a state scenic highway would occur.

c) ***Less than Significant Impact.*** The Project site is located within a predominately urbanized area of the City. The Project would replace the existing, failing retaining wall to stabilize and repair the eroding slope along Park Drive. Project construction would occur within the right-of-way (ROW) along Park Drive and the utility and open space easements. As analyzed under thresholds I(a) and I(b), the proposed retaining wall improvements would not degrade the existing visual character or quality of the Project site or permanently impair existing views for surrounding residents. The Project would be required to comply with applicable regulations required by the California Coastal Act, City of Carlsbad Zoning Ordinance, City of Carlsbad Habitat Management Plan (HMP), and City of Carlsbad LCP. Because implementation of the proposed Project would not conflict with applicable zoning or other regulations governing scenic quality, impacts would be less than significant.

d) ***Less than Significant Impact.*** The proposed Project would not require nighttime lighting usage because construction would occur during daytime construction hours as permitted by the City. According to the City of Carlsbad Municipal Code, Title 8, Chapter 8.48.010, Construction Hours Limitations, construction is not allowed after 6:00 p.m. on any day, or before 7:00 a.m., Monday through Friday, or before 8:00 p.m. on Saturday. However, should the project require the use of nighttime lighting during construction, such use would be temporary and sporadic, lighting would be hooded and directed onto the area of construction, and lighting would be in compliance with applicable local requirements. There would be no new sources of light or glare associated with the Project once construction is complete. Therefore, impacts associated with light and glare would be less than significant.

II. Agricultural and Forestry Resources

II. AGRICULTURAL AND FORESTRY RESOURCES* Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 in Public Resources Code section 12220(g)), or 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 the 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?	☐	☐	☐	☒

***** 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 (LESA) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. There are no lands present in Carlsbad that meet the state's definition of forest land (Public Resources Code section 12220(g)), timberland (Public Resources Code section 4526), or production (Government Code 51104(g)). Therefore, questions related to forestry resources will have no impacts.

a) ***No Impact.*** The Project site and surrounding area are designated as urban and built-up land, pursuant to the Farmland Mapping and Monitoring Program developed by the California Department of Conservation (DOC 2016). Urban and Built-Up Land generally includes land uses such as residential, commercial, industrial, institutional facilities, and other urban land uses. The Project site is not mapped as, nor meets the criteria for, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and the Project site has never previously been used for agricultural use. Therefore, the proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, and no impact would occur.

b) ***No Impact.*** As stated in the City's General Plan Environmental Impact Report (EIR), Chapter 3.14, Agricultural Resources, the Flower Fields are the only property in the City subject to Williamson Act contracts (City of Carlsbad 2014b). Implementation of the proposed Project would have no effect on the status of the Flower Fields. As shown on the City's Zoning Map, the Project site is zoned as Planned Community (PC), Open Space (OS), and Deferred Certification Area, which does not contain any zoning for agricultural uses (City of Carlsbad 2019b). Therefore, the proposed Project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

c-d) ***No Impact:*** The City of Carlsbad is devoid of any lands that meet the definition of forest land, timberland, or timberland production zone. Therefore, no impacts would occur as a result of the Project.

III. Air Quality

III. **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 in 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?	☐	☐	☒	☐

* 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 determinations in this section.

Local Air Quality

An area is designated in attainment when it is in compliance with the National Ambient Air Quality Standards (NAAQS) (federal) and/or California Ambient Air Quality Standards (CAAQS) (state). These standards are set by the Environmental Protection Agency or the California Air Resources Board for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. The criteria pollutants of primary concern that are considered in an air quality assessment are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), lead, and toxic air contaminants. Volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) are precursors to the formation of ground-level O_3.

Table 1 shows the San Diego Air Basin (SDAB) designations for criteria pollutants.

Table 1. San Diego Air Basin Designations

Criteria Pollutant	Federal Designation (NAAQS)	State Designation (CAAQS)
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Note 1	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM_{10}	Unclassifiable[2]	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment

Table 1. San Diego Air Basin Designations

Criteria Pollutant	Federal Designation (NAAQS)	State Designation (CAAQS)
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

SOURCE: SDAPCD 2018.

1 The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.

2 At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

As of November 2017, the SDAB is designated in attainment for all criteria pollutants under the NAAQS with the exception of O_3 (8-Hour) and PM_{10}, which is listed as unclassifiable. The SDAB is currently designated nonattainment for O_3 and particulate matter (PM_{10} and $PM_{2.5}$) under the CAAQS. It is designated as attainment under CAAQS for CO, NO_2, SO_2, lead, and sulfates.

a) ***Less than Significant Impact.*** The Project site is located in the SDAB. The periodic violations (NAAQS) in the SDAB, particularly for O_3 in inland foothill areas, requires that a plan be developed outlining the pollution controls that will be undertaken to improve air quality. In San Diego County, this attainment planning process is embodied in the Regional Air Quality Strategies (RAQS) developed by the San Diego County Air Pollution Control District (SDAPCD), with regional growth projections provided by the San Diego Association of Governments. The RAQS outlines the SDAPCD's plans and regulatory control measures designed to attain state air quality standards for O_3. The RAQS, which was adopted by the San Diego County Air Pollution Control Board in 1992, is updated on a triennial basis.

The SDAPCD also developed the SDAB's input into the State Implementation Plan (SIP), which is required under the Federal Clean Air Act for pollutants that are designated as being in nonattainment of national air quality standards for the air basin. The SIP relies on the same information from the San Diego Association of Governments to develop emissions inventories and emissions control strategies that are included in the attainment plan for the air basin.

The proposed Project relates to the SIP and/or RAQS through the land use and growth assumptions that are incorporated into the air quality planning document. These growth assumptions are based on each city's and county's general plan. The proposed Project would consist of the construction of a retaining wall and would not require a land use change or development that would increase the population or employment with the City. Therefore, the Project is within the scope of development that was anticipated in Carlsbad's General Plan used to develop the RAQS and SIP. Operation of the Project would result in emissions that were considered as part of the RAQS growth projections. As such, the proposed Project is not anticipated to conflict with either the RAQS or the SIP. Additionally, the operational emissions from the Project are below the screening levels, and subsequently would not violate ambient air quality standards. Therefore, impacts would be less than significant.

b) ***Less than Significant Impact.*** The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County. Due to its proximity to Carlsbad with similar geographic and climatic characteristics, the Del Mar–Mira Costa College monitoring station concentrations of 8-hour and 1-hour O_3 are considered most representative of O_3 in Carlsbad. The Escondido–East Valley Parkway monitoring station is the nearest location where PM_{10}, $PM_{2.5}$, NO_2, and CO concentrations are monitored. The El

Cajon–Redwood Avenue monitoring station is the nearest location where SO_2 concentrations are monitored. Data available for these monitoring sites from 2013 through 2017 provide the most recent air quality violations recorded, as shown in Table 2. Air quality within the region was in compliance with the CAAQS and NAAQS for NO_2, CO, and SO_2 during this monitoring period.

Table 2. Frequency of Air Quality Standard Violations, Number of Days Exceeding Standard

Monitoring Site	Year	State O_3 (1-Hour)	State O_3 (8-Hour)	Federal O_3 (8-Hour)	State PM_{10}*	Federal $PM_{2.5}$*
Del Mar–Mira Costa College	2013	0	0	0	—	—
	2014	1	4	4	—	—
	2015	1	2	2	—	—
	2016	0	1	1	—	—
	2017	0	0	0	—	—
Escondido–East Valley Parkway	2013	—	—	—	6.0(1)	3.1(1)
	2014	—	—	—	0.0(0)	0.0(0)
	2015	—	—	—	**(0)	**(0)
	2016	—	—	—	**	**(0)
	2017	—	—	—	**	**(0)

SOURCE: CARB 2020.

* Measurements of these pollutants are usually collected every 6 days and daily, respectively. The number of days exceeding standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

** Means insufficient data.

Grading and Construction

The Project would involve removal of an existing wall, installation of a new retaining wall, and repair of portions of the failing slope within the City's ROW and utility and open space easements. Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, rock crushing, soil disturbance, and VOC off-gassing) and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity; the specific type of operation; and, for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

Criteria air pollutant emissions associated with temporary construction activities were quantified using the California Emissions Estimator Model (CalEEMod). Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the maximum daily emissions estimated during each year of construction (2021 and 2022). The construction start date was based on information provided by the Project applicant and is intended to represent a reasonable scenario based on the best information available. Default values provided in CalEEMod were used where detailed Project information was not available.

Implementation of the Project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. The Project would implement various dust control strategies and

would be required to comply with SDAPCD Rule 55 to control dust emissions generated during grading activities. Proposed construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites and unpaved roads two times per day depending on weather conditions, and restricting vehicle speed on unpaved roads to 15 miles per hour. Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$.

Table 3 presents the estimated maximum daily construction emissions generated during construction of the Project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix A.

Table 3. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
2021	1.32	12.70	14.55	0.04	1.27	0.63
2022	1.03	9.67	14.47	0.02	0.58	0.45
Maximum	1.32	12.70	14.55	0.04	1.27	0.63
SDAPCD Threshold	75	250	550	250	100	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SDAPCD = San Diego Air Pollution Control District.
See Appendix A for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect CalEEMod "mitigated" output, which accounts for implementation of the Project's fugitive dust control strategies, including watering of the Project site and unpaved roads two times per day, restricting vehicle speed on unpaved roads to 15 miles per hour, and removing dirt and debris spilled onto paved surfaces at the Project site and on adjacent roadways.

As shown in Table 3, daily construction emissions would not exceed the SDAPCD significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ during construction in all construction years. Construction-generated emissions would be temporary and would not represent a long-term source of criteria air pollutant emissions. Additionally, standard construction measures; Stormwater Pollution Prevention Plan (SWPPP) requirements; best management practices (BMPs); and, when applicable, the California Green Building Code standards would reduce fugitive dust debris, emissions and other criteria pollutant emissions during grading and construction. Therefore, emissions from the construction phase would be minimal, temporary, and localized, resulting in pollutant emissions that are not anticipated to significantly contribute to an existing or projected air quality violation. Thus, impacts would be less than significant.

Operations

Once Project construction is complete, no operational activities associated with the Project would occur (no routine daily equipment operation or vehicle trips would be required). Because the Project would not result in any long-term operational activities, there would be no potential air quality impacts associated with operational air pollutant emissions. Given the limited emissions potentially associated with the Project, air quality would be essentially the same whether or not the Project is implemented. According to the California Environmental Quality Act (CEQA) Guidelines Section 15064(h)(3), the proposed Project's incremental contribution to the cumulative effect is not cumulatively considerable. Thus, impacts would be less than significant.

c) ***Less than Significant Impact.*** Sensitive receptors include schools, hospitals, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, and other facilities that house individuals with health conditions that would be adversely impacted by changes in air quality. The closest sensitive receptors are residences north of the Project site. As noted above, the proposed Project would not result in substantial pollutant emissions or concentrations.

Toxic Air Contaminants

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of toxic air contaminants (TACs) resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have noncarcinogenic effects. TACs that would potentially be emitted during construction activities would be diesel particulate matter emitted from heavy-duty construction equipment and heavy-duty trucks. The Project would not require the extensive use of heavy-duty construction equipment, which is subject to the California Air Resources Board's Airborne Toxic Control Measures to reduce diesel particulate matter emissions. According to the Office of Environmental Health Hazard Assessment, health risk assessments should be based on a 30-year exposure duration based on the typical residency period; however, such assessments should be limited to the period/duration of activities associated with a project (OEHHA 2015). Thus, the duration of proposed construction activities (approximately 7 months) would only constitute a small percentage of the total long-term exposure period and would not result in exposure of proximate sensitive receptors to substantial TACs.

After construction is completed, there would be no long-term source of TAC emissions during operation. No residual TAC emissions and corresponding cancer risk are anticipated after construction, and no long-term sources of TAC emissions are anticipated during operation of the Project. Implementation of the Project would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

Valley Fever

Valley fever is not highly endemic to San Diego County, and within San Diego County, the incidents rate in the Project area is below the San Diego County and statewide average. The Project would be consistent with SDAPCD Rule 55, which limits the amount of fugitive dust generated during construction and would also control the release of the Coccidioides immitis fungus from construction activities by watering two times per day and limiting speed on unpaved roads to 15 miles per hour. The closest sensitive receptors are single-family homes located adjacent to the northern, eastern, and southern boundaries of the Project site. Based on the low incidence rate of Coccidioidomycosis in the Project area and in greater San Diego County, and the Project's implementation of dust control strategies, it is not anticipated that earth-moving activities during Project construction would result in exposure of nearby sensitive receptors to valley fever. Therefore, the Project would have a less-than-significant impact with respect to valley fever exposure to sensitive receptors.

d) ***Less than Significant Impact.*** The proposed Project could generate emissions resulting in objectionable odors from construction; exhaust of VOCs from vehicles and/or equipment; and emissions of ammonia, carbon dioxide, hydrogen sulfide, methane, alcohols, disulfides, dust, or other pollutants during construction or operation of the Project. Such exposure would be in trace amounts, localized in the immediate area, and temporary, and would generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction or operation would be less than significant.

IV. Biological Resources

IV. BIOLOGICAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian, aquatic or wetland habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by 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?	☐	☒	☐	☐

The following analysis relies on the Biological Resources Technical Report prepared for the proposed Project by Dudek in December 2019, which is included as Appendix B of this Mitigated Negative Declaration (MND). The Biological Resources Technical Report provides baseline information in accordance with the City's Guidelines for Biological Studies (City of Carlsbad 2008) to demonstrate compliance with the Carlsbad HMP (City of Carlsbad 2004). Specifically, the Biological Resources Technical Report provides an assessment on potentially occurring species, vegetation mapping, jurisdictional wetlands delineation, general biological resources and wildlife movement assessment, and focused species surveys (i.e., coastal California gnatcatcher [*Polioptila californica californica*] and rare plants). The assessment included a review of the latest available relevant literature, published research, maps, soil data, data on biological baselines, special-status habitats, and species distributions to determine those resources that have the potential to occur within the Project site.

Additionally, Dudek biologists reviewed the previously prepared Biological Resources Technical Report for Park Drive Slope and Drainage Improvement Project (LSA 2018), the U.S. Department of Agriculture Natural Resources Conservation Service web soil survey (USDA 2019), the California Department of Fish and Wildlife

(CDFW) California Natural Diversity Database (CDFW 2019), the California Native Plant Society's Inventory of Rare and Endangered Plants (CNPS 2019), the U.S. Fish and Wildlife Services' Species Occurrence Data (USFWS 2019), and the City of Carlsbad Guidelines for Biological Studies (City of Carlsbad 2008).

a) ***Less than Significant with Mitigation Incorporated.*** The 5.32-acre Project site contains 3.76 acres of coastal sage scrub habitat (including disturbed), 0.33 acres of which would be permanently impacted as a result of Project construction (refer to Table 4, Impact and Mitigation Summary). Direct impacts result from the direct removal or conversion of an area's biological resources (e.g., through slope grading and other ground-disturbing activities). Direct impacts can be temporary or permanent. Direct impacts to vegetation communities were quantified by overlaying the proposed impact limits on the biological resources map of the study area (please refer to Figure 5, Impacts to Biological Resources, of Appendix B). For special-status wildlife species, impacts to suitable primary habitat were quantified in the same manner. Although the graded slope would be revegetated with coastal sage scrub species once the Project is completed, due to the length of the construction period, the revegetation is not expected to occur for at least 12 months. Additionally, the proposed slope would be a manufactured slope, so this impact would be permanent. Impacts associated with the retaining wall and brow ditch would also be permanent. There would be no temporary direct impacts associated with this Project.

Indirect impacts result primarily from adverse edge effects, and may be short or long term, or related to construction. For the proposed Project, it is assumed that the potential indirect impacts resulting from short-term construction activities would include dust, noise, and general human presence that may temporarily disrupt species and habitat vitality, and construction-related soil erosion and runoff. With respect to these potential indirect impacts, however, all Project grading would be subject to the typical restrictions (e.g., BMPs) and requirements that address erosion and runoff, including the federal Clean Water Act, National Pollution Discharge Elimination System, and preparation of a SWPPP. Long-term indirect impacts associated with the proposed Project are not anticipated, considering the Project is proposing slope stabilization and repair, which would improve the currently adverse edge conditions and therefore result in a beneficial impact. All impacts or potential impacts to biological resources would be identified during the construction phase of the Project, and appropriate mitigation would be applied. There would be no permanent activities or new land uses proposed as part of the Project.

Special-status plant species recorded in the Project vicinity were evaluated for their potential to occur on site (Appendix B). A total of 82 species of native or naturalized plants, 44 native (54%) and 38 non-native (46%), was recorded on the Project site during the rare plant survey. One special-status plant species was observed during the 2019 focused rare plant surveys: California adolphia (*Adolphia californica*; California Rare Plant Rank 2B.1). Fourteen individual California adolphia plants were observed toward the southwestern portion of the Project site in the coastal sage scrub habitat. Approximately nine individuals would be impacted as a result of Project construction. Although the area of impact would be revegetated once the Project is completed, the slope would be graded and would therefore be considered a permanent impact. Permanent impacts to California adolphia would be a significant impact, absent mitigation. Mitigation Measure (**MM-)BIO-1** would reduce impacts to California adolphia to less than significant. MM-BIO-1 requires transplanting California adolphia to the coastal sage scrub creation site. A Restoration and Habitat Enhancement Plan would be prepared for the Project to address habitat mitigation as a result of Project impacts to coastal sage scrub. As outlined under **MM-BIO-1**, this plan will include an evaluation of restoration suitability specific to proposed habitat types, soil and plant material salvage/translocation, planting and seeding lists, discussion of irrigation, maintenance and monitoring, and success criteria.

Special-status wildlife species recorded in the vicinity were evaluated for their potential to occur on site (Appendix B). One special-status wildlife species, coastal California gnatcatcher, was observed by LSA biologists during their focused surveys in 2016 (LSA 2018). Additional species that were not observed but have a moderate or high potential to occur on the Project site include Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), southern California legless lizard (*Anniella stebbinsi*), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), western yellow bat (*Lasiurus xanthinus*), and San Diego desert woodrat (*Neotoma lepida intermedia*). Approximately 0.28 acres of the 0.33 acres of impacted coastal sage scrub can support all of the aforementioned sensitive wildlife species (with the exception of the western yellow bat). Although the coastal sage scrub would be revegetated once the Project is completed, the slope would be graded and would therefore be considered a permanent impact (manufactured slope). Permanent impacts to 0.28 acres of suitable habitat would be a significant impact, absent mitigation. The City's Guidelines for Biological Studies require mitigation at a 2:1 ratio for suitable coastal sage scrub (City of Carlsbad 2008). Implementation of **MM-BIO-1, MM-BIO-2**, **MM-BIO-3,** and **MM-BIO-4** would reduce impacts to less than significant (refer to Section XXII. List of Mitigation Measures).

MM-BIO-1 and MM-BIO-3 would reduce impacts to potentially occupied coastal California gnatcatcher habitat to less than significant, consistent with requirements in the Carlsbad HMP. MM-BIO-1 requires habitat restoration/creation of 0.66 acres of coastal sage scrub to achieve a no-net-loss of coastal sage scrub in the Coastal Zone and meet the 2:1 mitigation requirement. MM-BIO-3 prohibits clearing of occupied habitat from March 1 through August 15 (coastal California gnatcatcher nesting season).

