DRAFT

La Mirada Creek Park Master Plan
Initial Study/Mitigated Negative Declaration

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MAY 2018

Printed on 30% post-consumer recycled material.

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AB	Assembly Bill
ADA	Americans with Disability Act
AQMP	Air Quality Management Plan
BMP	best management practice
CalEEMod	California Emissions Estimator Model
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of La Mirada
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2e	carbon monoxide equivalent
Creek Park	La Mirada Creek Park
CRHR	California Register of Historical Resources
EIR	environmental impact report
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
GIS	geographic information systems
GPS	Global Positioning System
HAZWOPER	Hazardous Waste Operations and Emergency Response
IS	initial study
JOS	Joint Outfall System
LED	light-emitting diode
LST	localized significance threshold
Master Plan	La Mirada Creek Park Master Plan
mgd	million gallons per day
MM	mitigation measure
MND	mitigated negative declaration
MT	metric ton
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
$PM_{2.5}$	particulate matter with an aerodynamic diameter equal to or less than 2.5 microns (i.e., fine)
PM_{10}	particulate matter with an aerodynamic diameter equal to or less than 10 microns (i.e., coarse)
PRC	Public Resources Code
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District

Acronym/Abbreviation	Definition
Suburban	Suburban Water Systems
SWPPP	stormwater pollution prevention plan
TAC	toxic air contaminant
USFWS	U.S. Fish and Wildlife Service
VOC	volatile organic compound
WRP	water reclamation plant

1 INTRODUCTION

1.1 Project Overview

The City of La Mirada (City) currently owns and operates the approximately 15.2-acre La Mirada Creek Park (Creek Park). The proposed project involves the rehabilitation and naturalization of the existing Creek Park through implementation of the La Mirada Creek Park Master Plan (Master Plan).

1.2 California Environmental Quality Act Compliance

The California Environmental Quality Act (CEQA), a statewide environmental law contained in California Public Resources Code (PRC) Sections 21000–21177, applies to most public agency decisions to carry out, authorize, or approve actions that have the potential to adversely affect the environment (PRC Section 21000 et seq.). The overarching goal of CEQA is to protect the physical environment. To achieve that goal, CEQA requires that public agencies identify the environmental consequences of their discretionary actions and consider alternatives and mitigation measures that could avoid or reduce significant adverse impacts when avoidance or reduction is feasible. It also gives other public agencies and the public an opportunity to comment on the project. If significant adverse impacts cannot be avoided, reduced, or mitigated to below a level of significance, the public agency is required to prepare an environmental impact report (EIR) and balance the project's environmental concerns with other goals and benefits in a statement of overriding considerations.

CEQA-Plus Evaluation

To implement the proposed project, the City may seek grants and/or loans from a state-administered program that requires a "CEQA-Plus" evaluation to be completed to comply with federal regulations. The results of this evaluation are provided under the CEQA-Plus Evaluation headings within each relevant resource area (e.g., biological resources). Generally, CEQA-Plus evaluations are provided for resource areas where a relevant federal law directly applies to that resources area (e.g., federal Endangered Species Act).

1.3 Preparation and Processing of this Initial Study/Mitigated Negative Declaration

The City's Public Works Department directed and supervised preparation of this Initial Study (IS) / Mitigated Negative Declaration (MND). Although prepared with assistance from the consulting firm Dudek, the content contained and the conclusions drawn within this IS/MND reflect the independent judgment of the City.

1.4 Initial Study Checklist

Dudek, under the City's guidance, prepared the proposed project's Environmental Checklist (i.e., IS) per CEQA Guidelines, Sections 15063–15065. The CEQA Guidelines include a suggested checklist to indicate whether a project would have an adverse impact on the environment. The checklist is found in Section 3, Initial Study Checklist, of this document. Following the Environmental Checklist, Sections 3.1 through 3.19 include an explanation and discussion of each significance determination made in the checklist for the proposed project.

For this IS/MND, the following four possible responses to each individual environmental issue area are included in the checklist:

1. Potentially Significant Impact
2. Less-Than-Significant Impact with Mitigation Incorporated
3. Less-Than-Significant Impact
4. No Impact

The checklist and accompanying explanation of checklist responses provide the information and analysis necessary to assess relative environmental impacts of the proposed project. In doing so, the City will determine the extent of additional environmental review, if any, for the proposed project.

1.5 Existing Documents Incorporated by Reference

CEQA Guidelines Sections 15150, 15168(c)(3), and 15168(d)(2) permit and encourage that an environmental document incorporate by reference other documents that provide relevant data. The City of La Mirada General Plan (City of La Mirada 2003), the City of La Mirada Zoning Map (City of La Mirada 2012), and the La Mirada Municipal Code (City of La Mirada 2017), which are all herein incorporated by reference pursuant to CEQA Guidelines, Section 15150, are available for review from the following:

City of La Mirada
Public Works Department
15515 Phoebe Avenue
La Mirada, California 90638

1.6 Points of Contact

The City of La Mirada is the lead agency for this environmental document. Any questions about preparation of this IS/MND, its assumptions, or its conclusions should be referred to the following:

Eric Villagracia, Project Manager
City of La Mirada
Community Development Department, Planning Division
13700 La Mirada Boulevard
La Mirada, California 90638
562.902.2373
evillagracia@cityoflamirada.org

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2 PROJECT DESCRIPTION

2.1 Project Location

The project site is located on the northeastern edge of the City, which is located within the southern portion of Los Angeles County adjacent to the northern Orange County border. Regionally, the City is bordered by the Cities of Whittier to the north, La Habra to the east, Buena Park to the south, and Norwalk to the west. Locally, the project site is bordered by Golden Lantern Lane and single-family residences to the north; Santa Gertrudes Avenue and single-family residences to the east; single-family residences, Surrey Lane, and Heights Christian School to the south; and Stamy Road / Las Flores Avenue and single-family residences to the west (Figure 1).

The project site is located within the boundaries of the approximately 15.2-acre La Mirada Creek Park (Creek Park). The project site location corresponds to Township 3 South, Range 11 West, Section 11 of the La Habra, California, Quadrangle 7.5-Minute Series Topographical Map published by the U.S. Geological Survey.

2.2 Environmental Setting

City of La Mirada

The City is a largely built out and urbanized community in Southern California. The City's planning boundary encompasses 4,611 acres, with approximately 3,841 acres within the City's corporate limits. The community's population, housing, and business patterns are shaped largely by accessibility to Interstate 5 from the southern portion of the City, and the Imperial Highway Corridor along the City's northern boundary. Land uses within the City include residential, commercial, industrial, parks, and open space.

Surrounding Land Uses

The project site is generally bounded by residential streets and land uses. The majority of the land uses to the north, west, and south are single-family residential. The following land uses surround the project site:

- North: Golden Lantern Lane and single-family residences
- East: Santa Gertrudes Avenue and single-family residences
- South: single-family residences, Surrey Lane, and Heights Christian School
- West: Stamy Road / Las Flores Avenue and single-family residences

Existing Project Site

Under the existing condition, Creek Park consists of a linear park located between Santa Gertrudes Avenue on the eastern boundary to Stamy Road on the western boundary. La Mirada Creek, which runs the entire length of the project site, is part of the San Gabriel drainage system originating in La Habra Heights and emptying into the San Gabriel River. The entire Creek Park is considered part of the drainage channel and regularly floods during rainstorms.

Creek Park is a heavily used passive park and involves activities such as strolling, jogging, dog-walking, informal exercise areas, and picnicking. Existing on-site stormwater conveyance features include a concrete low-flow channel, which flows year round, and a series of concrete check dams controlling stormwater flow. The project site also contains paved pathways along the north and south of the concrete channel, connected by a series of five bridge crossings (Figure 2a). Other park amenities and facilities include pathway lighting, a public restroom located towards the middle of the project site, and an amphitheater with a fire ring located on the northwest corner of the project site (Figure 2b).

Two parking lots provide vehicle access to the project site, one from Santa Gertrudes Avenue with approximately 56 parking spaces, and another from Stamy Road with approximately 21 parking spaces. The entire Creek Park is landscaped with turf, mature trees, slope planting, and irrigation. Additionally, a multi-use equestrian, walking, and jogging trail begins at the southeastern corner of the project site, runs along the southern boundary of the site, and continues west beyond Creek Park.

While currently heavily utilized, the Creek Park was constructed prior to the Title 24 Handicap Accessibility Codes and currently lacks accessibility to many park amenities, including the restroom building. Additionally, due to their age, the park lighting system, irrigation system, and five wooden bridges are in immediate need of replacement. Further, since the entire Creek Park regularly serves as a flood control channel and often floods during storm events above the low-flow concrete channel, several vertical feet of silt have been deposited along the edges of the concrete channel creating a steep vertical grade. As a result, the flood control channel has a reduced flow capacity and has a hazardous condition along its banks.

The General Plan land use designation for Creek Park is Parks and Open Space (Figure 3) (City of La Mirada 2003). The current zoning for the site is Open Space (OS) Flood Hazard Overlay District (Figure 4) (City of La Mirada 2012).

2.3 Project Summary

The proposed project involves the rehabilitation and naturalization of the existing Creek Park through implementation of the Master Plan. The Master Plan involves reconfiguration of the La Mirada Creek to return the flood flows to more natural patterns, upgraded park amenities integrated within the existing park facilities, reconstruction of the five wooden bridges, and relocation and expansion of restrooms. The proposed project would be located within the confines of the existing Creek Park, and as such, no expansion beyond the existing park boundaries is required.

While the proposed project would not result in any substantial changes to the existing on-site intensity, use, or activities, the Master Plan includes a variety of improvements such as spur paths leading to the naturalized creek and its bridges, recreational hardscape and softscape features to improve the functionality of the pathways, new exercise circuit stations, upgraded amphitheater, improved parking lots, better connections to the existing equestrian facilities, fitness and play nodes, garden, picnic areas, benches, and shelters (Figure 5; RRM 2018).

La Mirada Creek Naturalization

Hydraulic analysis and modeling was used to determine the optimal configuration of the La Mirada Creek that would balance flood conveyance for the target design storm frequency. As part of the Master Plan, the drainage features along the La Mirada Creek would be rehabilitated and naturalized to return the topography of the creek to contours that are more natural. Additionally, the concrete check dams and grouted riprap would be removed to enhance aesthetics of the natural topography. The proposed project would result in reconfiguration of the creek's meanders to increase flow capacity and reduce hazardous conditions along the channel.

Creek Park Improvements

Recreational Amenities

Creek Park would continue to support a number of passive recreational activities. A number of amenities and facilities would remain on site, including an amphitheater, pathways for walking and jogging, and seating areas. These recreational amenities would be upgraded and integrated within the existing context of the park. The proposed project would introduce an area of terraced seating with three levels, public art installations, a habitat garden with water quality and pollinator educational elements, and an herb garden. Other new recreational features include fitness stations and natural play elements that would be located within five nodes throughout the project site, off the paved pathways. Additionally, four dog waste stations would be available from the walkways.

Restroom Facilities

The proposed project seeks to improve restroom accessibility to comply with Title 24 Handicap Accessibility Codes. Due to the current location of the existing restroom, it is not easily accessible via vehicle and pedestrian pathways. The proposed project would demolish the existing restroom facility and construct two restroom buildings, one adjacent to the Santa Gertrudes parking lot and one adjacent to the Stamy Road parking lot. The new restroom buildings would be compliant with current Americans with Disability Act (ADA) and California Building Code (CBC) requirements.

Lighting

For safety and security purposes, lighting would be provided in the parking areas and throughout the project site. Light-emitting diode (LED) lighting would be installed, which is more economical and energy efficient than the traditional lighting. All exterior light fixtures would be hooded/shielded to direct light towards the ground to avoid light trespass and nighttime glare. No pole-mounted sports field lighting will be installed as part of the proposed project.

Bridges

Due to their age, the five wooden bridges need to be reconstructed to enhance durability and structural support. The proposed project would reconstruct these bridges in the same general location as the existing bridges, with the exception of one bridge location, which would be slightly adjusted to integrate within the creek naturalization efforts. The park bridges would continue to provide pedestrian connections between the northern and southern half of the park.

Parking and Circulation

Existing driveways off Santa Gertrudes Avenue and Stamy Road Vehicular would continue to provide access to the project site, as well as pedestrian entrances along Golden Lantern Lane. These driveways would connect to improved parking areas located in the same locations as the existing parking lots. Similar to the existing conditions, approximately 77 parking spaces would be provided.

Pedestrian circulation within and around the project site would be provided via a pedestrian path that connects all of the park amenities. The pathways would follow the existing pedestrian circulation along the north and south of the concrete channel, connected by the reconstructed bridges. In addition, spurs would connect the main path with recreational facilities located throughout the park.

Landscaping

The proposed project would be required to incorporate the state's Model Water Efficient Landscape Ordinance irrigation plans. All landscaped areas would incorporate the plans into the irrigation system layout, main line, etc. A watering schedule and water use calculations will be provided in accordance with Model Water Efficient Landscape Ordinance standards.

2.4 Construction and Phasing

The proposed project construction period is anticipated to occur for 280 calendar days (40 weeks). The proposed project would be constructed in a single phase starting as early as Fall 2019 and concluding early 2020. Although due to many variables, including a source of funding, construction may begin at a later time. Construction activities would involve demolition of the existing concrete channel and bridges. These structures and asphalt would be demolished and disposed of in accordance with all applicable state and local regulations.

For a breakdown of construction sub-phases and schedule, refer to the California Emissions Estimator Model (CalEEMod) air quality modeling outputs provided in Appendix A, Air Quality and Greenhouse Gas Emissions Modeling.[1]

[1] Construction phasing estimates are based on default assumptions provided in CalEEMod (Appendix A). These assumptions are based on the size of the project site, the proposed land use, and the size of the planned improvements.

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3 INITIAL STUDY CHECKLIST

1. **Project title:**

   La Mirada Creek Park Master Plan

2. **Lead agency name and address:**

   City of La Mirada
   Public Works Department
   15515 Phoebe Avenue
   La Mirada, California 90638

3. **Contact person and phone number:**

   Eric Villagracia, Project Manager
   562.902.2373
   evillagracia@cityoflamirada.org

4. **Project location:**

   12021 Santa Gertrudes Avenue
   La Mirada, California 90638

5. **Project sponsor's name and address:**

   City of La Mirada
   13700 La Mirada Boulevard
   La Mirada, California 90638

6. **General plan designation:**

   Parks and Open Space

7. **Zoning:**

   Open Space (OS), Flood Hazard Overlay District

8. **Description of project. (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary):**

   The proposed project involves the rehabilitation and naturalization of the existing Creek Park through implementation of the La Mirada Creek Park Master Plan (Master Plan). The Master Plan involves reconfiguring La Mirada Creek to return the flood flows to more natural patterns, upgrading park amenities integrated within the existing park facilities, reconstructing five wooden bridges, and relocating and expanding restrooms. See Section 2, Project Description, for further details.

9. **Surrounding land uses and setting (Briefly describe the project's surroundings):**

   The following land uses surrounds the project site:

   - North: Golden Lantern Lane and single-family residences
   - East: Santa Gertrudes Avenue and single-family residences
   - South: Single-family residences, Surrey Lane, and Heights Christian School
   - West: Stamy Road / Las Flores Avenue and single-family residences

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**

    - U.S. Army Corps of Engineers: 404 Permit
    - California Department of Fish and Wildlife (CDFW): 1602 Permit
    - Los Angeles Regional Water Quality Control Board (RWQCB): 401 Permit

11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?**

    Yes, one tribe requested notification of projects within the City of La Mirada's jurisdiction pursuant to California Public Resources Code, Section 21080.3.1. A letter was sent to this tribe and to date no response has been received.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION: (To be completed by the 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 revisions in the project have been made by or agreed to by the project proponent. 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" or "potentially significant unless mitigated" impact on the environment, but at least one effect (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 on attached sheets. 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, 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, nothing further is required.

Signature

4-24-18

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 environmental impact report (EIR) is required.
4. "Negative declaration: 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) following, 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 effects from the previously outlined checklist that 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 that 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 references to information sources for potential impacts (e.g., general plans, zoning ordinances) into the checklist. Reference to a previously prepared or outside document should include, where appropriate, 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. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. The significance criteria or threshold, if any, used to evaluate each question.
    b. The mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
I. AESTHETICS – Would the project**:**				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

3.1 Aesthetics

a) Would the project have a substantial adverse effect on a scenic vista?

No Impact. A scenic vista and other important visual resources are typically associated with natural landforms such as mountains, foothills, ridgelines, and coastlines. According to the City of La Mirada General Plan Open Space and Conservation Element, the City is

a built-out, urbanized community containing no natural resources such as forest, wildlife habitat, or agricultural land.

The General Plan contains policies intended to preserve resources important to the urban environment, including parks and recreational facilities, trails, air quality, and water supply, and Creek Park is identified as an Open Space resource (City of La Mirada 2003).

The proposed project would have visual characteristics similar to the existing condition, since the project would generally involve a rehabilitation of Creek Park and a naturalization of La Mirada Creek, neither of which would introduce new use or activities onto the project site that would be inconsistent with the existing aesthetic character of Creek Park. Therefore, no impacts associated with scenic vistas would occur.

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

No Impact. The project site is not located within the viewshed of a state scenic highway. According to the California Department of Transportation (Caltrans 2017), the nearest designated state scenic highway is the segment of State Route 2, (Angeles Crest Highway) located along the Gabriel Mountains in Los Angeles, north of the San Bernardino County Line. This segment of State Route 2 is located approximately 25 miles north of the project site. Due to the significant distance between the project site and this designated highway, and because of intervening development and topography, the proposed project would not be visible from this highway. Therefore, no impacts associated with state scenic highways would occur.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Less-Than-Significant Impact. As previously discussed, the proposed project would have visual characteristics similar to the existing condition, since the project would generally involve a rehabilitation of Creek Park and a naturalization of La Mirada Creek, neither of which would introduce new use or activities onto the project site that would be inconsistent with the existing aesthetic character of Creek Park. Following implementation of the propose project, much of the project site would remain relatively unaltered, and the existing open and natural character of the site would be preserved. Additionally, proposed improvements would be consistent with the size, scale, and height of the existing on-site and adjacent land uses and, thus, would not be out of character

with the existing aesthetic setting found in the project area. Therefore, impacts associated with visual character and quality would be less than significant.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less-Than-Significant Impact with Mitigation Incorporated. Similarly to the existing conditions, lighting would be provided in the parking areas and throughout the project site for safety and security purposes. LED lighting would installed, which is more economical and energy efficient than the traditional lighting. All exterior light fixtures would be hooded/shielded to direct light towards the ground and to avoid light trespass and nighttime glare. No pole-mounted sports field lighting would be installed as part of the proposed project.

To avoid light trespass, exterior lighting would be required to be shielded with hoods, filtering louvers, glare reducers, or other means to maintain adequate lighting without undue nighttime glare impacts on adjoining residential areas, pursuant to Mitigation Measure (MM-) AES-1.

MM-AES-1 Prior to the approval of plans and specifications, the City of La Mirada shall include a note on the electrical plans for the proposed project stating, "All exterior lighting shall be required to be shielded with hoods, filtering louvers, glare reducers, or other means to maintain adequate lighting throughout the area without undue nighttime glare impacts on adjoining residential areas." All lighting installed on the project site shall comply with this requirement.

In regard to glare, the proposed project would be constructed of a variety of building materials, including wood, stone, veneer, brick, and painted surfaces, many of which would have minimal or no reflective properties. All reflective materials such as glass, metals, and windows would be consistent with reflective building materials currently found on the project site and in the surrounding area under existing conditions. Therefore, with incorporation of mitigation, impacts associated with light and glare would be less than significant.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.2 Agriculture and Forestry Resources

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The project site is located in a predominately urbanized area. According to the California Department of Conservation's California Important Farmland Finder, the project site and surrounding area are identified as Urban and Built-Up Land (DOC 2017). The project site is not located on or adjacent to any parcels identified as Prime Farmland, Unique Farmland, or Farmland of State Importance (collectively called Important

Farmland). Due to the lack of Important Farmland for the project site and the surrounding area, implementation of the proposed project would not convert or otherwise impact any Important Farmland. Therefore, no impacts associated with conversion of Important Farmland would occur.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. According the California Department of Conservation's Williamson Act Parcel map for Los Angeles County, the project site is not located on or adjacent to any lands under Williamson Act contract. The Los Angeles County Williamson Act 2015/2016 Map designates the project site and surrounding land as non-Williamson Act Land (DOC 2016). In addition, the City Zoning Map identifies the project site as located within the Open Space (OS) zone (Flood Hazard Overlay District), and the surrounding area is zoned Single-Family Residential (R-1) (City of La Mirada 2012). As such, implementation of the proposed project would not conflict with existing zoning for agricultural use and Williamson Act contract lands. Therefore, no impacts associated with Williamson Act contracts or existing zoning for agricultural use would occur.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. As previously discussed, the project site is zoned as Open Space (OS) (Flood Hazard Overlay District), and the surrounding area is located within the Single-Family Residential (R-1) zone (City of La Mirada 2012). The project site is not located on or adjacent to forestland, timberland, or timberland zoned Timberland Production. Therefore, no impacts associated with forest land or timberland zoning would occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project site is located in a largely urban area. The project site is not located on or adjacent to forestland. No private timberlands or public lands with forests are located in the City. Therefore, no impact associated with the loss or conversion of forestland would occur.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. As previously discussed, the project site is not located on or adjacent to any parcels identified as Important Farmland or forest land. The proposed project would not involve changes to the existing environment that would result in the conversion of Important Farmland or forest land. Therefore, no impacts associated with the conversion or Important Farmland or forest land would occur.

3.2.1 CEQA-Plus Evaluation

Farmland Protection Policy Act

Is any portion of the project site located on important farmland?

No. No portion of the project site is located on important farmland.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3.3 Air Quality

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less-Than-Significant Impact. The proposed project is located in the South Coast Air Basin (SCAB), which is within the jurisdictional boundaries of the South Coast Air Quality Management District (SCAQMD). The most recent applicable air quality plan is the SCAQMD 2016 Final Air Quality Management Plan (AQMP) (SCAQMD 2017), which includes reduction and control measures that are outlined to mitigate emissions based on existing and projected land use and development. The AQMP is designed to meet applicable federal and state requirements for ozone (O_3) and particulate matter with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$). Projects are considered consistent with, and would not conflict with or obstruct implementation of, the AQMP if the growth in socioeconomic factors is consistent with the underlying regional plans used to develop the SCAQMD AQMP.

The proposed project would generate minimal short-term air quality emissions during construction activities with the use of construction equipment and vehicle trips to and from the project site. The on-site construction period would last for approximately 6 months and would involve operation of construction equipment. Due to the minor nature of these construction activities and the short duration of construction, construction activities would not result in inconsistencies with the growth in socioeconomic factors projected in the regional plans used to develop the AQMP. The need for construction workers would be met by the existing and future labor market in the City and in Los Angeles County, and the vehicle trips that would be required during construction would be negligible relative to regional vehicle trips and would result in minimal, temporary air quality emissions. As such, this work would not generate substantial air quality emissions and would not cause a change in socioeconomic conditions. Once operational, the proposed project operational activities would be comparable to the existing park operations. The proposed project would neither increase population nor require additional long-term employment. Therefore, the proposed project would not conflict with the implementation of the applicable AQMP, and impacts resulting from the project would be less than significant.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less-Than-Significant Impact. The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the proposed project. CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant and greenhouse gas (GHG) emissions associated with the construction and operational activities from a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the proposed project land use type and size, construction schedule, and anticipated construction equipment utilization, were based on information provided by the project applicant, or default model assumptions if project specifics were unavailable.

Construction. The proposed project would involve numerous improvements made to the La Mirada Creek Park including rehabilitating and naturalizing the area surrounding La Mirada Creek, upgrading of recreational facilities, demolition of existing restrooms and construction of two new restroom buildings adjacent to each parking lot, and the reconstruction of five pedestrian bridges throughout the park. Construction is anticipated to occur over a 26-week period. Sources of emissions would include off-road construction equipment exhaust, on-road vehicles exhaust and entrained road dust (i.e., material delivery trucks and worker vehicles), and fugitive dust associated with site preparation and grading activities. The majority of assumptions for the proposed project were based on CalEEMod defaults and are included in Appendix A. Table 1 shows the maximum daily construction emissions during project construction.