MM-BIO-1 and MM-BIO-2 would reduce impacts to suitable habitat for Southern California rufous-crowned sparrow, Southern California legless lizard, and San Diegan tiger whiptail to less than significant. As previously stated, MM-BIO-1 provides habitat restoration/creation of 0.66 acres of coastal sage scrub to achieve a no-net-loss of coastal sage scrub in the Coastal Zone and meet the 2:1 mitigation requirement. MM-BIO-2 requires revegetation of the manufactured slope. MM-BIO-2, MM-BIO-3, and MM-BIO-4 provide for avoidance of potential impacts to nesting birds protected under the federal Migratory Bird Treaty Act or the California Fish and Game Code, Sections 4700 and 3511.

b) ***Less than Significant with Mitigation Incorporated.*** The City's Guidelines for Biological Studies (City of Carlsbad 2008) defines "sensitive" habitats as riparian scrub, riparian woodland, riparian forest, southern coastal salt marsh, freshwater marsh, estuary, cismontane alkali marsh, fresh/open water, vernal pools, disturbed wetlands, native grassland, non-native grassland, coastal sage scrub, maritime succulent scrub, coastal sage scrub/chaparral scrub, southern mixed or chamise chaparral, southern maritime chaparral, oak woodland, and eucalyptus woodland. On site, there are four vegetation communities or land covers: coastal sage scrub (including disturbed), disturbed habitat, ornamental, and developed (refer to Figure 4, Biological Resources, of Appendix B). The entire site is an upland area characterized by coastal sage scrub and highly erodible soils (as evidenced by rills and gullies); there are no drainages or wetlands that existed prior to the development in this area (NETR 2019). LSA biologists identified three small areas with hydric soil indicators at these "disturbed wetland" locations, but the soil type in this area is mapped as Gaviota fine sandy loam, 30% to 50% slopes, eroded; it has no hydric rating (USDA 2019).

The Project site contains 3.76 acres of coastal sage scrub (including disturbed), which is considered a sensitive habitat as defined by CDFW and the City's Guidelines for Biological Studies. Although the graded slope would be revegetated with coastal sage scrub species upon completion of the Project, grading activities would cause permanent impacts to 0.33 acres of existing coastal sage scrub

(including disturbed). Additionally, adverse "edge effects" could occur during Project construction, and short-term, indirect impacts could include dust, soil erosion, and runoff that could disrupt plant vitality. All Project grading would be subject to implementation of BMPs and typical restrictions and requirements that address dust control, erosion, and runoff, including the federal Clean Water Act and National Pollution Discharge Elimination System. Short-term, construction-related indirect impacts to vegetation communities would be a significant impact, absent mitigation. **MM-BIO-1** and **MM-BIO-2** would reduce impacts to vegetation communities to less than significant, consistent with requirements in the Carlsbad HMP. **MM-BIO-1** would reduce impacts to California adolphia to less than significant by transplanting California adolphia to the coastal sage scrub creation site, and **MM-BIO-2** requires revegetation of the manufactured slope. This revegetation area does not count toward the 0.66-acre mitigation requirement; however, it would reduce the overall loss of coastal sage scrub habitat and functions. Additionally, **MM-BIO-5** and **MM-BIO-6** would reduce potential indirect impacts to less than significant. **MM-BIO-5** requires temporary construction fencing to delineate the limits of grading, and **MM-BIO-6** mandates that a biological monitor be present during construction activities (refer to Section XXII. List of Mitigation Measures). No long-term edge effects are anticipated because the permanent structure is limited to the retaining wall, and the 2:1 graded slope would be revegetated with coastal sage scrub species after Project completion.

For California Coastal Commission purposes, under 14 California Code of Regulations (CCR) Section 13577(a)(1), wetlands are defined as "land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes." As this definition has been applied by the California Coastal Commission, the presence of any one of the three U.S. Army Corps of Engineers (ACOE) wetland criteria (wetland hydrology, a predominance of wetland vegetation, or hydric soils) can be sufficient evidence to qualify an area as a wetland. However, on the Project site, wetland vegetation occurs in small, isolated patches that constitute less than 0.01 acres in total (Appendix B). In addition, as described above, the loamy, sandy soil present has no hydric rating. The site is also not located adjacent to or connecting to any lagoon or wetland habitat. Given the lack of a persistent water source, the lack of discernible hydrology indicators, and the lack of hydrophytic vegetation, the gully on site does not meet the definition of an aquatic resource regulated by ACOE, the Regional Water Quality Control Board (RWQCB), CDFW, and/or the California Coastal Commission. No jurisdictional aquatic features were identified on site, and implementation of the proposed Project would result in no impacts to riparian, aquatic, or wetland habitat.

c) ***No Impact.*** On March 25, 2019, Dudek biologists Callie Amoaku and Tricia Wotipka surveyed the study area for potential jurisdictional aquatic features. Methods described in the 1987 ACOE Wetland Delineation Manual (TR Y-87-1) (ACOE 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (ACOE 2008), Section 1600 of Fish and Game Code, and the State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State (SWRCB 2019) were used. Prior to the delineation, Dudek biologists reviewed the LSA report (LSA 2018) and previously identified potentially jurisdictional aquatic resources. The LSA report previously identified "disturbed wetlands" and non-wetland waters in an earthen gully on site—dominated by upland plants—that drains onto the sidewalk of Park Drive and continues into a storm drain. Dudek evaluated this gully during the 2019 site visit and determined that it was an erosional feature caused by nuisance runoff from surrounding development. This feature lacks an ordinary high water mark because there was no distinguishable bed and bank often associated with a stream channel and there were no discernible hydrology indicators such as drift deposits, shelving, sediment deposition, or drainage patterns (Appendix B). The Clean Water Rule: Definitions of "Waters of the United States" specifically excludes erosional features, such as gullies,

from the definition of a waters of the United States (40 CFR 110, 112, 116, et al.). The RWQCB recently adopted the Statewide Wetland Definition and Procedures (SWRCB 2019), which defines waters of the state subject to RWQCB jurisdiction and the procedures to conduct wetland delineations. Dudek's 2019 evaluation followed the guidelines outlined in these latest procedures, which direct practitioners to follow the existing ACOE procedures and manuals when making wetland determinations. CDFW does not regulate gullies due to the lack of a "streambed."

However, when looking at the entire site as a whole, it is clear that the site does not support natural wetlands or wetlands that provide any type of ecological value, particularly those functions and services typically observed in coastal wetlands. The entire site is an upland area characterized by coastal sage scrub and highly erodible soils (as evidenced by rills and gullies), and there are no drainages or wetlands that existed prior to development in this area (Appendix B).

Given the lack of a persistent water source, the lack of discernible hydrology indicators, and the lack of hydrophytic vegetation, the gully does not meet the definition of an aquatic resource regulated by ACOE, RWQCB, CDFW, and/or the California Coastal Commission. Therefore, there would be no impacts to state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

d) ***No Impact.*** Due to the Project's location in an urbanized area, bound by Park Drive to the west and single-family homes to the north, east, and south, the Biological Resources Technical Report prepared for the Project determined that the Project site is not considered a significant wildlife movement corridor or habitat linkage (Appendix B). Therefore, the Project would not interfere with the movement of wildlife species or an established migratory wildlife corridor, and no impact would occur.

e) ***Less Than Significant with Mitigation Incorporated.*** The City's Municipal Code – Chapter 11.12.080 specifies guidelines for tree protection and preservation. No trees are proposed to be removed from the Project site; therefore, the Project would not conflict with this local ordinance. However, the Open Space, Conservation, and Recreation Element of the City's General Plan states that the City shall protect environmentally sensitive lands; wildlife habitats; and rare, threatened, or endangered plant and animal communities (City of Carlsbad 2015b). As stated above in Threshold IV(b), 0.33 acres of existing coastal sage scrub habitat (including disturbed) would be permanently impacted by grading activities. Therefore, impacts would be significant, absent of mitigation. **MM-BIO-1** and **MM-BIO-2** outlined below would reduce impacts to less than significant.

f) ***Less Than Significant with Mitigation Incorporated***. The North County Multi-Habitat Conservation Program is a long-term regional conservation plan established to protect sensitive species and habitats in northern San Diego County. The North County Multi-Habitat Conservation Program is divided into seven subarea plans—one for each jurisdiction within the North County Multi-Habitat Conservation Program—that are permitted and implemented separately from one another. The City of Carlsbad is the only city under the North County Multi-Habitat Conservation Program that has an approved and permitted Subarea Plan (City of Carlsbad HMP). The City adopted the Carlsbad HMP in December 1999 and approved it in 2004 (City of Carlsbad 2004); the U.S. Fish and Wildlife Service and CDFW granted final approvals, including implementing agreement and terms and conditions, in November 2004. The purpose of the Carlsbad HMP is to guide the design, management, monitoring, and public use of the preserve system. The Carlsbad HMP calls for 6,478 acres of natural habitat to be preserved within the City, as well as an additional 308 acres of habitat for coastal California gnatcatcher within the City's or San Diego County's gnatcatcher core area. The Carlsbad HMP identifies local facility management zones that were developed based on the distribution of existing

vegetation communities and sensitive species. The zones were further broken down into HMP cores, linkages, and special resource areas. The Project site is not located within a Carlsbad HMP hardline preserve, standards area, core, linkage, or special resource area (Appendix B).

The Biological Resources Technical Report prepared for the Project (Appendix B) provides baseline information in accordance with the City's Guidelines for Biological Studies to demonstrate compliance with the Carlsbad HMP. Impacts to coastal sage scrub within the Coastal Zone require that at least 67% of coastal sage scrub to be conserved; the proposed Project would avoid 91% of coastal sage scrub on site. However, the Project would still result in impacts to 0.28 acres of occupied coastal sage scrub that can support coastal California gnatcatcher. Although the coastal sage scrub habitat would be revegetated once the Project is completed, the slope would be graded and would therefore be considered a permanent impact (manufactured slope). Coastal California gnatcatcher is a Covered Species under the Carlsbad HMP, which conditions that 75% of coastal California gnatcatchers be conserved within Standards Areas. The Project site is not located within a Standards Area, and thus, the 75% avoidance would not apply. However, the City's Guidelines for Biological Studies require mitigation at a 2:1 ratio for occupied coastal sage scrub (City of Carlsbad 2008). Because Project construction would result in permanent impacts to 0.28 acres of occupied coastal sage scrub, impacts would be a significant, absent mitigation. **MM-BIO-1** and **MM-BIO-3** would reduce impacts to potentially occupied coastal California gnatcatcher habitat to less than significant, consistent with requirements in the Carlsbad HMP. **MM-BIO-1** requires habitat restoration/creation of 0.66 acres of coastal sage scrub to achieve a no-net-loss of coastal sage scrub in the Coastal Zone and meet the 2:1 mitigation requirement. **MM-BIO-3** prohibits clearing of occupied habitat from March 1 through August 15 (coastal California gnatcatcher nesting season).

Southern California rufous-crowned sparrow is a CDFW watch list species and Covered Species under the Carlsbad HMP. The proposed Project would result in impacts to 0.28 acres of coastal sage scrub that can support Southern California rufous-crowned sparrow. The Carlsbad HMP's conditions of coverage for Southern California rufous-crowned sparrow are based on preserve management and management directives, which do not apply to this Project. However, the City's Guidelines for Biological Studies require mitigation at a 2:1 ratio for suitable coastal sage scrub (City of Carlsbad 2008). Permanent impacts to 0.28 acres of suitable habitat would be a significant impact, absent mitigation. **MM-BIO-1** and **MM-BIO-2** would reduce impacts to suitable habitat for Southern California rufous-crowned sparrow to less than significant.

With implementation of the proposed mitigation measures for impacts to biological resources, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan. Additionally, the Project has been designed to minimize direct and indirect impacts to biological resources to the extent feasible. Therefore, impacts would be less than significant with mitigation incorporated.

No plant species covered by the Carlsbad HMP were observed during the surveys or are expected to occur on site.

Mitigation Measures

Proposed mitigation to address potential impacts associated with the Project are outlined below, as well as in Section XXII List of Mitigation Measures:

MM-BIO-1 **Habitat Mitigation**: Impacts to 0.33 acres of coastal sage scrub requires mitigation at a 2:1 ratio, totaling 0.66 acres of coastal sage scrub. This habitat mitigation shall be achieved by conserving 0.66 acres of suitable habitat in an off-site mitigation area within the Coastal Zone (see Table 4, Impact and Mitigation Summary). The habitat mitigation shall also include the transplanting of California Adolphia (*Adolphia californica*) to the off-site creation site.

The applicant shall prepare a conceptual mitigation plan and submit it to the City of Carlsbad and/or Agencies for review. The final plan shall be submitted at least 30 days prior to initiating Project impacts. The mitigation shall be prepared and implemented consistent with Volume II, Appendix C (Revegetation Guidelines), and Vol. III of the North County Multiple Habitat Conservation Program; pages F-8 to F-11 of the City of Carlsbad Habitat Management Plan; and Section 3.1.5 of the City of Carlsbad Open Space and Conservation Resource Management Plan. The mitigation plan shall, at a minimum, include an evaluation of restoration suitability specific to proposed habitat types, a description of soil and plant material salvage/translocation, planting and seeding lists, discussion of irrigation, discussion of a maintenance and monitoring program, and discussion of success criteria. All areas shall be monitored for a minimum of 5 years to ensure establishment of intended plant communities.

Any invasive removal associated with the coastal sage scrub creation site shall be completed using hand equipment, and removal shall be completed outside of the nesting bird season. If invasive removal cannot be completed outside of the nesting bird season, pre-work surveys shall be conducted per the nesting bird survey mitigation measure (MM-BIO-4).

Table 4. Impact and Mitigation Summary

Vegetation Community or Land Cover	Existing Acreage	Permanent Impacts (acres)	Required Mitigation Ratio[1]	Required Mitigation Acreage
Native Vegetation Communities				
Occupied Coastal Sage Scrub	3.71	0.28	2:1	0.56
Disturbed Coastal Sage Scrub	0.05	0.05	2:1	0.10
Subtotal	*3.76*	*0.33*	—	*0.66*
Land Covers				
Disturbed Habitat	0.22	0.15	—	—
Ornamental	1.04	0.13	—	—
Developed	0.30	0.10	—	—
Subtotal	*1.56*	*0.38*	—	—
Total	**5.32**	**0.71**	—	**0.66**

[1] Per Table 6 in the Carlsbad HMP (City of Carlsbad 2004).

MM-BIO-2 **Revegetation:** The graded slope shall be revegetated with coastal sage scrub species once construction of the wall and slope are completed. Soil shall be revegetated with native plant species found within adjacent habitats. Locally available seed and/or container plants shall be used.

MM-BIO-3 **Avoid Coastal California Gnatcatcher Nesting Season**: Coastal sage scrub habitat shall not be cleared from March 1 through August 15, per the conditions of coverage for coastal California gnatcatcher (*Polioptila californica californica*).

MM-BIO-4 **Nesting Bird Survey:** For clearing of any other vegetation February 1 through September 15, and clearing of occupied coastal sage scrub February 1 through February 28 and August 16 through September 15, a nesting bird survey shall be conducted within the proposed impact area and a 500-foot buffer within 72 hours prior to construction. This survey is necessary to ensure avoidance of impacts to nesting raptors (e.g., red-tailed hawk [*Buteo jamaicensis*]) and/or birds protected by the federal Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3513. If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum of a 300-foot buffer and up to a maximum of 500 feet for raptors or listed species, and shall be avoided until the nesting cycle is complete. If construction activities—particularly clearing/grubbing, grading, and other intensive activities—stop for more than 3 days, an additional nesting bird survey shall be conducted within the proposed impact area and a 500-foot buffer before such activities can recommence.

MM-BIO-5 **Temporary Installation of Fencing:** To prevent inadvertent disturbance to areas outside the limits of grading, the contractor shall install temporary fencing along the entire limits of grading prior to any vegetation clearing.

MM-BIO-6 **Construction Monitoring and Reporting:** To prevent inadvertent disturbance to areas outside the limits of grading, all grading of native habitat shall be monitored by a biologist. The biological monitor shall be contracted to perform biological monitoring during all clearing and grubbing activities. The Project biologist shall perform the following duties:

1. Attend the pre-construction meeting with the contractor and other key construction personnel prior to clearing and grubbing to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).
2. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas and of minimizing harm to or harassment of wildlife prior to clearing and grubbing.
3. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing and grubbing.
4. Supervise and monitor vegetation clearing and grubbing weekly to ensure against direct and indirect impacts to biological resources that are intended to be protected and preserved, and to document that protective fencing is intact.
5. Flush special-status species (i.e., avian and other mobile species) from occupied habitat areas immediately prior to brush-clearing activities.

6. Periodically monitor the construction site to verify the Project is implementing the following Stormwater Pollution Prevention Plan best management practices:
   i. dust-control
   ii. silt fencing (if required)
   iii. removal of construction debris and maintenance of a clean work area
   iv. covered trash receptacles that are animal- and weather-proof
   v. prohibition of pets on the construction site
   vi. a speed limit of 15 miles per hour
7. Keep monitoring notes for the duration of the Project for submittal in a final report to substantiate the biological supervision of the vegetation clearing and grading activities and the protection of biological resources.
8. Prepare a monitoring report after completion of construction activities that describes the biological monitoring activities, including a monitoring log; photos of the site before, during, and after the grading and clearing activities; and a list of special-status species observed.

V. Cultural Resources

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

The following analysis is based on information presented in the Archaeological Assessment for the Park Drive Retaining Wall Project conducted by LSA (May 2016), which is included as Appendix C-1 to this MND.

a) ***No Impact.*** Pursuant to CEQA Guidelines Section 15064.5(a)(3), a resource may be considered "historically significant" by the lead agency if the resource meets the criteria for listing. A resource is eligible for listing in the California Register of Historical Resources if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following National Register of Historic Places criteria (California Public Resources Code, Section 5024.1 [c]):

1) Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2) Associated with the lives of persons important in our past.

3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4) Has yielded, or may be likely to yield, information important in prehistory or history.

Resources younger than 50 years are not considered for listing in the California Register of Historical Resources, but they may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (see 14 CCR 4852[d][2]).