Table 1
Estimated Maximum Daily Construction Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
2018	1.13	10.03	9.78	0.02	1.03	0.61
2019	0.85	7.80	7.50	0.01	0.66	0.53
Maximum Daily Emissions	**1.13**	**10.03**	**9.78**	**0.02**	**1.03**	**0.61**
SCAQMD threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: SCAQMD 2015.
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; SCAQMD = South Coast Air Quality Management District.
See Appendix A for detailed results.

As shown in Table 1, daily construction emissions would not exceed the SCAQMD thresholds for volatile organic compound (VOC), NO_x, carbon monoxide (CO), SO_x, particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM_{10}), or $PM_{2.5}$. Due to the limited nature of construction activities in terms of types of equipment, hours of use, duration of construction, truck trips, and number of construction worker vehicle trips, short-term construction emissions would not violate any air quality standards or contribute substantially to an existing air quality violation. As such, the proposed project would result in a less-than-significant impact during construction.

Operation. Long-term operation of the proposed project would result in similar activities and associated emissions as the existing park. Accordingly, operational emissions are anticipated to be minimal and would be less than significant.

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

Less-Than-Significant Impact. Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the SCAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003).

The SCAB is a nonattainment area for O_3, nitrogen dioxide (NO_2), PM_{10}, and $PM_{2.5}$ under the National Ambient Air Quality Standards and/or the California Ambient Air Quality Standards as a result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (e.g., VOC and NO_x for O_3,) can potentially contribute to poor air quality. Construction emissions presented in Table 1 illustrate that the proposed project would result in minimal short-term increases in pollutant emissions and would not exceed the SCAQMD significance thresholds. In addition, long-term operation of the proposed project would result in similar emissions as the existing park, primarily form vehicle trips from visitors or due to maintenance activities. Furthermore,

the proposed project would not conflict with the 2016 SCAQMD AQMP, which addresses the cumulative emissions in the SCAB. Accordingly, the proposed project would not result in a cumulatively considerable increase in emissions of criteria pollutants for which the project region is in non-attainment; thus, potential impacts from the project would be less than significant.

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less-Than-Significant Impact. Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). Residential land uses are located immediately north and west of the project site. The closest sensitive receptors to the proposed project are residences adjacent to the project boundary located to the north, south, east, and west. In addition, the Heights Christian Schools La Mirada Preschool is located approximately 270 feet to the south of the proposed project.

Localized Significance Thresholds

The SCAQMD recommends a localized significance threshold (LST) analysis to evaluate localized air quality impacts to sensitive receptors in the immediate vicinity of a project site as a result of construction activities. The project is located in Source-Receptor Area 5 (Southeast Los Angeles County). This analysis conservatively applies the SCAQMD LST values for a 1-acre site, since the equipment assumed for the proposed project would disturb less than 1 acre per day, with a receptor distance of 25 meters (82 feet).

Project construction activities would result in temporary sources of on-site criteria air pollutant emissions associated with construction equipment exhaust and concrete handling activities. Since they would occur off site, emissions from trucks and worker vehicle trips are not included in the LST analysis. The maximum daily on-site construction emissions generated during construction of the proposed project are presented in Table 2 and are compared to the SCAQMD localized significance criteria for Source-Receptor Area 5 to determine whether project-generated on-site construction emissions would result in potential LST impacts.

Table 2
Construction Localized Significance Thresholds Analysis

Year	NO_2	CO	PM_{10}	$PM_{2.5}$
	pounds per day (on-site)			
2018	9.76	4.25	0.95	0.44
SCAQMD LST Criteria	*80*	*571*	*4*	*3*
Threshold Exceeded?	No	No	No	No

Source: SCAQMD 2009.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.
SCAQMD LST values applied are for an area disturbed of 1 acre per day with a receptor distance of less than 25 meters (which equates to 82 feet) in Source-Receptor Area 5.
See Appendix A for detailed results.

As shown in Table 2, proposed construction activities would not generate emissions in excess of site-specific LSTs; therefore, localized project construction impacts would be less than significant.

CO Hotspots

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed CO "hotspots." CO transport is extremely limited and disperses rapidly with distance from the source. Typically, high CO concentrations are associated with severely congested intersections operating at an unacceptable level of service (level of service E or worse). Projects contributing to adverse traffic impacts may result in the formation of a CO hotspot. Additional analysis of CO hotspot impacts would be conducted if a project would result in a significant impact or contribute to an adverse traffic impact at a signalized intersection that would potentially subject sensitive receptors to CO hotspots.

Construction activities would be temporary and would not be a source of daily, long-term mobile-source emissions. Daily operations of the proposed project would not involve a substantial increase in daily traffic volumes in the project area. Accordingly, the proposed project would not generate traffic that would contribute to potential adverse traffic impacts that may result in the formation of CO hotspots. In addition, due to continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing. Based on these considerations, the proposed project would result in a less-than-significant impact to air quality with regard to potential CO hotspots.

Toxic Air Contaminants

Toxic air contaminants (TACs) are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SCAQMD recommends an incremental cancer risk threshold of 10 in 1 million. "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. The SCAQMD recommends a Hazard Index of 1 or more for acute (short-term) and chronic (long-term) non-carcinogenic effects.[2] TACs that would potentially be emitted during construction activities associated with development of the proposed project would be diesel particulate matter.

Diesel particulate matter emissions would be emitted from heavy equipment operations and heavy-duty trucks. Notably, heavy-duty construction equipment is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions. As described for the LST analysis, PM_{10} (representative of diesel particulate matter) exposure would be minimal. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (conservatively estimated at approximately 26 weeks) would only constitute a small percentage of the total 30-year exposure period. Furthermore, the proposed project would not require the extensive use of heavy-duty construction equipment and construction activities would not occur in one area for an extended period. Regarding long-term operations, the proposed project would not result in non-permitted stationary sources that would emit air pollutants or TACs.

In summary, the proposed project would not expose sensitive receptors to substantial, long-term pollutant concentrations or health risk during construction or operations, and this impact would be less than significant.

[2] Non-cancer adverse health risks are measured against a hazard index, which is defined as the ratio of the predicted incremental exposure concentrations of the various non-carcinogens from the project to published reference exposure levels that can cause adverse health effects.

e) Would the project create objectionable odors affecting a substantial number of people?

Less-Than-Significant Impact. The occurrence and severity of potential odor impacts depend on numerous factors. The nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying, cause distress among the public, and generate citizen complaints.

The SCAQMD has identified typical sources of odor, which include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). Potential sources of odors during construction activities include equipment and vehicle exhaust. However, due to the limited nature of construction activities in terms of types of equipment, number of hours of use, and duration of construction, the odors generated by equipment exhaust and other construction activities would be minimal. Furthermore, the proposed project would utilize typical construction techniques in compliance with applicable SCAQMD rules. In regards to operations, the proposed project does not include any elements or uses that would create substantial odors. Therefore, impacts associated with odors generated as a result of the proposed project would be less than significant.

3.3.1 CEQA-Plus Evaluation

Clean Air Act

Is the project subject to a State Implementation Plan conformity determination?

Yes. The entire SCAB is designated as a nonattainment area for federal and state O_3 standards and federal and state $PM_{2.5}$ standards. The SCAB is designated as a nonattainment area for state PM_{10} standards; however, it is designated as an attainment area for federal PM_{10} standards. The SCAB is designated as an attainment area for federal and state CO standards, federal and state NO_2 standards, and federal and state SO_2 standards. Although a portion of the SCAB has been designated as nonattainment for the federal rolling 3-month average lead standard (Los Angeles County), it is designated as attainment for the state lead standard (EPA 2018; CARB 2017).

Table 3 depicts the federal attainment classification of the SCAB. In summary, the proposed project is located in an area that is nonattainment for O_3 and $PM_{2.5}$. In addition, the proposed project is located in a maintenance area for CO. This analysis focuses on these criteria pollutants.

Table 3
South Coast Air Basin Federal Attainment Classification

Pollutant	Federal Attainment Status	De Minimis Thresholds (tons per year)
O_3 – 1 hour	No federal standard	N/A
O_3 – 8-hour	**Extreme nonattainment**	10 [a] (VOC or NO_x)
NO_2	Unclassifiable/attainment	N/A
CO	Attainment/maintenance	100
SO_2	Unclassifiable/attainment	N/A
PM_{10}	Attainment/maintenance	100
$PM_{2.5}$	**Serious nonattainment**	70
Pb	Unclassifiable/attainment	N/A
Hydrogen Sulfide	No federal standard	N/A
Sulfates	No federal standard	N/A
Visibility-Reducing Particles	No federal standard	N/A
Vinyl Chloride	No federal standard	N/A

Sources: EPA 2018 (federal attainment status); EPA 2017 (de minimis thresholds).
Notes: O_3 = ozone; VOC = volatile organic compound; NO_x = oxides of nitrogen; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; Pb = lead; N/A = not applicable.
[a] The applicable de minimis threshold applies equally to each ozone precursor (VOC and NO_x).

The proposed project would involve making improvements to the La Mirada Creek Park, including rehabilitating and naturalizing the area surrounding La Mirada Creek, upgrading of recreational facilities, demolishing existing restrooms and constructing two new restroom buildings adjacent to each parking lot, and the reconstructing five pedestrian bridges throughout the park. The proposed project does not include housing or commercial land uses that would directly induce population growth in the broader project area. Thus, at a regional level, the proposed project would be consistent with the underlying growth forecasts used in the 2016 AQMP.

The estimated project construction emissions (in tons per year) are shown in Table 4. As previously mentioned, because the proposed project would not substantially alter the parks existing operational activities, operational emissions are expected to be similar to the existing park and therefore were not quantified for the analysis. Refer to Appendix A of this document for the complete air quality modeling assumptions and outputs.

Table 4
Estimated Annual Construction Criteria Air Pollutant Emissions

Year	VOC	NO_x	CO	PM_{10}	$PM_{2.5}$
	tons per year				
2018	0.04	0.42	0.26	0.03	0.02
2019	0.02	0.17	0.16	0.01	0.01
Maximum Annual Emissions	**0.04**	**0.42**	**0.26**	**0.03**	**0.02**
De Minimis Threshold	*10*	*10*	*100*	*100*	*70*
Threshold Exceeded?	No	No	No	No	No

Notes: VOC = volatile organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; PM_{10} = fine particulate matter; $PM_{2.5}$ = fine particulate matter.
See Appendix A for detailed results.

As provided in Table 4, the proposed project would not exceed any of the applicable federal de minimis thresholds during construction activities in 2018 or 2019. Therefore, additional conformity analysis is not required; the proposed project would conform to the applicable implementation plan for the project area.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
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?	☐	☒	☐	☐

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

3.4 Biological Resources

The following analysis relies on a biological constraints analysis and field assessment conducted by Dudek in August and October 2017. This assessment included a pre-field 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 15.2-acre project site and surrounding 100-foot buffer (the biological study area) (Figure 6).

A search of CDFW's California Natural Diversity Database (CDFW 2017), California Native Plant Society's (CNPS's) *Inventory of Rare and Endangered Plants* (CNPS Inventory; CNPS 2017), and U.S. Fish and Wildlife Service's (USFWS's) occurrence data (USFWS 2017a) was conducted to identify special-status biological resources from the region. The California Natural Diversity Database and CNPS Inventory were queried based on the U.S. Geological Survey 7.5-minute topographic quadrangle map for La Habra where the biological study area is located, as well as the surrounding eight U.S. Geological Survey 7.5-minute quadrangle maps (i.e., Anaheim, Baldwin Park, El Monte, Orange, Los Alamitos, San Dimas, Whittier, and Yorba Linda).

Potential and/or historic drainages and aquatic features were also investigated based on a review of the U.S. Geological Survey topographic maps (1:24,000 scale), aerial photographs, the USFWS' National Wetland Inventory database (USFWS 2017b), and the Natural Resource Conservation Service Web Soil Survey (USDA 2017). Other documentation reviewed included the Los Angeles County General Plan (County of Los Angeles 2015a) and City of La Mirada General Plan (City of La Mirada 2003). In addition, hydrologic information was obtained from gauge stations within the vicinity of the biological study area.

Following the pre-field literature review, Dudek conducted a general site visit on August 4, 2017, and a reconnaissance-level biological survey of the site on October 6, 2017, to identify existing biological resources and confirm potential biological constraints. During the field surveys, vegetation communities and land covers were catalogued and confirmed based on existing site conditions. Vegetation communities were mapped according to the CDFW's *List of Vegetation Alliances and Associations* (or Natural Communities List), which is based on *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). Land covers not included in the Natural Communities List followed the Orange County Habitat Classification System (Gray and Bramlet 1992). A general inventory of plant and wildlife species detected by sight, calls, tracks, scat, or other field indicators were compiled, and a determination was made concerning the potential for special-status species to occur within the biological study area. Additionally, a preliminary investigation was conducted of the extent and distribution of U.S. Army Corps of Engineers jurisdictional waters of the United States, RWQCB jurisdictional waters of the state, and CDFW jurisdictional streambed and associated riparian habitat.

The biological study area is characterized by two non-natural vegetation communities and land covers: urban/developed land mapping unit and parks and ornamental plantings mapping unit (Figure 6).

The urban/developed land mapping unit is not recognized by the Natural Communities List. Urban/developed land refers to areas supporting man-made structures, including homes, yards, and sidewalks, and other highly modified lands supporting structures associated with dwellings or other permanent structures. Vegetation in these areas, if present at all, is typically associated with ornamental landscaping that has been included in the development footprint. Within the park, the urban/developed land cover consists of concrete pedestrian walkways and pedestrian bridges.

The parks and ornamental plantings mapping unit is also not recognized by the Natural Communities List. This land cover type consists of introduced plantings of exotic, and sometimes native, species as landscaping that are actively maintained. Within the park, this mapping unit supports planted trees such as California sycamore (*Platanus racemosa*), Brazilian pepper tree (*Schinus terebinthifolius*), Peruvian pepper tree (*Schinus molle*), Canary Island pine (*Pinus canariensis*), and camphor tree (*Cinnamomum camphora*). The understory includes species such as Bermuda grass (*Cynodon dactylon*) and Sydney golden wattle (*Acacia longifolia*). A complete list of plants encountered within the biological study area is included in Appendix B-1 of this document.

Wildlife species observed or detected during the field surveys of the biological study area, included a total of 19 bird species, 4 mammal species, and 1 reptile species. Some of the dominant bird species detected within the biological study area included house sparrow (*Passer domesticus*), lesser goldfinch (*Spinus psaltria*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), pin-tailed whydah (*Vidua macroura*), Say's phoebe (*Sayornis saya*), scaly-breasted munia (*Lonchura punctulata*), and western bluebird (*Sialia mexicana*). However, no active bird nests were detected within the biological study area. Mammal species detected included California ground squirrel (*Spermophilus beecheyi*), domestic dog (*Canis lupus familiaris*), domestic horse (*Equus caballus*), and eastern fox squirrel (*Sciurus niger*). Reptile species detected included the western fence lizard (*Sceloporus occidentalis*). A complete list of wildlife detected within the biological study area is included in Appendix B-2 of this document.

The biological study area contains jurisdictional areas regulated by the U.S. Army Corps of Engineers, RWQCB, and the CDFW. La Mirada Creek supports non-wetland waters of the United States and waters of the state due to its physical, hydrologic, and biological characteristics and connectivity to downstream jurisdictional areas. The jurisdictional extents would most likely encompass the width of the concrete flood control structures (approximately 9 feet in width), plus the adjacent earthen banks (approximately 23 feet in total width). Additionally, there are several, small lateral inputs from the surrounding urban areas that contribute to La Mirada Creek flows. However, these structures would most likely not constitute regulated jurisdictional features.

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

Less-Than-Significant Impact with Mitigation Incorporated. The biological study area includes the construction footprint of the proposed park improvements on approximately 15.2 acres, plus a 100-foot buffer around the project site (Figure 6). Due to the existing setting and urban condition of the biological study area, the potential for special-status species is low.

Plant Species

The project site is characterized by non-natural vegetation communities and land covers. No plant species listed or proposed for listing as rare, threatened, or endangered by the USFWS or CDFW were detected within the biological study area during the surveys conducted in August and October 2017. Additionally, no plant species considered sensitive

by the CNPS were detected. A review of literature, existing documentation, and geographic information systems (GIS) data was performed to evaluate the potential for special-status plant species to occur within the biological study area. Each special-status plant species was given a rating of not expected, low, medium, or high based on relative location to known occurrences, vegetation communities, soils, and elevation. Based on the results of the literature review and database searches, 37 special-status plant species were identified as previously occurring within the region. However, all of these species are not expected to occur within the biological study area based on the soils, current disturbance levels, vegetation communities (habitat) present, and elevation ranges of the project site. The complete results of this potential to occur evaluation for special-status plants are included as Appendix B-3 of this document. Further, there is no USFWS-designated critical habitat for listed plant species within the biological study area. Therefore, direct and indirect impacts to special-status plant species would be less than significant.

The surveys were not conducted during the peak bloom period for most flowering plants; however, special-status plant species would be unlikely to survive with the current amount of disturbance, non-native plant competition, and development already in place.

Wildlife Species

The project site is entirely restricted to non-natural vegetation communities and land covers. No wildlife species listed or proposed for listing as rare, threatened, or endangered by the USFWS or CDFW were detected within the biological study area during the surveys conducted in August and October 2017. A review of literature, existing documentation, and GIS data was performed to evaluate the potential for special-status wildlife species to occur within the biological study area. Each special-status wildlife species was given a rating of not expected, low, moderate, or high based on relative location to know occurrences, vegetation communities, and elevation.

Based on the results of the literature review and database searches, 52 special-status wildlife species were identified as occurring within the region. Two special-status wildlife species have at least a moderate potential to occur within the vicinity of the park: Cooper's hawk (*Accipiter cooperii*) and yellow warbler (*Setophaga petechia*). These species are not federally or state listed as endangered or threatened, but are afforded some level of sensitivity. Nesting Cooper's hawks are considered "watch list" species by the CDFW, and nesting yellow warblers are considered "species of special concern" by the CDFW. Although Cooper's hawks and yellow warblers are not expected to nest on site due to the limited availability of suitable nesting habitat, any disturbance to the existing landscape trees within the biological study area would

need to occur outside the nesting season to comply with the California Fish and Game Code and the Migratory Bird Treaty Act.

The nesting season generally occurs from February through August. If tree trimming or removal is deemed necessary during the nesting season, then all suitable nesting habitat should be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to project-related vegetation clearing. Typically, if an active nest is detected, then an appropriate avoidance buffer around the nest, as determined by a qualified biologist, is flagged and avoided until the nesting cycle is complete. With implementation of MM-BIO-1, potential impacts to nesting Cooper's hawks and yellow warblers from construction-related activities would be less than significant.

MM-BIO-1 To avoid potential impacts to nesting birds in conformance with the Migratory Bird Treaty Act and California Fish and Game Code, a qualified biologist shall conduct a nesting bird survey within 7 days of vegetation clearing, cutting, or removal activities during the breeding/nesting season for native birds. The survey would consist of full coverage of the proposed project footprint and an appropriate buffer, as determined by the biologist. If no occupied nests are found, no additional steps would be required. If nests are found being used for breeding or rearing young by a native bird, the nest locations shall be mapped by the biologist using Global Positioning System (GPS) equipment. The species of the nesting bird and, to the degree feasible, the nesting stage (e.g., incubation of eggs, feeding of young, near fledging) would be documented. The biologist may establish an avoidance buffer around occupied nests if there is a significant potential for take of the species or potential for inadvertent destruction of the nest. The buffer shall be determined by the biologist based on the species present, surrounding habitat, and existing environmental setting/level of disturbance. No construction or ground-disturbing activities would be conducted within the buffer until the biologist has determined that the nest is no longer being used for breeding or rearing and has informed the construction supervisor that activities may resume.

All other special-status wildlife species are not expected or were determined to have a low potential to occur within the biological study area based on the vegetation communities (habitat) present, elevation ranges, and proximity of previous California Natural Diversity Database occurrences to the project site. The complete results of this potential to occur evaluation for special-status wildlife are included as Appendix B-4 of this document. Additionally, there is no USFWS-designated critical habitat for listed wildlife species within

the biological study area. Therefore, with the incorporation of mitigation, direct and indirect impacts to special-status wildlife species would be less than significant.

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

No Impact. The project site is located entirely on disturbed/developed land. No natural vegetation communities are present within the impact footprint. There is no native riparian community associated with engineered portion of La Mirada Creek that occurs on the project site. Therefore, no impacts associated with riparian or sensitive vegetation communities would occur.

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

Less-Than-Significant Impact with Mitigation Incorporated. The proposed project includes the creation of a new, engineered stormwater drainage system. This system would primarily transport stormwater downstream through the use of stabilized, reinforced earthen channels. It is assumed that construction activities would encroach within the jurisdictional limits of La Mirada Creek. Any proposed discharge of "fill material" or "waste" into a regulated aquatic resource would require acquisition of Clean Water Act (Sections 404 and 401), California Fish and Game Code (Section 1602), and possibly Porter–Cologne Water Quality Act (Waste Discharge Requirements) permits from the respective regulatory agency.

To determine the extent of each agencies jurisdiction and any potential impacts, a formal delineation of wetlands, waters of the United States, and waters of the state is recommended. As a result, implementation of the proposed project could have potentially significant direct permanent and/or temporary impacts on non-wetland waters. Short-term and long-term indirect impacts to jurisdictional non-wetland waters relating to construction would not likely result in significant impacts. Significant impacts to jurisdictional non-wetland waters would be mitigated to less than significant through implementation of MM-BIO-2.

MM-BIO-2 Direct impacts to jurisdictional non-wetland waters shall be addressed through a combination of off-site and on-site measures. On-site measures

shall include regrading of areas temporarily impacted at a 1:1 ratio. Areas temporarily impacted shall be returned to conditions similar to those that existed prior to grading and/or ground-disturbing activities. Permanent impacts to jurisdictional non-wetland waters shall be replaced at a minimum ratio of 1:1. Direct permanent and temporary impacts to jurisdictional non-wetland waters shall be addressed through Section 401 and Section 404 of the Clean Water Act, the Porter–Cologne Water Quality Act, and Section 1602 of the California Fish and Game Code. Appropriate mitigation measures shall be determined based on the existing low-quality aquatic resources that occur at the project sites in consultation with the U.S. Army Corps of Engineers, RWQCB, and the CDFW.

The quality of the water discharged into the channel would still be consistent with water quality standards set forth by the state, and the composition of the flood control channel's water would not be adversely affected. Additionally, the proposed project would be subject to the typical restrictions (e.g., best management practices (BMPs)) and requirements that address erosion and runoff, including those of the Clean Water Act and National Pollutant Discharge Elimination System (NPDES) program. With implementation of these BMPs and potential permit conditions, potential impacts to jurisdictional non-wetland waters would be reduced to acceptable level of significance. Therefore, with the incorporation of mitigation, impacts associated with federally protected wetlands and waters of the United States and state would be less than significant.

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

Less-Than-Significant Impact with Mitigation Incorporated. The project site currently consists primarily of open space parkland and does not contain substantial physical linear barriers (e.g., long segments of chain link fence) that could impede wildlife movement. Thus, the project site could potentially facilitate movement of wildlife species. However, the proposed project would not include any physical linear improvements that could potentially hinder wildlife movement through the project site, particularly the movement of large mammals such as coyote or deer.

The park contains trees and shrubs that may be used by migratory birds for breeding. Direct impacts to migratory nesting birds must be avoided to comply with the Migratory Bird Treaty Act and California Fish and Game Code.

Although the project would be limited to disturbed or developed areas, removal of trees or other nesting habitat would occur as a result of project implementation. Therefore, direct impacts to nesting birds could occur if conducted during the nesting season (i.e., February through August). Additionally, indirect impacts to nesting birds from short-term, construction-related noise could result in decreased reproductive success or abandonment of a nesting habitat area during the nesting season. To avoid potential direct and indirect impacts to nesting birds during the nesting season, a qualified biologist would conduct a survey prior to any vegetation clearing, cutting, or removal activities and implement protective steps, as addressed in MM-BIO-1. Therefore, with incorporation of mitigation, impacts to nesting birds from construction-related activities would be less than significant.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The park contains several mature trees that have been planted and maintained for several years. The proposed project would include the removal of several of these ornamental trees. The City has adopted a Preservation, Protection, and Removal of Parkway Trees Ordinance (City of La Mirada Municipal Code Chapter 12.08) that affords protection to any tree planted and maintained by the City. It is unlawful to cut, trim, prune, plant, remove, injure, or interfere with any parkway tree or plant without a permit. Thus, it is anticipated that a tree removal permit would need to be obtained for the proposed project. It should be noted that all of the western sycamore trees within the park showed evidence of infestation and disease by invasive shot hole borers and, unfortunately, will likely experience declining health over the next few years as a result. Overall, the proposed project would comply with all applicable requirements set forth in the City's tree preservation ordinance regarding removal of ornamental trees. Therefore, no impacts associated with local policies or ordinances protecting biological resources would occur.

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

No Impact. The proposed project is not within any habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. As a result, implementation of the proposed project would not be in conflict with any such plans. Therefore, no impacts associates with adopted conversation plans would occur.

3.4.1 CEQA-Plus Evaluation

Federal Endangered Species Act, Section 7

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may affect federally listed threatened or endangered species that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

No. No federally listed plant or wildlife species have potential to occur on the project site due to the lack of suitable habitat. Construction activities would be restricted to existing developed/disturbed areas. There would be no removal of riparian vegetation or trees used for foraging or nesting birds. Therefore, no impacts, direct or indirect, would occur to any federally listed species.

Migratory Bird Treaty Act

Will the project affect protected migratory birds that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

Yes. The park contains trees and shrubs that may be used by migratory birds for breeding. Direct impacts to migratory nesting birds must be avoided to comply with the Migratory Bird Treaty Act and California Fish and Game Code.

Although the project would be limited to disturbed or developed areas, removal of trees or other nesting habitat would occur as a result of project implementation. Therefore, direct impacts to nesting birds could occur if conducted during the nesting season (i.e., February through August). Additionally, indirect impacts to nesting birds from short-term, construction-related noise could result in decreased reproductive success or abandonment of an area as nesting habitat if conducted during the nesting season. To avoid potential direct and indirect impacts to nesting birds during the nesting season, a qualified biologist would conduct a survey prior to any vegetation clearing, cutting, or removal activities and implement protective steps, as addressed in MM-BIO-1. Therefore, with incorporation of mitigation, impacts to nesting birds from construction-related activities would be less than significant.

Protection of Wetlands – Executive Order Number 11990

Does any portion of the project area contain areas that should be evaluated for wetland delineation or require a permit from ACOE?

Yes. The proposed project includes the creation of a new, engineered stormwater drainage system. This system would primarily transport stormwater downstream through the use of stabilized, reinforced earthen channels. It is assumed that construction activities would encroach within the jurisdictional limits of La Mirada Creek. Any proposed discharge of "fill material" or "waste" into a regulated aquatic resource would require acquisition of Clean Water Act (Sections 404 and 401), California Fish and Game Code (Section 1602), and possibly Porter–Cologne Water Quality Act (Waste Discharge Requirements) permits from the respective regulatory agency.

Implementation of the proposed project could have potentially significant direct permanent and/or temporary impacts on non-wetland waters. Short-term and long-term indirect impacts to jurisdictional non-wetland waters relating to construction would not likely result in significant impacts. Significant impacts to jurisdictional non-wetland waters would be mitigated to less than significant through implementation of MM-BIO-2, previously described.

		Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
V.	**CULTURAL RESOURCES** – Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	☐	☐	☒	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☒	☐	☐
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

3.5 Cultural Resources

The following analysis is based on the Cultural Resources Records Search and Pedestrian Field Survey prepared by DUKE CRM and included as Appendix C.

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

Less-Than-Significant Impact. The Cultural Resources Records Search and Pedestrian Field Survey (Appendix C) involved a records search at the South Central Coastal Information Center. The South Central Coastal Information Center records search included a review of all recorded historic and prehistoric archaeological sites within a 1-mile radius of the project site. In addition, the California State Historic Property Data File was reviewed, which includes the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks, and California Points of Historical Interest.

Historical aerial photographs were reviewed to understand development of the project site and surrounding properties. The amphitheater seating at the east end of the project site was constructed from 1963–1972, two of the check dams appear in the 1963 photographs, and the remaining three check dams appear in the 1972 photographs. Some of the check dams appear to have been altered at some time from 1963–1972, and all the check dams appear to have been heavily altered from 1994–2003. A review of historical topographic maps dating back to 1896 showed that there were no existing structures on the project site prior to the building of the check dams and amphitheater area.

A pedestrian field survey of La Mirada Creek Park was conducted on September 21, 2017. Care was taken to document the check dams, footbridges, stacked rock walls, and amphitheater, as they were potential historic resources due to their age.

Pursuant to CEQA Guidelines, Section 15064.5(a)(3), a resource may be considered to be "historically significant" by the lead agency if the resource meets the criteria for listing. A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following NRHP criteria (California PRC, 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.

In addition to meeting one or more of the previously outlined criteria, the CRHR requires that sufficient time has passed to understand its historical importance. Fifty years is used as a general estimate of time needed to develop the perspective to understand the resource's significance (CCR 4852 (d)(2)).

Despite their age, the existing La Mirada Creek Park, check dams, amphitheater, rock walls, and foot bridges were found not eligible for listing in the NRHP or CRHR (see Appendix C). Therefore, none of the buildings or structures on the project site are considered historical resources as defined by CEQA Guidelines Section 15064.5(a). Impacts associated with historic resources would be less than significant.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Less-Than-Significant Impact with Mitigation Incorporated. The record search from the South Central Coastal Information Center indicated that 20 cultural resources studies have been conducted within a 1-mile search radius and four studies have been conducted within a 0.5-mile search radius. The four studies that have been conducted within 0.5 miles of the project indicated there is one recorded historic resource and two unrecorded prehistoric isolates within a 1-mile radius of the project site. However, none of these studies found evidence of the presence of prehistoric cultural resources within the proposed project site. The historic resource is an athletic track and field at Lowell High School, located approximately 0.5 miles east of the project site. The athletic track, evaluated within a cultural resources study, was determined ineligible for listing in the NRHP. The closest recorded prehistoric resource is CA-ORA-572, located 1.75 miles southeast of the project site.

No archaeological resources were located on the surface within the La Mirada Creek Park. Soils within the project site have been previously disturbed by extensive grading and/or filling, and if undisturbed soils exist within the project site, they are likely at a depth of at least 6 feet below present surface along the La Mirada Creek channel. Depth of prior disturbance in the remainder of the park is unknown but likely similar based on observations of exposed surficial soils that match the color, texture, and gravel content of the lowest levels of the creek channel exposures. Thus, the sensitivity for cultural

resources within the project site is considered low due to the prior ground disturbances and alterations to structures. Due to the disturbed nature of the project site soils, the probability of encountering artifacts or historical material in a primary context is low. Notwithstanding, there is still a possibility of subsurface cultural deposits existing in undisturbed soils, since it is always possible that intact archaeological deposits are present at subsurface levels in the project region. For this reason, the project site should be treated as potentially sensitive for archaeological resources. Therefore, MM-CUL-1 is recommended to reduce potential impacts to unanticipated archaeological resources to less than significant.

MM-CUL-1 If archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending on the significance of the find under the California Environmental Quality Act (CEQA) (14 California Code of Regulations Section 15064.5(f); California PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan and data recovery, may be warranted.

With incorporation of mitigation, impacts associated with archaeological resources would be less than significant.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-Than-Significant Impact with Mitigation Incorporated. On September 22, 2017, a search was performed of the online Paleobiology Database and other published literature for fossil localities in or near the project site. According to this search, the closest fossil localities to the project site are to the south and in the Coyote Hills to the east. The fossil locality to the south produced fossil material from large and small terrestrial mammals, birds, and reptiles, and fish at a depth of approximately 14 feet below ground surface. The fossil locality in the Coyote Hills to the east produced marine invertebrates at a depth of approximately 10–15 feet below ground surface (Appendix C).

No paleontological resources were identified within the project area as a result of the Paleobiology Database search and literature review. The surface sediments in the project site have a low sensitivity in shallower levels. However, given the proximity of fossil localities and the potential to transition at depth into fossiliferous Pleistocene deposits, the project site is considered highly sensitive at depth to for supporting paleontological resources. Considering the depths of the fossil finds in nearby localities, this transition to high sensitivity would likely occur at approximately 10 feet below ground surface.

The proposed project is not expected to exceed 10 feet in depth during ground-disturbance activities, and thus, sediments of high paleontological sensitivity are not expected to be impacted. However, if paleontological resources are encountered during earth-moving activity, work shall be halted in that area until a qualified paleontologist can assess the significance of the find. As such, implementation of MM-CUL-2 would be required to ensure that subsurface construction activity complies with the standard procedures for treatment of unanticipated discoveries of paleontological resources.

MM-CUL-2 In the event that paleontological resources (fossil remains) are exposed during construction activities for the proposed project, all construction work occurring within 50 feet of the find shall immediately stop until a qualified paleontologist, as defined by the Society of Vertebrate Paleontology's 2010 guidelines, can assess the nature and importance of the find. Depending on the significance of the find, the qualified paleontologist may record the find and allow work to continue, or may recommend salvage and recovery of the resource. All recommendations will be made in accordance with the Society of Vertebrate Paleontology's 2010 guidelines, and shall be subject to review and approval by the City of La Mirada. Work in the area of the find may only resume upon approval of a qualified paleontologist.

With incorporation of MM-CUL-2, impacts associated with paleontological resources would be less than significant.

d) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less-Than-Significant Impact. As previously discussed, there are no previously recorded cultural resources on the project site. However, if human remains are discovered during ground-disturbing activities, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner

has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be immediately notified of the discovery. If the County Coroner determines that the remains are, or are believed to be, Native American, he or she must notify the NAHC in Sacramento within 24 hours. In accordance with PRC Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant of the deceased Native American. The most likely descendant must complete his or her inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition for the human remains. Therefore, based on compliance with state requirements, impacts associated with the discovery of human remains would be less than significant.

3.5.1 CEQA-Plus Evaluation

National Historic Preservation Act, Section 106

Identify the APE, including construction, staging areas, and depth of any excavation. (Note that the APE is three-dimensional and includes all areas that may be affected by the project, including the surface area and extending belowground to the depth of any project excavations.)

The area of potential effect (APE) includes the area where rehabilitation and naturalization of the existing La Mirada Creek, plus associated on-site improvements throughout the boundaries of the existing La Mirada Creek, would occur (see Figure 2 in Appendix C for the limits of the proposed project's APE). Construction of the proposed project would be located within the confines of the existing Creek Park, and as such, no expansion beyond the existing park boundaries is required. Project-related ground disturbance is expected to be relatively shallow, no more than 5 feet in depth. Soils within the project site have been previously disturbed by extensive grading and/or filling, and if undisturbed soils exist within the project site, they are likely at a depth of at least 6 feet below present surface along the La Mirada Creek channel. However, a few locations related to the check dams and creek channel are planned to reach 10 feet in depth.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VI. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
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 soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

3.6 Geology and Soils

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

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

No Impact. According to the Earthquake Zones of Required Investigation map for the La Habra Quadrangle, the project site is not located within an Earthquake Fault Zone (CGS 1999). The nearest delineated Earthquake Fault Zone is associated with the Whittier Fault Line and located approximately 3 miles north of the project site. Based on this distance, the project site would not be subject to surface rupture associated with this earthquake fault. Therefore, no impacts associated with rupture of a known earthquake fault would occur.

ii) Strong seismic ground shaking?

Less-Than-Significant Impact. Similar to other projects in the greater Southern California region, the project site would be susceptible to strong seismic ground shaking during earthquakes. However, the proposed project does not include any residential or habitable structures. Park patrons would be expected to visit the project site for a maximum of few hours at a time, which, compared with other projects that encourage people to remain on site over a longer duration, would reduce the potential for substantial adverse effects related to loss, injury, or death in the event of an earthquake. Additionally, the proposed project would be designed and constructed to meet all applicable seismic requirements set forth by the current CBC, which would help to maintain structural integrity in the event of an earthquake. Compliance with all applicable state and local requirements would reduce potential of substantial adverse impacts resulting from an earthquake. Therefore, impacts associated with Strong seismic ground shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less-Than-Significant Impact. Liquefaction is typified by a buildup of pore water pressure in the affected soil layer to a point where a total loss of shear strength may occur during a seismic event, causing the soil to behave as a liquid. Liquefaction

primarily occurs in loose, saturated, granular soils. Cohesive soils, such as silty clays and clays, are generally not considered susceptible to soil liquefaction.

The Earthquake Zones of Required Investigation map for the La Habra Quadrangle, the project site is located within an area susceptible to liquefaction (CGS 1998). According to this map, a liquefaction zone runs along La Mirada Creek. However, as previously discussed, the proposed project would be designed and constructed to meet all applicable seismic requirements set forth by the current CBC, which would help to maintain structural integrity regardless of the characteristic of the underlying soils. Therefore, impacts associated with liquefaction would be less than significant.

iv) Landslides?

Less-Than-Significant Impact. Per the Earthquake Zones of Required Investigation map for the La Habra Quadrangle, the project site is located within an area susceptible to earthquake-induced landslide (CGS 1998). The nearest landslide-zone to the project site is located approximately 2.6 miles north in the foothill region of the City of Whittier. Due to the relatively large distance between the project site and the earthquake-induced landslide zone, and because the proposed project would not introduce any residential or habitable structures, there would be reduced potential of substantial adverse impacts resulting from a landslide. Therefore, impacts associated with landslides would be less than significant.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Short-Term Construction

Less-Than-Significant Impact. Construction associated with the proposed project would involve earthwork and other construction activities that would disturb soil. Soil erosion could result from such construction activities, thereby potentially affecting the water quality of local downstream waterways.

Since proposed project construction activities would disturb 1 acre or more, the proposed project must adhere to the provisions of the incumbent version of the NPDES Construction General Permit. Construction activities subject to this permit include clearing, grading, and ground disturbances such as stockpiling and excavating. The Construction General Permit requires implementation of a stormwater pollution prevention plan (SWPPP), which would include construction features for the proposed project designed to prevent erosion and protect the quality of stormwater runoff, known

as BMPs. Sediment-control BMPs may include stabilized construction entrances, straw wattles on earthen embankments, sediment filters on existing inlets, or the equivalent.

The preparation, implementation, and participation with both the NPDES General Permit and the Construction General Permit, including the SWPPP and BMPs, would reduce project construction effects on erosion to acceptable levels. Therefore, short-term construction impacts associated with erosion would be less than significant.

Long-Term Operational Impacts

Less-Than-Significant Impact. The project site is currently developed and surfaced with turf, mature trees, and paved areas (e.g., pedestrian pathways and parking lots). Collectively, these surfaces help to stabilize and retain soils on the project site while preventing erosion from occurring. Following implementation of the proposed project, these surfaces would largely remain on the project site, continuing to stabilize and retain topsoil. Therefore, impacts associated with substantial soil erosion or loss of topsoil would be less than significant.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less-Than-Significant Impact. The proposed project is located within a liquefaction zone. However, as previously discussed, the proposed project would be designed and constructed to meet all applicable seismic requirements set forth by the current CBC, which would help to maintain structural integrity regardless of the characteristic of the underlying soils. Therefore, impacts associated with liquefaction and unstable geologic units and soils would be less than significant.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less-Than-Significant Impact. Expansive soils are characterized by their potential shrink/swell behavior. Shrink/swell is the cyclic change in volume (expansion and contraction) that occurs in certain fine-grained clay sediments from the process of wetting and drying. Clay minerals are known to expand with changes in moisture content. The higher the percentage of expansive minerals present in near surface soils, the higher the potential for substantial expansion.

According to the U.S. Department of Agricultural Web Soil Survey, the project site is identified as Cropley-Urban soil with 0%–5% slope. The Cropley series soil are found on alluvial fans and floodplains and typically consist of clay loam (USDA 2017). Thus, due to the clay materials within the underlying soils, the project site is considered to be located on expansive soils. Notwithstanding, the proposed project would be designed and constructed to meet all applicable seismic requirements set forth by the current CBC, which would help to maintain structural integrity regardless of the characteristic of the underlying soils. Therefore, impacts associated with expansive soils would be less than significant.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. Similar to the existing restroom facilities, the proposed restrooms would connect to the municipal sewer system. The proposed project would not require septic tanks or similar alternative wastewater disposal systems. Therefore, no impacts associated with the underlying soils' capability to support septic tanks would occur.

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

3.7 Greenhouse Gas Emissions

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

Less-Than-Significant Impact. Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer). Gases that trap heat in the atmosphere are often called GHGs. The greenhouse effect traps heat in the troposphere through a threefold process: (1) short-wave radiation emitted by the Sun is absorbed by the Earth, (2) the Earth emits a portion

of this energy in the form of long-wave radiation, and (3) GHGs in the upper atmosphere absorb this long-wave radiation and emit this long-wave radiation into space and back toward the Earth. This trapping of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

Principal GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide, O_3, and water vapor. Some GHGs, such as CO_2, CH_4, and nitrous oxide, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely byproducts of fossil-fuel combustion, whereas CH_4 results mostly from off-gassing associated with agricultural practices and landfills. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride, which are associated with certain industrial products and processes (CAT 2006).

The SCAQMD has not adopted recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects. In October 2008, SCAQMD presented to the Governing Board the *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (2008). The guidance document was not adopted or approved by the Governing Board. This document, which builds on the previous guidance prepared by the California Air Pollution Control Officers Association, explored various approaches for establishing a significance threshold for GHG emissions.

The SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. In December 2008, the SCAQMD adopted an interim 10,000 metric tons (MT) of carbon dioxide equivalent (CO_2e) per year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency. From December 2008 to September 2010, the SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The SCAQMD has continued to consider adoption of significance thresholds for residential and general land use development projects.

The most recent proposal, issued in September 2010, uses the following tiered approach to evaluate potential GHG impacts from various uses (SCAQMD 2010):

Tier 3 Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 MT CO_2e per year threshold for industrial uses would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e per year), commercial projects (1,400 MT CO_2e per year), and mixed-use projects (3,000 MT CO_2e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO_2e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.

The recommended SCAQMD threshold applied to the proposed project is the 3,000 MT CO_2e per year for all non-industrial projects. It should be noted that the SCAQMD does not have a construction-only significance threshold for GHGs. Per the SCAQMD guidance, construction emissions should be amortized over the operational life of the project, which is assumed to be 30 years for typical projects (SCAQMD 2008). This impact analysis, therefore, amortizes construction emissions over 30 years and compares the emissions to the SCAQMD operational threshold of 3,000 MT CO_2e per year.

Construction. Construction of the proposed project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road vendor (material delivery) and haul trucks, and worker vehicles. Since the SCAQMD has not established construction-phase GHG thresholds, construction GHG emissions were amortized assuming a 30-year development life after completion of construction and were compared to the 3,000 MT CO_2e per year operational GHG threshold.

Appendix A provides a detailed depiction of the construction schedule, including information regarding phasing, equipment utilized during each phase, vendor trucks, and worker vehicles. The estimated project-generated GHG emissions from construction activities are shown in Table 5.

Table 5
Estimated Annual Construction Greenhouse Gas Emissions

	CO_2	CH_4	N_2O	CO_2e
	metric tons per year			
2018	46.14	0.01	0.00	46.44

Table 5
Estimated Annual Construction Greenhouse Gas Emissions

	CO_2	CH_4	N_2O	CO_2e
	metric tons per year			
2019	21.16	0.01	0.00	21.30
Total Project Emissions	**67.30**	**0.02**	**0.00**	**67.74**
Annualized Emissions over 30 Years	—	—	—	***2.26***
SCAQMD Threshold	—	—	—	*3,000*
Exceed Threshold	—	—	—	***No***

Notes:
CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.
See Appendix A for complete results.

Operation. Long-term operation of the proposed project would result in minimal additional vehicle trips to the existing park. The main source of emissions from operation of the proposed project would include motor vehicle emissions generated by visitors and maintenance of the park facilities. While the proposed project could increase parking capacity at the park resulting in a minor increase in mobile emissions, operational activities resulting from the proposed project would be less intensive (i.e., less vehicles and equipment operation) than assumed for the project's construction scenario; amortized GHG emissions associated with proposed project construction would result in annualized generation of approximately 2 MT CO_2e. Accordingly, operational emissions are anticipated to be minimal and would be less than significant.

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

Less-Than-Significant Impact. The Scoping Plan, approved by CARB on December 12, 2008, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Relatedly, in the Final Statement of Reasons for the Amendments to the CEQA Guidelines, the CNRA observed that "[t]he [Scoping Plan] may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures

identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-global warming potential GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., low-carbon fuel standard), among others, which may not be directly applicable to the proposed project. However, to the extent that these regulations are applicable to the proposed project, the proposed project would comply will all regulations adopted in furtherance of the Scoping Plan to the extent required by law.

Regarding consistency with Senate Bill 32 (goal of reducing GHG emissions to 40% below 1990 levels by 2030) and Executive Order S-3-05 (goal of reducing GHG emissions to 80% below 1990 levels by 2050), there are no established protocols or thresholds of significance for that future-year analysis. However, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014). In addition, the proposed project would not interfere with implementation of any of the previously described GHG reduction goals for 2030 or 2050 because—as evidenced previously—the proposed project's amortized GHG emissions of approximately 2 MT CO_2E would be substantially lower than the recommend SCAQMD significance threshold of 3,000 MT CO_2E. Therefore, the proposed project would not conflict with the state's trajectory toward future GHG reductions, and the proposed project's impacts on GHG emissions in the 2030 and 2050 horizon years would be less than significant.

Based on the preceding considerations, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and no additional mitigation is required. The impact is less than significant**.**

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

3.8 Hazards and Hazardous Materials

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

Short-Term Construction Impacts

Less-Than-Significant Impact. During the construction of the proposed project, hazardous or potentially hazardous materials would be handled, transported, used, and disposed of both on and off the project site. These materials include gasoline, diesel fuel, lubricants, and other petroleum-based products used to operate and maintain construction equipment and vehicles. The transporting, use, and disposal of hazardous materials would be temporary in duration and would coincide with short-term construction activities on the project site. Hazardous materials associated with operation and maintenance of

construction equipment and vehicles would be securely stored in the construction staging area within the project site, with only the required amounts of these materials being stored on site. The actual quantity of hazardous or potentially hazardous materials permitted to be stored on the project site would be determined by (1) the individual hazardous characteristics of the material; (2) manufacturer guidelines; (3) and the applicable federal, state, and local regulations.

Any transport, use, or disposal of hazardous materials would comply with all applicable local and state regulations such as the U.S. Environmental Protection Agency (EPA), the California Department of Resources Recycling and Recovery, and the Los Angeles County Certified Unified Program Agencies. Therefore, short-term impacts associated with routine transport, use, or disposal of hazardous materials will be less than significant.

Long-Term Operational Impacts

Less-Than-Significant Impact. The use of hazardous materials for operations and maintenance of the proposed project would likely include household cleaning products, paints, and fertilizers. Many of these hazardous materials would be considered universal wastes, which are generally defined as hazardous wastes common to businesses and households that pose a lower risk to people and the environment than other hazardous wastes (EPA 2017). Federal and state regulations allow universal wastes to be handled and disposed of with less stringent standards than other hazardous wastes, and these wastes typically do not have to be managed as hazardous waste. The actual quantity of hazardous materials permitted to be stored on the project site would be determined by (1) the individual hazardous characteristics of the material; (2) manufacturer guidelines; (3) and the applicable federal, state, and local regulations. Therefore, long-term operational impacts associated with routine transport, use, or disposal of hazardous materials would be less than significant.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less-Than-Significant Impact. Refer to response provided in Section 3.8(a).