A records search of the Project site was performed at the South Coast Information Center (SCIC) on May 9, 2016. The SCIC provided records of all previous surveys, archaeological sites, subsurface investigations, and historic resources older than 45 years that are located within a 0.25-mile radius of the Project site (Project's area of potential effects). Site records of archaeological sites and bibliographical references for all surveys and investigations within the 0.25-mile search radius were provided. Historic maps and aerial photographs were investigated, and the following inventories were examined: National Register of Historic Places, California Register of Historical Resources, California Historical Landmarks, California Historic Properties Directory, and the California Points of Historical Interest. Additionally, a field survey was conducted on May 13, 2016, to identify and document any cultural resources older than 45 years, per the Office of Historic Preservation Guidelines (OHP 1995) and to identify any substantial changes to the landscape from the prior survey completed in 2011 (Appendix C-1). No previously recorded sites were documented within the Project's area of potential effects, and no new prehistoric or historic sites, artifacts, or features were identified during the 2016 pedestrian field survey. There are three concrete brow ditches situated in the central and northern portions of the Project site, none of which are historic in age. Based on the literature search, field survey, and landform, the Project site retains a limited probability of containing cultural resources (Appendix C-1). Because no historic built-environmental resources were identified within the Project site, and with consideration that Project disturbance would occur within the Park Drive ROW, storm drain, water easements, and private developed land, the Project would have no impact on historic resources.

b) ***Less than Significant with Mitigation Incorporated.*** As described above, a records search was conducted on May 9, 2016, at the SCIC at San Diego State University by LSA personnel. The SCIC provided records of all previous surveys, archaeological sites, subsurface investigations, and historic resources older than 45 years that are located within a 0.25-mile radius of the Project site. A total of 27 archaeological investigations have been completed within a 0.25-mile radius of the Project site, six of which intersect the Project site (refer to Table A in Appendix C-1 to this MND). Four cultural resources have been previously recorded within 0.25 miles of the Project site. LSA personnel conducted an additional archaeological field survey of the Project site on May 13, 2016. The survey consisted of walking along exposed areas in the eastern and western portions of the Project site; nothing of significance was documented. No previously recorded sites are within the Project site, and the nearest recorded cultural resource is located approximately 100 meters northeast of the Project site at the top of the slope. This site contained human remains, pottery, shell, hearth features, and groundstone, and had been disturbed upon initial recording from agricultural work (Appendix C-1). This area was used for agricultural purposes from the late 1930s until the late 1980s, and a subdivision had been construction by the early 1990s and remains today (Appendix C-1).

An addendum to LSA's Archaeological Assessment for the Project was prepared on May 22, 2020, by Dudek (Appendix C-2 to this MND) that focuses on the additional 0.49 acres of the Project site that was not previously surveyed in the LSA 2016 report. The LSA report surveyed an area of 4.8 acres, and the current Project site totals 5.32 acres. Dudek personnel conducted a pedestrian survey of the additional 0.49 acres of the Project site on May 18, 2020, and no cultural or built-environment resources were identified.

Based on the results of LSA's 2011 and 2016 archaeological assessment of the Project site and Dudek's supplemental pedestrian survey of the additional 0.49 acres, there is a low sensitivity for intact subsurface archaeological deposits, and no significant cultural resources were observed within the Project site (Appendix C-2). Approximately 80% of the Project site is situated on a steep (40% slope), west-facing slope, and the sediment on the slope has been severely eroded from a higher terrace on which the current residential subdivision is located (Appendix C-1). Based on the disturbed landform context, steep slope, and field survey observations, there is a low potential for the presence of buried deposits. However, given the archaeological sites with burials and habitation artifacts documented within proximity of the Project site, and the physical location of the Project site just north of Agua Hedionda, archaeological monitoring was recommended in the report prepared by LSA in 2016 (Appendix C-1). Although no archaeological resources were identified within the Project site, the presence of significant subsurface archaeological resources is a possibility in areas where only surface inspection has taken place. Therefore, impacts would be significant, absent mitigation. With implementation of **MM-CUL-1**, outlined below and in Section XXII of this MND, impacts to archaeological resources would be reduced to less than significant.

c) ***Less than Significant with Mitigation Incorporated.*** As discussed above, there are no previously recorded cultural resources within the Project site. The one previously recorded cultural resource site, CA-SDI-10024, is located outside the Project site approximately 100 meters to the northeast at the top of the slope. It contained human remains, pottery, shell, hearth features, and groundstone, and had been disturbed upon initial recording from agricultural work (Appendix C-1). As described above, this area was used for agricultural purposes from the late 1930s until the late 1980s, and a subdivision had been construction by the early 1990s and remains today. The Project site is partially located within the public ROW, and the Project proposes the replacement of the existing retaining wall, which means much of the ground disturbance would be within previously disturbed areas. The area is considered to be of low sensitivity for encountering archaeological deposits. However, due to the Project site's proximity to other documented archaeological resource sites, there is the possibility of encountering undiscovered human remains during construction of the Project. Thus, impacts would be significant, absent mitigation. With implementation of **MM-CUL-2** outlined below and in Section XXII of this MND, impacts would be reduced to less than significant.

Mitigation Measures

MM-CUL-1 During construction, a qualified archaeologist and tribal monitor shall be present for all ground-disturbing activities (e.g., vegetation removal, grading). If archaeological material is identified during ground-disturbing activities, work in that location shall be diverted and a qualified archaeologist, in consultation with the tribal monitor, shall evaluate the nature and significance of the find. The qualified archaeologist shall ensure that treatment of any cultural resources discovered during site grading complies with the City of Carlsbad's Cultural Resource Guidelines.

MM-CUL-2 If human remains are encountered at any time during construction or routine maintenance in the Project area, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the San Diego County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98, so the County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a most likely descendant (MLD). The MLD may inspect the site of discovery, and shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

VI. Energy

VI. ENERGY **Would the project:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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) ***Less than Significant Impact***. Construction of the Project would require the use of electric power for as-necessary lighting and electronic equipment. The amount of electricity used during construction would be minimal because typical energy demand stems from the use of electrically powered equipment. This electricity demand would be temporary and would cease upon completion of construction; therefore, the Project would not adversely impact the available electricity supply. During construction, natural gas would typically not be consumed on the Project site. The majority of the energy used during construction would be from petroleum.

Petroleum would be consumed throughout construction of the Project. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and vehicle miles traveled associated with the transportation of construction materials and construction worker commutes also would result in petroleum consumption. However, the Project would be required to comply with the California Air Resources Board's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. Additionally, the petroleum used during construction would be temporary and minimal, and would not be wasteful or inefficient. Therefore, short-term construction impacts associated with energy consumption would be less than significant.

In regard to long-term operations, the Project would consist of replacing the existing retaining wall and rehabilitating the eroded slope, and thus would not result in an increase in energy consumption once construction is complete. Therefore, no long-term operational impacts associated with energy consumption would occur.

b) ***Less than Significant Impact***. The City of Carlsbad adopted its Climate Action Plan in September 2015 (City of Carlsbad 2015c). As discussed above, considering the nature of the Project, the Project would not result in wasteful, inefficient, or unnecessary consumption of energy during construction or operation. During construction, the Project would comply with California Air Resources Board's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes. Additionally, energy use during construction would be minimal and temporary. Further, the Project would not result in an increase in energy consumption during long-term operations. Therefore, impacts associated with the potential for the Project to conflict with a state or local renewable energy or energy efficiency plan would be less than significant.

VII. Geology and Soils

VII. GEOLOGY AND SOILS **Would the project:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
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 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?	☐	☐	☒	☐
d) Be located on expansive soils, as defined in Section 1803.5.3 of the California Building Code (2016), 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) ***Less than Significant Impact.***

i) As shown in Figure 3.5-2 of the City's General Plan EIR (City of Carlsbad 2014c), no known active, potentially active, or inactive faults traverse the City. Additionally, as shown on the California

Department of Conservation California Earthquake Hazards Zone Application (EQ Zapp), the City is not identified as being within a fault zone, nor are any fault traces identified within the City (DOC 2019). The Newport-Inglewood-Rose Canyon Fault is the closest known active fault, located approximately 4 miles offshore of the City's coastline. Because the Project site is not located within an Alquist-Priolo Earthquake Fault Zone, underlain by an active or potentially active fault, or proposes any facilities that could be affected by rupture of a known earthquake fault, impacts would be less than significant.

ii) The Project site is located in seismically active Southern California and could be subject to strong ground shaking, lurching, and/or ground cracking in the event of a large earthquake on any of the active or potentially active faults in the greater Southern California region, including the Newport-Inglewood-Rose Canyon Fault located approximately 4 miles offshore of the City's coastline, as well as the Coronado Bank, La Nacion, Elsinor, Agua Caliente, and San Jacinto fault zones. However, construction of the Project would not include any structures, and development of infrastructure improvements would conform to applicable state and local design standards. With consideration that the Project does not proposed any structures or residences on site, and Project compliance with applicable regulations related to infrastructure improvements, impacts associated with strong seismic ground shaking would be less than significant.

iii. Liquefaction is the phenomenon that occurs during severe ground shaking whereby soils reduce greatly in strength and temporarily behave similarly to a fluid rather than a solid. Liquefaction is restricted to certain geologic and hydrologic environments, primarily recently deposited sand and silt in areas with high groundwater levels. The Project site is composed of Santiago Formation and Artificial Fill to the depths of up to approximately 5 feet next to and beneath Park Drive (Appendix D). As shown in Figure 3.5-3 of the City's General Plan EIR (City of Carlsbad 2014c), the Project site is not located within a potential liquefaction zone. The southeastern-most part of the Project site is adjacent to a tidal flats area, which is considered to be a potential liquefaction hazard zone. Additionally, as shown on the California Department of Conservation California Earthquake Hazards Zone Application (EQ Zapp), the City is not identified as being within a liquefaction zone (DOC 2019). Furthermore, the Project does not propose any habitable structures that could be potentially impacted by liquefaction on site. Compliance with applicable state and local design standards, and recommendations in the Geotechnical Data Report prepared for the Project (Appendix E) would ensure that Project impacts related to liquefaction would be less than significant.

iv. Some of the natural causes of landslides are earthquakes, streams, and heavy rainfall. In addition, certain human activities tend to make earthen materials less stable and increase the chance of ground failure. Although the City does not include any areas identified as being susceptible to landslides (City of Carlsbad 2014c), the steep slope on the Project site is susceptible to erosion during storm events. Weakly cemented friable sandstone exposed at the face of the slope is very prone to surface-water-induced erosion, as evidenced by the deep rills on the face of the slope. However, implementation of the Project would help stabilize the slope and mitigate surface and deeper-seated instability. Given the nature of the Project, and the City's low risk of landslides, the potential for seismically induced landslides is low and impacts related to landslides would be less than significant.

b) ***Less than Significant Impact.*** As outlined in the Project description above, currently, the hillside along the northeast side of Park Drive between Cove Drive and Bayshore Drive experiences significant erosion and drainage issues that affect the function of the roadway and sidewalk, and the safety of pedestrians, cyclists, and drivers, particularly during and after rain events. Road widening in the late

1980s cut the toe of the slope along the northeast side of the road, after which the slope began to show erosion issues, in turn prompting construction of the retaining wall several years later. Over the years, the deposition of sediment along the sidewalk and roadway has created a safety hazard, restricted public access to local public beach areas, and created a maintenance burden for the City. In addition, the existing retaining wall shows signs of structural failure, likely due to ineffective drainage measures, which has affected its function and longevity.

The slope face is significantly weathered and contains numerous rills and channels resulting from surface erosion during rain events, especially on the southern portion of the Project site. Slope wash has accumulated behind the existing retaining wall along Park Drive from this surface erosion. The Project proposes slope stabilization to mitigate surface (surficial slaking, sloughing, and erosion) and deeper-seated instability of the slope along the north side of Park Drive. In addition to the slope stability considerations, the existing retaining wall requires replacement as the signs of structural failure increase each year. Portions of the existing block wall are degrading to the point where the steel rebar is exposed and portions of the retaining wall are beginning to lean toward the sidewalk. Failure of the retaining wall could result in additional slope instability issues and would be further exacerbated by storm events, and would require a long-term closure of the sidewalk, bicycle lane, and portions of the roadway until an emergency repair project could be constructed.

The purpose of the proposed Project is to stabilize the slope along Park Drive, direct surface water away from the face of the slope, replace the existing retaining wall, and introduce a brow ditch at the top of the retaining wall to collect runoff and eroded materials from overtopping the wall and impacting sidewalk access. During construction of the Project, potential sedimentation and erosion impacts would be minimized or avoided with implementation of erosion and sedimentation control measures in compliance with the National Pollutant Discharge Elimination System (NPDES) permit requirements. Furthermore, the Project would adhere to the City's Master Drainage Plan, Grading Ordinance, Storm Water Ordinance, BMP Design Manual, and Jurisdictional Runoff Management Program (JRMP) to avoid increased runoff, pollutants, and soil erosion during construction.

Although the slope may still experience some minor erosion post-construction, implementation of the Project would ensure a more stable design from an engineering and water quality perspective because it evaluated active erosion areas and areas with a high susceptibility for erosion. The Project would reduce the existing slope erosion by removing surface runoff from the slope and conveying it into the storm drain system. Compliance with applicable state and local design standards, and recommendations in the Geotechnical Data Report prepared for the Project (Appendix E), would further ensure potential impacts related to erosion on site would not be substantial. With consideration of the Project's purpose to reduce erosion on site, impacts would be less than significant.

c) ***Less than Significant Impact.*** As previously analyzed under Thresholds VII (a)(iii) and (a)(iv), although the City does not have any areas identified as being susceptible to landslides (City of Carlsbad 2014c), the steep slope on the Project site is susceptible to erosion during storm events. Weakly cemented friable sandstone is exposed at the face of the slope, which is very prone to surface-water-induced erosion, as evidenced by the deep rills in the face of the slope. However, implementation of the Project would help stabilize the slope and mitigate surface and deeper-seated instability. Given the nature of the Project and the City's low risk for landslides, the potential for seismically induced landslides is low. Regarding liquefaction, the Project site is composed of Santiago Formation and artificial fill to the depths of up to approximately 5 feet next to and beneath Park Drive (Appendix D). As shown in Figure 3.5-3 of the City's General Plan EIR (City of Carlsbad 2014c), the Project site is not located within a potential liquefaction zone. Additionally, as shown on the California Department of

Conservation California Earthquake Hazards Zone Application (EQ Zapp), the City is not identified as being within a liquefaction zone (DOC 2019).

Land subsidence is the sinking of a large area of ground surface with little or no horizontal movement. Subsidence areas typically occur where groundwater or natural gas is extracted. Soils in San Diego County are generally granitic and there have been no documented incidents of subsidence in San Diego County or the City (City of Carlsbad 2014c).

As described above under Threshold VII(b), the purpose of the proposed Project is to stabilize the slope along Park Drive, direct surface water away from the face of the slope, replace the existing retaining wall, and introduce a brow ditch at the top of the retaining wall to collect runoff and eroded materials from overtopping the wall and impacting sidewalk access. The Project does not propose any habitable structures that could be potentially impacted by landslides, lateral spreading, subsidence, or liquefaction. Compliance with applicable state and local design standards, and recommendations in the Geotechnical Data Report prepared for the Project (Appendix E), would ensure potential impacts as a result of the unstable slope during construction would not be substantial. Considering the purpose of the Project, impacts would be less than significant.

d) ***Less than Significant Impact.*** Certain types of soil are inherently expansive, meaning they can expand and contract as the water content fluctuates within the soil. This expansion and contraction, also called "shrink-swell," can damage structures that are not appropriately engineered for this activity. The U.S. Department of Agriculture analyzes the shrink-swell potential of each soil type, and categorizes it as "low," "moderate," "high," or "very high." Where the shrink-swell classification is moderate to very high, shrinking and swelling can damage buildings, roads, and other structures. Most of the soils in the City have low shrink-swell potential (City of Carlsbad 2014c).

Test results conducted by Delta Group on the sampled fill materials on site indicated that the fill has high plasticity and a high potential for expansion, with an expansion index of 118 (Appendix E). However, implementation of the Project would stabilize the slope and mitigate surface and deeper-seated instability. Replacement of the failing retaining wall, repair of the failing slope, and directing surface water away from the face of the slope would reduce potential impacts. The Project would be required to comply with the City's Grading Ordinance, General Plan policies, and recommendations in the Geotechnical Report (Appendix E), which would further reduce potential impacts associated with expansive soils to less than significant.

e) ***No Impact.*** No septic tank systems are proposed as part of the Project. The Project would not include any new structures or residences that would require the use of a septic tank or alternative wastewater disposal system. Therefore, no impact would occur.

f) ***Less than Significant with Mitigation Incorporated.*** A Paleontological Resources Assessment was prepared for the Project by LSA on June 15, 2016, and it is included as Appendix D to this MND. LSA examined geologic maps of the Project site and reviewed relevant geological and paleontological literature to determine which geologic units are present within the Project site and whether fossils have been recovered within the Project site or from those with similar geologic units elsewhere in the region. A fossil locality search request was submitted to the San Diego Natural History Museum to determine the status and extent of previously recorded paleontological resources within and surrounding the Project site. According to the locality search, there are no known fossil localities within the boundaries of the Project. Additionally, LSA conducted a pedestrian field survey of the Project site on February 22, 2011, for a previous cultural resources assessment. The Project site was

resurveyed for the 2016 assessment on May 13, 2016. Both surveys involved walking linear transects over the Project site to note the sediments at the surface and document and collect any cultural and/or paleontological resources that may have been present. No paleontological resources were observed during the survey (Appendix D).

Geologic mapping indicates that the Project site contains the Santiago Formation, which dates to the middle Eocene, specifically 40.2 to 47.8 million years ago (Appendix D). In addition, the Geotechnical Data Report prepared for the Project by Group Delta indicates that the Project site is underlain by Eocene-age Santiago Formation materials that are covered by up to approximately 5 feet of colluvium on the upper portions of the slope and approximately 5 feet of fill at the bottom of the slope, as well as undocumented fill associated with the roadway and underground utility improvements at the Project site (Appendix E). According to the County of San Diego Guidelines for Determining Significance: Paleontological Resources (County of San Diego 2009), member C of the Santiago Formation has produced "some of the best preserved assemblages of middle Eocene terrestrial mammals in California." Exposures of this formation around Oceanside, Carlsbad, and Vista contain "a diverse fossil record consisting of marine, estuarine, and terrestrial fossils and fossil assemblages" (County of San Diego 2009). Because the Santiago Formation is known to contain scientifically significant paleontological resources, this formation is considered to have high paleontological sensitivity.

Although there are no known fossil localities within the boundaries of the Project site, the San Diego Natural History Museum has records of three localities from the Santiago Formation within 1 mile of the Project site (Appendix D). Because scientifically important fossils are known from the Santiago Formation, the museum considers it to have high paleontological sensitivity and recommends implementation of a paleontological resource mitigation program for any ground-disturbing activities that may occur in this formation. The results of the locality search and literature review indicate that the Project site contains artificial fill, which has no paleontological sensitivity, and the Santiago Formation, which has high paleontological sensitivity. Therefore, no paleontological mitigation is recommended for excavations in the artificial fill, which is located next to and beneath Park Drive and extends to depths of up to approximately 5 feet. However, if excavation occurs in deposits of the Santiago Formation, which may be encountered at the surface throughout the Project site except for where it is covered by artificial fill, there is a potential to encounter scientifically significant paleontological resources (Appendix D). The topography of the Project site has been further altered since the LSA Paleontological Assessment was completed due to time passed since the field study was conducted, and due to further erosion on site from storm events over the years. Nonetheless, impacts to paleontological resources would be significant, absent mitigation. With implementation of **MM-PR-1**, outlined below and in Section XXII of this MND, potential impacts to paleontological resources would be reduced to less than significant.

MM-PR-1 If excavation activities will occur in deposits of the Santiago Formation, the applicant shall retain a qualified paleontologist to prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP should be consistent with the guidelines of the Society of Vertebrate Paleontology and include the following:

1. The paleontologist, or his/her representative, shall attend a preconstruction meeting.
2. Excavation and grading activities in deposits with high paleontological sensitivity (Santiago Formation) shall be monitored by a paleontologist monitor following a PRIMP.
3. If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction away from the area of the find to assess its significance.

4. Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a scientific institution.
5. At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program.
6. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected and a paleontologist shall be contacted to assess the find for significance. If determined to be significant, the fossil shall be collected from the field.

VIII. Greenhouse Gas Emissions

VIII. 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 purposes of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), O_3, and certain hydrofluorocarbons (HFCs). These gases, known as greenhouse gases (GHGs), allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Emissions of GHGs in excess of natural ambient concentrations are thought to be responsible for the enhancement of the greenhouse effect and contribute to what is termed "global warming," the trend of warming of the Earth's climate from anthropogenic activities. Global climate change impacts are by nature cumulative; direct impacts cannot be evaluated because the impacts themselves are global rather than localized impacts.

California Health and Safety Code Section 38505(g) defines GHGs to include the following compounds: CO_2, CH_4, N_2O, O_3, chlorofluorocarbons (CFCs), HFCs, perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Because individual GHGs have varying heat-trapping properties and atmospheric lifetimes, GHG emissions are converted to carbon dioxide equivalent (CO_2e) units for comparison. The CO_2e is a consistent methodology for comparing GHG emissions because it normalizes various GHG emissions to a consistent measure. The most common GHGs related to the Project are those primarily related to energy usage: CO_2, CH_4, and N_2O.

The City's original Climate Action Plan (CAP), adopted in September 2015, was prepared concurrently with the City's updated General Plan and included actions to carry out the General Plan's goals and policies, consistent with the Community Vision (City of Carlsbad 2015c). The original CAP was also correlated with

the EIR for the General Plan, with the CAP GHG reduction target synchronized with the EIR. CAP Amendment No. 1 (Updated CAP), adopted in May 2020, revised the GHG inventory, reduction targets, and forecast; updated reductions from existing measures; and incorporated Community Choice Energy as a new reduction measure (City of Carlsbad 2020). An addendum to the EIR was also prepared. The CAP is a plan for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP.

In March 2019, the City Council adopted several ordinances aimed at reducing GHG in new construction and alterations to existing buildings. Projects requiring building permits are subject to these ordinances, which address the following:

- Energy efficiency (Ord. No. CS-347)
- Solar photovoltaic systems (Ord. No. CS-347)
- Water heating systems using renewable energy (Ord. Nos. CS-347 and CS-348)
- Electric vehicle charging (Ord. No. CS-349)
- Transportation demand management (Ord. No. CS-350)

The updated CAP established a screening threshold of 900 metric tons (MT) CO_2e per year for new development projects to determine if a project would need to demonstrate consistency with the CAP through the Consistency Checklist and/or a self-developed GHG emissions reduction program. Projects that are projected to emit fewer than 900 MT CO_2e annually would not make a considerable contribution to the cumulative impact of climate change, and therefore, do not need to demonstrate consistency with the updated CAP. Regardless of this screening threshold, all projects requiring building permits are subject to the above-referenced CAP ordinances. Such projects are therefore required to show compliance with the ordinances through submittal of a completed Consistency Checklist and provide site plans and building plans.

The City prepared baseline inventories for 2005 and 2011 of government operations in the original CAP. The City's updated CAP contains a baseline communitywide inventory of GHG emissions for 2012, 2014, and 2016 (City of Carlsbad 2015c). A projection of emissions to 2035 (corresponding to the General Plan horizon year), a calculation of the City's targets based on a reduction from the 2012 baseline, and emissions reductions with implementation of the updated CAP are provided in the updated CAP (City of Carlsbad 2020).

The 2012 communitywide inventory was estimated to be 977,000 MT CO_2e and the 2011 government operations inventory was estimated to be 8,205 MT CO^2e (City of Carlsbad 2015c). Accounting for future population and economic growth, the City projects GHG emissions of 956,000 MT CO_2e in 2035, assuming business-as-usual. The CAP includes a reduction target to reduce emissions below the 2012 baseline by 49% by 2035 (City of Carlsbad 2020). Therefore, the City must implement strategies that reduce emissions to 472,000 MT CO_2e by 2035. By meeting the 2035 targets, the City will meet the 2030 state goal identified in Senate Bill 32, and maintain a trajectory to meet its proportional share of the 2050 state target identified in Executive Order S-3-05.

a) ***Less than Significant Impact:*** Construction of the Project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road vendor trucks, and worker vehicles. CalEEMod was used to calculate the annual GHG emissions based on the construction scenario. Construction of the Project is anticipated to commence in August 2021 and reach

completion in January 2022, lasting 7 months. Table 5 presents construction emissions for the Project in 2021 and 2022.

Table 5. Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons			
2021	106.53	0.02	0.00	107.15
2022	1.07	<0.01	0.00	1.08
Total	**107.60**	**0.02**	**0.00**	**108.23**
30-Year Amortized Construction Emissions (MT CO_2e per year)				**3.61**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; MT = metric tons.
See Appendix A for complete results.
Totals may not sum due to rounding.

As shown in Table 5, the estimated total GHG emissions during construction would be approximately 108 MT CO_2e over the construction period (2021 and 2022). Estimated Project-generated construction emissions amortized over 30 years would be approximately 4 MT CO_2e per year. GHG emissions generated during construction of the Project would be short term, lasting only for the duration of the construction period (7 months), and would not represent a long-term source of GHG emissions. Once Project construction is complete, no operational activities associated with the proposed Project would occur (no routine daily equipment operation or vehicle trips would be required). Because the Project would not result in any long-term operational activities, there would be no potential GHG emissions impacts associated with operational GHG emissions. As shown in Table 5, amortized Project-generated construction emissions would not exceed the 900 MT CO_2e threshold. Therefore, GHG emissions impacts would be less than significant.

b) ***Less than Significant Impact:*** As stated above, the City of Carlsbad adopted a CAP in 2015 that outlines actions that the City will undertake to achieve its proportional share of state GHG emissions reductions. The CAP demonstrates that, with implementation of applicable General Plan goals and policies, coupled with state and federal actions and execution of CAP measures and actions, the City will reduce GHG emissions in alignment with state goals established by Assembly Bill (AB) 32 and Senate Bill 32, and maintain a trajectory to meet its proportional share of the 2050 state target identified in Executive Order S-3-05. As described for Threshold VIII(a), the proposed Project would be below the 900 MT CO_2e screening threshold established by the City. As such, the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHGs. Therefore, impacts would be less than significant.

IX. Hazards and Hazardous Materials

IX. HAZARDS AND HAZARDOUS MATERIALS Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 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 environment?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

a) ***Less than Significant Impact.*** Hazardous materials are typically used by most land uses, such as industrial, retail/office, commercial, residential, agriculture, medical, and recreational uses, among other activities (City of Carlsbad 2014d). The proposed Project would involve replacement of a failing retaining wall and stabilization of an eroding slope, and therefore does not fit into any of the land use categories listed above. However, limited transport, use, and disposal of hazardous materials may occur during construction of the new retaining wall along Park Drive and proposed improvements (e.g., the use of fuels, solvents, and lubricating fluids for the fueling and servicing of construction equipment). The County of San Diego Department of Environmental Health, Hazardous Materials Division is the designated Certified Unified Program Agency (CUPA) for San Diego County, and is required to implement the unified hazardous waste and hazardous materials management and regulatory program for San Diego County, with the help of other local agencies such as the City. The City will continue to maintain permitting requirements, as administered by the County of San Diego's Department of Environmental Health requirements, for all land uses that handle, store, or generate hazardous waste. Construction would be short term and the handling of any hazardous materials would be regulated through implementation of CUPA programs and conformance with other applicable federal, state, and local regulations, including applicable General Plan policies outlined in

the City's General Plan EIR, Chapter 3.6 (City of Carlsbad 2014d). Operation of the Project would not involve the routine use, transport, or disposal of hazardous materials, and therefore, no long-term operational impacts related to hazardous materials are anticipated. For the reasons stated above, the impact of potential use, transport, and disposal of hazardous materials associated with implementation of the Project would be less than significant.

b) ***Less than Significant Impact.*** As previously stated, hazardous materials are typically used by most land uses such as industrial, retail/office, commercial, residential, agriculture, medical, and recreational uses, among other activities. The proposed Project would involve the replacement of a failing retaining wall and stabilization of an eroding slope, and therefore does not fit into any of the land use categories listed above. However, limited transport, use, and disposal of hazardous materials may occur during construction of the new retaining wall along Park Drive and proposed improvements (e.g., the use of fuels, solvents, and lubricating fluids for the fueling and servicing of construction equipment). Although the risk of upset and accident conditions involving the release of hazardous materials into the environment is not anticipated, there is the chance it could occur during construction activities. However, with proper implementation of CUPA programs as described above, in conjunction with other state and federal regulations and applicable General Plan policies, the impact of reasonably foreseeable accidents and/or upset conditions involving the release of hazardous materials associated with implementation of the Project would be less than significant.

c) ***Less than Significant Impact.*** The Project site is not located within 0.25 miles of an existing or proposed school. The closest school to the Project site is Kelly Elementary School, located approximately 0.5 miles northeast. Limited transport, use, and disposal of hazardous materials may occur during construction of the new retaining wall along Park Drive and proposed improvements (e.g., the use of fuels, solvents, and lubricating fluids for the fueling and servicing of construction equipment). However, construction would be short term, and the handling of any hazardous materials would be regulated through implementation of CUPA programs, as well as conformance with other applicable federal, state, and local regulations. Operation of the Project would not involve the routine use, transport, or disposal of hazardous materials, and therefore, no long-term operational impacts related to hazardous materials are anticipated. Construction of the Project is not anticipated to have any impacts on surrounding schools. Therefore, impacts would be less than significant. Hazardous air quality and GHG emissions are addressed in detail in Section III, Air Quality, and Section VIII, Greenhouse Gas Emissions, of this MND.

d) ***Less than Significant Impact.*** A Hazardous Materials Technical Memo was prepared for the Project by Dudek on March 18, 2020, and is included as Appendix F of this MND. Findings from the Hazardous Materials Technical Memo are included herein. A search of regulatory records was conducted by EDR on February 28, 2020 (included as an attachment to Appendix F). The search was conducted for the Project site and includes a 0.25-mile, 0.5-mile, and 1-mile search radius as defined in the records review requirements of the American Society for Testing and Materials Standard 1527-13. The EDR search includes Cortese List databases as defined by Government Code Section 69562.5. The EDR report gives a listing of sites within the defined search radii that are listed on one or more environmental regulatory databases. A total of 40 sites were identified in the EDR report; the Project site was not identified in any of the regulatory databases in the EDR report. Adjacent sites that were listed in the HAZNET, HWTS, and RCRA NONGEN/NLR databases are noted to have produced waste, including asbestos-containing waste. However, review of these records did not indicate any violation or release that could impact the environmental conditions of the Project site (Appendix F).

Government Code Section 65962.5 requires the California Environmental Protection Agency to compile a list of hazardous waste and substances sites (Cortese List). Dudek conducted a search of the online databases that provide information on Cortese List sites on March 3, 2020, and the Project site was not identified in the noted databases. Additionally, Dudek viewed the GeoTracker and Envirostor online databases on March 3, 2020, and no sites were identified on either online database within 0.5 miles of the Project site. Based on a review of the regulatory databases presented in the EDR report and based on review of online databases, it is unlikely that hazardous materials or hazardous waste impacts are present at the Project site (Appendix F). Additionally, Figure 3.6-2, Ranked Hazardous Materials Sites, in Chapter 3.6 of the City's General Plan EIR (City of Carlsbad 2014d), shows there are no ranked hazardous materials sites on or immediately surrounding the Project site. Therefore, because the Project would not be located on a site that is included on a list of hazardous materials sites, implementation of the Project would not create a significant hazard to the public or environment, and impacts would be less than significant.

e) ***Less than Significant Impact.*** The McClellan-Palomar Airport is located approximately 2.16 miles southeast of the Project site. As shown in Figure 3.6-3, McClellan-Palomar Airport Influence Area/Safety Zones, in Chapter 3.6 of the City's General Plan EIR (City of Carlsbad 2014d), the Project site is located in the Airport Overflight Notification Area, which applies only to new residential development. The Project does not propose residential development and would not construct any structures that would pose a risk to aircraft. Therefore, considering the nature of the Project, impacts would be less than significant.

f) ***Less than Significant Impact.*** The City's Emergency Operations Plan (EOP) defines the scope of the City's emergency preparedness and incident response activities. The EOP establishes emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of planning efforts of the various emergency staff and service elements using the Standardized Emergency Management System (published by the California Office of Emergency Services) and the National Incident Management System (published by the Federal Emergency Management Agency). The EOP identifies the City's Emergency Operations Center (EOC) as the location from which centralized emergency management would be performed during a major emergency or disaster, including receiving and disseminating information, maintaining contact with other EOCs, and providing instructions to the public (City of Carlsbad 2014d). Implementation of the proposed Project would not result in new development or population growth that could increase the demand for emergency services and affect implementation of adopted emergency response and evacuation plans. Construction of the Project would take place within the City's ROW and utility and open space easements. The northbound lane of Park Drive between Bayshore Drive and Marina Drive may be temporarily blocked off during portions of construction; however, the southbound lane would still be accessible, and surrounding residents would still be able to access and exit their homes. Potential detours along Park Drive as a result of Project construction would not interfere with an adopted emergency response or evacuation plan. Considering the Project's location and purpose, and the short-term construction duration, implementation of the Project would not impair or interfere with an adopted emergency response plan or evacuation plan, and impacts would be less than significant.

g) ***Less than Significant Impact.*** Calculation of threat from wildfire hazard is based on a number of combining factors, including fuel loading (vegetation), topography, and climatic conditions (e.g., wind, humidity, and temperature), as well as the proximity of structures and urban development to fire hazards. The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California, and ranked fire threat based on the availability of fuel and the

likelihood of an area burning (based on topography, fire history, and climate). The rankings are little or no fire threat, moderate, high, and very high fire threat. As shown in Figure 3.6-4, Structure Fire/Wildfire Threat, in Chapter 3.6 of the City's General Plan EIR, the Project site is in a designated "Urban" zone and does not correlate with a fire threat ranking (City of Carlsbad 2014d). The Project does not propose any habitable structures on site, or structures that could cause a threat to surrounding residences. Considering the location and purpose of the Project, wildfire impacts as a result of Project implementation would be less than significant.

X. Hydrology and Water Quality

X. HYDROLOGY AND WATER QUALITY **Would the project:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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 ground water 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 offsite;	☐	☐	☒	☐
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) ***Less than Significant Impact.*** The Project is needed to stabilize the slope along the north side of Park Drive and to mitigate surface (surficial slaking, sloughing, and erosion) and deeper-seated instability. A brow ditch is proposed at the top of the proposed 2:1 slope and at the top of the wall to safely convey stormwater runoff to the existing storm drain systems. By decreasing stormwater runoff from the face of the proposed slope, erosion is expected to be decreased significantly; however, the potential for erosion would not be eliminated entirely by removing the stormwater runoff from the face of the slope using the brow ditch at the top of the slope. It is assumed that potential indirect impacts resulting from short-term construction activities would include dust, noise, and general human presence that may temporarily

disrupt species and habitat vitality, and construction-related soil erosion and runoff. With respect to these potential indirect impacts, however, all Project grading would be subject to the typical restrictions, including BMPs and requirements that address erosion and runoff, including the federal Clean Water Act; NPDES and Municipal Separate Storm Sewer System (MS4) Permit issued by the San Diego RWQCB; City of Carlsbad Engineering Standards; the City's Master Drainage Plan, Grading Ordinance, Storm Water Ordinance, BMP Design Manual, and JRMP; and preparation of a SWPPP. Furthermore, as outlined above in Section IV Biological Resources, the project would implement mitigation measure **MM-BIO-6**, Construction Monitoring and Reporting, which requires the construction site to be periodically monitored to verify that the Project is implementing SWPPP BMPs, including dust control, silt fencing (if required), removal of construction debris, maintenance of a clean work area, covered trash receptacles that are animal- and weather-proof, and prohibition of pets on the construction site (refer to Section XXII. List of Mitigation Measures).

The Project is proposing slope stabilization and repair, which would improve the currently adverse conditions and therefore result in a beneficial impact. Compliance with applicable federal, state, and local regulations, including applicable General Plan policies, would ensure that the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality. For these reasons, impacts would be less than significant.

b) ***Less than Significant Impact.*** Groundwater consists of water within underground aquifers that are recharged from the land surface. The rate of groundwater recharge is affected by the permeability of the ground surface. The proposed Project improvements are not anticipated to reduce groundwater recharge since the majority of improvements do not consist of impervious surfaces. Any water used for construction purposes would be trucked in, and no groundwater use is proposed. Considering the nature of the Project, impacts would be less than significant.

c) ***Less than Significant Impact.*** As described above, The Project is needed to stabilize the slope along the north side of Park Drive and to mitigate surface (surficial slaking, sloughing, and erosion) and deeper-seated instability. A brow ditch is proposed at the top of the proposed 2:1 slope and at the top of the wall to safely convey stormwater runoff to the existing storm drain system. By removing the stormwater runoff from the face of the proposed slope, erosion is expected to decrease significantly. The Project would not substantially alter the existing drainage pattern of the site or area, nor alter the course of a stream or river through the addition of impervious surfaces. Because the Project does not propose habitable structures or any structures that would increase water use on site, the Project would not result in increased surface runoff that could result in flooding or capacity exceedance of the existing storm drain servicing the Project site.

As previously analyzed, all Project grading would be subject to the typical restrictions, including BMPs and requirements that address erosion and runoff, including the federal Clean Water Act; NPDES and MS4 Permit issued by the San Diego RWQCB; City of Carlsbad Engineering Standards; the City's Master Drainage Plan, Grading Ordinance, Storm Water Ordinance, BMP Design Manual, and JRMP; and preparation of a SWPPP. With consideration that the Project would improve the currently adverse conditions related to drainage on site, impacts would be less than significant.

d) ***Less than Significant Impact.*** Although the Project site is located adjacent to the Agua Hedionda Lagoon, the Project site is not subject to flood hazard, dam inundation, tsunami, or seiche zones as shown in Figures 3.8-1, 3.8-2, and 3.8-3 of the City's General Plan EIR, Chapter 3.8 (City of Carlsbad 2014e). The proposed Project improvements would not include any infrastructure on site that would

result in the risk of release of pollutants due to Project inundation. Therefore, impacts would be less than significant.

e) ***Less than Significant Impact.*** As previously described, the Project would be subject to the typical restrictions, including BMPs and requirements that address erosion and runoff, including the federal Clean Water Act; NPDES and MS4 Permit issued by the San Diego RWQCB; City of Carlsbad Engineering Standards; the City's Master Drainage Plan, Grading Ordinance, Storm Water Ordinance, BMP Design Manual, and JRMP; and preparation of a SWPPP. The Project would be considered a "Standard" project per the BMP Design Manual guidance (City of Carlsbad 2016), and would implement low-impact-development and source-control BMPs where feasible. The Project would not conflict with or obstruct implementation of a water quality control plan, and is not subject to an applicable groundwater management plan within the City. Therefore, impacts would be less than significant.