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less-Than-Significant Impact. The project site is located within 0.25 miles of Heights Christian Schools-La Mirada (12200 Oxford Drive), which is approximately 500 feet south of the project site. However, as previously discussed, the proposed project would not involve the storage, handling, or disposal of substantial quantities of hazardous materials that would pose a significant health and safety risk to the public. Therefore, impacts associated with emitting or handling hazardous materials within 0.25 miles of a school will be a less than significant.

d) Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. Pursuant to CEQA, the California Department of Toxic Substances Control maintains a Hazardous Waste and Substances Sites List (Cortese List). Government Code Section 65962.5(a) requires the list be updated at least annually to reflect new information regarding previously listed sites or new sites requiring response action (CalEPA 2017). Before placing a site on the backlog, Department of Toxic Substances Control ensures that all necessary actions have been taken to protect the public and environment from any immediate hazard posed by the site. A review of the Cortese List indicates that the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impacts associated with hazardous materials site would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The nearest airport to the project site is the Fullerton Municipal Airport, which is located approximately 3.5 miles southeast of the project site. According to the Airport Land Use Commission Airport Planning Area map for this airport, the proposed project is located outside of any impact zone around the airport (ALUC 2004). Therefore, no impacts associated with public airport hazards would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. There are no private airstrips located in the project vicinity. Therefore, no impacts associated with private airstrip hazards would occur.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. Implementation of the proposed project would not interfere with existing roadways and would not substantially affect vehicular circulation in the project area. There may be an increase in park patrons upon completion of proposed project; however, the additional trips generated would be nominal and would not affect local vehicular circulation on adjacent streets that may serve as emergency response or evacuation routes. As such, the proposed project would not impede emergency vehicle circulation in the surrounding area. Therefore, no impacts associated with emergency evacuation response would occur.

h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less-Than-Significant Impact. Much of the land surrounding the project site is highly developed, and as a whole, the project area lacks any lands considered wildlands or wildland–urban interfaces. According to the California Department of Forestry and Fire Protection's Fire Hazard Severity Zones maps, the project site is neither moderately, highly, or very highly susceptible to wildland fire (CAL FIRE 2007). Therefore, impacts associated with wildland fires would be less than significant.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

3.9 Hydrology and Water Quality

a) Would the project violate any water quality standards or waste discharge requirements?

Short-Term Construction Impacts

Less-Than-Significant Impact. Construction associated with the proposed project would involve earthwork and other construction activities that would disturb soil. Soil erosion

could result from such construction activities, thereby potentially affecting the water quality of local downstream waterways.

Since proposed project construction activities would disturb 1 acre or more, the proposed project must adhere to the provisions of the incumbent version of the NPDES Construction General Permit. Construction activities subject to this permit include clearing, grading, and ground disturbances such as stockpiling and excavating. The Construction General Permit requires implementation of a stormwater pollution prevention plan (SWPPP), which would include construction features for the proposed project designed to prevent erosion and protect the quality of stormwater runoff, known as BMPs. Sediment-control BMPs may include stabilized construction entrances, straw wattles on earthen embankments, sediment filters on existing inlets, or the equivalent.

The preparation, implementation, and participation with both the NPDES General Permit and the Construction General Permit, including the SWPPP and BMPs, would reduce project construction effects on erosion to acceptable levels. Therefore, short-term construction impacts associated with water quality standards would be less than significant.

Long-Term Operational Impacts

Less-Than-Significant Impact. Over the years, many vertical feet of silt have been deposited along the edges of La Mirada Creek, creating a vertical grade on each side of the existing concrete channel. As a result, the creek, whose primary purpose is floodwater conveyance, has experienced a reduction in flow capacity and, during infrequent large storm events, heavy on-site and off-site flooding.

The proposed project seeks to rehabilitate and naturalize the La Mirada Creek to balance flood conveyance through the creek. Since Creek Park would continue to serve as a flood control channel, it is expect that park would still flood during storm events exceeding an approximate 1-year storm. However, the proposed improvements would better control floodwaters by altering the existing La Mirada Creek so that flooding occurs in a more predictable and controllable fashion compared with the existing conditions.

Additionally, the proposed project would not change the quantity of stormwater currently being conveyed via La Mirada Creek, but should alter the velocity that the stormwater is conveyed through Creek Park. By reducing the velocity of the stormwater, erosion and scour impacts would also be minimized, especially when compared with the existing conditions. Further, certain locations along the creek's banks would be strategically terraced to allow for floodwaters to spread out more evenly throughout the park. Like

other parts of the park, these terraced areas would include landscaping and other structural improvements designed to withstand the design flood velocity.

Overall, following implementation of the proposed project, La Mirada Creek would continue to operate as a flood control facility. The proposed project would not alter the makeup of the stormwater conveyed through the project site and would continue to comply with all applicable water quality standards. Therefore, long-term operational impacts associated with water quality standards would be less than significant.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Groundwater Supplies

Less-Than-Significant Impact. Domestic water service is provided in the project area by Suburban Water Systems (Suburban). Suburban's water supply comes from 80% groundwater and the rest from surface water sources. Groundwater supplies are pumped from local wells located in the San Gabriel and Central Basins containing 8.6 million acre-feet and 13 million acre-feet of water, respectively. Surface water is supplied through the Metropolitan Water District of Southern California (Metropolitan), which imports water via aqueducts from Northern California and the Colorado River (Suburban Water Systems 2017).

Under the existing conditions, the domestic water needs with Suburban's service area have been adequately met by existing supplies. Along with Metropolitan's initiatives, water suppliers relying on the San Gabriel and Central Basins have taken steps to reduce vulnerability to extended droughts through recycled water programs, conservation devices, and education. In addition, groundwater pumpers in the area created the Water Replenishment District of Southern California (WRD), which manages replenishment of the groundwater basin. The WRD has the responsibility to manage, regulate, replenish, and protect the quality of groundwater supplies (Central Basin Municipal Water District 2005).

The proposed project would continue to have a similar, if not reduced, water demand as the current Creek Park, due largely to the use of a more water-efficient plant palette and the installation of a new irrigation system. As such, although a portion of the water used by the proposed project would be comprised of groundwater, given that Suburban would be able to continue to serve the water needs of the project site along with the remainder

of its service area, the proposed project would not adversely affect groundwater supplies. Therefore, impacts associated with groundwater supplies would less than significant.

Groundwater Recharge

Less-Than-Significant Impact. Compared with the existing conditions, the proposed project would include a similar amount of pervious surfaces on the project site. The project site would still predominately consist of pervious areas, including natural turf and landscaping. These pervious areas will promote retention of stormwater runoff, allowing percolation of these waters into subsurface soils and eventually the aquifer below. Additionally, the naturalization of La Mirada Creek would potentially allow for more on-site recharge, as impervious paved segments of the channel would be replaced with engineered pervious reached of the creek. Therefore, impacts associated with groundwater recharge would be less than significant.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Less-Than-Significant Impact. The proposed project would not change the quantity of stormwater currently being conveyed via La Mirada Creek, but should alter the velocity that the stormwater is conveyed through Creek Park. By reducing the velocity of the stormwater, erosion and scour impacts would also be minimized, especially when compared with the existing conditions. Further, certain locations along the creek's banks would be strategically terraced to allow for floodwaters to spread out more evenly throughout the park. Like other parts of the park, these terraced areas would include landscaping and other structural improvements designed to withstand the design flood velocity. Therefore, impacts associated with altering existing drainage patterns and on- or off-site erosion or siltation would be less than significant.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less-Than-Significant Impact. The proposed project seeks to rehabilitate and naturalize the La Mirada Creek to balance flood conveyance through the creek. Since Creek Park would continue to serve as a flood control channel, it is expected that the park would still flood during storm events exceeding an approximate 1-year storm. However, the

proposed improvements would better control floodwaters by altering the existing La Mirada Creek so that flooding occurs in a more predictable and controllable fashion compared with the existing conditions. Therefore, impacts associated with altering existing drainage patterns and flooding would be less than significant.

e) Would the project 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?

Less-Than-Significant Impact. Refer to response provided in Section 3.9 (a).

f) Would the project otherwise substantially degrade water quality?

Less-Than-Significant Impact. Refer to response provided in Section 3.9 (a).

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Panels No. 06037C1842F and 06037C1861F, the project site is not located within a 100-year flood zone. The project site is located in Zone X, area of minimal flood hazard (FEMA 2017). Additionally, the proposed project does not involve the construction of housing. Therefore, no impacts associated with placing housing within a 100-year flood hazard area would occur.

h) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. As previously addressed, the project site is not located within a 100-year flood hazard zone. In addition, the project does not propose the construction of any structures that would impede or redirect flood flows. Therefore, no impacts associated with structures within a 100-year flood hazard area would occur.

i) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less-Than-Significant Impact. There are no levees or dams adjacent to or within the immediate project area. The project site is located approximately 5 miles northeast of the Brea Dam. The Brea Dam is located in the City of Fullerton and was constructed to

provide flood risk protection for the San Gabriel River Basin in Orange County. Due to the distance between Brea Dam and the project site, in the highly unlikely event of dam failure, floodwaters would not be expected to inundate the project site to the extent that adverse effects are experienced.

Additionally, the proposed project seeks to rehabilitate and naturalize the La Mirada Creek to balance flood conveyance through the creek. Since Creek Park would continue to serve as a flood control channel, it is expected that the park would still flood during storm events exceeding an approximate 1-year storm. However, the proposed improvements would better control floodwaters by altering the existing La Mirada Creek so that flooding occurs in a more predictable and controllable fashion compared with the existing conditions. Therefore, impacts associated with flooding would be less than significant.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. The proposed project is unlikely susceptible to seiche, tsunami, or mudflow. Seiche is generally associated with oscillation of enclosed bodies of water typically caused by ground shaking associated with a seismic event. The project site is not located near an enclosed body of water. Flooding from tsunami conditions is not expected, as the project site is located approximately 14 miles from the Pacific Ocean. Additionally, the project site and surrounding area are largely developed and generally lack the characteristics typically associated with mudflows such as unvegetated hillsides. Therefore, no impacts associated with seiche, tsunami, or mudflow would occur.

3.9.1 CEQA-Plus Evaluation

Floodplain Management – Executive Order Number 11988

Is any portion of the project site located within a 100-year floodplain as depicted on a floodplain map or otherwise designated by FEMA?

No. According to the FEMA Flood Insurance Rate Map Panels No. 06037C1842F and 06037C1861F, the project site is not located within a 100-year flood zone.

Wild and Scenic Rivers Act

Is any portion of the project located within a wild and scenic river?

No. No wild and scenic river is located in the broader project area, and thus, the proposed project would not impact a wild and scenic river.

Identify watershed where the project is located.

San Gabriel River Watershed.

		Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
X.	**LAND USE AND PLANNING** – Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

3.10 Land Use and Planning

a) Would the project physically divide an established community?

No Impact. The physical division of an established community typically refers to the construction of a linear feature (such as a major highway or railroad tracks) or removal of access (such as a local road or bridge) that would impair mobility within an existing community and outlying area. Under the existing conditions, Creek Park allows local park patrons to access the residential area the surround the project site. Upon completion of the proposed project, local residents would still be able to use Creek Park to access that same residential areas that they can access under the existing conditions. Therefore, no impacts associated with physical division of an established community would occur.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The current General Plan land use designation for Creek Park is Parks and Open Space (City of La Mirada 2003). The current zoning for the site is Open Space (OS) Flood Hazard Overlay District (City of La Mirada 2012).

The City of La Mirada General Plan Land Use Element states that all public parks and City-owned and Los Angeles County-owned recreational facilities are included in the Parks and Open Space land use category, and active recreational parks represent the primary permitted use. Additionally, according to Section 21.24.010 of the City's Zoning Ordinance, the purpose of the OS zone is to provide "areas for recreational activity and open space needs, including open space for flood control purposes, cemeteries, and passive recreation. This district allows for recreational development of land and necessary public facilities, including schools." Table 21.24.020 identifies "public park" as a permitted use in the OS zone.

The proposed project involves the rehabilitation and naturalization of the existing Creek Park through implementation of the La Mirada Creek Park Master Plan (Master Plan). The Master Plan involves reconfiguring La Mirada Creek to return the flood flows to more natural patterns, upgrading park amenities integrated within the existing park facilities, reconstructing the five wooden bridges, and relocating and expanding restrooms. As such, the proposed project, similar to the existing Creek Park, would be consistent with the purpose of both the Parks and Open Space land use designation and the OS zone, as previously outlined. Therefore, no impacts associated with applicable land use plans, policies, and regulations would occur.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed project is not within any habitat conservation plan; natural community conservation plan; or other approved local, regional, or state habitat conservation plan. As a result, implementation of the proposed project would not be in conflict with any such plans. Therefore, no impacts associates with adopted conversation plans would occur.

3.10.1 CEQA-Plus Evaluation

Coastal Zone Management Act

Is any portion of the project site located within the coastal zone?

No. The project site is located approximately 14 miles east of the Pacific Ocean, and thus, the proposed project would not be within the coastal zone.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XI. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

3.11 Mineral Resources

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The California Department of Conservation, Division of Mines and Geology identified significant mineral resources within the Los Angeles Metropolitan Area. According to Figure 9.6 in the County of Los Angeles General Plan, the project site is not located near any Mineral Resource Zones (County of Los Angeles 2014). The nearest mineral resources are located in the northern portion of Los Angeles County approximately 8 miles north of the project site. Therefore, no impacts associated with loss of availability of mineral resources would occur.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. As previously discussed, the proposed project is not located on or within an area of known mineral resources. No mineral extraction activities occur on or adjacent to the proposed project site, and no known locally important mineral resources are present on site. Therefore, no impacts associated with the loss of availability of a locally important mineral resource recovery site would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XII. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.12 Noise

a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less-Than-Significant Impact with Mitigation Incorporated. Construction noise is considered a short-term impact and would be considered significant if construction activities exceed the allowable hours of operation, as permitted by the City, and/or the permissible limit. Existing residential uses surrounding the project site may be affected by short-term noise impacts associated with construction activities and the transport of construction workers and the movement of construction materials to and from the project site.

Project-generated construction noise would vary depending on the construction process, the type of equipment involved, the location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of

the week), and the duration of the construction work. Grading is expected to produce the highest sustained construction noise levels.

Typical noise sources and noise levels associated with construction are shown in Table 6. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 to 4 minutes at lower power settings. A likely worst-case construction noise scenario assuming the use of this equipment was calculated using the Federal Highway Administration's Roadway Construction Noise Model (FHWA 2017), assuming the use of a grader, a dozer, two excavators, two backhoes, and a scraper operating at 100 feet from the nearest noise-sensitive receptor.

Assuming a usage factor of 40% for each piece of equipment, unmitigated noise levels at 100 feet would reach up to 83 A-weighted decibels (dBA) equivalent sound level over a given period (L_{eq}) and 85 dBA maximum sound level (L_{max}) at the nearest noise-sensitive receptor during grading. Noise levels for the other construction phases would be lower and range between 78 to 79 dBA.

Table 6
Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA at 50 feet)
Rock Drills	83–99	96
Jackhammers	75–85	82
Pneumatic Tools	78–88	85
Pumps	74–84	80
Dozers	77–90	85
Scrapers	83–91	87
Haul Trucks	83–94	88
Cranes	79–86	82
Portable Generators	71–87	80
Rollers	75–82	80
Tractors	77–82	80
Front-End Loaders	77–90	86
Hydraulic Excavators	81–90	86
Graders	79–89	86
Air Compressors	76–89	86
Trucks	81–87	86

Source: FTA 2006
Notes: dBA = A-weighted decibel

Construction noise would cause a temporary, periodic increase in the ambient noise levels above the existing levels within the project vicinity.

Section 9.04.010(b)(4) of the City's Municipal Code prohibits "construction or repair work of any kind upon, or excavating for, any building or structure, where any such work entails the use of…..any other machine, tool, device, or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in a dwelling, hotel, or apartment or other place of residence" on any Sunday or any other day between the hours of 8:00 p.m. and 7:00 a.m. It is not expected that project construction would be required on Sundays or during the evening/nighttime hours. As such, project construction noise would be exempt from the noise level thresholds set forth in City's Noise Ordinance. Nonetheless, given the close proximity of the nearby residential uses, MM-NOI-1 and MM-NOI-2 shall be required to further minimize temporary increases in noise levels due to construction activities.

MM-NOI-1 At least 10 business days prior to commencement of construction, the City of La Mirada shall provide written notice to all residential property owners and tenants within 500 feet of the project site that proposed construction activities could affect outdoor or indoor living areas. The notice shall contain a description of the proposed project, a construction schedule including days and hours of construction, and a description of noise-reduction measures.

MM-NOI-2 In addition to adherence to the City of La Mirada's policies found in the City's Municipal Code limiting the construction hours of operation, the following measures are recommended to reduce construction noise and vibration emanating from the project:

- Construction equipment, fixed or mobile, shall be properly outfitted and maintained with feasible noise-reduction devices to minimize construction-generated noise.
- Stationary noise sources such as generators shall be located away from noise-sensitive land uses, if feasible.
- Laydown and construction vehicle staging areas shall be located away from noise-sensitive land uses, if feasible.
- Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners to contact a representative at the City of La Mirada to report noise-related

issues, if necessary. In the event that the City of La Mirada receives a pattern of noise complaints, appropriate corrective actions shall be implemented, such as on-site noise monitoring during construction activities, and a report of the action shall be provided to the reporting party.

Therefore, with incorporation of mitigation, impacts associated with short-term construction noise increase would be less than significant.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less-Than-Significant Impact. The main concern associated with ground-borne vibration is annoyance; however, in extreme cases, vibration can cause damage to buildings, particularly those that are old or otherwise fragile. Some common sources of ground-borne vibration are trains and construction activities such as blasting, pile-driving, and heavy earth-moving equipment; none of these activities would be required as part of the proposed project. The primary source of ground-borne vibration occurring as part of the project would be earthwork activities.

According to the California Department of Transportation, D-8 and D-9 Caterpillars, earthmovers, and trucks have not exceeded 0.10 inches/second peak particle velocity at 10 feet. Since the nearest off-site residence is located not closer than 15 feet from the proposed construction activities, vibration from construction activities at the closest sensitive receiver would not exceed the significance threshold of 0.20 inches/second peak particle velocity (Caltrans 2013).

Vibration-sensitive instruments and operations may require special consideration during construction. Vibration criteria for sensitive equipment and operations are not defined and are often case specific. As a guide, major construction activity within 200 feet and pile driving within 600 feet may be potentially disruptive to vibration sensitive operations (Caltrans 2013). There are no known vibration-sensitive facilities within 200 feet of the project, and pile driving would not be employed in project construction. Therefore, impacts associated with ground-borne vibration would be less than significant.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-Than-Significant Impact. Following implementation of the proposed project, the project site would continue to support the recreational uses and activities that already

occur at Creek Park. Generally, although many of the existing passive recreational facilities on the project site would be enhanced and improved as part of the project, most of these facilities would either remain in place or be replaced in kind. Thus, residences that are currently located in the vicinity of these existing uses could anticipate similar ambient noise levels following development of the proposed project. Any increase in higher single-event noise levels associated with increase patronage of Creek Park as a result of the proposed project would be infrequent and would not cause a substantial increase in long-term ambient noise levels to the point that thresholds established in the City's Noise Ordinance is exceeded. Therefore, impacts associated with a substantial permanent increase in ambient noise levels would be less than significant.

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-Than-Significant Impact with Mitigation Incorporated. Refer to response provided in Section 3.12(a).

e) Would the project be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The nearest airport to the project site is the Fullerton Municipal Airport, which is located approximately 3.5 miles southeast of the project site. According to the Airport Land Use Commission Airport Planning Area map for this airport, the proposed project is located outside of any noise contours delineated around the airport (ALUC 2004). Therefore, no impacts associated with public airport noise would occur.

f) Would the project be within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. There are no private airstrips located in the project vicinity. Therefore, no impacts associated with private airstrip noise would occur.

3.12.1 CEQA-Plus Evaluation

Noise Control Act

Will construction or operation of the project result in the generation of noise levels that could affect the health, welfare, or well-being of people?

No. Construction noise would cause a temporary, periodic increase in the ambient noise levels above the existing levels within the project vicinity. Project construction noise would be exempt from the noise level thresholds set forth in City's Noise Ordinance. Nonetheless, given the close proximity of the nearby residential uses, MM-NOI-1 and MM-NOI-2 shall be required to further minimize temporary increases in noise levels due to construction activities.

Following implementation of the proposed project, the project site would continue to support the recreational uses and activities that already occur at Creek Park. Generally, although many of the existing passive recreational facilities on the project site would be enhanced and improved as part of the project, most of these facilities would either remain in place or be replaced in kind. Thus, residences that are currently located in the vicinity of these existing uses could anticipate similar ambient noise levels following development of the proposed project. Therefore, impacts associated with a substantial permanent increase in ambient noise levels would be less than significant.

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

3.13 Population and Housing

a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed project does not include residential uses and habitable structures, which would directly introduce additional population to the project area. In addition, the project site is located within an urbanized area and is already served by existing streets and utilities. As such, the proposed project would not require the extension of roadways and utilities into areas not already served by such facilities, which could otherwise indirectly induce population growth. Therefore, no impacts associated with inducement of population growth would occur.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. Under the existing condition, the project site does not contain any residential structures or habitable buildings. Therefore, no impacts associated with displacing substantial numbers of existing housing would occur.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As previously discussed, the project site does not contain any residential uses, and as such, the project site does not support a residential population. Therefore, no impacts associated with displacing substantial numbers of people would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☐	☒

3.14 Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

Less-Than-Significant Impact. The Los Angeles County Fire Department provides fire protection and emergency medical services for the City. The closest Los Angeles County Fire Department station to the project site is Station 49 (13820 La Mirada Boulevard), located approximately 2.4 miles southwest of the project site.

Since the project site is already served by Los Angeles County Fire Department, the proposed project will not affect response times to the site. The proposed project would not introduce any new uses or activities onto the project site that would increase the number of calls for services to the site. Therefore, no impacts associated with fire protection would occur.

Police protection?

Less-Than-Significant Impact. The City contracts with the Los Angeles County Sheriff's Department for police protection services. The La Mirada Community Sheriff's Station (13716 La Mirada Boulevard) is located approximately 2.5 miles southwest of the project site.

Similar to fire protection services, since the project site is already served by the Los Angeles County Sheriff's Department, the project will not affect response times to the site. The proposed project would not introduce any new uses or activities onto the project site that would increase the number of calls for services to the site. Therefore, no impacts associated with police protection services would occur.

Schools?

No Impact. The proposed project would not introduce additional population to the project area. As such, the proposed project would not contribute to the student population in the project area. Therefore, no impacts associated with schools would occur.

Parks?

Less-Than-Significant Impact. The proposed project itself involves improvements to an existing park. Although there may be a modest increase in park users as a result of the new and updated park features, no additional off-site recreational facilities would be required. The potential environmental impacts resulting from construction of the proposed recreational facility are already accounted for in this IS/MND as part of the impact assessment conducted for the entirety of the project. Therefore, impacts associated with recreational services would be less than significant.

Other public facilities?

No Impact. The proposed project would not induce population growth and, as a result, would not increase the use of public facilities such as libraries and community centers. Therefore, no impacts associated with public facilities would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
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?	☐	☐	☒	☐

3.15 Recreation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less-Than-Significant Impact. By introducing new recreational features onto the project site, it is anticipated that there would be a modest increase in park visitors. However, the new and updated park facilities would continue to be routinely maintained following implementation of the proposed project, and any necessary repairs would continue to

occur to ensure that the park continues to perform as intended and to prevent physical deterioration. Therefore, impacts associated with the increased use of parks and other recreational facilities would be less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less-Than-Significant Impact. The construction of recreational facilities are a component of the proposed project analyzed herein, and as such, any potential environmental impacts related to these project elements are already accounted for in this IS/MND as part of the impact assessment conducted for the entirety of the project. No adverse physical effects beyond those already disclosed in this IS/MND would occur as a result of implementation of the proposed project. Therefore, impacts associated with the construction or expansion of recreational facilities would be less than significant.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC – Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

3.16 Transportation and Traffic

a) Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less-Than-Significant Impact. Under its existing conditions, two parking lots provide vehicle access to the project site, one from Santa Gertrudes Avenue with approximately 56 parking spaces, and another from Stamy Road with approximately 21 parking spaces. Following implementation of the proposed project, existing driveways off Santa Gertrudes Avenue and Stamy Road would continue to provide vehicular access to the project site, as well as pedestrian entrances along Golden Lantern Lane. These driveways would connect to improved parking areas located in the same locations as the existing parking lots. Similar to the existing conditions, approximately 77 parking spaces would be provided.

With the exception of a few special events held throughout the year, the proposed project would primarily serve local residents who access the project site via pedestrian paths that connect all of the park amenities. Because only two additional parking spaces would be provided on the project site compared with the existing conditions, and due to the proposed project being primarily a neighborhood serving park, the project would not generate additional new vehicular trips to the point that project traffic would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Therefore, impacts associated with traffic and circulation would be less than significant.

b) Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No Impact. According to the Los Angeles County Metropolitan Transportation Authority's 2010 Congestion Management Program, all Congestion Management Program arterial monitoring intersections, including monitored freeway onramps or offramps, where a proposed project will add 50 or more trips during either the AM or PM weekday peak hours, require a traffic impact study to be prepared. As previously discussed, the project would not generate additional vehicular trips to the point that project traffic would trigger the need for a traffic impact study, and as such, the proposed project would not generate enough vehicle trips to result in adverse effects to Congestion Management Program intersection or roadway segments. Therefore, no impacts associated with Los Angeles County Metropolitan Transportation Authority's Congestion Management Program would occur.

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The nearest airport to the project site is the Fullerton Municipal Airport, which is located approximately 3.5 miles southeast of the project site. According to the Airport Land Use Commission Airport Planning Area map for this airport, the proposed project is located outside of any area surrounding the airport that has height or other restrictions placed upon it that could impact design of the proposed project. Therefore, no impacts associated with air traffic patterns would occur.

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed project would not physically alter any of the existing streets located adjacent to the project site. Similar to the existing conditions, project driveways and access would comply with all applicable standards set forth by the City, ensuring safe egress/ingress and circulation on and adjacent to the project site. As such, no sharp curves, dangerous intersections, or incompatible uses would be created by the proposed project. Therefore, no impacts associated with hazardous design features or incompatible land uses would occur.

e) Would the project result in inadequate emergency access?

No Impact. Following implementation of the proposed project, vehicles, including emergency response vehicles, would continue to access the project site via existing driveways off Santa Gertrudes Avenue and Stamy Road, and all of the project site would be directly accessible to emergency personnel. The parking lots and internal drive aisles would comply with all applicable standards set forth by the City's fire code to ensure adequate widths, vertical clearance, and turning radius for fire engines and other emergency vehicles. The nominal number of new vehicular trips generated by the proposed project would not conflict with emergency vehicle circulation in the unlikely event of an emergency. Therefore, no impacts associated with emergency access would occur.

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. Construction of the proposed project would be contained within the project site and would not physically alter the existing streets, sidewalks, or any other alternative transportation facilities (e.g., bus stops) in the project area. Thus, the project would not interfere with any existing or proposed public transit, bicycle, or pedestrian facilities or operations serving the project area.

The City has adopted a Master Plan of Bikeways that includes over 14 miles of bicycle lanes along streets and dedicated multi-use trails. According to the Figure OSC-1 of the City's General Plan Open Space and Conservation Element, the project site lies along a designated trail and park (City of La Mirada 2003). The proposed project would not conflict with adopted programs related to bicycle or pedestrian trails that extend the length of the project site. Upon completion, the project site would continue to operate trails to meet City policies related to alternative transportation. Therefore, no impacts associated with the public transit, bicycle, or pedestrian facilities or performance would occur.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVII. TRIBAL CULTURAL RESOURCES				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

3.17 Tribal Cultural Resources

a) 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:

i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

Less-Than-Significant Impact. As previously discussed in Section 3.5, all built-environment resources within the project site were recorded and evaluated in consideration of NRHP and CRHR designation criteria and integrity requirements. None of the buildings and structures within the project site were found to be eligible for listing in the NRHP or CRHR. These properties are not considered historical resources for the purposes of CEQA.

Results of the records search indicated that 20 cultural resources studies have been conducted within a 1-mile search radius, four studies have been conducted within a 0.5-mile search radius, and none of these previous cultural resources studies have included the current project site. The four studies that have been conducted within 0.5 miles of the project indicated there is one recorded historic resource and two unrecorded prehistoric isolates within a 1-mile radius of the project site. The historic resource is an athletic track and field at Lowell High School, located approximately 0.5 miles east of the project site. The athletic track, evaluated within a cultural resources study, was determined ineligible for listing in the NRHP. Therefore, impacts associated with historical resources listed or eligible for listing in the CRHR or by the NRHP would be less than significant.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less-Than-Significant Impact with Mitigation Incorporated. The proposed project is subject to compliance with Assembly Bill (AB) 52 (PRC Section 21074). AB 52 requires consideration of impacts to tribal cultural resources as part of the CEQA process, and requires the City, as the lead agency, to notify any groups that are traditionally or culturally affiliated with the geographic area of the proposed project and who have requested notification. One NAHC-listed California Native American Tribal representative requested project notification pursuant to AB 52 (PRC 21074). On March 1, 2018, the City sent a project notification letter to Andrew Salas, representative with the Gabrieleno Band of Mission Indians – Kizh Nation. The letter contains a project description, outline of AB 52, request for consultation, and contact information for the appropriate lead agency representative. As of the date of this document, no response from Mr. Salas has been received by the City.

While the need for on-site monitoring is not supported by the cultural resources evaluation conducted for the project and project site, the City is committed to preserving the integrity of tribal cultural resources. As such, measures MM-TCR-1 and MM-TCR-2 would be required to ensure that tribal monitors have access to the project site during subsurface construction activities and that resources unearthed by project construction activities are evaluated appropriately.

MM-TRC-1 Prior to the issuance of any grading permits for the project, the City of La Mirada Public Works Department shall ensure that the construction contractor provides access for Native American monitoring during ground-disturbing activities. This provision shall be included on project plans and specifications. The site shall be made accessible to any Native American tribe requesting to be present, provided adequate notice is given to the construction contractor and that a construction safety hazard does not occur. The monitor(s) shall be approved by a local tribal representative and shall be present on site during the construction phases that involve any ground-disturbing activities. The monitor(s) shall possess Hazardous Waste Operations and Emergency Response (HAZWOPER) certification. In addition, the monitor(s) shall be required to provide insurance certificates, including liability insurance, for any archaeological resource(s) encountered during grading and excavation activities pertinent to the provisions outlined in the California Environmental Quality Act (CEQA), California PRC Division 13, Section 21083.2 (a) through (k).

Neither the City of La Mirada, project applicant, nor construction contractor shall be financially obligated for any monitoring activities. If evidence of any tribal cultural resources is found during ground-disturbing activities, the monitor(s) shall have the capacity to halt construction in the immediate vicinity of the find to recover and/or determine the appropriate plan of recovery for the resource. The recovery process shall not unreasonably delay the construction process.

Construction activity shall not be contingent on the presence or availability of a monitor, and construction may proceed regardless of whether or not a monitor is present on site. The on-site monitoring shall end when the project site grading and excavation activities are completed or when the monitor has indicated that the site has a low potential for archaeological resources.

MM-TRC-2 All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist and Native American monitor. If the resources are Native American in origin, the tribe shall coordinate with the landowner regarding

treatment and curation of these resources. The treatment plan established for the resources shall be in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15064.5(f) for historical resources and PRC Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) shall be the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis.

Based on compliance with MM-CUL-1 and MM-CUL-2, as well as with MM-TCR-1 and MM-TCR-2, impacts to buried, currently unrecorded/unknown tribal cultural resources would be less than significant.

	Potentially Significant Impact	Less-Than-Significant Impact with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
XVIII. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

3.18 Utilities and Service Systems

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less-Than-Significant Impact. The Los Angeles County Sanitation Districts provides wastewater treatment services to the City. Wastewater generated in the project area is conveyed via the municipal sewer system to Joint Outfall System (JOS), which includes the main Joint Water Pollution Control Plant in the City of Carson and six satellite water reclamation plants (WRPs) in the metropolitan Los Angeles area. Approximately two-thirds of the wastewater in JOS is treated at the Joint Water Pollution Control Plant and the remaining one-third is treated at WRPs. The Joint Water Pollution Control Plant provides primary and secondary treatment for approximately 260 million gallons per day (mgd) of wastewater and has a total permitted capacity of 400 mgd. The Los Coyotes WRP provides primary, secondary, and tertiary treatment for 37.5 mgd and is approximately 6.5 miles southwest of the project site.

The project site currently contains one restroom facility that requires wastewater treatment. As part of the proposed project, an additional restroom facility could be added to the project site, for a total of two restroom facilities. The addition of a restroom facility would generate a nominal increase in wastewater that could be accommodated by the capacity of the JOS, including the Los Coyotes WRP. Therefore, impacts associated with wastewater treatment requirements would be less than significant.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Water Facilities

Less-Than-Significant Impact. Domestic water service is provided in the project area by Suburban. Suburban's water supply comes from 80% groundwater and the rest from surface water sources. Groundwater supplies are pumped from local wells located in the San Gabriel and Central Basins containing 8.6 million acre-feet and 13 million acre-feet of water, respectively. Surface water is supplied through the Metropolitan Water District of Southern California, which imports water via aqueducts from Northern California and the Colorado River (Suburban Water Systems 2017).

Following implementation of the proposed project, the project site would continue to support the recreational uses and activities that already occur at Creek Park. Generally,

although many of the existing passive recreational facilities on the project site would be enhanced and improved as part of the project, most of these facilities would either remain in place or be replaced in kind. Thus, no new water intensive uses or activities would be introduced on site by the proposed project.

Conversely, compared with the turf that encompasses a majority of the project site, the proposed project would be required to incorporate the state's Model Water Efficient Landscape Ordinance irrigation plans into the irrigation system layout, main line, etc., and a watering schedule and water use calculations will be provided in accordance with Model Water Efficient Landscape Ordinance standards. These requirements would likely reduce water usage on site compared with the existing conditions.

As such, there is adequate supplies to provide the required water to proposed project without the need to construct new water supply facilities or expand existing facilities. The proposed project would not substantially increase the water demand, such that it could not be adequately served by exiting supplies. Therefore, impacts associated with water treatment facilities would be less than significant.

Wastewater Facilities

Less-Than-Significant Impact. As previously addressed, the project currently contains one restroom facility. The addition of another restroom facility would generate a nominal increase in wastewater, which could be accommodated by the capacity of the JOS, including the Los Coyotes WRP. Therefore, impacts associated with wastewater capacity and wastewater treatment facilities would be less than significant.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less-Than-Significant Impact. Following implementation of the proposed project, La Mirada Creek would continue to operate as a flood control facility. The proposed project would not alter the makeup of the stormwater conveyed through the project site and would continue to comply with all applicable water quality standards. Therefore, impacts associated with stormwater drainage facilities would be less than significant.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less-Than-Significant Impact. As previously discussed, there is adequate supply to provide the required water to proposed project without the need to construct new water supply facilities or expand existing facilities. The proposed project would not substantially increase the water demand, such that it could not be adequately served by exiting supplies. Therefore, impacts associated with water supplies would be less than significant.

e) Would the project 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?

Less-Than-Significant Impact. The project currently contains one restroom facility. The addition of another restroom facility would generate a nominal increase in wastewater, which could be accommodated by the capacity of the JOS, including the Los Coyotes WRP. Therefore, impacts associated with wastewater treatment capacities would be less than significant.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less-Than-Significant Impact. The County of Los Angles has seven major solid waste landfills and four minor solid waste landfills. Table 13.1 of the County of Los Angles General Plan Public Services and Facilities Elements lists the remaining permitted capacity for landfills and the remaining life in years (County of Los Angeles 2015b). The total maximum daily capacity of landfills is 43,649 tons.

Because the number of project components that would generate a measureable amount of refuse are generally limited to the bathroom facilities and picnicking areas, the proposed project's produce a substantial amount of solid waste. The proposed project's estimated solid waste generation would equate to only a nominal percentage of the daily permitted capacity at the regional landfills that would serve the City, representing only a very small increase to the local and regional solid waste stream. Therefore, impacts associated with solid waste disposal would be less than significant.

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. Solid waste disposal services must follow all applicable federal, state, and local statutes and regulations related to the collection of solid waste. The project would be required to comply with all applicable diversion requirements set forth by the City, including any applicable provisions related to waste diversion during either project construction or operation. In addition, the project will also be required to comply with all applicable state and local waste diversion requirements, including AB 939 and Senate Bill 1016. Therefore, no impacts associated with federal, state, and local statutes and regulations related to solid waste would occur.

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

3.19 Mandatory Findings of Significance

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

Less-Than-Significant Impact With Mitigation Incorporated. As discussed in Section 3.4, Biological Resources; Section 3.5, Cultural Resources; and Section 3.17, Tribal Cultural Resources; impacts related to both biological and cultural resources would be reduced to less than significant with the incorporation of mitigation. Therefore, the proposed project would not 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, 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)?

Less-Than-Significant Impact With Mitigation Incorporated. As addressed throughout this IS/MND, the proposed project would have no impact, a less-than-significant impact, or a less-than-significant impact with mitigation incorporated with respect to all environmental impact areas. Cumulative impacts of several resource areas have already been addressed in several resource sections: Section 3.3, Air Quality; Section 3.7, Greenhouse Gas Emissions; Section 3.12, Noise; and Section 3.16, Transportation and Traffic. CalEEMod was used to assess the air quality and GHG emissions impacts resulting from the proposed project, concluding less-than-significant impacts. Noise assessments conducted as part of this IS/MND considered cumulative impacts and concluded that cumulative impacts would be less than significant with mitigation incorporated. Since the proposed use of the project would be similar to existing conditions, cumulative traffic impacts associated with the project would be less than significant.

Some of the other resource areas (i.e., Section 3.1, Aesthetics; Section 3.2, Agricultural and Forestry Resources; Section 3.9, Hydrology and Water Quality; Section 3.10, Land Use and Planning; Section 3.11, Mineral Resources; Section 3.13, Population and Housing; Section 3.14, Public Services; Section 3.15, Recreation; and Section 3.18, Utilities and Services Systems) were determined to have a less-than-significant (either with or without mitigation measures incorporated) or no impact compared to existing conditions, and, thus, the proposed project would not contribute to cumulative impacts related to these environmental topics. Other issues areas (i.e., Section 3.5, Cultural Resources; Section 3.6, Geology and Soils; Section 3.8, Hazards and Hazardous Materials, and Section 3.17, Tribal Cultural Resources) are by their nature site specific, and impacts at one location do not add to impacts at other locations or create additive impacts.

For all resource areas analyzed, with the incorporation of feasible mitigation measures identified within this IS/MND, the proposed project's individual-level impacts would be reduced to less-than-significant levels, which would, in turn, reduce the potential for these impacts to be considered part of any possible cumulative impact. Therefore, the proposed project would not result in individually limited but cumulatively considerable impacts.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less-Than-Significant Impact With Mitigation Incorporated. As evaluated throughout this document, with incorporation of mitigation, environmental impacts associated with the proposed project would be reduced to less-than-significant levels. Thus, the proposed project would not directly or indirectly cause substantial adverse effects on human beings.

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4.2 List of Preparers

Dudek

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Ryan Henry, Biological Resources
Curtis Battle, GIS Technician
Becky Golden-Harrell, Lead Technical Editor
Corinne Price, Technical Editor
David Mueller, Publications Specialist
Devin Brookhart, Publications Specialist Lead

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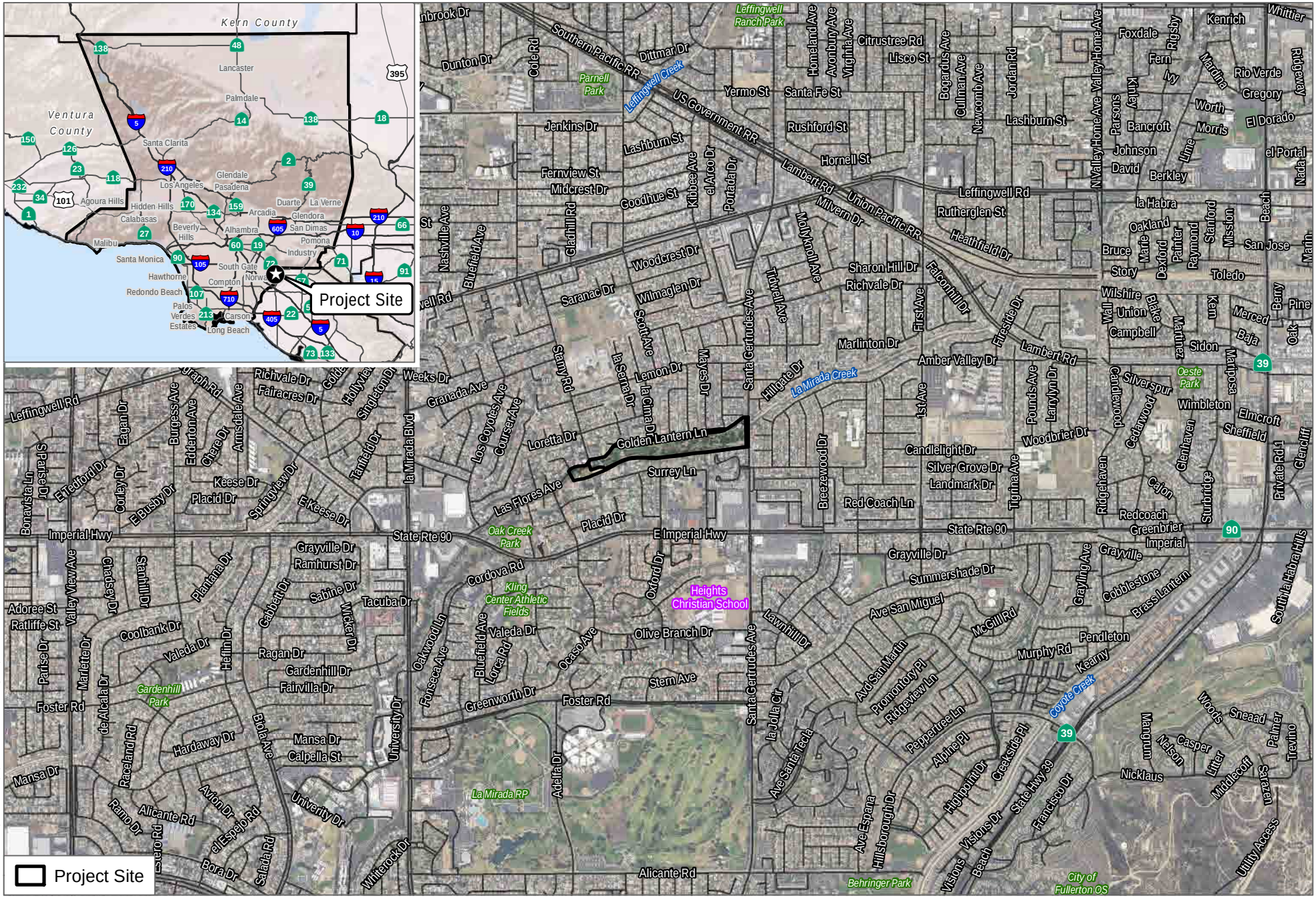

SOURCE: County of Orange 2018; County of Los Angeles 2018; NAIP 2016

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

La Mirada Creek Park

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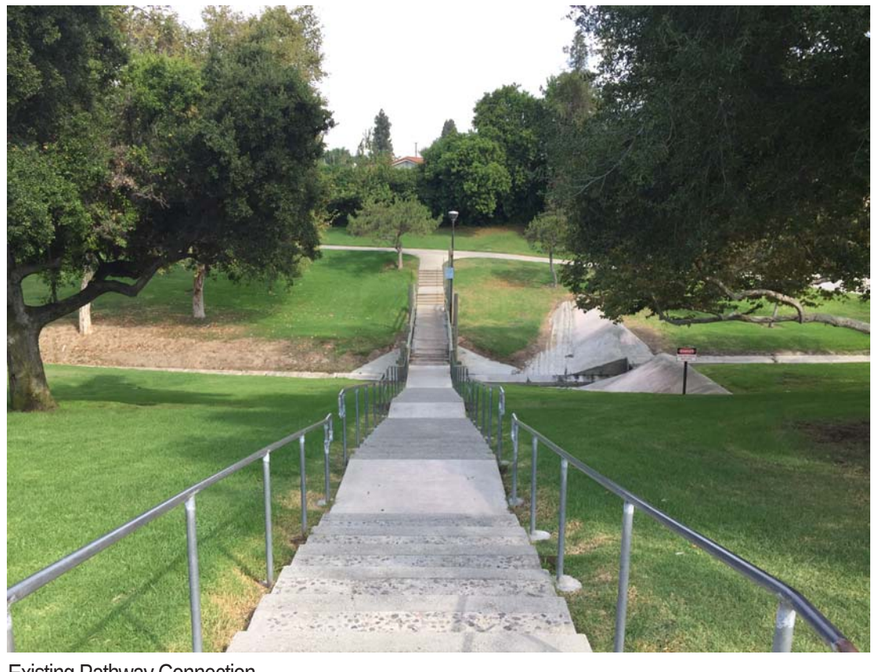
Existing Bridge Crossing

Existing Concrete Channel

Existing Concrete Check-Dam



Existing Pathway Connection

SOURCE: Dudek, 2017

FIGURE 2a

Existing Site Photos

La Mirada Creek Park

DUDEK

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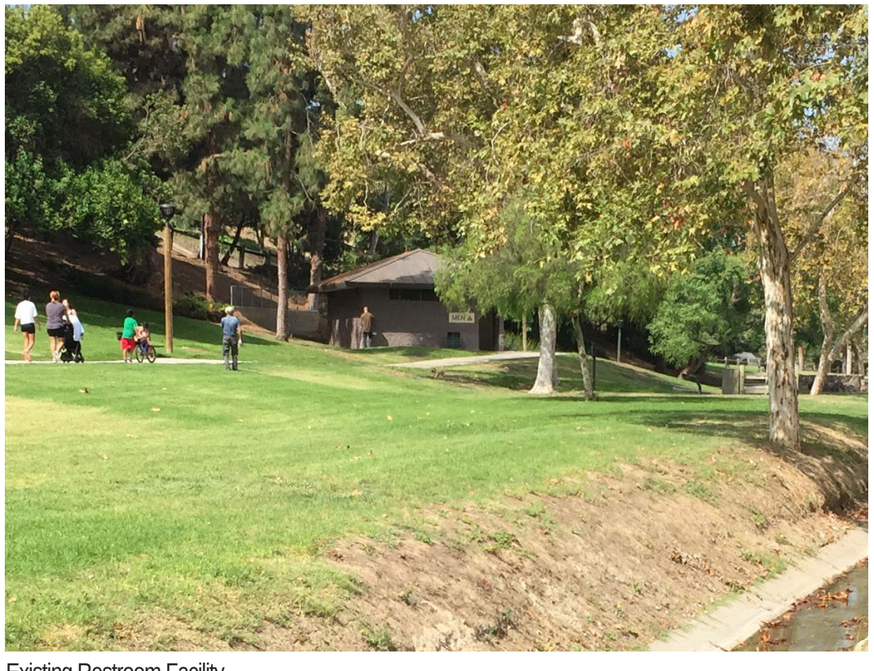
Existing Amphitheater with Fire Ring