XI. Land Use and Planning

XI. LAND USE AND PLANNING **Would the project:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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) ***No Impact.*** The Project would involve installation of a new retaining wall and improvement of slope stability along Park Drive in the City. The site does not include residential units or businesses, and there is not an existing, established community on the Project site. Construction of the Project would be short term and is not expected to permanently impact surrounding residences. The Project site would not divide an established community, and no impact would occur as a result of Project implementation.

b) ***Less than Significant Impact.*** The Project is subject to several local and regional plans intended to avoid environmental effects. Such local plans include the City's General Plan and the City's LCP. All significant impacts to biological resources as they relate to the LCP would be mitigated to less than significant, as described in Section IV, Biological Resources. The Project would comply with applicable regulations in the City's Zoning Code, such as the Hillside Development Regulations, and implementation of the proposed retaining wall would preserve and enhance the quality of the natural hillside. Additionally, the Project would comply with the Agua Hedionda Land Use Plan and applicable regional plans, such as San Diego Forward: The Regional Plan and the regional air quality plan. Overall, the Project would not 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, and impacts would be less than significant.

XII. Mineral Resources

XII. MINERAL RESOURCES **Would the project:**	Potentially Significant **Impact**	Less than Significant with Mitigation Incorporated	Less than Significant **Impact**	No Impact
a) Result in the loss of availability of a known mineral resource that would be of future 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–b) ***No Impact:*** The City of Carlsbad is devoid of any non-renewable mineral resources of economic value to the region and the residents of the state. Mineral resources within the City are no longer being used and extracted as exploitable natural resources. Therefore, no impacts would occur to mineral resource as a result of the proposed Project (City of Carlsbad 2014f).

XIII. Noise

XIII. NOISE **Would the project result in:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

a) ***Less than Significant with Mitigation Incorporated.*** The City of Carlsbad General Plan Noise Element establishes maximum recommended noise exposure levels on the basis of land use zones. The recommended noise exposure levels use day/night average sound level (DNL) (or L_{dn}), and are applicable to exterior (outside) noise, as opposed to noise levels occurring in interior building spaces. The recommended maximum exterior noise level for single-family residences is 60 A-weighted

decibels (dBA) DNL, and 65 dBA DNL for multi-family residences (City of Carlsbad 2015d). The City of Carlsbad Municipal Code Noise Ordinance does not provide quantitative noise restrictions for construction noise, but it does have limitations on construction hours. Carlsbad Municipal Code Chapter 8.48 outlines regulations for limitation of hours for construction (i.e., the erection, demolition, alteration, or repair of any building or structure or the grading or excavation of land) that creates disturbing, excessive, or offensive noise. Construction can occur Monday through Friday from 7 a.m. to 6 p.m., and Saturday from 8 a.m. to 6 p.m.; no work can be conducted on Sundays or any federal holiday. Carlsbad Municipal Code Chapter 8.48 also outlines exceptions that may be granted by the City for circumstances such as emergency repairs required to protect the health and safety of the community. Due to lack of a locally applied quantified threshold for construction noise exposure, Federal Transit Administration (FTA) guidance (i.e., 80 dBA 8-hour energy-averaged noise level [L_{eq}] at residential receptors) are used herein.

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would be considered noise- and vibration-sensitive and may warrant unique measures for protection from intruding noise.

Currently, the Project site is surrounded by such noise-sensitive single-family and multi-family residential land uses to the west, southwest, south, southeast, east, and north. The closest of these receptors are shown in Figure 8 and represent the nearest residential land uses with the potential to be impacted by construction of the Project. Additional sensitive receptors are located farther from the Project site in the surrounding community and, by virtue of their increased distance from the Project site and the nature of airborne sound and groundborne vibration levels attenuating in magnitude over such traverse, would be less impacted by noise and vibration levels than the nearest sensitive receptors. Open space borders the Project site to the northeast and northwest. Park Drive serves as the southern and western boundary of the Project site. Agua Hedionda Lagoon is as close to the Project as approximately 520 feet southwest. The San Diego Freeway (Interstate 5) is the nearest major roadway to the Project site. Figure 5-2 and Figure 5-3 of the City of Carlsbad Noise Element show that the Project site is external to the 60–65 dBA noise contours for existing and future conditions, respectively.

Construction noise and vibration are temporary phenomena. Construction noise and vibration levels vary from hour to hour and day to day, depending on the equipment in use, the operations being performed, and the distance between the source and receptor. Construction activities for the Project would include demolition of the existing wall structure, grading, trenching, retaining wall construction, paving of the sidewalk, and application of architectural coatings. Potential noise impacts on sensitive receptors from construction activities associated with the Project would be a function of the noise emission level generated by operating construction equipment, equipment location, and the timing and duration of the construction activities.

Table 6, Construction Equipment Typical Noise Emission Levels, presents maximum sound pressure levels of typical heavy equipment and powered tools at “full power” at a reference distance of 50 feet between the sound emission source and a receptor. As an example, a loader and two dump trucks, all operating at full power and relatively close together, would generate a maximum sound level of approximately 82 dBA at 50 feet from their logarithmically combined operations. As distance increases between equipment and/or between areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together. In addition, typical operating cycles may involve 2 minutes of full-power operation, followed by 3 or 4 minutes at lower levels. This variation in equipment

operating intensity, as a fraction of full power, is referred to as "acoustical usage factor" by the Federal Highway Administration in its Roadway Construction Noise Model User's Guide (FHWA 2006). Thus, the energy-averaged noise level (L_{eq}) during construction activity is generally lower than use at full power. Noise levels from construction operations decrease at a rate of approximately 6 decibels (dB) per doubling of distance from the source.

Table 6. Construction Equipment Typical Noise Emission Levels

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Backhoe	78
Compressor (air)	78
Concrete Mixer Truck	76
Dump Truck	76
Excavator	81
Front End Loader	79
Impact Pile Driver	95
Pickup Truck	55
Vacuum Street Sweeper	80

Source: FHWA 2006

The nearest point of construction activities to the closest noise-sensitive receivers (single-family residence located east of Zone A) would be approximately 10 feet and the farthest would be approximately 350 feet. But since the location of operating construction equipment can vary with time, a concept called the "acoustic center" is useful in describing average noise levels that represent mobile equipment as they operate over a defined geographic area. The acoustic center is the idealized point from which the energy sum of all construction activity for a phase within a defined area would originate, and consistent with the FTA "general assessment" guidance method (FTA 2018), can be represented by the geographic center of a distinct project zone (A, B, or C) of anticipated construction activity nearest to a receptor. For purposes of this analysis, the distance between the nearest receptor to acoustic center of a zone is the average of two distance values: the horizontal distance to the nearest zone boundary point, and the horizontal distance to the farthest zone boundary point.

A prediction model emulating the aforementioned Federal Highway Administration's Roadway Construction Noise Model (FHWA 2006) was used to estimate construction noise levels at the six nearest noise-sensitive receptors (R1 through R6) associated with the land use or occupied structure shown in Figure 8. Although the model was developed by the Federal Highway Administration, the Roadway Construction Noise Model is often used for non-roadway projects because the same types of construction equipment used for roadway projects are also used to construct other project types. The prediction model considers two construction activity scenarios (FHWA 2006):

1. Evaluate noise from the loudest piece of equipment for a distinct phase of activity, assuming it is operating at the nearest distance (ND) to a proximate sensitive receptor. By way of example, this could be an operating pile driver at the southern boundary of a project construction zone.
2. Evaluate noise from all equipment associated with a phase, assuming the nearest zone's acoustic center (AC) as the origin point-type source.

Although the first of these two methods focuses on potential noise impact from singular operating equipment as close as it could be to a sensitive receptor, the latter considers the phase as a whole—including not one but all equipment at the average distance to a receptor as represented by the acoustical center. No topographical or structural shielding was assumed in the modeling of construction noise for either scenario (i.e., the receivers are modelled with no obstacles to the travel of sound between the construction activity and receiver location—a conservative assumption). The predicted noise levels from the proposed construction activities are summarized in Table 7, Construction Noise Model Results Summary. The complete set of prediction model input and output data worksheets is provided in Appendix G to this MND.

Table 7. Construction Noise Model Results Summary

	Construction Noise at Representative Receptor (R) Distances (dBA, 8-hour L_{eq})											
	R1		**R2**		**R3**		**R4**		**R5**		**R6**	
Construction Phase	*ND 105 feet*	*AC 263 feet*	*ND 70 feet*	*AC 114 feet*	*ND 80 feet*	*AC 163 feet*	*ND 65 feet*	*AC 163 feet*	*ND 10 feet**	*AC 163 feet*	*ND 155 feet*	*AC 256 feet*
Site Preparation (excavator, hauling truck, street sweeper)	71	66	74	73	73	70	75	70	**91**	70	67	66
Trenching (excavator, hauling truck, backhoe, street sweeper)	71	67	74	74	73	71	75	71	**91**	71	67	67
Demolition (hauling truck, excavator, loader, water truck, street sweeper)	71	66	74	73	73	70	75	70	**91**	70	67	66
Grading (excavator, hauling truck, street sweeper)	71	68	74	75	73	72	75	72	**91**	72	67	68
Retaining Wall Construction (impact pile driver, excavator, hauling truck, street sweeper)	**82**	75	**85**	**82**	**84**	79	**86**	79	**94**	79	78	75

Table 7. Construction Noise Model Results Summary

Construction Phase	Construction Noise at Representative Receptor (R) Distances (dBA, 8-hour L_{eq})											
	R1		R2		R3		R4		R5		R6	
	ND 105 feet	*AC 263 feet*	*ND 70 feet*	*AC 114 feet*	*ND 80 feet*	*AC 163 feet*	*ND 65 feet*	*AC 163 feet*	*ND 10 feet**	*AC 163 feet*	*ND 155 feet*	*AC 256 feet*
Sidewalk/Brow Ditch/Paving (excavator, concrete truck)	71	64	74	71	73	68	75	68	**91**	68	67	64
Architectural Coating (compressor, concrete truck)	69	63	72	70	71	67	73	67	**89**	67	65	63

Notes:
ND = Nearest distance prediction scenario (singular loudest equipment for the phase).
AC = Acoustic center prediction scenario (all phase equipment operating).
* Distance from nearest receiving property line and pile driver is 25 feet.

Bold values indicate exceedance of Federal Transit Administration (FTA) guidance limit of 80 dBA 8-hour energy-averaged noise level (L_{eq}).

As presented in Table 7, the highest predicted construction noise levels (8-hour L_{eq}) are predicted to exceed FTA guidance at the nearest residential receptors during the following activities:

- At R1, R2, R3, R4, and R5: operation of impact pile-driving during the retaining wall construction phase
- At R2, operating of all equipment during the retaining wall construction phase
- At R5, operation of the loudest equipment for all phases

Mitigating these elevated noise levels would require implementation of **MM-NOI-1** (outlined below and in Section XXII), installing a temporary noise barrier of sufficient height and ground extent so that its presence occludes the propagation of construction noise to the sensitive receptor of concern and yields the needed noise reduction quantity: the difference between the bold value in Table 7 and the 80 dBA guidance threshold. Figure 9 shows a sample temporary noise barrier on a "k-rail" mounting method, as described in **MM-NOI-1**.

Compliance with the City's Municipal Code requirements, and implementation of **MM-NOI-1** would ensure temporary noise impacts due to Project construction noise would be less than significant.

MM-NOI-1 The City of Carlsbad or its contractor(s) shall install a temporary noise barrier to reduce construction noise exposure associated with Project construction activities at the following representative noise-sensitive receptor locations or areas:

- Along the western property line of noise-sensitive receptor R5, with a minimum top height above grade of 16 feet, prior to commencement of all phases for Zone A.

- Along the southern edge of Park Drive between Marina Drive and Bayshore Drive, with a minimum top height above grade of 16 feet, during pile-driving for the retaining wall construction activity for Zone A.
- Along the western edge of Park Drive between 4677 Park Drive and 4701 Park Drive, with a minimum top height above grade of 24 feet, during pile-driving for the retaining wall construction activity for Zone B.
- Along the western edge of Park Drive between 4645 Park Drive and 4683 Park Drive, with a minimum top height above grade of 24 feet, during pile-driving for the retaining wall construction activity for Zone C.
- Along the eastern property line of noise-sensitive receptor R1, with a minimum top height above grade of 8 feet, during pile-driving for retaining wall construction activity for Zone C.

The temporary barrier shall be comparable to an outdoor-grade acoustical blanket having a sound transmission class (STC) rating of at least 25, which would be consistent with City of Carlsbad Noise Guidelines Manual (City of Carlsbad 2013) and California Department of Transportation guidance (Caltrans 2013), to exhibit adequate performance (i.e., at least 10 dB transmission loss greater than the up to 14 dB of needed barrier noise reduction effect). Because it is the sound blanket that delivers this sufficient STC rating, temporary barrier alternatives to a recommended "k-rail" mounting method as means of installation or support would be acceptable as long as the assembled blankets present a "solid" wall with minimized gaps or cracks between adjoining segments and where the blankets are near the ground surface.

b) ***Less than Significant.*** Construction activities that might expose persons to excessive groundborne vibration or groundborne noise could cause a potentially significant impact. Groundborne vibration information related to construction activities has been collected by FTA (FTA 2018). FTA guidance for vibration serves to quantify potential vibration impacts with respect to appropriate standards, which are 0.3 inches per second (in/sec) peak particle velocity (PPV) for the prevention of structural damage to typical residential buildings and 0.2 in/sec PPV for human annoyance (Caltrans 2013).

For heavier pieces of conventional construction equipment, such as excavators, generated vibration velocity levels of approximately 0.03 in/sec PPV would be expected at a distance of 50 feet (FTA 2018). Because no occupied residential structures are closer than this distance, groundborne vibration impacts from conventional equipment operating at the Project zones would be less than significant.

For impact pile-driving, a specialized construction activity that involves high-energy impacts that generate large vibration velocity amplitudes, at 50 feet the estimated groundborne vibration velocity level from such activity would be 0.23 in/sec (based on a "typical" reference value of 0.644 in/sec at 25 feet [FTA 2018]), which is just below the suggested 0.3 in/sec threshold for residential structure building damage risk. Although potentially annoying to occupants of residential structures at this predicted magnitude, the activity would be temporary and occur only during allowable daytime construction hours as permitted by the City. Therefore, potential impacts related to groundborne vibration from pile-driving activity would be less than significant.

c) ***No Impact.*** The Project site is not located in the vicinity of a private airstrip. The Project is located more than 2 miles from the McClellan-Palomar Airport. The Project site is located outside of the 60

dB Community Noise Equivalent Level noise exposure range, and workers would not be subject to excessive noise levels as a result of airport operations (City of Carlsbad 2015d). Therefore, there would be no impacts from airport land uses.

XIV. Population and Housing

XIV. POPULATION AND HOUSING **Would the project:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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–b) No Impact. The proposed Project would involve removal and replacement of the existing retaining wall to stabilize and repair the failing slope located on the northeast side of Park Drive between Cove Drive and Bayshore Drive. The Project would not involve construction of new homes or businesses, or introduce any new structures on site, nor would any surrounding roads or other infrastructure be expanded or extended as a result of the Project. Because implementation of the Project would not induce growth or result in displacement of existing people or housing, no impact would occur.

XV. Public Services

XV. PUBLIC SERVICES **Would the project** result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, a 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**:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

a) ***Less than Significant Impact.*** The proposed Project would involve removal and installation of a retaining wall to stabilize and repair a steep slope in an area generally located on the northeast side of Park Drive between Cove Drive and Bayshore Drive. The proposed Project would not induce population growth or result in the addition of housing, schools, or other community facilities that might require fire protection or result in an increase in need for fire protection. Construction of the retaining wall would not change local fire protection response times or affect demand for fire protection services in the Project area. Therefore, impacts to fire protection services would be less than significant.

b) ***Less than Significant Impact.*** As described above, the proposed Project would not induce population growth or result in the addition of housing, schools, or other community facilities that might require police protection or result in an increase need for police protection. Construction of the retaining wall would not change local police protection response times or affect demand for police protection services in the Project area. Therefore, impacts to police protection services would be less than significant.

c) ***No Impact.*** The proposed Project would not involve a housing component that would result in population growth or increased demands on existing schools within the area. Therefore, no impact to schools would occur.

d) ***No Impact.*** The proposed Project would not involve a housing component or increase employment that would result in population growth. Therefore, additional demands on existing public parks would not occur as a result of Project implementation, and no impact would occur.

e) ***No Impact.*** The proposed Project would not involve a housing component or increase employment that would result in population growth in the City. Therefore, additional demands on other public facilities, such as libraries or health care services, would not occur as a result of Project implementation. No impact would occur.

XVI. Recreation

XVI. RECREATION	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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) ***No Impact.*** The proposed Project would not involve a housing component or substantially increase employment opportunities within the City because construction would be short term and temporary, and construction workers are anticipated to come from the surrounding area. The Project proposes replacement of the existing retaining wall and stabilization of the slope along Park Drive, and implementation of the Project has no relation to increased use of recreational facilities within the

area. Therefore, the proposed Project would not result in substantial physical deterioration of neighborhood or regional parks or other recreational facilities, and no impacts would occur.

b) ***No Impact.*** The proposed Project would involve removal and installation of a retaining wall to stabilize and repair a steep slope in an area generally located on the northeast side of Park Drive between Cove Drive and Bayshore Drive. The proposed Project would not involve construction of a recreational facility that could have an adverse effect on the environment. In addition, the proposed Project would not induce population growth such that the expansion of existing recreational facilities would be required. Therefore, no impacts associated with the construction or expansion of recreational facilities would occur.

XVII. Transportation

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

The General Plan Mobility Element promotes a livable streets strategy for mobility within the City. The objective of this strategy is to create a "multi-modal" street network that balances the mobility needs of pedestrians, bicyclists, transit users, and vehicles (City of Carlsbad 2015a).

a) ***Less than Significant Impact.*** Park Drive is a neighborhood connector street, per the City of Carlsbad's General Plan Mobility Element (City of Carlsbad 2015a), that runs parallel to the Agua Hedionda Lagoon in the City. Park Drive provides one lane of travel in each direction, and parking, bike lanes, and sidewalks within the 60-foot-wide ROW. Park Drive is the only connector road to Bayshore Drive, which has the only public boat launch for kayaks and other non-motorized vessels on Agua Hedionda Lagoon. Bayshore Drive also provides beach access for fishing and other shoreline recreation. Currently, the hillside along the northeast side of Park Drive between Cove Drive and Bayshore Drive experiences significant erosion and drainage issues that affect the function of the roadway and sidewalk, and the safety of pedestrians, cyclists, and drivers, particularly during and after rain events. Road widening in the late 1980s cut the toe of the slope along the northeast side of the road, after which the slope began to show erosion issues, in turn prompting construction of the retaining wall several years later. Over the years, the deposition of sediment along the sidewalk and roadway has created a safety hazard, restricted public access to local public beach areas, and created a maintenance burden for the City. To address these issues, the Project proposes replacement of the existing, failing retaining wall, and slope stabilization. The Project would not involve new development

or population growth that could increase the level of service of existing roadways in the area or require additional transportation facilities. Although Project construction could result in the temporary closure of a small portion of Park Drive's northbound lane adjacent to the Project boundary, vehicle access to Bayshore Drive and Marina Drive would not be restricted. Implementation of the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system within the City, and impacts would be less than significant.

b) ***Less than Significant Impact.*** The Project does not propose alteration of existing roads or construction of new roads or transportation facilities. Replacement of the existing retaining wall and associated improvements would not result in design hazards, such as sharp curves or dangerous intersections, to existing roadways. Construction of the Project would take place within the City's ROW and utility and open space easements. The northbound lane of Park Drive between Bayshore Drive and Marina Drive may be temporarily blocked off during portions of construction to accommodate large construction equipment; however, the southbound lane would still be accessible, and surrounding residents would still be able to access and exit their homes via Park Drive (south of Bayshore or north of Marina Drive). Temporary roadway closure along the northbound portion of Park Drive adjacent to the Project site would be controlled by construction workers, as necessary, to reduce any potential impacts as a result of the modified roadway during Project construction. Once construction is complete, all equipment would be removed from the Project site, and any temporary roadway closures would be lifted. Therefore, implementation of the Project would not result in a substantial increase in hazards due to design features or incompatible uses, and impacts would be less than significant.

c) ***Less than Significant Impact.*** Implementation of the proposed Project would not result in new development or population growth that could increase the demand for emergency services and/or affect emergency access. Construction of the Project would take place within the City's ROW and utility and open space easements. As previously described, the northbound lane of Park Drive between Bayshore Drive and Marina Drive may be temporarily blocked off during portions of construction; however, the southbound lane would still be accessible, and surrounding residents would still be able to access and exit their homes. Project construction would be temporary and is not expected to interfere with emergency access for surrounding residences. Therefore, impacts would be less than significant.