Existing Pathway Lighting

Existing Pathway Lighting



Existing Restroom Facility

SOURCE: Dudek, 2017

FIGURE 2b

Existing Site Photos

La Mirada Creek Park

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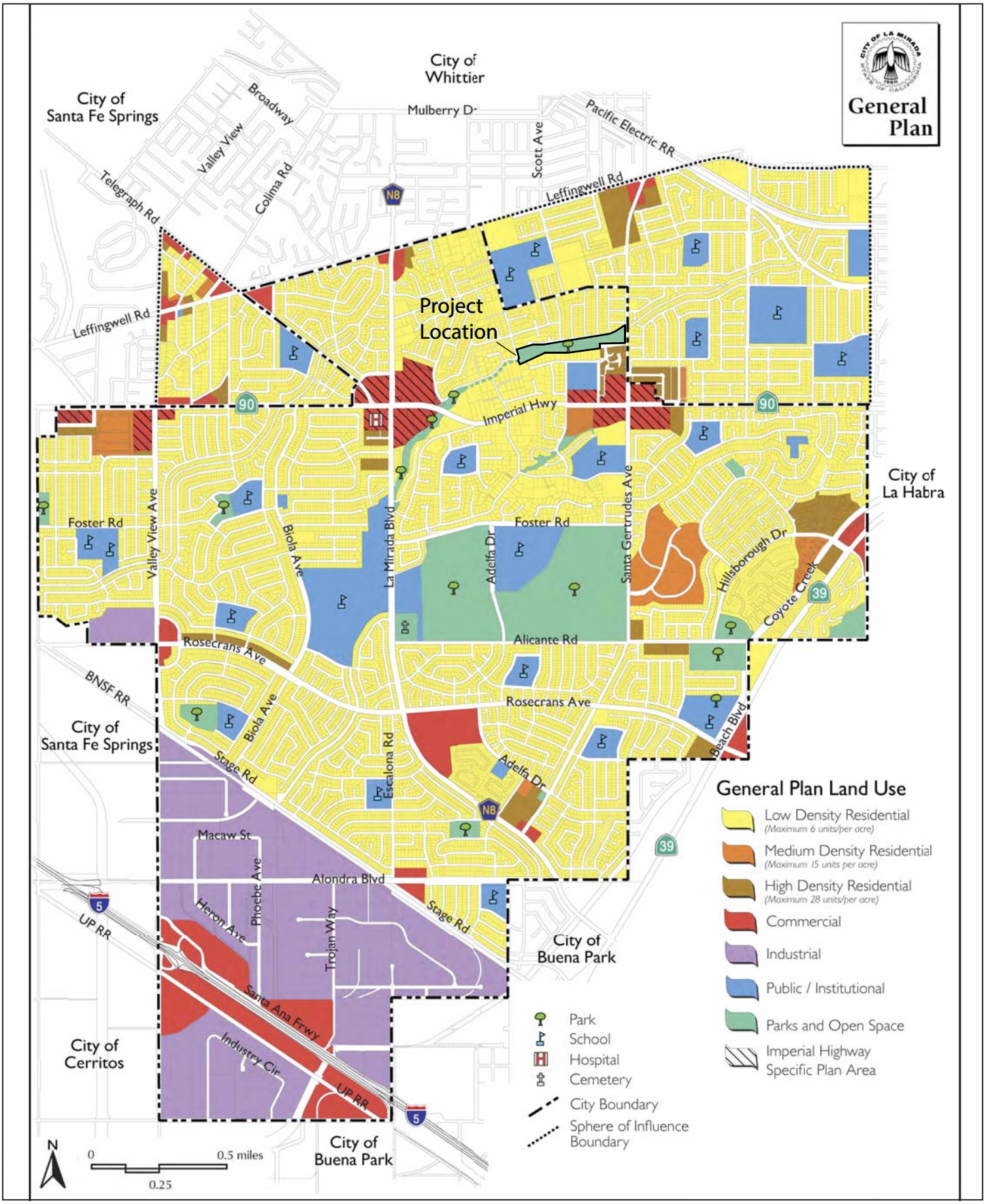

SOURCE: City of La Mirada 2003

FIGURE 3

General Plan Land Use Map

La Mirada Creek Park

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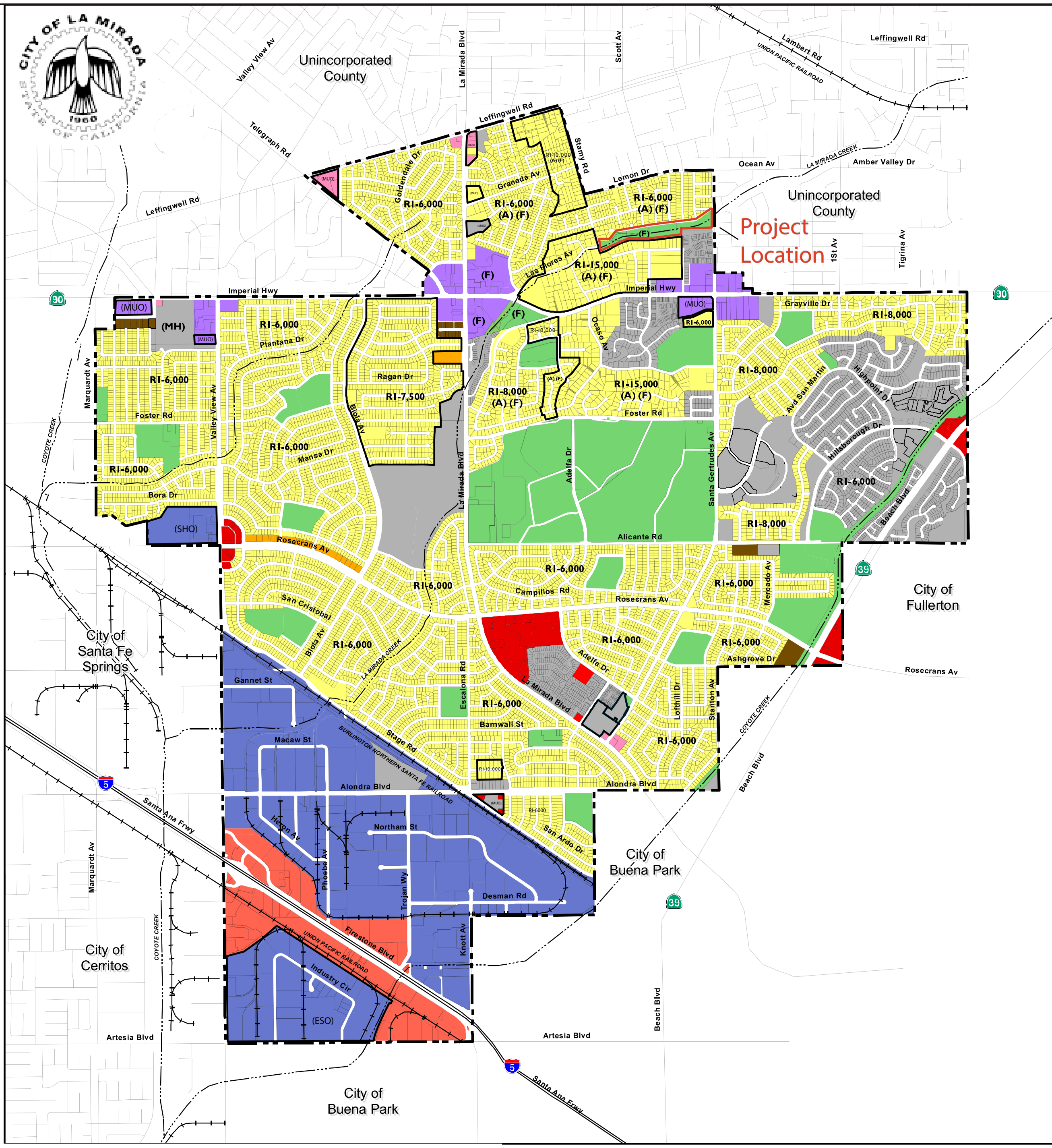

Zoning Districts

R-1	Single-Family Residential
R-3	Medium Density Residential
R-4	High Density Residential
C-O	Administrative Office
M2	Industrial
IHSP	Imperial Highway Specific Plan
C-1	Neighborhood Commercial
C-F	Freeway Commercial
C-4	General Commercial
PUD	Planned Unit Development
SP	Specific Plan
OS	Open Space

Overlay Districts

(MH)	Mobile Home Park
(A)	Farm Animal
(F)	Flood Hazard
(ESO)	Emergency Shelter
(MUO)	Mixed Use
(SHO)	Special Housing

City Boundary
Freeway
Railroad
Creek

Revised: January 10, 2008.
Source: Los Angeles County, GIS 2007.

N 0 0.25 0.5 1 Miles

SOURCE: City of La Mirada 2012

FIGURE 4

Zoning Map

La Mirada Creek Park

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SOURCE: RRM 2018

FIGURE 5

Master Plan

La Mirada Creek Park

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SOURCE: NAIP 2016

DUDEK

0 150 300 Feet

FIGURE 6

Biological Resources

La Mirada Creek Park

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APPENDIX A

CalEEMod Outputs

CalEEMod Version: CalEEMod.2016.3.2

Date: 2/19/2018 9:36 AM

La Mirada Creek Park

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	11.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - La Mirada Creek Park

Land Use - Project within existing 11-acre park.

Construction Phase - Construction asusmed to begin September 2018 would finish February 2019

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Trips and VMT - Updated trips

Table Name	Column Name	Default Value	New Value
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tblAreaCoating	Area_Nonresidential_Interior	6000	718740
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tblConstructionPhase	NumDays	300.00	15.00
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tblConstructionPhase	NumDays	30.00	25.00
tblConstructionPhase	NumDays	300.00	15.00
tblConstructionPhase	NumDays	300.00	29.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
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tblFleetMix	MCY	4.7240e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	9.9100e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.9990e-003	0.00
tblFleetMix	SBUS	7.0400e-004	0.00
tblFleetMix	UBUS	2.0270e-003	0.00
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tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes

tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
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tblTripsAndVMT	VendorTripNumber	1.00	2.00
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tblTripsAndVMT	WorkerTripNumber	5.00	6.00

tblTripsAndVMT	WorkerTripNumber	5.00	6.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0386	0.4176	0.2596	5.1000e-004	0.0104	0.0211	0.0315	1.7300e-003	0.0196	0.0213	0.0000	46.1367	46.1367	0.0121	0.0000	46.4383
2019	0.0181	0.1678	0.1606	2.3000e-004	2.6300e-003	0.0115	0.0142	7.0000e-004	0.0106	0.0113	0.0000	21.1558	21.1558	5.8100e-003	0.0000	21.3009
Maximum	**0.0386**	**0.4176**	**0.2596**	**5.1000e-004**	**0.0104**	**0.0211**	**0.0315**	**1.7300e-003**	**0.0196**	**0.0213**	**0.0000**	**46.1367**	**46.1367**	**0.0121**	**0.0000**	**46.4383**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0386	0.4176	0.2596	5.1000e-004	0.0104	0.0211	0.0315	1.7300e-003	0.0196	0.0213	0.0000	46.1367	46.1367	0.0121	0.0000	46.4382
2019	0.0181	0.1678	0.1606	2.3000e-004	2.6300e-003	0.0115	0.0142	7.0000e-004	0.0106	0.0113	0.0000	21.1557	21.1557	5.8100e-003	0.0000	21.3009
Maximum	**0.0386**	**0.4176**	**0.2596**	**5.1000e-004**	**0.0104**	**0.0211**	**0.0315**	**1.7300e-003**	**0.0196**	**0.0213**	**0.0000**	**46.1367**	**46.1367**	**0.0121**	**0.0000**	**46.4382**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition 1	Demolition	9/1/2018	10/12/2018	5	30	La Mirada Creek Naturalization-Removal of Concrete Check
2	Grading	Grading	10/13/2018	11/16/2018	5	25	La Mirada Creek Naturalization-Reconfig of Creek's Meanders
3	Demolition 2	Demolition	11/17/2018	12/7/2018	5	15	Restroom Facilities-Demo of Central Restrooms
4	Building Construction 1	Building Construction	12/8/2018	12/28/2018	5	15	Restroom Facilities-Construction of Restrooms
5	Building Construction 2	Building Construction	12/29/2018	1/18/2019	5	15	Recreational Facility Upgrades
6	Building Construction 3	Building Construction	1/19/2019	2/28/2019	5	29	Pedestrian Bridges (5)

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition 1	Graders	1	8.00	187	0.41
Demolition 1	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition 2	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition 2	Excavators	1	8.00	158	0.38
Building Construction 1	Forklifts	2	8.00	89	0.20
Building Construction 1	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 2	Forklifts	2	8.00	89	0.20
Building Construction 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Building Construction 3	Forklifts	2	8.00	89	0.20
Building Construction 3	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition 1	2	6.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	6.00	0.00	20.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition 2	3	8.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 1	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0118	0.1464	0.0638	1.5000e-004		6.2700e-003	6.2700e-003		5.7700e-003	5.7700e-003	0.0000	13.3725	13.3725	4.1600e-003	0.0000	13.4766
Total	**0.0118**	**0.1464**	**0.0638**	**1.5000e-004**		**6.2700e-003**	**6.2700e-003**		**5.7700e-003**	**5.7700e-003**	**0.0000**	**13.3725**	**13.3725**	**4.1600e-003**	**0.0000**	**13.4766**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.5900e-003	3.0000e-004	0.0000	9.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3857	0.3857	3.0000e-005	0.0000	0.3864
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.9000e-004	4.2000e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9473	0.9473	3.0000e-005	0.0000	0.9481
Total	**5.2000e-004**	**1.9800e-003**	**4.5000e-003**	**1.0000e-005**	**1.0800e-003**	**2.0000e-005**	**1.0900e-003**	**2.8000e-004**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**1.3330**	**1.3330**	**6.0000e-005**	**0.0000**	**1.3344**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0118	0.1464	0.0638	1.5000e-004		6.2700e-003	6.2700e-003		5.7700e-003	5.7700e-003	0.0000	13.3725	13.3725	4.1600e-003	0.0000	13.4766
Total	**0.0118**	**0.1464**	**0.0638**	**1.5000e-004**		**6.2700e-003**	**6.2700e-003**		**5.7700e-003**	**5.7700e-003**	**0.0000**	**13.3725**	**13.3725**	**4.1600e-003**	**0.0000**	**13.4766**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.5900e-003	3.0000e-004	0.0000	9.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3857	0.3857	3.0000e-005	0.0000	0.3864
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.9000e-004	4.2000e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9473	0.9473	3.0000e-005	0.0000	0.9481
Total	**5.2000e-004**	**1.9800e-003**	**4.5000e-003**	**1.0000e-005**	**1.0800e-003**	**2.0000e-005**	**1.0900e-003**	**2.8000e-004**	**2.0000e-005**	**3.0000e-004**	**0.0000**	**1.3330**	**1.3330**	**6.0000e-005**	**0.0000**	**1.3344**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.6300e-003	0.0000	6.6300e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.8200e-003	0.1220	0.0531	1.2000e-004		5.2300e-003	5.2300e-003		4.8100e-003	4.8100e-003	0.0000	11.1438	11.1438	3.4700e-003	0.0000	11.2305
Total	**9.8200e-003**	**0.1220**	**0.0531**	**1.2000e-004**	**6.6300e-003**	**5.2300e-003**	**0.0119**	**7.2000e-004**	**4.8100e-003**	**5.5300e-003**	**0.0000**	**11.1438**	**11.1438**	**3.4700e-003**	**0.0000**	**11.2305**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.1800e-003	5.9000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7714	0.7714	5.0000e-005	0.0000	0.7728
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	3.3000e-004	3.5000e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7894	0.7894	3.0000e-005	0.0000	0.7901
Total	**4.9000e-004**	**3.5100e-003**	**4.0900e-003**	**2.0000e-005**	**9.9000e-004**	**2.0000e-005**	**1.0100e-003**	**2.7000e-004**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.5608**	**1.5608**	**8.0000e-005**	**0.0000**	**1.5628**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.6300e-003	0.0000	6.6300e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.8200e-003	0.1220	0.0531	1.2000e-004		5.2300e-003	5.2300e-003		4.8100e-003	4.8100e-003	0.0000	11.1438	11.1438	3.4700e-003	0.0000	11.2305
Total	**9.8200e-003**	**0.1220**	**0.0531**	**1.2000e-004**	**6.6300e-003**	**5.2300e-003**	**0.0119**	**7.2000e-004**	**4.8100e-003**	**5.5300e-003**	**0.0000**	**11.1438**	**11.1438**	**3.4700e-003**	**0.0000**	**11.2305**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-005	3.1800e-003	5.9000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7714	0.7714	5.0000e-005	0.0000	0.7728
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	3.3000e-004	3.5000e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7894	0.7894	3.0000e-005	0.0000	0.7901
Total	**4.9000e-004**	**3.5100e-003**	**4.0900e-003**	**2.0000e-005**	**9.9000e-004**	**2.0000e-005**	**1.0100e-003**	**2.7000e-004**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.5608**	**1.5608**	**8.0000e-005**	**0.0000**	**1.5628**

3.4 Demolition 2 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.0600e-003	0.0723	0.0700	1.1000e-004		4.5300e-003	4.5300e-003		4.3200e-003	4.3200e-003	0.0000	9.6957	9.6957	2.0800e-003	0.0000	9.7476
Total	**8.0600e-003**	**0.0723**	**0.0700**	**1.1000e-004**		**4.5300e-003**	**4.5300e-003**		**4.3200e-003**	**4.3200e-003**	**0.0000**	**9.6957**	**9.6957**	**2.0800e-003**	**0.0000**	**9.7476**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.5900e-003	3.0000e-004	0.0000	9.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3857	0.3857	3.0000e-005	0.0000	0.3864
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.6000e-004	2.8000e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.6315	0.6315	2.0000e-005	0.0000	0.6320
Total	**3.6000e-004**	**1.8500e-003**	**3.1000e-003**	**1.0000e-005**	**7.5000e-004**	**2.0000e-005**	**7.5000e-004**	**1.9000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**1.0172**	**1.0172**	**5.0000e-005**	**0.0000**	**1.0184**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.0600e-003	0.0723	0.0700	1.1000e-004		4.5300e-003	4.5300e-003		4.3200e-003	4.3200e-003	0.0000	9.6957	9.6957	2.0800e-003	0.0000	9.7476
Total	**8.0600e-003**	**0.0723**	**0.0700**	**1.1000e-004**		**4.5300e-003**	**4.5300e-003**		**4.3200e-003**	**4.3200e-003**	**0.0000**	**9.6957**	**9.6957**	**2.0800e-003**	**0.0000**	**9.7476**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.5900e-003	3.0000e-004	0.0000	9.0000e-005	1.0000e-005	9.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3857	0.3857	3.0000e-005	0.0000	0.3864
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.6000e-004	2.8000e-003	1.0000e-005	6.6000e-004	1.0000e-005	6.6000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.6315	0.6315	2.0000e-005	0.0000	0.6320
Total	**3.6000e-004**	**1.8500e-003**	**3.1000e-003**	**1.0000e-005**	**7.5000e-004**	**2.0000e-005**	**7.5000e-004**	**1.9000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**1.0172**	**1.0172**	**5.0000e-005**	**0.0000**	**1.0184**

3.5 Building Construction 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6600e-003	0.0631	0.0532	7.0000e-005		4.6800e-003	4.6800e-003		4.3000e-003	4.3000e-003	0.0000	6.3489	6.3489	1.9800e-003	0.0000	6.3983
Total	**6.6600e-003**	**0.0631**	**0.0532**	**7.0000e-005**		**4.6800e-003**	**4.6800e-003**		**4.3000e-003**	**4.3000e-003**	**0.0000**	**6.3489**	**6.3489**	**1.9800e-003**	**0.0000**	**6.3983**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	1.8500e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3747	0.3747	3.0000e-005	0.0000	0.3753
Worker	4.0000e-004	3.3000e-004	3.5000e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7894	0.7894	3.0000e-005	0.0000	0.7901
Total	**4.7000e-004**	**2.1800e-003**	**3.9800e-003**	**1.0000e-005**	**9.1000e-004**	**2.0000e-005**	**9.4000e-004**	**2.5000e-004**	**2.0000e-005**	**2.6000e-004**	**0.0000**	**1.1641**	**1.1641**	**6.0000e-005**	**0.0000**	**1.1654**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6600e-003	0.0631	0.0532	7.0000e-005		4.6800e-003	4.6800e-003		4.3000e-003	4.3000e-003	0.0000	6.3489	6.3489	1.9800e-003	0.0000	6.3983
Total	**6.6600e-003**	**0.0631**	**0.0532**	**7.0000e-005**		**4.6800e-003**	**4.6800e-003**		**4.3000e-003**	**4.3000e-003**	**0.0000**	**6.3489**	**6.3489**	**1.9800e-003**	**0.0000**	**6.3983**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	1.8500e-003	4.8000e-004	0.0000	9.0000e-005	1.0000e-005	1.1000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3747	0.3747	3.0000e-005	0.0000	0.3753
Worker	4.0000e-004	3.3000e-004	3.5000e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7894	0.7894	3.0000e-005	0.0000	0.7901
Total	**4.7000e-004**	**2.1800e-003**	**3.9800e-003**	**1.0000e-005**	**9.1000e-004**	**2.0000e-005**	**9.4000e-004**	**2.5000e-004**	**2.0000e-005**	**2.6000e-004**	**0.0000**	**1.1641**	**1.1641**	**6.0000e-005**	**0.0000**	**1.1654**

3.6 Building Construction 2 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-004	4.2000e-003	3.5500e-003	0.0000		3.1000e-004	3.1000e-004		2.9000e-004	2.9000e-004	0.0000	0.4233	0.4233	1.3000e-004	0.0000	0.4266
Total	**4.4000e-004**	**4.2000e-003**	**3.5500e-003**	**0.0000**		**3.1000e-004**	**3.1000e-004**		**2.9000e-004**	**2.9000e-004**	**0.0000**	**0.4233**	**0.4233**	**1.3000e-004**	**0.0000**	**0.4266**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	1.2000e-004	3.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0250	0.0250	0.0000	0.0000	0.0250
Worker	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0526	0.0526	0.0000	0.0000	0.0527
Total	**3.0000e-005**	**1.4000e-004**	**2.6000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0776**	**0.0776**	**0.0000**	**0.0000**	**0.0777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-004	4.2000e-003	3.5500e-003	0.0000		3.1000e-004	3.1000e-004		2.9000e-004	2.9000e-004	0.0000	0.4233	0.4233	1.3000e-004	0.0000	0.4266
Total	**4.4000e-004**	**4.2000e-003**	**3.5500e-003**	**0.0000**		**3.1000e-004**	**3.1000e-004**		**2.9000e-004**	**2.9000e-004**	**0.0000**	**0.4233**	**0.4233**	**1.3000e-004**	**0.0000**	**0.4266**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	1.2000e-004	3.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0250	0.0250	0.0000	0.0000	0.0250
Worker	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0526	0.0526	0.0000	0.0000	0.0527
Total	**3.0000e-005**	**1.4000e-004**	**2.6000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0776**	**0.0776**	**0.0000**	**0.0000**	**0.0777**

3.6 Building Construction 2 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5000e-003	0.0527	0.0490	6.0000e-005		3.7300e-003	3.7300e-003		3.4300e-003	3.4300e-003	0.0000	5.8278	5.8278	1.8400e-003	0.0000	5.8739
Total	**5.5000e-003**	**0.0527**	**0.0490**	**6.0000e-005**		**3.7300e-003**	**3.7300e-003**		**3.4300e-003**	**3.4300e-003**	**0.0000**	**5.8278**	**5.8278**	**1.8400e-003**	**0.0000**	**5.8739**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	1.6300e-003	4.1000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3466	0.3466	2.0000e-005	0.0000	0.3472
Worker	3.4000e-004	2.7000e-004	2.9200e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.7135	0.7135	2.0000e-005	0.0000	0.7141
Total	**3.9000e-004**	**1.9000e-003**	**3.3300e-003**	**1.0000e-005**	**8.6000e-004**	**2.0000e-005**	**8.7000e-004**	**2.3000e-004**	**2.0000e-005**	**2.5000e-004**	**0.0000**	**1.0601**	**1.0601**	**4.0000e-005**	**0.0000**	**1.0613**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5000e-003	0.0527	0.0490	6.0000e-005		3.7300e-003	3.7300e-003		3.4300e-003	3.4300e-003	0.0000	5.8278	5.8278	1.8400e-003	0.0000	5.8739
Total	**5.5000e-003**	**0.0527**	**0.0490**	**6.0000e-005**		**3.7300e-003**	**3.7300e-003**		**3.4300e-003**	**3.4300e-003**	**0.0000**	**5.8278**	**5.8278**	**1.8400e-003**	**0.0000**	**5.8739**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	1.6300e-003	4.1000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3466	0.3466	2.0000e-005	0.0000	0.3472
Worker	3.4000e-004	2.7000e-004	2.9200e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.7135	0.7135	2.0000e-005	0.0000	0.7141
Total	**3.9000e-004**	**1.9000e-003**	**3.3300e-003**	**1.0000e-005**	**8.6000e-004**	**2.0000e-005**	**8.7000e-004**	**2.3000e-004**	**2.0000e-005**	**2.5000e-004**	**0.0000**	**1.0601**	**1.0601**	**4.0000e-005**	**0.0000**	**1.0613**

3.7 Building Construction 3 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.1092	0.1014	1.3000e-004		7.7300e-003	7.7300e-003		7.1200e-003	7.1200e-003	0.0000	12.0719	12.0719	3.8200e-003	0.0000	12.1674
Total	**0.0114**	**0.1092**	**0.1014**	**1.3000e-004**		**7.7300e-003**	**7.7300e-003**		**7.1200e-003**	**7.1200e-003**	**0.0000**	**12.0719**	**12.0719**	**3.8200e-003**	**0.0000**	**12.1674**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.3800e-003	8.5000e-004	1.0000e-005	1.8000e-004	2.0000e-005	2.0000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.7180	0.7180	5.0000e-005	0.0000	0.7192
Worker	7.0000e-004	5.6000e-004	6.0500e-003	2.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.4780	1.4780	5.0000e-005	0.0000	1.4791
Total	**8.1000e-004**	**3.9400e-003**	**6.9000e-003**	**3.0000e-005**	**1.7700e-003**	**3.0000e-005**	**1.8000e-003**	**4.7000e-004**	**3.0000e-005**	**5.0000e-004**	**0.0000**	**2.1959**	**2.1959**	**1.0000e-004**	**0.0000**	**2.1983**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.1092	0.1014	1.3000e-004		7.7300e-003	7.7300e-003		7.1200e-003	7.1200e-003	0.0000	12.0719	12.0719	3.8200e-003	0.0000	12.1674
Total	**0.0114**	**0.1092**	**0.1014**	**1.3000e-004**		**7.7300e-003**	**7.7300e-003**		**7.1200e-003**	**7.1200e-003**	**0.0000**	**12.0719**	**12.0719**	**3.8200e-003**	**0.0000**	**12.1674**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.3800e-003	8.5000e-004	1.0000e-005	1.8000e-004	2.0000e-005	2.0000e-004	5.0000e-005	2.0000e-005	7.0000e-005	0.0000	0.7180	0.7180	5.0000e-005	0.0000	0.7192
Worker	7.0000e-004	5.6000e-004	6.0500e-003	2.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.4780	1.4780	5.0000e-005	0.0000	1.4791
Total	**8.1000e-004**	**3.9400e-003**	**6.9000e-003**	**3.0000e-005**	**1.7700e-003**	**3.0000e-005**	**1.8000e-003**	**4.7000e-004**	**3.0000e-005**	**5.0000e-004**	**0.0000**	**2.1959**	**2.1959**	**1.0000e-004**	**0.0000**	**2.1983**

CalEEMod Version: CalEEMod.2016.3.2

Date: 2/19/2018 9:40 AM

La Mirada Creek Park

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	11.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - La Mirada Creek Park

Land Use - Project within existing 11-acre park.