XVIII. Tribal Cultural Resources

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:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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	☐	☒	☐	☐

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:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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.	☐	☐	☒	☐

a) ***Less than Significant with Mitigation Incorporated:*** As described above and in Appendix C-1, a records search of the Project site was performed at the SCIC on May 9, 2016. Historic maps and aerial photographs were investigated and the following inventories were examined: National Register of Historic Places, California Register of Historical Resources, California Historical Landmarks, California Historic Properties Directory, and the California Points of Historical Interest. Based on the literature search and field survey, no significant cultural resources were observed within the Project area. As previously analyzed under Section V, Cultural Resources, one previously recorded cultural resources site, CA-SDI-10024, is located outside the Project site approximately 100 meters to the northeast at the top of the slope. This site contained human remains, pottery, shell, hearth features, and groundstone, and had been disturbed upon initial recording due to agricultural work from the late 1930s through the 1980s. This site is now occupied by a single-family residential subdivision. Based on the disturbed landform context, steep slope, and field survey observations on site, there is a low potential for the presence of buried deposits. However, given the proximity of a significant archaeological site with burials and habitation artifacts, and the physical location of the Project site adjacent to the Agua Hedionda Lagoon, archaeological monitoring is recommended (Appendix C-1). Although no tribal cultural resources were identified on site through record searches or field survey, implementation of **MM-CR-1** and **MM-CR-2** would reduce the potential of impacts to tribal cultural resources as a result of Project construction (refer to Section V Cultural Resources and Section XXII List of Mitigation Measures). Therefore, impacts would be less than significant with mitigation incorporated.

b) ***Less than Significant Impact:*** The Project is subject to compliance with AB 52 (California Public Resources Code, Section 21074), which requires consideration of impacts to tribal cultural resources as part of the CEQA process. AB 52 requires the City, as the lead agency responsible for CEQA compliance for the Project, to notify any groups who have requested notification or who are traditionally or culturally affiliated with the geographic area of the Project. Because AB 52 is a government-to-government process, all records of correspondence related to AB 52 notification and any subsequent consultation are on file with the City. In accordance with AB 52, on November 12, 2020, the City's Planning Division notified the San Luis Rey Band of Mission Indians, the Torres Martinez Desert Cahuilla Indians, the Mesa Grande Band of Mission Indians, and the Rincon Band of Luiseño Indians, which are traditionally and culturally affiliated California Native American tribes that have requested notice of proposed projects. To date, one response to the City's notice has been received, from the Rincon Band of Luiseño Indians. On December 17, 2020, Cheryl Madrigal, the Tribal Historic Preservation Officer and Cultural Resources Manager for the Rincon Band of Luiseño Indians,

responded to the City's AB 52 consultation notice stating that the Rincon Band has concerns that the Project has the potential to impact tangible tribal cultural resources, traditional cultural landscapes, and potential traditional cultural properties within the Rincon Band's Area of Historic Interest. The Rincon Band requested further information on the Project, to review proposed mitigation, and consultation with the City on the Project. Two phone consultation meetings were held between the City and Cheryl Madrigal of The Rincon Band to discuss the project and proposed mitigation measures. With the addition of MM-TCR-1, Rincon confirmed conclusion of consultation in a letter dated March 3, 2021.

Implementation of **MM-TCR-1** requires the project developer to enter into a Pre-Excavation Agreement, also known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement, with a consulting Traditionally and Culturally Affiliated Luiseño tribe. Implementation of MM-TCR-1 outlined below and in Section XXII of this MND would ensure potential impacts to tribal cultural resources would be less than significant.

Based on tribal consultation and the City's analysis of substantial evidence pursuant to California Register of Historical Resources criteria while considering potential significance to the tribe, the City will determine if there are any tribal cultural resources present within the Project site or area that may be substantially impacted by the Project. This determination will be concluded as part of the Final MND analysis.

Although no tribal cultural resources have been identified within the Project site, the presence of significant subsurface tribal cultural resources is a possibility in areas where only surface inspection has taken place. Implementation of **MM-TCR-1**, as well as **MM-CUL-1** and **MM-CUL-2** outlined in Section V, Cultural Resources, and Section XXII, List of Mitigation Measures, would ensure impacts to tribal cultural resources would be reduced to less than significant.

Mitigation Measures

MM-TCR-1 Prior to the commencement of any ground-disturbing activities, including but not limited to exploratory geotechnical investigations/borings for contractor bidding purposes, the project developer shall enter into a Pre-Excavation Agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement, with a consulting Traditionally and Culturally Affiliated Luiseño tribe ("TCA Tribe"). This agreement will contain provisions to address the proper treatment of any tribal cultural resources and/or Luiseño Native American human remains inadvertently discovered during the course of the project. The agreement shall outline the roles and powers of the Luiseño Native American monitors and the archaeologist, and may include the following provisions. A copy of said archaeological contract and Pre-Excavation Agreement shall be provided to the City of Carlsbad prior to the issuance of a grading permit.

a. A Luiseño Native American monitor, associated with a TCA Tribe, shall be present during all ground disturbing activities. Ground disturbing activities may include, but are not be limited to, archaeological studies, geotechnical investigations, clearing, grubbing, trenching, excavation, preparation for utilities and other infrastructure, and grading activities.

b. Any and all uncovered artifacts of Luiseño Native American cultural importance shall be treated with dignity and respect in accordance with the TCA Tribe's

cultural and spiritual traditions and reburied on-site within an appropriate location protected by open space or easement, etc., where the cultural items will not be disturbed in the future, or shall be returned to the Most Likely Descendant, whichever is most applicable, and shall not be curated, unless ordered to do so by a federal agency or a court of competent jurisdiction.

c. The tribal representative shall be present at the project's preconstruction meeting to consult with grading and excavation contractors concerning excavation schedules and safety issues, as well as to consult with the archaeologist concerning the proposed archaeologist techniques and/or strategies for the project.

d. Luiseño Native American monitors and archaeological monitors shall have joint authority to temporarily divert and/or halt construction activities. If tribal cultural resources are discovered during construction, all earth-moving activity within and around the immediate discovery area must be diverted until the Luiseño Native American monitor and the archaeologist can assess the nature and significance of the find.

e. If a significant tribal cultural resource(s) and/or unique archaeological resource(s) are discovered during ground-disturbing activities for this project, consulting TCA Tribes shall be notified and consulted regarding the respectful and dignified treatment of those resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance is the preferred method of preservation for archaeological and tribal cultural resources. If, however, the Applicant is able to demonstrate that avoidance of a significant and/or unique cultural resource is infeasible and a data recovery plan, or other culturally-appropriate mitigation measure, is authorized by the City of Carlsbad as the lead agency, and the TCA Tribes that consulted with the City for this project shall be consulted regarding the drafting and finalization of any such recovery plan.

f. When tribal cultural resources are discovered during the project, if the archaeologist collects such resources, a Luiseño Native American monitor must be present. If the archaeologist does not collect the tribal cultural resources that are unearthed during the ground disturbing activities, the Luiseño Native American monitor shall follow the procedures in MM-TCR-1(b).

g. If suspected Native American human remains are encountered, California Health and Safety Code Section 7050.5(b) states that no further disturbance shall occur until the San Diego County Medical Examiner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. Suspected Native American remains shall be examined in the field and kept in a secure location at the site. A Luiseño Native American monitor shall be present during the examination of the remains. If the San Diego County Medical Examiner determines the remains to be Native American, the Native American Heritage Commission (NAHC) must be contacted by the Medical Examiner within 24 hours. The NAHC must then immediately notify the "Most Likely Descendant" about the

discovery. The Most Likely Descendant shall then make recommendations within 48 hours, and engage in consultation concerning treatment of remains as provided in Public Resources Code 5097.98.

h. In the event that fill material is imported into the project area, the fill shall be clean of tribal cultural resources and documented as such. Commercial sources of fill material are already permitted as appropriate and will be culturally sterile. If fill material is to be utilized and/or exported from areas within the project site, then that fill material shall have been monitored and confirmed by an archaeologist and Luiseño Native American monitor that such fill material does not contain tribal cultural resources.

i. No testing, invasive or non-invasive, shall be permitted on any recovered tribal cultural resources without the written permission of the consulting tribes.

j. Prior to the approval of final inspection, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusions of the monitoring program shall be submitted by the archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Carlsbad for approval. Confidential information (e.g. location information of cultural resources) will not be available for general public distribution. Upon request, a copy of the final monitoring report shall be provided to each consulting tribe by the City's Planning Division.

XIX. Utilities and Service Systems

XIX. UTILITIES AND SERVICE SYSTEMS **Would the project:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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 would cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
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?	☐	☐	☒	☐

XIX. UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

a) ***Less than Significant Impact.*** The Project proposes the replacement of an existing retaining wall and associated slope stability improvements. No habitable structures or growth-inducing facilities are proposed that would result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. As such, impacts would be less than significant.

b) ***Less than Significant Impact.*** Minimal water use would be required during Project construction for dust control and landscaping establishment. Water required for construction activities would be hauled in by a water truck. Once construction is complete, operation of the Project site is not expected to require water usage. The minimal water use during construction would not generate a significant increase in demand for water that would require new or expanded entitlement. Therefore, impacts would be less than significant.

c) ***No Impact.*** As previously described, the Project proposes the replacement of an existing retaining wall and associated slope stability improvements. No habitable structures or facilities are proposed on site that would require wastewater service. Therefore, implementation of the Project would not exceed wastewater treatment facility capacity, and no impact would occur.

d) ***Less than Significant Impact.*** Solid waste associated with implementation of the Project would be generated by construction activities. Waste during construction would primarily consist of grading materials and demolition debris from the existing retaining wall and the sidewalk in front of the wall, which would be approximately 5,000 square feet of wall and sidewalk demolition. The total amount of waste generated by Project construction is estimated to be approximately 8,000 cubic yards. Demolished materials would be disposed of at Miramar Landfill. Considering the size of the disturbed area and construction being temporary, the amount of waste generated from construction is anticipated to be minimal. The Project would be required to comply with all applicable federal, state, and local regulations related to solid waste. Once construction is complete, no solid waste would be generated from the Project site. Because construction of the Project is not expected to 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, impacts would be less than significant.

e) ***Less than Significant Impact.*** As stated above, the Project would be required to comply with all applicable federal, state, and local statutes and regulations related to solid waste disposal during construction. Once operational, the Project would generate no solid waste. Therefore, impacts would be less than significant.

XX. Wildfire

XX. WILDFIRE If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

CAL FIRE has mapped fire threat potential throughout California and ranked fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings are little or no fire threat, moderate, high, and very high fire threat. As shown in Figure 3.6-4, Structure Fire/Wildfire Threat, in Chapter 3.6 of the City's General Plan EIR, the Project site is in a designated "Urban" zone and does not identify with a CAL FIRE fire threat ranking (City of Carlsbad 2014d).

a) ***Less than Significant Impact.*** The City's EOP defines the scope of the City's emergency preparedness and incident response activities. The EOP establishes emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of planning efforts of the various emergency staff and service elements using the Standardized Emergency Management System published by the California Office of Emergency Services, and the National Incident Management System published by the Federal Emergency Management Agency. The EOP identifies the City's EOC as the location from which centralized emergency management would be performed during a major emergency or disaster, including receiving and disseminating information, maintaining contact with other EOCs, and providing instructions to the public (City of Carlsbad 2014d). Implementation of the Project would not result in new development or population growth that could increase the demand for emergency services or affect implementation of adopted emergency response or evacuation plans. Construction of the Project would take place within the City's ROW and utility and open space easements. The northbound lane of Park Drive between Bayshore Drive and Marina Drive may be temporarily blocked off during portions of construction; however, the southbound lane would still be accessible, and surrounding residents would still be able to access and exit their homes. Potential detours along Park Drive as a result of Project construction would not interfere with an adopted emergency response or evacuation plan. Considering the location, purpose, and short-term

construction duration, implementation of the Project would not impair or interfere with an adopted emergency response plan or evacuation plan, and impacts would be less than significant.

b) ***Less than Significant Impact.*** The Project site is not located in a classified "high" or "very high fire hazard" severity zone. Proposed improvements on site are not expected to exacerbate wildfire risk, and no habitable structures are proposed on site that would be at risk. As such, impacts would be less than significant.

c) ***No Impact.*** Implementation of the Project would not require 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. Therefore, no impact would occur.

d) ***Less than Significant Impact.*** The Project proposes replacement of a failing retaining wall and associated slope stabilization improvements that would reduce the potential for post-fire-related impacts to residences located downslope of the Project site. No habitable structures are proposed on site that would be at risk of post-wildfire impacts. Considering the purpose of the Project, impacts would be less than significant.

XXI. Mandatory Findings of Significance

XXI. MANDATORY FINDINGS OF SIGNIFICANCE **Would the project:**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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 the substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) ***Less than Significant with Mitigation Incorporated.*** Implementation of the Project would not 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. However, as analyzed in Section IV, Biological Resources, the 5.32-acre Project site contains 3.76 acres of coastal sage scrub (including disturbed), 0.33 acres of which would be permanently impacted as a result of Project construction. Direct impacts result from the direct removal or conversion of an area's biological resources (e.g., through slope grading and other ground-disturbing activities). Although the graded slope would be revegetated with coastal sage scrub species once the Project is completed, due to the length of the construction period, the revegetation would not occur for at least 12 months. Additionally, the proposed slope would be a manufactured slope; therefore, this impact would be permanent.

Special-status plant species recorded in the Project vicinity were evaluated for their potential to occur on site (Appendix B). A total of 82 species of native or naturalized plants, 44 native (54%) and 38 non-native (46%), was recorded on the Project site during the rare plant survey. One special-status plant species was observed during the 2019 focused rare plant surveys: California adolphia. Fourteen individual California adolphia plants were observed toward the southwestern portion of the Project site in the coastal sage scrub habitat. Approximately nine individuals would be impacted as a result of Project construction. Although the area of impact would be revegetated once the Project is complete, the slope would be graded and would therefore be considered a permanent impact. Permanent impacts to California adolphia would be a significant impact, absent mitigation. **MM-BIO-1** would reduce impacts to California adolphia to less than significant. MM-BIO-1 requires transplanting of California adolphia to the coastal sage scrub creation site.

Special-status wildlife species recorded in the vicinity were evaluated for their potential to occur on site (Appendix B). One special-status wildlife species, coastal California gnatcatcher, was observed by LSA personnel during their focused surveys in 2016 (LSA 2018). Additional species that were not observed but have a moderate or high potential to occur on the Project site include Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), southern California legless lizard (*Anniella stebbinsi*), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), western yellow bat (*Lasiurus xanthinus*), and San Diego desert woodrat (*Neotoma lepida intermedia*). Approximately 0.28 acres of the 0.33 acres of impacted coastal sage scrub can support all of the aforementioned sensitive wildlife species (with the exception of the western yellow bat). Although the coastal sage scrub would be revegetated once the Project is complete, the slope would be graded and would therefore be considered a permanent impact (manufactured slope). Permanent impacts to 0.28 acres of suitable habitat would be a significant impact, absent mitigation. The City's Guidelines for Biological Studies (City of Carlsbad 2008) require mitigation at a 2:1 ratio for suitable coastal sage scrub. Implementation of **MM-BIO-1, MM-BIO-2**, **MM-BIO-3,** and **MM-BIO-4** would reduce impacts to less than significant (refer to Section XXII. List of Mitigation Measures).

b) ***Less than Significant Impact.*** Cumulative impacts are defined as two or more individual project effects that, when considered together, combine to result in a significant impact. Implementation of the Project would result in potentially significant impacts to biological resources, cultural resources, paleontological resources, and noise. Identified significant impacts are construction-specific and the Project would not result in any permanent, operational impacts. Identified Project impacts are not cumulatively considerable because they are all site-specific. All proposed mitigation for biological resources, cultural resources, paleontological resources, and noise would reduce impacts to less than significant. Other cumulative projects in the area would be required to identify site-specific impacts and mitigation measures, and would be required to adhere to applicable regulations. Considering the

nature of the Project, which would have no permanent or growth-inducing impacts, cumulatively considerable impacts as a result of the Project would be less than significant.

c) ***Less than Significant Impact.*** Implementation of the Project would not involve environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. Adherence to all applicable regulatory codes, ordinances, standards, and guidelines previously identified throughout this MND would ensure that construction of the Project would not result in any substantial adverse impacts on humans. Therefore, impacts would be less than significant.

XXII. List of Mitigation Measures

Biological Resources

MM-BIO-1 **Habitat Mitigation:** Impacts to 0.33 acres of coastal sage scrub requires mitigation at a 2:1 ratio, totaling 0.66 acres of coastal sage scrub. This habitat mitigation shall be achieved by conserving 0.66 acres of suitable habitat in an off-site mitigation area within the Coastal Zone (see Table 8, Impact and Mitigation Summary). The habitat mitigation shall include the transplanting of California Adolphia (*Adolphia californica*) to the off-site creation site.

The applicant shall prepare a conceptual mitigation plan and submit it to the City of Carlsbad and/or Agencies for review. The final plan shall be submitted at least 30 days prior to initiating Project impacts. The mitigation shall be prepared and implemented consistent with Volume II, Appendix C (Revegetation Guidelines), and Vol. III of the North County Multiple Habitat Conservation Program; pages F-8 to F-11 of the City of Carlsbad Habitat Management Plan; and Section 3.1.5 of the City of Carlsbad Open Space and Conservation Resource Management Plan. The mitigation plan shall, at a minimum, include an evaluation of restoration suitability specific to proposed habitat types, a description of soil and plant material salvage/translocation, planting and seeding lists, discussion of irrigation, discussion of a maintenance and monitoring program, and discussion of success criteria. All areas shall be monitored for a minimum of 5 years to ensure establishment of intended plant communities.

Any invasive removal associated with the coastal sage scrub creation site shall be completed using hand equipment, and removal shall be completed outside of the nesting bird season (February 15 through September 15). If invasive removal cannot be completed outside of the nesting bird season, pre-work surveys shall be conducted per the nesting bird survey mitigation measure (MM-BIO-4).