Construction Phase - Construction asusmed to begin September 2018 would finish February 2019

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Trips and VMT - Updated trips

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	100	0
tblAreaCoating	Area_Nonresidential_Exterior	2000	239580
tblAreaCoating	Area_Nonresidential_Interior	6000	718740
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	300.00	15.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	30.00	25.00
tblConstructionPhase	NumDays	300.00	15.00
tblConstructionPhase	NumDays	300.00	29.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.8700e-003	0.00
tblFleetMix	MCY	4.7240e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	9.9100e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.9990e-003	0.00
tblFleetMix	SBUS	7.0400e-004	0.00
tblFleetMix	UBUS	2.0270e-003	0.00
tblLandUse	LandUseSquareFeet	0.00	4,000.00
tblLandUse	LotAcreage	0.00	11.00
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes

tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
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tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	1.00	2.00
tblTripsAndVMT	VendorTripNumber	1.00	2.00
tblTripsAndVMT	VendorTripNumber	1.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00

tblTripsAndVMT	WorkerTripNumber	5.00	6.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.1235	10.0267	9.7759	0.0160	0.6113	0.6266	1.0308	0.0789	0.5779	0.6098	0.0000	1,579.6929	1,579.6929	0.3131	0.0000	1,587.4990
2019	0.8422	7.7943	7.4984	0.0110	0.1246	0.5358	0.6604	0.0333	0.4930	0.5263	0.0000	1,091.0674	1,091.0674	0.2977	0.0000	1,098.5101
Maximum	**1.1235**	**10.0267**	**9.7759**	**0.0160**	**0.6113**	**0.6266**	**1.0308**	**0.0789**	**0.5779**	**0.6098**	**0.0000**	**1,579.6929**	**1,579.6929**	**0.3131**	**0.0000**	**1,587.4990**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.1235	10.0267	9.7759	0.0160	0.6113	0.6266	1.0308	0.0789	0.5779	0.6098	0.0000	1,579.6929	1,579.6929	0.3131	0.0000	1,587.4990
2019	0.8422	7.7943	7.4984	0.0110	0.1246	0.5358	0.6604	0.0333	0.4930	0.5263	0.0000	1,091.0674	1,091.0674	0.2977	0.0000	1,098.5100
Maximum	**1.1235**	**10.0267**	**9.7759**	**0.0160**	**0.6113**	**0.6266**	**1.0308**	**0.0789**	**0.5779**	**0.6098**	**0.0000**	**1,579.6929**	**1,579.6929**	**0.3131**	**0.0000**	**1,587.4990**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition 1	Demolition	9/1/2018	10/12/2018	5	30	La Mirada Creek Naturalization-Removal of Concrete Check
2	Grading	Grading	10/13/2018	11/16/2018	5	25	La Mirada Creek Naturalization-Reconfig of Creek's Meanders
3	Demolition 2	Demolition	11/17/2018	12/7/2018	5	15	Restroom Facilities-Demo of Central Restrooms
4	Building Construction 1	Building Construction	12/8/2018	12/28/2018	5	15	Restroom Facilities-Construction of Restrooms
5	Building Construction 2	Building Construction	12/29/2018	1/18/2019	5	15	Recreational Facility Upgrades
6	Building Construction 3	Building Construction	1/19/2019	2/28/2019	5	29	Pedestrian Bridges (5)

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition 1	Graders	1	8.00	187	0.41
Demolition 1	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition 2	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition 2	Excavators	1	8.00	158	0.38
Building Construction 1	Forklifts	2	8.00	89	0.20
Building Construction 1	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 2	Forklifts	2	8.00	89	0.20
Building Construction 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Building Construction 3	Forklifts	2	8.00	89	0.20
Building Construction 3	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition 1	2	6.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	6.00	0.00	20.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition 2	3	8.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 1	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**		**0.4180**	**0.4180**		**0.3846**	**0.3846**		**982.7113**	**982.7113**	**0.3059**		**990.3596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.8900e-003	0.1026	0.0190	2.6000e-004	5.8200e-003	3.9000e-004	6.2200e-003	1.6000e-003	3.8000e-004	1.9700e-003		28.5595	28.5595	1.9500e-003		28.6084
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0323	0.0232	0.3011	7.4000e-004	0.0671	5.3000e-004	0.0676	0.0178	4.9000e-004	0.0183		73.1611	73.1611	2.4900e-003		73.2235
Total	**0.0352**	**0.1258**	**0.3201**	**1.0000e-003**	**0.0729**	**9.2000e-004**	**0.0738**	**0.0194**	**8.7000e-004**	**0.0203**		**101.7206**	**101.7206**	**4.4400e-003**		**101.8318**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**		**0.4180**	**0.4180**		**0.3846**	**0.3846**	**0.0000**	**982.7113**	**982.7113**	**0.3059**		**990.3596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.8900e-003	0.1026	0.0190	2.6000e-004	5.8200e-003	3.9000e-004	6.2200e-003	1.6000e-003	3.8000e-004	1.9700e-003		28.5595	28.5595	1.9500e-003		28.6084
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0323	0.0232	0.3011	7.4000e-004	0.0671	5.3000e-004	0.0676	0.0178	4.9000e-004	0.0183		73.1611	73.1611	2.4900e-003		73.2235
Total	**0.0352**	**0.1258**	**0.3201**	**1.0000e-003**	**0.0729**	**9.2000e-004**	**0.0738**	**0.0194**	**8.7000e-004**	**0.0203**		**101.7206**	**101.7206**	**4.4400e-003**		**101.8318**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**	**0.5303**	**0.4180**	**0.9483**	**0.0573**	**0.3846**	**0.4418**		**982.7113**	**982.7113**	**0.3059**		**990.3596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.9400e-003	0.2463	0.0456	6.4000e-004	0.0140	9.5000e-004	0.0149	3.8300e-003	9.1000e-004	4.7400e-003		68.5429	68.5429	4.6900e-003		68.6601
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0323	0.0232	0.3011	7.4000e-004	0.0671	5.3000e-004	0.0676	0.0178	4.9000e-004	0.0183		73.1611	73.1611	2.4900e-003		73.2235
Total	**0.0393**	**0.2695**	**0.3467**	**1.3800e-003**	**0.0811**	**1.4800e-003**	**0.0825**	**0.0216**	**1.4000e-003**	**0.0230**		**141.7040**	**141.7040**	**7.1800e-003**		**141.8836**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**	**0.5303**	**0.4180**	**0.9483**	**0.0573**	**0.3846**	**0.4418**	**0.0000**	**982.7113**	**982.7113**	**0.3059**		**990.3596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.9400e-003	0.2463	0.0456	6.4000e-004	0.0140	9.5000e-004	0.0149	3.8300e-003	9.1000e-004	4.7400e-003		68.5429	68.5429	4.6900e-003		68.6601
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0323	0.0232	0.3011	7.4000e-004	0.0671	5.3000e-004	0.0676	0.0178	4.9000e-004	0.0183		73.1611	73.1611	2.4900e-003		73.2235
Total	**0.0393**	**0.2695**	**0.3467**	**1.3800e-003**	**0.0811**	**1.4800e-003**	**0.0825**	**0.0216**	**1.4000e-003**	**0.0230**		**141.7040**	**141.7040**	**7.1800e-003**		**141.8836**

3.4 Demolition 2 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0746	9.6406	9.3365	0.0145		0.6034	0.6034		0.5765	0.5765		1,425.0257	1,425.0257	0.3050		1,432.6510
Total	**1.0746**	**9.6406**	**9.3365**	**0.0145**		**0.6034**	**0.6034**		**0.5765**	**0.5765**		**1,425.0257**	**1,425.0257**	**0.3050**		**1,432.6510**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.7800e-003	0.2053	0.0380	5.3000e-004	0.0117	7.9000e-004	0.0124	3.1900e-003	7.6000e-004	3.9500e-003		57.1191	57.1191	3.9100e-003		57.2167
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0431	0.0309	0.4014	9.8000e-004	0.0894	7.1000e-004	0.0901	0.0237	6.6000e-004	0.0244		97.5481	97.5481	3.3300e-003		97.6313
Total	**0.0489**	**0.2362**	**0.4394**	**1.5100e-003**	**0.1011**	**1.5000e-003**	**0.1026**	**0.0269**	**1.4200e-003**	**0.0283**		**154.6672**	**154.6672**	**7.2400e-003**		**154.8480**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0746	9.6406	9.3365	0.0145		0.6034	0.6034		0.5765	0.5765	0.0000	1,425.0257	1,425.0257	0.3050		1,432.6510
Total	**1.0746**	**9.6406**	**9.3365**	**0.0145**		**0.6034**	**0.6034**		**0.5765**	**0.5765**	**0.0000**	**1,425.0257**	**1,425.0257**	**0.3050**		**1,432.6510**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.7800e-003	0.2053	0.0380	5.3000e-004	0.0117	7.9000e-004	0.0124	3.1900e-003	7.6000e-004	3.9500e-003		57.1191	57.1191	3.9100e-003		57.2167
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0431	0.0309	0.4014	9.8000e-004	0.0894	7.1000e-004	0.0901	0.0237	6.6000e-004	0.0244		97.5481	97.5481	3.3300e-003		97.6313
Total	**0.0489**	**0.2362**	**0.4394**	**1.5100e-003**	**0.1011**	**1.5000e-003**	**0.1026**	**0.0269**	**1.4200e-003**	**0.0283**		**154.6672**	**154.6672**	**7.2400e-003**		**154.8480**

3.5 Building Construction 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8885	8.4084	7.0959	9.2700e-003		0.6239	0.6239		0.5740	0.5740		933.1271	933.1271	0.2905		940.3895
Total	**0.8885**	**8.4084**	**7.0959**	**9.2700e-003**		**0.6239**	**0.6239**		**0.5740**	**0.5740**		**933.1271**	**933.1271**	**0.2905**		**940.3895**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.5100e-003	0.2424	0.0604	5.2000e-004	0.0128	1.7700e-003	0.0146	3.6900e-003	1.6900e-003	5.3800e-003		55.7316	55.7316	3.7900e-003		55.8264
Worker	0.0539	0.0386	0.5018	1.2300e-003	0.1118	8.9000e-004	0.1127	0.0296	8.2000e-004	0.0305		121.9352	121.9352	4.1600e-003		122.0391
Total	**0.0624**	**0.2810**	**0.5621**	**1.7500e-003**	**0.1246**	**2.6600e-003**	**0.1272**	**0.0333**	**2.5100e-003**	**0.0358**		**177.6668**	**177.6668**	**7.9500e-003**		**177.8655**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8885	8.4084	7.0959	9.2700e-003		0.6239	0.6239		0.5740	0.5740	0.0000	933.1271	933.1271	0.2905		940.3895
Total	**0.8885**	**8.4084**	**7.0959**	**9.2700e-003**		**0.6239**	**0.6239**		**0.5740**	**0.5740**	**0.0000**	**933.1271**	**933.1271**	**0.2905**		**940.3895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.5100e-003	0.2424	0.0604	5.2000e-004	0.0128	1.7700e-003	0.0146	3.6900e-003	1.6900e-003	5.3800e-003		55.7316	55.7316	3.7900e-003		55.8264
Worker	0.0539	0.0386	0.5018	1.2300e-003	0.1118	8.9000e-004	0.1127	0.0296	8.2000e-004	0.0305		121.9352	121.9352	4.1600e-003		122.0391
Total	**0.0624**	**0.2810**	**0.5621**	**1.7500e-003**	**0.1246**	**2.6600e-003**	**0.1272**	**0.0333**	**2.5100e-003**	**0.0358**		**177.6668**	**177.6668**	**7.9500e-003**		**177.8655**

3.6 Building Construction 2 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8885	8.4084	7.0959	9.2700e-003		0.6239	0.6239		0.5740	0.5740		933.1271	933.1271	0.2905		940.3895
Total	**0.8885**	**8.4084**	**7.0959**	**9.2700e-003**		**0.6239**	**0.6239**		**0.5740**	**0.5740**		**933.1271**	**933.1271**	**0.2905**		**940.3895**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.5100e-003	0.2424	0.0604	5.2000e-004	0.0128	1.7700e-003	0.0146	3.6900e-003	1.6900e-003	5.3800e-003		55.7316	55.7316	3.7900e-003		55.8264
Worker	0.0539	0.0386	0.5018	1.2300e-003	0.1118	8.9000e-004	0.1127	0.0296	8.2000e-004	0.0305		121.9352	121.9352	4.1600e-003		122.0391
Total	**0.0624**	**0.2810**	**0.5621**	**1.7500e-003**	**0.1246**	**2.6600e-003**	**0.1272**	**0.0333**	**2.5100e-003**	**0.0358**		**177.6668**	**177.6668**	**7.9500e-003**		**177.8655**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8885	8.4084	7.0959	9.2700e-003		0.6239	0.6239		0.5740	0.5740	0.0000	933.1271	933.1271	0.2905		940.3895
Total	**0.8885**	**8.4084**	**7.0959**	**9.2700e-003**		**0.6239**	**0.6239**		**0.5740**	**0.5740**	**0.0000**	**933.1271**	**933.1271**	**0.2905**		**940.3895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.5100e-003	0.2424	0.0604	5.2000e-004	0.0128	1.7700e-003	0.0146	3.6900e-003	1.6900e-003	5.3800e-003		55.7316	55.7316	3.7900e-003		55.8264
Worker	0.0539	0.0386	0.5018	1.2300e-003	0.1118	8.9000e-004	0.1127	0.0296	8.2000e-004	0.0305		121.9352	121.9352	4.1600e-003		122.0391
Total	**0.0624**	**0.2810**	**0.5621**	**1.7500e-003**	**0.1246**	**2.6600e-003**	**0.1272**	**0.0333**	**2.5100e-003**	**0.0358**		**177.6668**	**177.6668**	**7.9500e-003**		**177.8655**

3.6 Building Construction 2 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	7.5314	6.9937	9.2700e-003		0.5334	0.5334		0.4907	0.4907		917.7245	917.7245	0.2904		924.9835
Total	**0.7855**	**7.5314**	**6.9937**	**9.2700e-003**		**0.5334**	**0.5334**		**0.4907**	**0.4907**		**917.7245**	**917.7245**	**0.2904**		**924.9835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	7.7100e-003	0.2289	0.0553	5.2000e-004	0.0128	1.5200e-003	0.0143	3.6900e-003	1.4500e-003	5.1400e-003		55.2439	55.2439	3.6600e-003		55.3353
Worker	0.0490	0.0341	0.4493	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.0000e-004	0.0305		118.0989	118.0989	3.6900e-003		118.1912
Total	**0.0567**	**0.2629**	**0.5047**	**1.7100e-003**	**0.1246**	**2.3900e-003**	**0.1270**	**0.0333**	**2.2500e-003**	**0.0356**		**173.3428**	**173.3428**	**7.3500e-003**		**173.5266**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	7.5314	6.9937	9.2700e-003		0.5334	0.5334		0.4907	0.4907	0.0000	917.7245	917.7245	0.2904		924.9835
Total	**0.7855**	**7.5314**	**6.9937**	**9.2700e-003**		**0.5334**	**0.5334**		**0.4907**	**0.4907**	**0.0000**	**917.7245**	**917.7245**	**0.2904**		**924.9835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	7.7100e-003	0.2289	0.0553	5.2000e-004	0.0128	1.5200e-003	0.0143	3.6900e-003	1.4500e-003	5.1400e-003		55.2439	55.2439	3.6600e-003		55.3353
Worker	0.0490	0.0341	0.4493	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.0000e-004	0.0305		118.0989	118.0989	3.6900e-003		118.1912
Total	**0.0567**	**0.2629**	**0.5047**	**1.7100e-003**	**0.1246**	**2.3900e-003**	**0.1270**	**0.0333**	**2.2500e-003**	**0.0356**		**173.3428**	**173.3428**	**7.3500e-003**		**173.5266**

3.7 Building Construction 3 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	7.5314	6.9937	9.2700e-003		0.5334	0.5334		0.4907	0.4907		917.7245	917.7245	0.2904		924.9835
Total	**0.7855**	**7.5314**	**6.9937**	**9.2700e-003**		**0.5334**	**0.5334**		**0.4907**	**0.4907**		**917.7245**	**917.7245**	**0.2904**		**924.9835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	7.7100e-003	0.2289	0.0553	5.2000e-004	0.0128	1.5200e-003	0.0143	3.6900e-003	1.4500e-003	5.1400e-003		55.2439	55.2439	3.6600e-003		55.3353
Worker	0.0490	0.0341	0.4493	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.0000e-004	0.0305		118.0989	118.0989	3.6900e-003		118.1912
Total	**0.0567**	**0.2629**	**0.5047**	**1.7100e-003**	**0.1246**	**2.3900e-003**	**0.1270**	**0.0333**	**2.2500e-003**	**0.0356**		**173.3428**	**173.3428**	**7.3500e-003**		**173.5266**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	7.5314	6.9937	9.2700e-003		0.5334	0.5334		0.4907	0.4907	0.0000	917.7245	917.7245	0.2904		924.9835
Total	**0.7855**	**7.5314**	**6.9937**	**9.2700e-003**		**0.5334**	**0.5334**		**0.4907**	**0.4907**	**0.0000**	**917.7245**	**917.7245**	**0.2904**		**924.9835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	7.7100e-003	0.2289	0.0553	5.2000e-004	0.0128	1.5200e-003	0.0143	3.6900e-003	1.4500e-003	5.1400e-003		55.2439	55.2439	3.6600e-003		55.3353
Worker	0.0490	0.0341	0.4493	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.0000e-004	0.0305		118.0989	118.0989	3.6900e-003		118.1912
Total	**0.0567**	**0.2629**	**0.5047**	**1.7100e-003**	**0.1246**	**2.3900e-003**	**0.1270**	**0.0333**	**2.2500e-003**	**0.0356**		**173.3428**	**173.3428**	**7.3500e-003**		**173.5266**

CalEEMod Version: CalEEMod.2016.3.2

Date: 2/19/2018 9:41 AM

La Mirada Creek Park

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	11.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - La Mirada Creek Park

Land Use - Project within existing 11-acre park.

Construction Phase - Construction asusmed to begin September 2018 would finish February 2019

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Off-road Equipment - Updated equipment

Trips and VMT - Updated trips

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	100	0
tblAreaCoating	Area_Nonresidential_Exterior	2000	239580
tblAreaCoating	Area_Nonresidential_Interior	6000	718740
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	300.00	15.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	30.00	25.00
tblConstructionPhase	NumDays	300.00	15.00
tblConstructionPhase	NumDays	300.00	29.00
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.8700e-003	0.00
tblFleetMix	MCY	4.7240e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	9.9100e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.9990e-003	0.00
tblFleetMix	SBUS	7.0400e-004	0.00
tblFleetMix	UBUS	2.0270e-003	0.00
tblLandUse	LandUseSquareFeet	0.00	4,000.00
tblLandUse	LotAcreage	0.00	11.00
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes

tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
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tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	20.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	1.00	2.00
tblTripsAndVMT	VendorTripNumber	1.00	2.00
tblTripsAndVMT	VendorTripNumber	1.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00

tblTripsAndVMT	WorkerTripNumber	5.00	6.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00
tblTripsAndVMT	WorkerTripNumber	2.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.1274	10.0324	9.7410	0.0160	0.6113	0.6266	1.0308	0.0789	0.5779	0.6099	0.0000	1,572.3745	1,572.3745	0.3132	0.0000	1,580.1798
2019	0.8469	7.7977	7.4607	0.0109	0.1246	0.5358	0.6604	0.0333	0.4930	0.5263	0.0000	1,081.8534	1,081.8534	0.2977	0.0000	1,089.2968
Maximum	**1.1274**	**10.0324**	**9.7410**	**0.0160**	**0.6113**	**0.6266**	**1.0308**	**0.0789**	**0.5779**	**0.6099**	**0.0000**	**1,572.3745**	**1,572.3745**	**0.3132**	**0.0000**	**1,580.1798**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.1274	10.0324	9.7410	0.0160	0.6113	0.6266	1.0308	0.0789	0.5779	0.6099	0.0000	1,572.3745	1,572.3745	0.3132	0.0000	1,580.1798
2019	0.8469	7.7977	7.4607	0.0109	0.1246	0.5358	0.6604	0.0333	0.4930	0.5263	0.0000	1,081.8534	1,081.8534	0.2977	0.0000	1,089.2968
Maximum	**1.1274**	**10.0324**	**9.7410**	**0.0160**	**0.6113**	**0.6266**	**1.0308**	**0.0789**	**0.5779**	**0.6099**	**0.0000**	**1,572.3745**	**1,572.3745**	**0.3132**	**0.0000**	**1,580.1798**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition 1	Demolition	9/1/2018	10/12/2018	5	30	La Mirada Creek Naturalization-Removal of Concrete Check
2	Grading	Grading	10/13/2018	11/16/2018	5	25	La Mirada Creek Naturalization-Reconfig of Creek's Meanders
3	Demolition 2	Demolition	11/17/2018	12/7/2018	5	15	Restroom Facilities-Demo of Central Restrooms
4	Building Construction 1	Building Construction	12/8/2018	12/28/2018	5	15	Restroom Facilities-Construction of Restrooms
5	Building Construction 2	Building Construction	12/29/2018	1/18/2019	5	15	Recreational Facility Upgrades
6	Building Construction 3	Building Construction	1/19/2019	2/28/2019	5	29	Pedestrian Bridges (5)