Table 8. Impact and Mitigation Summary

Vegetation Community or Land Cover	Existing Acreage	Permanent Impacts	Required Mitigation Ratio[1]	Required Mitigation Acreage
Native Vegetation Communities				
Occupied Coastal Sage Scrub	3.71	0.28	2:1	0.56

Table 8. Impact and Mitigation Summary

Vegetation Community or Land Cover	Existing Acreage	Permanent Impacts	Required Mitigation Ratio[1]	Required Mitigation Acreage
Disturbed Coastal Sage Scrub	0.05	0.05	2:1	0.10
Subtotal	*3.76*	*0.33*	—	*0.66*
Land Covers				
Disturbed Habitat	0.22	0.15	—	—
Ornamental	1.04	0.13	—	—
Developed	0.30	0.10	—	—
Subtotal	*1.56*	*0.38*	—	—
Total	**5.32**	**0.71**	—	**0.66**

[1] Per Table 6 in the Carlsbad HMP (City of Carlsbad 2004).
Note: This is a repeat of Table 4, above.

MM-BIO-2 **Revegetation:** The graded slope shall be revegetated with coastal sage scrub species once construction of the wall and slope are completed. Soil shall be revegetated with native plant species found within adjacent habitats. Locally available seed and/or container plants shall be used.

MM-BIO-3 **Avoid Coastal California Gnatcatcher Nesting Season**: Coastal sage scrub habitat shall not be cleared from March 1 through August 15, per the conditions of coverage for coastal California gnatcatcher (*Polioptila californica californica*).

MM-BIO-4 **Nesting Bird Survey**: For clearing of any other vegetation February 1 through September 15, and clearing of occupied coastal sage scrub February 1 through February 28 and August 16 through September 15, a nesting bird survey shall be conducted within the proposed impact area and a 500-foot buffer within 72 hours prior to construction. This survey is necessary to ensure avoidance of impacts to nesting raptors (e.g., red-tailed hawk [*Buteo jamaicensis*]) and/or birds protected by the federal Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3513. If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum of a 300-foot buffer and up to a maximum of 500 feet for raptors or listed species, and shall be avoided until the nesting cycle is complete. If construction activities—particularly clearing/grubbing, grading, and other intensive activities—stop for more than 3 days, an additional nesting bird survey shall be conducted within the proposed impact area and a 500-foot buffer before such activities can recommence.

MM-BIO-5 **Temporary Installation of Fencing**: To prevent inadvertent disturbance to areas outside the limits of grading, the contractor shall install temporary fencing along the entire limits of grading prior to any vegetation clearing.

MM-BIO-6 **Construction Monitoring and Reporting:** To prevent inadvertent disturbance to areas outside the limits of grading, all grading of native habitat shall be monitored by a biologist. The biological monitor shall be contracted to perform biological monitoring during all clearing and grubbing activities. The Project biologist shall perform the following duties:

1. Attend the pre-construction meeting with the contractor and other key construction personnel prior to clearing and grubbing to reduce conflict between the timing and location of construction activities with other mitigation requirements (e.g., seasonal surveys for nesting birds).
2. Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas and of minimizing harm to or harassment of wildlife prior to clearing and grubbing.
3. Review and/or designate the construction area in the field with the contractor in accordance with the final grading plan prior to clearing and grubbing.
4. Supervise and monitor vegetation clearing and grubbing weekly to ensure against direct and indirect impacts to biological resources that are intended to be protected and preserved, and to document that protective fencing is intact.
5. Flush special-status species (i.e., avian and other mobile species) from occupied habitat areas immediately prior to brush-clearing activities.
6. Periodically monitor the construction site to verify the Project is implementing the following Stormwater Pollution Prevention Plan best management practices:
    i. dust-control
    ii. silt fencing (if required)
    iii. removal of construction debris and maintenance of a clean work area
    iv. covered trash receptacles that are animal- and weather-proof
    v. prohibition of pets on the construction site
    vi. a speed limit of 15 miles per hour
7. Keep monitoring notes for the duration of the Project for submittal in a final report to substantiate the biological supervision of the vegetation clearing and grading activities and the protection of biological resources.
8. Prepare a monitoring report after completion of construction activities that describes the biological monitoring activities, including a monitoring log; photos of the site before, during, and after the grading and clearing activities; and a list of special-status species observed.

Cultural Resources

MM-CUL-1 During construction, a qualified archaeologist and tribal monitor shall be present for all ground-disturbing activities (e.g., vegetation removal, grading). If archaeological material is identified during ground-disturbing activities, work in that location shall be diverted and a qualified archaeologist, in consultation with the tribal monitor, shall evaluate the nature and significance of the find. The qualified archaeologist shall ensure that treatment of any cultural resources discovered during site grading complies with the City of Carlsbad's Cultural Resource Guidelines.

MM-CUL-2 If human remains are encountered at any time during construction or routine maintenance in the Project area, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the San Diego County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98, so the County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a most likely descendant (MLD). The MLD may inspect the site of discovery, and shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Paleontological Resources

MM-PR-1 If excavation activities will occur in deposits of the Santiago Formation, the applicant shall retain a qualified paleontologist to prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed Project. The PRIMP should be consistent with the guidelines of the Society of Vertebrate Paleontology and include the following:

1. The paleontologist, or his/her representative, shall attend a preconstruction meeting.
2. Excavation and grading activities in deposits with high paleontological sensitivity (Santiago Formation) shall be monitored by a paleontologist monitor following a PRIMP.
3. If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction away from the area of the find to assess its significance.
4. Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a scientific institution.
5. At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program.
6. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected and a paleontologist shall be contacted to assess the find for significance. If determined to be significant, the fossil shall be collected from the field.

Noise

MM-NOI-1 The City of Carlsbad or its contractor(s) shall install a temporary noise barrier to reduce construction noise exposure associated with Project construction activities at the following representative noise-sensitive receptor locations or areas:

- Along the western property line of noise-sensitive receptor R5, with a minimum top height above grade of 16 feet, prior to commencement of all phases for Zone A.
- Along the southern edge of Park Drive between Marina Drive and Bayshore Drive, with a minimum top height above grade of 16 feet, during pile-driving for the retaining wall construction activity for Zone A.

- Along the western edge of Park Drive between 4677 Park Drive and 4701 Park Drive, with a minimum top height above grade of 24 feet, during pile-driving for the retaining wall construction activity for Zone B.

- Along the western edge of Park Drive between 4645 Park Drive and 4683 Park Drive, with a minimum top height above grade of 24 feet, during pile-driving for the retaining wall construction activity for Zone C.

- Along the eastern property line of noise-sensitive receptor R1, with a minimum top height above grade of 8 feet, during pile-driving for retaining wall construction activity for Zone C.

The temporary barrier shall be comparable to an outdoor-grade acoustical blanket having a sound transmission class (STC) rating of at least 25, which would be consistent with City of Carlsbad Noise Guidelines Manual (City of Carlsbad 2013) and California Department of Transportation guidance (Caltrans 2013), to exhibit adequate performance (i.e., at least 10 dB transmission loss greater than the up to 14 dB of needed barrier noise reduction effect). Because it is the sound blanket that delivers this sufficient STC rating, temporary barrier alternatives to a recommended "k-rail" mounting method as means of installation or support would be acceptable as long as the assembled blankets present a "solid" wall with minimized gaps or cracks between adjoining segments and where the blankets are near the ground surface.

Tribal Cultural Resources

MM-TCR-1 Prior to the commencement of any ground-disturbing activities, including but not limited to exploratory geotechnical investigations/borings for contractor bidding purposes, the project developer shall enter into a Pre-Excavation Agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement, with a consulting Traditionally and Culturally Affiliated Luiseño tribe ("TCA Tribe"). This agreement will contain provisions to address the proper treatment of any tribal cultural resources and/or Luiseño Native American human remains inadvertently discovered during the course of the project. The agreement shall outline the roles and powers of the Luiseño Native American monitors and the archaeologist, and may include the following provisions. A copy of said archaeological contract and Pre-Excavation Agreement shall be provided to the City of Carlsbad prior to the issuance of a grading permit.

a. A Luiseño Native American monitor, associated with a TCA Tribe, shall be present during all ground disturbing activities. Ground disturbing activities may include, but are not be limited to, archaeological studies, geotechnical investigations, clearing, grubbing, trenching, excavation, preparation for utilities and other infrastructure, and grading activities.

b. Any and all uncovered artifacts of Luiseño Native American cultural importance shall be treated with dignity and respect in accordance with the TCA Tribe's cultural and spiritual traditions and reburied on-site within an appropriate location protected by open space or easement, etc., where the cultural items will not be disturbed in the future, or shall be returned to the Most Likely Descendant, whichever is most

applicable, and shall not be curated, unless ordered to do so by a federal agency or a court of competent jurisdiction.

c. The tribal representative shall be present at the project's preconstruction meeting to consult with grading and excavation contractors concerning excavation schedules and safety issues, as well as to consult with the archaeologist concerning the proposed archaeologist techniques and/or strategies for the project.

d. Luiseño Native American monitors and archaeological monitors shall have joint authority to temporarily divert and/or halt construction activities. If tribal cultural resources are discovered during construction, all earth-moving activity within and around the immediate discovery area must be diverted until the Luiseño Native American monitor and the archaeologist can assess the nature and significance of the find.

e. If a significant tribal cultural resource(s) and/or unique archaeological resource(s) are discovered during ground-disturbing activities for this project, consulting TCA Tribes shall be notified and consulted regarding the respectful and dignified treatment of those resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance is the preferred method of preservation for archaeological and tribal cultural resources. If, however, the Applicant is able to demonstrate that avoidance of a significant and/or unique cultural resource is infeasible and a data recovery plan, or other culturally-appropriate mitigation measure, is authorized by the City of Carlsbad as the lead agency, and the TCA Tribes that consulted with the City for this project shall be consulted regarding the drafting and finalization of any such recovery plan.

f. When tribal cultural resources are discovered during the project, if the archaeologist collects such resources, a Luiseño Native American monitor must be present. If the archaeologist does not collect the tribal cultural resources that are unearthed during the ground disturbing activities, the Luiseño Native American monitor shall follow the procedures in MM-TCR-1(b).

g. If suspected Native American human remains are encountered, California Health and Safety Code Section 7050.5(b) states that no further disturbance shall occur until the San Diego County Medical Examiner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. Suspected Native American remains shall be examined in the field and kept in a secure location at the site. A Luiseño Native American monitor shall be present during the examination of the remains. If the San Diego County Medical Examiner determines the remains to be Native American, the Native American Heritage Commission (NAHC) must be contacted by the Medical Examiner within 24 hours. The NAHC must then immediately notify the "Most Likely Descendant" about the discovery. The Most Likely Descendant shall then make recommendations within 48 hours, and engage in consultation concerning treatment of remains as provided in Public Resources Code 5097.98.

h. In the event that fill material is imported into the project area, the fill shall be clean of tribal cultural resources and documented as such. Commercial sources of fill material are already permitted as appropriate and will be culturally sterile. If fill material is to be

utilized and/or exported from areas within the project site, then that fill material shall have been monitored and confirmed by an archaeologist and Luiseño Native American monitor that such fill material does not contain tribal cultural resources.

i. No testing, invasive or non-invasive, shall be permitted on any recovered tribal cultural resources without the written permission of the consulting tribes.

j. Prior to the approval of final inspection, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis and conclusions of the monitoring program shall be submitted by the archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Carlsbad for approval. Confidential information (e.g. location information of cultural resources) will not be available for general public distribution. Upon request, a copy of the final monitoring report shall be provided to each consulting tribe by the City's Planning Division.

EARLIER ANALYSES

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration (Section 15063[c][3][D]). In such cases, a discussion should identify the following on attached sheets:

a) Earlier analyses used. Identify earlier analyses and state where they are available for review.
b) Impacts adequately addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
c) Mitigation measures. For effects that are "Less Than Significant with Mitigation Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

EARLIER ANALYSIS USED AND SUPPORTING INFORMATION SOURCES

The following documents were used in the analysis of this Project and are on file at the City of Carlsbad Planning Division located at 1635 Faraday Avenue, Carlsbad, California 92008.

1. Final Environmental Impact Report for the City of Carlsbad General Plan and Climate Action Plan (SCH #2011011004), June 2015.
2. Carlsbad Climate Action Plan, September 2015, Revised May 2020.
3. Carlsbad Tribal, Cultural, and Paleontological Resources Guidelines, September 2017.
4. City of Carlsbad Guidance to Demonstrating Consistency with the Climate Action Plan, Form P-31, April 2019.
5. Carlsbad General Plan, September 2015.
6. City of Carlsbad Municipal Code, Title 21 Zoning.
7. City of Carlsbad Transportation Demand Management Handbook, August 2018.
8. City of Carlsbad Transportation Impact Analysis Guidelines, April 2018.
9. Habitat Management Plan for Natural Communities in the City of Carlsbad (HMP), November 2004.
10. San Diego Regional Airport Authority/San Diego County Airport Land Use Commission, McClellan-Palomar Airport Land Use Compatibility Plan, January 2018.

INTENTIONALLY LEFT BLANK

References

ACOE (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetlands Delineation Manual*. TR-Y-87-1. Vicksburg, Mississippi: U.S. Army Corps of Engineers Environmental Laboratory. January 1987.

ACOE. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0).* Environmental Laboratory, ERDC/EL TR-08-28. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center. September 2008. Accessed September 24, 2012. http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/trel08-28.pdf.

Caltrans (California Department of Transportation). 2013. *Transportation and Construction Vibration Guidance Manual*. September.

Caltrans. 2015. "Scenic Highways – California Scenic Highway Program." December 29, 2015. Accessed May 15, 2020. https://databasin.org/maps/a2ab217801d149b48bfb69cde9fd8101.

CARB (California Air Resources Board). 2020. "iADAM: Air Quality Data Statistics." https://www.arb.ca.gov/adam/topfour/topfourdisplay.php.

CDFW (California Department of Fish and Wildlife). 2019. California Natural Diversity Database (CNDDB) RareFind Version 5.2.14 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Accessed February 13, 2019. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

City of Carlsbad. 2004. *Habitat Management Plan for Natural Communities in the City of Carlsbad*. Approved in December 1999, finalized in November 2004. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=27193.

City of Carlsbad. 2008. *Guidelines for Biological Studies*. Prepared by Technology Associates. San Diego, California: Technology Associates. September 30, 2008. http://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=24331.

City of Carlsbad. 2013. *City of Carlsbad Noise Guidelines Manual*.

City of Carlsbad. 2014a. *Draft Program Environmental Impact Report for the Carlsbad General Plan Update, Chapter 3.1, Aesthetics.* March 2014. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=23265.

City of Carlsbad. 2014b. *Draft Program Environmental Impact Report for the Carlsbad General Plan Update. Chapter 3.14, Agricultural Resources.* March 2014. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=23263.

City of Carlsbad. 2014c. *Draft Program Environmental Impact Report for the Carlsbad General Plan Update, Chapter 3.5 Geology, Soils and Seismicity*. March 2014. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=23269.

City of Carlsbad. 2014d. *Draft Program Environmental Impact Report for the Carlsbad General Plan Update, Chapter 3.6, Hazardous Materials, Airport Safety, and Wildfires.* March 2014. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=23270.

City of Carlsbad. 2014e. *Draft Program Environmental Impact Report for the Carlsbad General Plan Update, Chapter 3.8, Hydrology and Flooding/Water Quality*. March 2014. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=23272.

City of Carlsbad. 2014f. *Draft Program Environmental Impact Report for the Carlsbad General Plan Update, Chapter 3.15, Impacts Not Potentially Significant*. March 2014. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=23264.

City of Carlsbad. 2015a. *City of Carlsbad General Plan, Chapter 3, Mobility Element*. September 22, 2015. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=24065.

City of Carlsbad. 2015b. *City of Carlsbad General Plan, Chapter 4, Open Space, Conservation, and Recreation Element*. September 22, 2015. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=24095.

City of Carlsbad. 2015c. *City of Carlsbad Climate Action Plan (CAP)*. September 22, 2015. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=29361.

City of Carlsbad. 2015d. *City of Carlsbad General Plan, Chapter 5, Noise Element*. September 22, 2015. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=24093.

City of Carlsbad. 2016. *City of Carlsbad BMP Design Manual*. Effective February 16, 2016. https://cityadmin.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=30142.

City of Carlsbad. 2019a. *Local Coastal Program 2019*. October 16, 2019. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=24088.

City of Carlsbad. 2019b. "City of Carlsbad Zoning Map." Updated April 2019. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=24153.

City of Carlsbad. 2020. *Climate Action Plan*. Revised May 2020. https://www.carlsbadca.gov/civicax/filebank/blobdload.aspx?BlobID=45385.

CNPS (California Native Plant Society). 2019. *Inventory of Rare and Endangered Plants* (online edition, version 8-03 0.39). Sacramento, California: California Native Plant Society. Accessed April 2019. www.rareplants.cnps.org.

County of San Diego. 2009. *County of San Diego Guidelines for Determining Significance: Paleontological Resources*.

DOC (California Department of Conservation). 2016. San Diego County Important Farmland 2016 Sheet 1 of 2. California Department of Conservation, Division of Land Resource Protection. Farmland Mapping and Monitoring Program. Accessed May 15, 2020.

DOC. 2019. California Department of Conservation California Earthquake Hazards Zone Application (EQ Zapp). Updated April 4, 2019. https://maps.conservation.ca.gov/cgs/EQZApp/app/.

Dudek. 2019. "Revised Alternatives Analysis Memorandum for Park Drive Slope and Drainage Improvement Project." Memo from Dudek to the City of Carlsbad. December 19, 2019.

FHWA (Federal Highway Administration). 2006. *FHWA Roadway Construction Noise Model: User's Guide*. Final Report. FHWA-HEP-06-015. DOT-VNTSC-FHWA-06-02. Cambridge, Massachusetts: DOT, Research and Innovative Technology Administration. Final Report. August 2006.

FTA (Federal Transit Administration). 2018. *Transit Noise and Vibration Impact Assessment*. 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.

LSA (LSA Associates Inc.). 2018. *Biological Resources Technical Report, Park Drive Slope and Drainage Improvement Project, City of Carlsbad, San Diego County, California*. Prepared for the City of Carlsbad. July 2018.

NETR (Nationwide Environmental Title Research LLC). 2019. Historic Aerials. (v. 0.4.8). Accessed March 2019. https://www.historicaerials.com/viewer.

OEHHA (Office of Environmental Health Hazard Assessment). 2015. *Air Toxics Hot Spots Program, Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments*. Accessed September 2018. https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

OHP (Office of Historic Preservation). 1995. *Instructions for Recording Historical Resources*. March 1995. https://scic.sdsu.edu/_resources/docs/manual95.pdf.

SDAPCD (San Diego Air Pollution Control District). 2018. "Attainment Status." https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/attainment-status.html.

SWRCB (State Water Resources Control Board). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. March 22, 2019. https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/wrapp/df_procedures_clean.pdf.

USDA (U.S. Department of Agriculture). 2019. Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. http://websoilsurvey.nrcs.usda.gov/app/ WebSoilSurvey.aspx.

USFWS (U.S. Fish and Wildlife Service). 2019. "Critical Habitat and Occurrence Data" [map]. Accessed April 2019. http://www.fws.gov/data.

INTENTIONALLY LEFT BLANK

SOURCE: SANGIS 2017, 2020

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Initial Study/Mitigated Negative Declaration for the Park Drive Slope and Drainage Improvement Project

INTENTIONALLY LEFT BLANK

ABOVE: Sediment deposition after a December 2018 storm event
BELOW: Portions of the retaining wall are beginning to lean towaed the sidewalk

ABOVE: Degradation of the existing retaining wall
BELOW: Sediment deposition after a January 2000 storm event

FIGURE 2

Existing Site Photos

Initial Study/Mitigated Negative Declaration for the Park Drive Slope and Drainage Improvement Project

INTENTIONALLY LEFT BLANK

SOURCE: SANGIS 2017, 2020

DUDEK

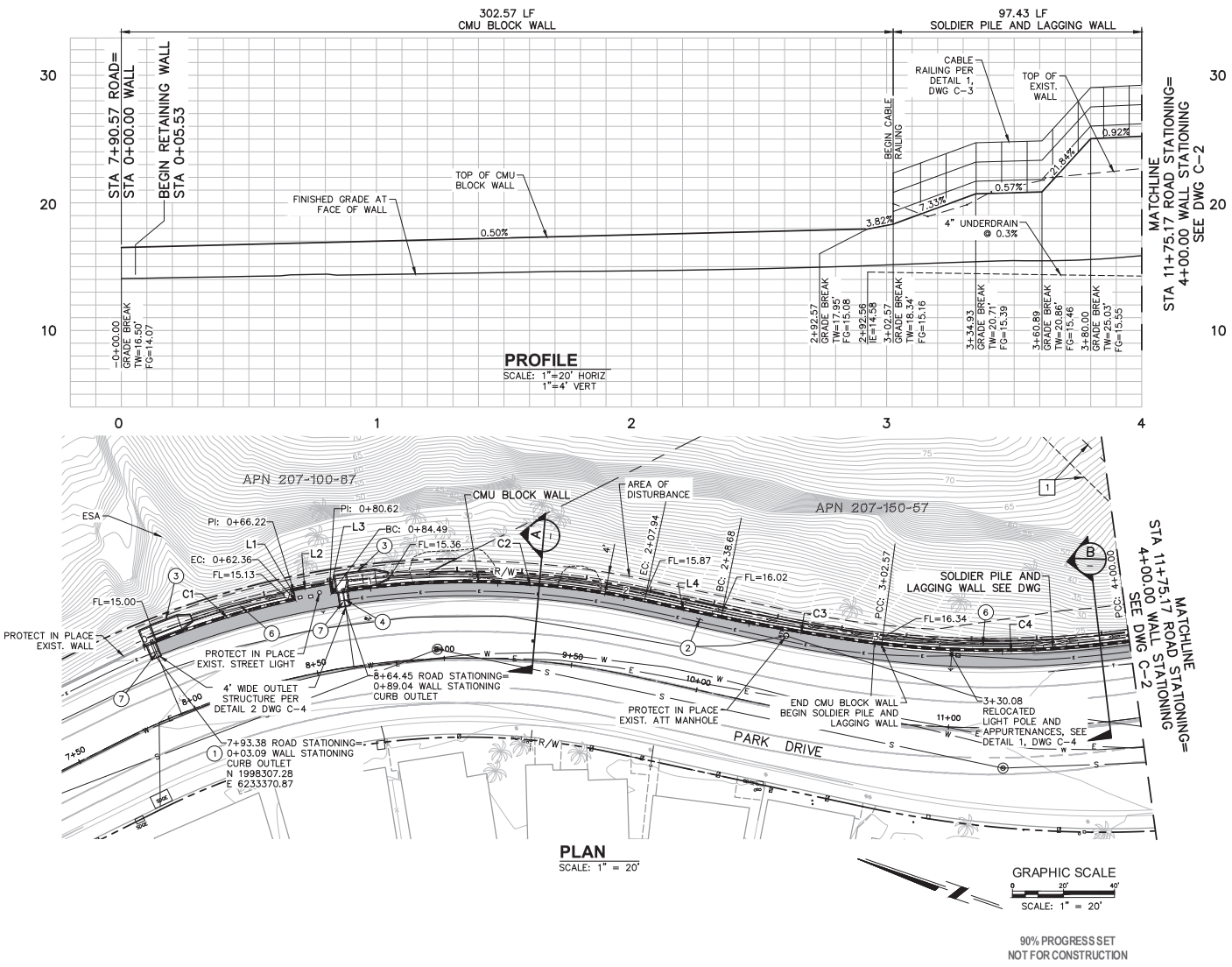
0 50 100 Feet

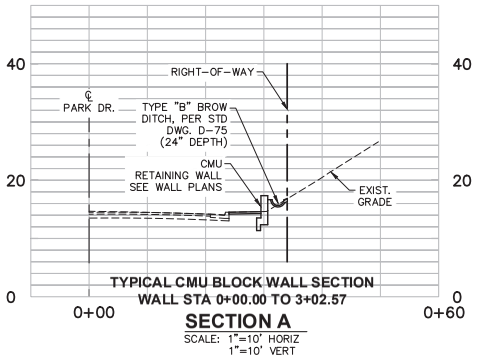
FIGURE 3

Proposed Improvement Zones

Initial Study/Mitigated Negative Declaration for the Park Drive Slope and Drainage Improvement Project

INTENTIONALLY LEFT BLANK



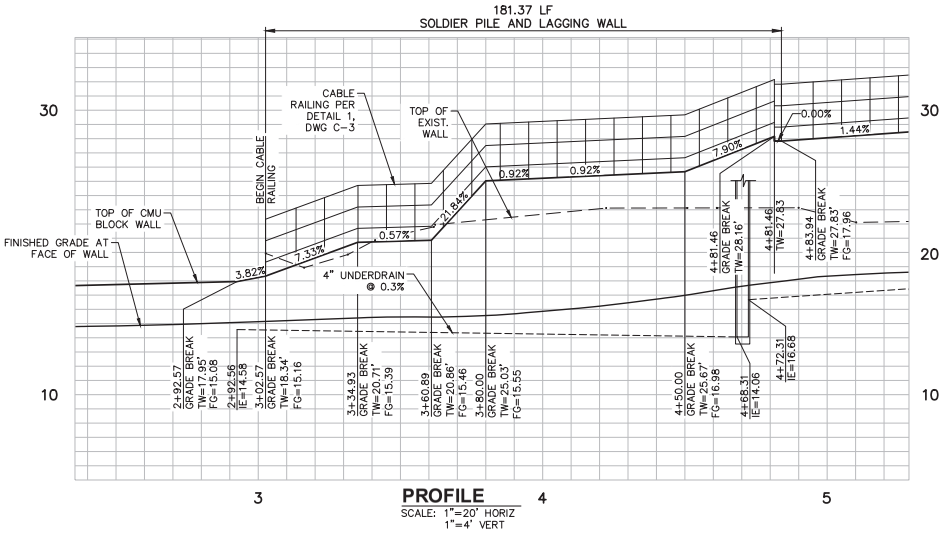


90% PROGRESS SET
NOT FOR CONSTRUCTION

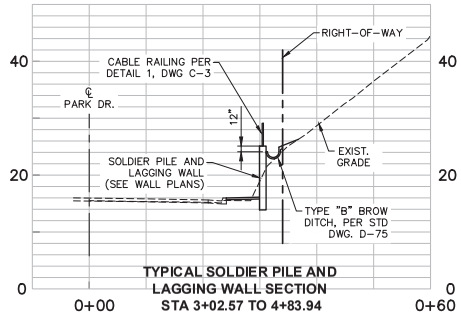
FIGURE 4

Improvement Zone A

INTENTIONALLY LEFT BLANK

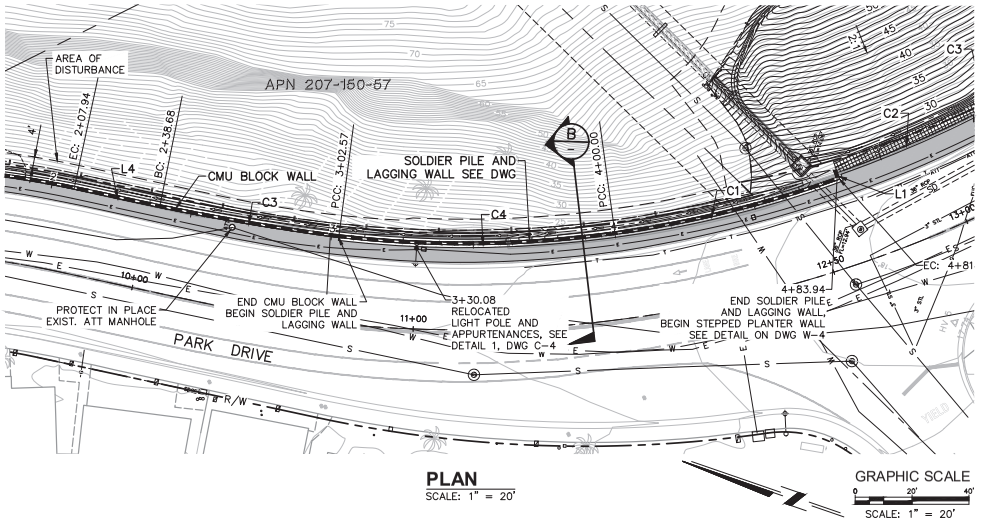


PROFILE
SCALE: 1"=20' HORIZ
1"=4' VERT



TYPICAL SOLDIER PILE AND LAGGING WALL SECTION
STA 3+02.57 TO 4+83.94

SECTION B
SCALE: 1"=10' HORIZ
1"=10' VERT

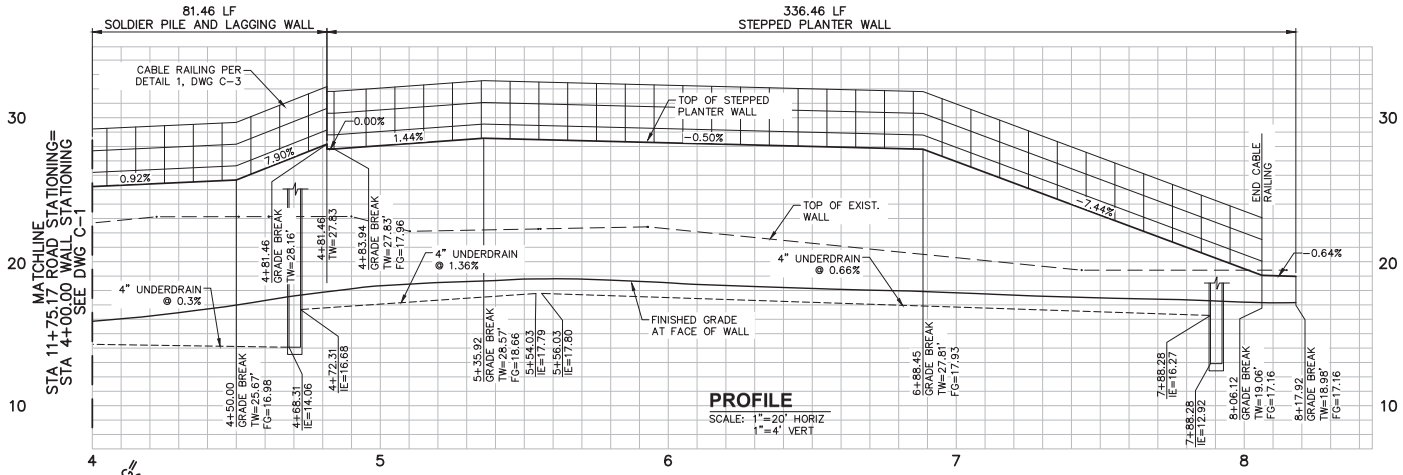


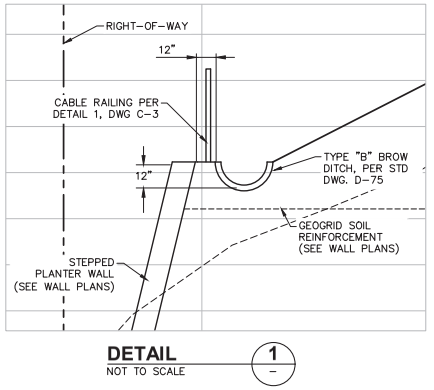
PLAN
SCALE: 1" = 20'

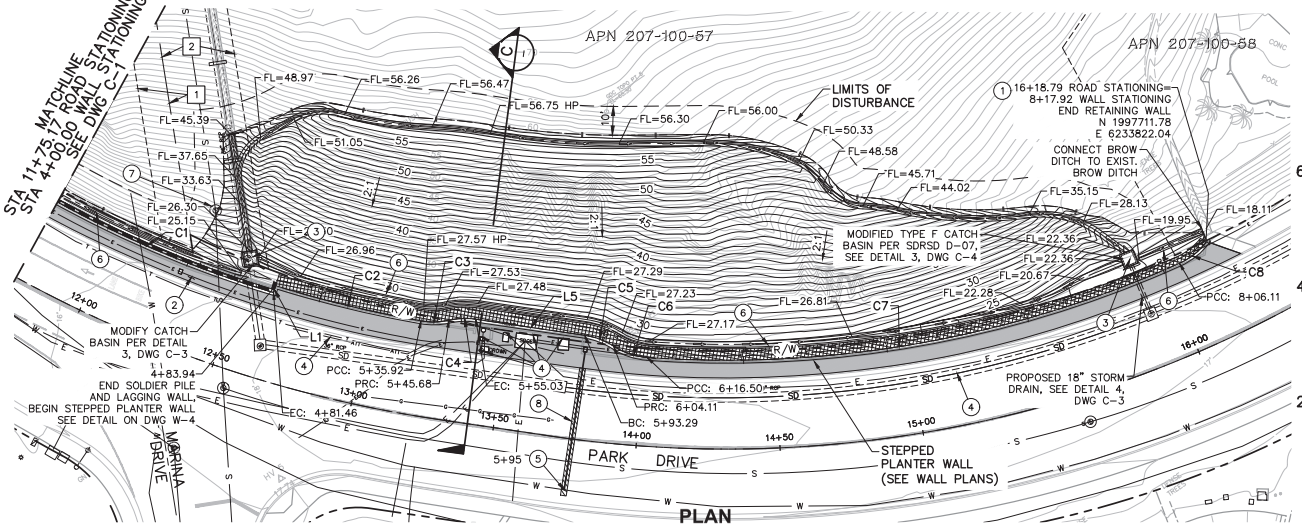
GRAPHIC SCALE
0 20' 40'
SCALE: 1" = 20'

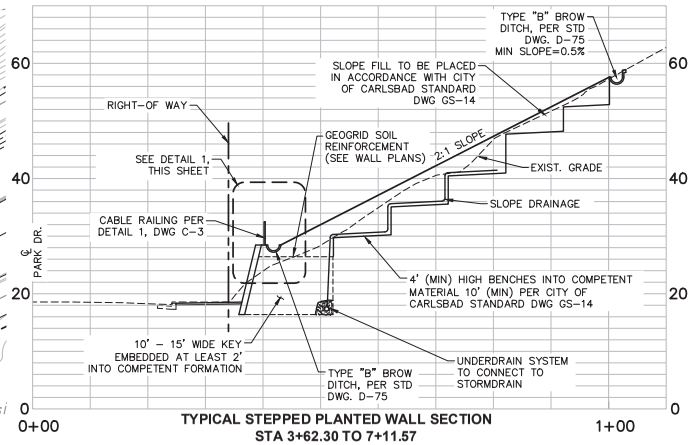
FIGURE 5
Improvement Zone B

INTENTIONALLY LEFT BLANK









GRAPHIC SCALE
SCALE: 1" = 20'

90% PROGRESS SET
NOT FOR CONSTRUCTION

FIGURE 6

Improvement Zone C

INTENTIONALLY LEFT BLANK

FIGURE 7

Proposed Retaining Wall (Zone A)

INTENTIONALLY LEFT BLANK

SOURCE: SANGIS 2017, 2020

DUDEK

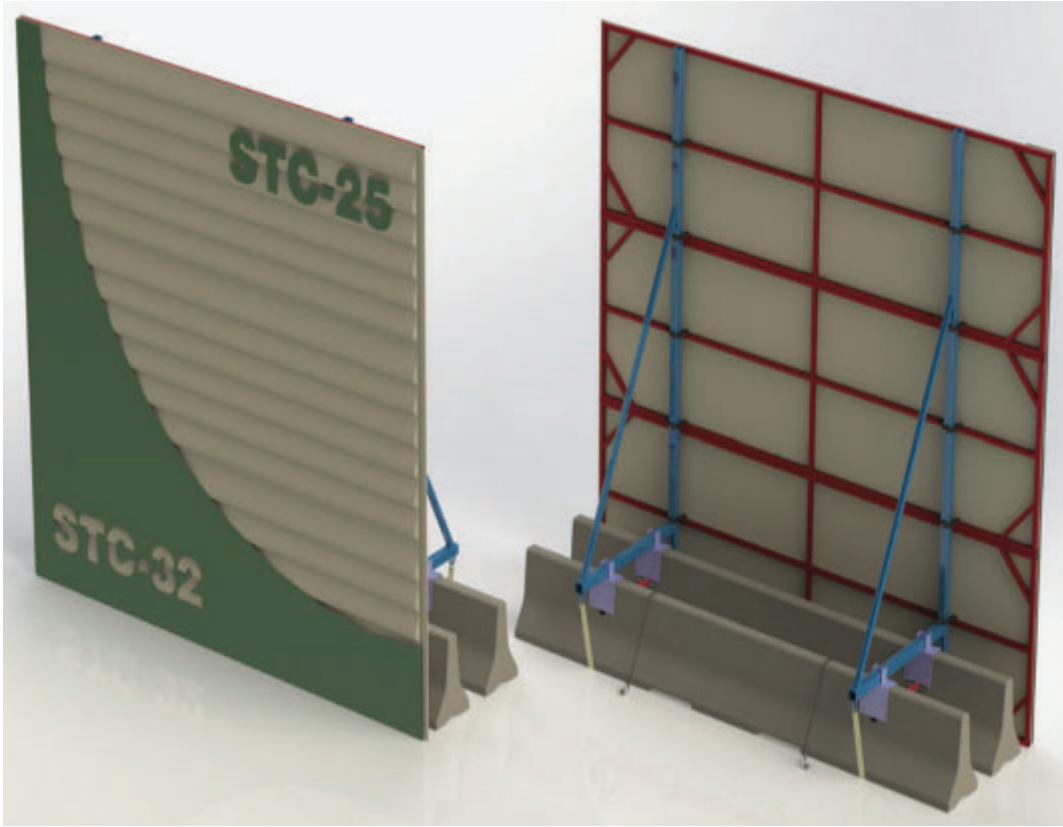
0 50 100 Feet

FIGURE 8

Nearest Noise-Sensitive Receptors to the Project Site

Initial Study/Mitigated Negative Declaration for the Park Drive Slope and Drainage Improvement Project

INTENTIONALLY LEFT BLANK



SOURCE: Behrens & Associates (2020)

FIGURE 9

Temporary Sound Barrier Sample: "K-Rail Mounted" Variety

Initial Study/Mitigated Negative Declaration for the Park Drive Slope and Drainage Improvement Project

INTENTIONALLY LEFT BLANK