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition 1	Graders	1	8.00	187	0.41
Demolition 1	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition 2	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition 2	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition 2	Excavators	1	8.00	158	0.38
Building Construction 1	Forklifts	2	8.00	89	0.20
Building Construction 1	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 2	Forklifts	2	8.00	89	0.20
Building Construction 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Building Construction 3	Forklifts	2	8.00	89	0.20
Building Construction 3	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition 1	2	6.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	6.00	0.00	20.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition 2	3	8.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 1	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	4	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**		**0.4180**	**0.4180**		**0.3846**	**0.3846**		**982.7113**	**982.7113**	**0.3059**		**990.3596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.9800e-003	0.1041	0.0206	2.6000e-004	5.8200e-003	4.0000e-004	6.2300e-003	1.6000e-003	3.8000e-004	1.9800e-003		28.0472	28.0472	2.0400e-003		28.0983
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0352	0.0254	0.2725	6.9000e-004	0.0671	5.3000e-004	0.0676	0.0178	4.9000e-004	0.0183		68.4408	68.4408	2.3400e-003		68.4991
Total	**0.0381**	**0.1295**	**0.2931**	**9.5000e-004**	**0.0729**	**9.3000e-004**	**0.0738**	**0.0194**	**8.7000e-004**	**0.0203**		**96.4880**	**96.4880**	**4.3800e-003**		**96.5975**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**		**0.4180**	**0.4180**		**0.3846**	**0.3846**	**0.0000**	**982.7113**	**982.7113**	**0.3059**		**990.3596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.9800e-003	0.1041	0.0206	2.6000e-004	5.8200e-003	4.0000e-004	6.2300e-003	1.6000e-003	3.8000e-004	1.9800e-003		28.0472	28.0472	2.0400e-003		28.0983
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0352	0.0254	0.2725	6.9000e-004	0.0671	5.3000e-004	0.0676	0.0178	4.9000e-004	0.0183		68.4408	68.4408	2.3400e-003		68.4991
Total	**0.0381**	**0.1295**	**0.2931**	**9.5000e-004**	**0.0729**	**9.3000e-004**	**0.0738**	**0.0194**	**8.7000e-004**	**0.0203**		**96.4880**	**96.4880**	**4.3800e-003**		**96.5975**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846		982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**	**0.5303**	**0.4180**	**0.9483**	**0.0573**	**0.3846**	**0.4418**		**982.7113**	**982.7113**	**0.3059**		**990.3596**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.1400e-003	0.2498	0.0495	6.2000e-004	0.0140	9.7000e-004	0.0150	3.8300e-003	9.2000e-004	4.7600e-003		67.3134	67.3134	4.9000e-003		67.4360
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0352	0.0254	0.2725	6.9000e-004	0.0671	5.3000e-004	0.0676	0.0178	4.9000e-004	0.0183		68.4408	68.4408	2.3400e-003		68.4991
Total	**0.0423**	**0.2752**	**0.3219**	**1.3100e-003**	**0.0811**	**1.5000e-003**	**0.0826**	**0.0216**	**1.4100e-003**	**0.0230**		**135.7541**	**135.7541**	**7.2400e-003**		**135.9351**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7858	9.7572	4.2514	9.7600e-003		0.4180	0.4180		0.3846	0.3846	0.0000	982.7113	982.7113	0.3059		990.3596
Total	**0.7858**	**9.7572**	**4.2514**	**9.7600e-003**	**0.5303**	**0.4180**	**0.9483**	**0.0573**	**0.3846**	**0.4418**	**0.0000**	**982.7113**	**982.7113**	**0.3059**		**990.3596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.1400e-003	0.2498	0.0495	6.2000e-004	0.0140	9.7000e-004	0.0150	3.8300e-003	9.2000e-004	4.7600e-003		67.3134	67.3134	4.9000e-003		67.4360
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0352	0.0254	0.2725	6.9000e-004	0.0671	5.3000e-004	0.0676	0.0178	4.9000e-004	0.0183		68.4408	68.4408	2.3400e-003		68.4991
Total	**0.0423**	**0.2752**	**0.3219**	**1.3100e-003**	**0.0811**	**1.5000e-003**	**0.0826**	**0.0216**	**1.4100e-003**	**0.0230**		**135.7541**	**135.7541**	**7.2400e-003**		**135.9351**

3.4 Demolition 2 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0746	9.6406	9.3365	0.0145		0.6034	0.6034		0.5765	0.5765		1,425.0257	1,425.0257	0.3050		1,432.6510
Total	**1.0746**	**9.6406**	**9.3365**	**0.0145**		**0.6034**	**0.6034**		**0.5765**	**0.5765**		**1,425.0257**	**1,425.0257**	**0.3050**		**1,432.6510**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.9500e-003	0.2081	0.0412	5.2000e-004	0.0117	8.0000e-004	0.0125	3.1900e-003	7.7000e-004	3.9600e-003		56.0945	56.0945	4.0900e-003		56.1967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0339	0.3633	9.2000e-004	0.0894	7.1000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.2543	91.2543	3.1100e-003		91.3322
Total	**0.0528**	**0.2420**	**0.4045**	**1.4400e-003**	**0.1011**	**1.5100e-003**	**0.1026**	**0.0269**	**1.4300e-003**	**0.0283**		**147.3488**	**147.3488**	**7.2000e-003**		**147.5289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0746	9.6406	9.3365	0.0145		0.6034	0.6034		0.5765	0.5765	0.0000	1,425.0257	1,425.0257	0.3050		1,432.6510
Total	**1.0746**	**9.6406**	**9.3365**	**0.0145**		**0.6034**	**0.6034**		**0.5765**	**0.5765**	**0.0000**	**1,425.0257**	**1,425.0257**	**0.3050**		**1,432.6510**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.9500e-003	0.2081	0.0412	5.2000e-004	0.0117	8.0000e-004	0.0125	3.1900e-003	7.7000e-004	3.9600e-003		56.0945	56.0945	4.0900e-003		56.1967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0339	0.3633	9.2000e-004	0.0894	7.1000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.2543	91.2543	3.1100e-003		91.3322
Total	**0.0528**	**0.2420**	**0.4045**	**1.4400e-003**	**0.1011**	**1.5100e-003**	**0.1026**	**0.0269**	**1.4300e-003**	**0.0283**		**147.3488**	**147.3488**	**7.2000e-003**		**147.5289**

3.5 Building Construction 1 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8885	8.4084	7.0959	9.2700e-003		0.6239	0.6239		0.5740	0.5740		933.1271	933.1271	0.2905		940.3895
Total	**0.8885**	**8.4084**	**7.0959**	**9.2700e-003**		**0.6239**	**0.6239**		**0.5740**	**0.5740**		**933.1271**	**933.1271**	**0.2905**		**940.3895**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.8800e-003	0.2428	0.0670	5.1000e-004	0.0128	1.8000e-003	0.0146	3.6900e-003	1.7200e-003	5.4100e-003		54.1513	54.1513	4.0700e-003		54.2532
Worker	0.0586	0.0423	0.4541	1.1500e-003	0.1118	8.9000e-004	0.1127	0.0296	8.2000e-004	0.0305		114.0679	114.0679	3.8900e-003		114.1652
Total	**0.0675**	**0.2851**	**0.5211**	**1.6600e-003**	**0.1246**	**2.6900e-003**	**0.1273**	**0.0333**	**2.5400e-003**	**0.0359**		**168.2192**	**168.2192**	**7.9600e-003**		**168.4184**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8885	8.4084	7.0959	9.2700e-003		0.6239	0.6239		0.5740	0.5740	0.0000	933.1271	933.1271	0.2905		940.3895
Total	**0.8885**	**8.4084**	**7.0959**	**9.2700e-003**		**0.6239**	**0.6239**		**0.5740**	**0.5740**	**0.0000**	**933.1271**	**933.1271**	**0.2905**		**940.3895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.8800e-003	0.2428	0.0670	5.1000e-004	0.0128	1.8000e-003	0.0146	3.6900e-003	1.7200e-003	5.4100e-003		54.1513	54.1513	4.0700e-003		54.2532
Worker	0.0586	0.0423	0.4541	1.1500e-003	0.1118	8.9000e-004	0.1127	0.0296	8.2000e-004	0.0305		114.0679	114.0679	3.8900e-003		114.1652
Total	**0.0675**	**0.2851**	**0.5211**	**1.6600e-003**	**0.1246**	**2.6900e-003**	**0.1273**	**0.0333**	**2.5400e-003**	**0.0359**		**168.2192**	**168.2192**	**7.9600e-003**		**168.4184**

3.6 Building Construction 2 - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8885	8.4084	7.0959	9.2700e-003		0.6239	0.6239		0.5740	0.5740		933.1271	933.1271	0.2905		940.3895
Total	**0.8885**	**8.4084**	**7.0959**	**9.2700e-003**		**0.6239**	**0.6239**		**0.5740**	**0.5740**		**933.1271**	**933.1271**	**0.2905**		**940.3895**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.8800e-003	0.2428	0.0670	5.1000e-004	0.0128	1.8000e-003	0.0146	3.6900e-003	1.7200e-003	5.4100e-003		54.1513	54.1513	4.0700e-003		54.2532
Worker	0.0586	0.0423	0.4541	1.1500e-003	0.1118	8.9000e-004	0.1127	0.0296	8.2000e-004	0.0305		114.0679	114.0679	3.8900e-003		114.1652
Total	**0.0675**	**0.2851**	**0.5211**	**1.6600e-003**	**0.1246**	**2.6900e-003**	**0.1273**	**0.0333**	**2.5400e-003**	**0.0359**		**168.2192**	**168.2192**	**7.9600e-003**		**168.4184**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8885	8.4084	7.0959	9.2700e-003		0.6239	0.6239		0.5740	0.5740	0.0000	933.1271	933.1271	0.2905		940.3895
Total	**0.8885**	**8.4084**	**7.0959**	**9.2700e-003**		**0.6239**	**0.6239**		**0.5740**	**0.5740**	**0.0000**	**933.1271**	**933.1271**	**0.2905**		**940.3895**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.8800e-003	0.2428	0.0670	5.1000e-004	0.0128	1.8000e-003	0.0146	3.6900e-003	1.7200e-003	5.4100e-003		54.1513	54.1513	4.0700e-003		54.2532
Worker	0.0586	0.0423	0.4541	1.1500e-003	0.1118	8.9000e-004	0.1127	0.0296	8.2000e-004	0.0305		114.0679	114.0679	3.8900e-003		114.1652
Total	**0.0675**	**0.2851**	**0.5211**	**1.6600e-003**	**0.1246**	**2.6900e-003**	**0.1273**	**0.0333**	**2.5400e-003**	**0.0359**		**168.2192**	**168.2192**	**7.9600e-003**		**168.4184**

3.6 Building Construction 2 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	7.5314	6.9937	9.2700e-003		0.5334	0.5334		0.4907	0.4907		917.7245	917.7245	0.2904		924.9835
Total	**0.7855**	**7.5314**	**6.9937**	**9.2700e-003**		**0.5334**	**0.5334**		**0.4907**	**0.4907**		**917.7245**	**917.7245**	**0.2904**		**924.9835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.0500e-003	0.2290	0.0616	5.0000e-004	0.0128	1.5400e-003	0.0143	3.6900e-003	1.4700e-003	5.1600e-003		53.6633	53.6633	3.9300e-003		53.7615
Worker	0.0533	0.0373	0.4054	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.0000e-004	0.0305		110.4656	110.4656	3.4500e-003		110.5519
Total	**0.0614**	**0.2663**	**0.4670**	**1.6100e-003**	**0.1246**	**2.4100e-003**	**0.1270**	**0.0333**	**2.2700e-003**	**0.0356**		**164.1288**	**164.1288**	**7.3800e-003**		**164.3133**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	7.5314	6.9937	9.2700e-003		0.5334	0.5334		0.4907	0.4907	0.0000	917.7245	917.7245	0.2904		924.9835
Total	**0.7855**	**7.5314**	**6.9937**	**9.2700e-003**		**0.5334**	**0.5334**		**0.4907**	**0.4907**	**0.0000**	**917.7245**	**917.7245**	**0.2904**		**924.9835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.0500e-003	0.2290	0.0616	5.0000e-004	0.0128	1.5400e-003	0.0143	3.6900e-003	1.4700e-003	5.1600e-003		53.6633	53.6633	3.9300e-003		53.7615
Worker	0.0533	0.0373	0.4054	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.0000e-004	0.0305		110.4656	110.4656	3.4500e-003		110.5519
Total	**0.0614**	**0.2663**	**0.4670**	**1.6100e-003**	**0.1246**	**2.4100e-003**	**0.1270**	**0.0333**	**2.2700e-003**	**0.0356**		**164.1288**	**164.1288**	**7.3800e-003**		**164.3133**

3.7 Building Construction 3 - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	7.5314	6.9937	9.2700e-003		0.5334	0.5334		0.4907	0.4907		917.7245	917.7245	0.2904		924.9835
Total	**0.7855**	**7.5314**	**6.9937**	**9.2700e-003**		**0.5334**	**0.5334**		**0.4907**	**0.4907**		**917.7245**	**917.7245**	**0.2904**		**924.9835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.0500e-003	0.2290	0.0616	5.0000e-004	0.0128	1.5400e-003	0.0143	3.6900e-003	1.4700e-003	5.1600e-003		53.6633	53.6633	3.9300e-003		53.7615
Worker	0.0533	0.0373	0.4054	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.0000e-004	0.0305		110.4656	110.4656	3.4500e-003		110.5519
Total	**0.0614**	**0.2663**	**0.4670**	**1.6100e-003**	**0.1246**	**2.4100e-003**	**0.1270**	**0.0333**	**2.2700e-003**	**0.0356**		**164.1288**	**164.1288**	**7.3800e-003**		**164.3133**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7855	7.5314	6.9937	9.2700e-003		0.5334	0.5334		0.4907	0.4907	0.0000	917.7245	917.7245	0.2904		924.9835
Total	**0.7855**	**7.5314**	**6.9937**	**9.2700e-003**		**0.5334**	**0.5334**		**0.4907**	**0.4907**	**0.0000**	**917.7245**	**917.7245**	**0.2904**		**924.9835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.0500e-003	0.2290	0.0616	5.0000e-004	0.0128	1.5400e-003	0.0143	3.6900e-003	1.4700e-003	5.1600e-003		53.6633	53.6633	3.9300e-003		53.7615
Worker	0.0533	0.0373	0.4054	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.0000e-004	0.0305		110.4656	110.4656	3.4500e-003		110.5519
Total	**0.0614**	**0.2663**	**0.4670**	**1.6100e-003**	**0.1246**	**2.4100e-003**	**0.1270**	**0.0333**	**2.2700e-003**	**0.0356**		**164.1288**	**164.1288**	**7.3800e-003**		**164.3133**

APPENDIX B

Biological Resources Data

APPENDIX B
Biological Resource Data

B.1 PLANT COMPENDIUM

VASCULAR SPECIES

GYMNOSPERMS AND GNETOPHYTES

CUPRESSACEAE—CYPRESS FAMILY

* *Cupressus sempervirens*—Italian cypress

* *Juniperus chinensis*—Chinese juniper

Sequoia sempervirens—redwood

MONOCOTS

ARECACEAE—PALM FAMILY

Washingtonia filifera—California fan palm

* *Syagrus romanzoffiana*—queen palm

* *Washingtonia robusta*—Washington fan palm

POACEAE—GRASS FAMILY

* *Cynodon dactylon*—Bermuda grass

* *Echinochloa crus-galli*—barnyard grass

EUDICOTS

ALTINGIACEAE—ALTINGIACEAE FAMILY

* *Liquidambar styraciflua*—sweet gum

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Rhus ovata—sugarbush

* *Schinus molle*—Peruvian peppertree

* *Schinus terebinthifolius*—Brazilian peppertree

APOCYNACEAE—DOGBANE FAMILY

* *Nerium oleander*—oleander

ARALIACEAE—GINSENG FAMILY

* *Hedera helix*—English ivy

ASTERACEAE—SUNFLOWER FAMILY

* *Sonchus oleraceus*—common sow thistle

* *Taraxacum officinale*—common dandelion

BETULACEAE—BIRCH FAMILY

Alnus rhombifolia—white alder

BRASSICACEAE—MUSTARD FAMILY

* *Capsella bursa-pastoris*—shepherd's purse

FABACEAE—LEGUME FAMILY

* *Acacia longifolia*—Sydney golden wattle

* *Tipuana tipu*—tipu

FAGACEAE—OAK FAMILY

Quercus sp.—oak

LAURACEAE—LAUREL FAMILY

* *Cinnamomum camphora*—camphor tree

MALVACEAE—MALLOW FAMILY

Malvella leprosa—alkali mallow

MORACEAE—MULBERRY FAMILY

* *Ficus microcarpus nitida*—Indian laurel fig

MYRSINACEAE—MYRSINE FAMILY

* *Lysimachia arvensis*—scarlet pimpernel

MYRTACEAE—MYRTLE FAMILY

* *Eucalyptus camaldulensis*—river redgum

NYCTAGINACEAE—FOUR O'CLOCK FAMILY

* *Bougainvillea spectabilis*—bougainvillea

OLEACEAE—OLIVE FAMILY

* *Fraxinus uhdei*—Shamel ash

* *Jasminum multiflorum*—star jasmine

* *Ligustrum japonicum*—Japanese privet

PINACEAE—PINE FAMILY

Cedrus deodara—deodar cedar

* *Pinus canariensis*—Canary Island pine

Pinus sp.—pine

PODOCARPACEAE—PODOCARPUS FAMILY

* *Podocarpus macrophyllus*—Japanese yew

ROSACEAE—ROSE FAMILY

* *Raphiolepis indica*—Indian hawthorne

* *Pyrus calleryana*—callery pear

SAPINDACEAE—SAPINDACEAE-RAMBUTAN FAMILY

* *Koelreuteria paniculata*—goldenrain tree

SCROPHULARIACEAE—FIGWORT FAMILY

* *Myoporum laetum*—myoporum

SOLANACEAE—NIGHTSHADE FAMILY

* *Nicotiana glauca*—tree tobacco

* signifies introduced (non-native) species

B.2 WILDLIFE COMPENDIUM

BIRD

BUSHTITS

AEGITHALIDAE—LONG-TAILED TITS AND BUSHTITS

Psaltriparus minimus—bushtit

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch

Spinus psaltria—lesser goldfinch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Empidonax difficilis—Pacific-slope flycatcher

Sayornis nigricans—black phoebe

Sayornis saya—Say's phoebe

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—California scrub-jay

Corvus brachyrhynchos—American crow

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird

OLD WORLD SPARROWS

PASSERIDAE—OLD WORLD SPARROWS

* *Passer domesticus*—house sparrow

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

* *Streptopelia decaocto*—Eurasian collared-dove

THRUSHES

TURDIDAE—THRUSHES

Sialia mexicana—western bluebird

Turdus migratorius—American robin

WATERFOWL

ANATIDAE—DUCKS, GEESE, AND SWANS

Anas platyrhynchos—mallard

WAXBILLS

ESTRILDIDAE—WAXBILLS

* *Lonchura punctulata*—scaly-breasted munia

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Melozone crissalis—California towhee

WHYDAHS

VIDUIDAE—WHYDAHS AND INDIGOBIRDS

* *Vidua macroura*—pin-tailed whydah

MAMMAL

DOMESTIC

CANIDAE—WOLVES AND FOXES

* *Canis lupus familiaris*—domestic dog

EQUIDAE—HORSES AND BURROS

* *Equus caballus*—domestic horse

SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus (Otospermophilus) *beecheyi*—California ground squirrel

* *Sciurus niger*—eastern fox squirrel

REPTILE

LIZARDS

PHRYNOSOMATIDAE—IGUANID LIZARDS

Sceloporus occidentalis—western fence lizard

* signifies introduced (non-native) species

B.3 SPECIAL-STATUS PLANT SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROGRAM AREA

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur on Project Site
Abronia villosa var. *aurita*	chaparral sand-verbena	None/None/1B.1	Chaparral, Coastal scrub, Desert dunes; sandy/annual herb/(Jan)Mar–Sep/245–5250	Not expected to occur. No suitable habitat is present on the project site.
Androsace elongata ssp. *acuta*	California androsace	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland/annual herb/Mar–June/490–4280	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Asplenium vespertinum	western spleenwort	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub; rocky/perennial rhizomatous herb/Feb–June/590–3280	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Atriplex parishii	Parish's brittlescale	None/None/1B.1	Chenopod scrub, Playas, Vernal pools; alkaline/annual herb/June–Oct/80–6235	Not expected to occur. No suitable habitat is present on the project site.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, Coastal scrub; alkaline/annual herb/Apr–Oct/30–655	Not expected to occur. No suitable habitat is present on the project site.
Berberis nevinii	Nevin's barberry	FE/SE/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; sandy or gravelly/perennial evergreen shrub/(Feb)Mar–June/225–2705	Not expected to occur. No suitable habitat is present on the project site.
California macrophylla	round-leaved filaree	None/None/1B.2	Cismontane woodland, Valley and foothill grassland; clay/annual herb/Mar–May/45–3935	Not expected to occur. No suitable habitat is present on the project site.
Calochortus catalinae	Catalina mariposa lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial bulbiferous herb/(Feb)Mar–June/45–2295	Not expected to occur. No suitable habitat is present on the project site.
Calochortus plummerae	Plummer's mariposa lily	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; granitic, rocky/perennial bulbiferous herb/May–July/325–5575	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Calochortus weedii var. *intermedius*	intermediate mariposa lily	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland; rocky, calcareous/perennial bulbiferous herb/May–July/340–2805	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Calystegia felix	lucky morning-glory	None/None/3.1	Meadows and seeps (sometimes alkaline), Riparian scrub (alluvial); Historically associated with wetland and marshy places, but possibly in drier situations as well. Possibly silty loam and alkaline./annual rhizomatous herb/Mar–Sep/95–705	Not expected to occur. No suitable habitat is present on the project site.
Camissoniopsis lewisii	Lewis' evening-primrose	None/None/3	Coastal bluff scrub, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; sandy or clay/annual herb/Mar–May(June)/0–985	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/0–1575	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	FC/SE/1B.1	Coastal scrub (sandy), Valley and foothill grassland/annual herb/Apr–July/490–4005	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Convolvulus simulans	small-flowered morning-glory	None/None/4.2	Chaparral (openings), Coastal scrub, Valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/95–2430	Not expected to occur. No suitable habitat is present on the project site.
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	None/None/2B.2	Marshes and swamps (freshwater)/annual vine (parasitic)/July–Oct/45–920	Not expected to occur. No suitable habitat is present on the project site.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur on Project Site
Deinandra paniculata	paniculate tarplant	None/None/4.2	Coastal scrub, Valley and foothill grassland, Vernal pools; usually vernally mesic, sometimes sandy/annual herb/(Mar)Apr–Nov/80–3085	Not expected to occur. No suitable habitat is present on the project site.
Dudleya multicaulis	many-stemmed dudleya	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland; often clay/perennial herb/Apr–July/45–2590	Not expected to occur. No suitable habitat is present on the project site.
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; sandy or gravelly/perennial herb/Feb–July(Sep)/225–2655	Not expected to occur. No suitable habitat is present on the project site.
Juglans californica	Southern California black walnut	None/None/4.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; alluvial/perennial deciduous tree/Mar–Aug/160–2955	Not expected to occur. No suitable habitat is present on the project site.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/0–4005	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None/4.3	Chaparral, Coastal scrub/annual herb/Jan–July/0–2905	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.1	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools; Mesic/annual herb/Apr–July/5–3970	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Orcuttia californica	California Orcutt grass	FE/SE/1B.1	Vernal pools/annual herb/Apr–Aug/45–2165	Not expected to occur. No suitable habitat is present on the project site.
Phacelia hubbyi	Hubby's phacelia	None/None/4.2	Chaparral, Coastal scrub, Valley and foothill grassland; gravelly, rocky, talus/annual herb/Apr–July/0–3280	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia	None/None/3.2	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/15–985	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Phacelia stellaris	Brand's star phacelia	None/None/1B.1	Coastal dunes, Coastal scrub/annual herb/Mar–June/0–1310	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; sandy, gravelly/perennial herb/(July)Aug–Nov(Dec)/0–6890	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Quercus engelmannii	Engelmann oak	None/None/4.2	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/perennial deciduous tree/Mar–June/160–4265	Not expected to occur. No suitable habitat is present on the project site.
Ribes divaricatum var. *parishii*	Parish's gooseberry	None/None/1A	Riparian woodland/perennial deciduous shrub/Feb–Apr/210–985	Not expected to occur. No suitable habitat is present on the project site.
Romneya coulteri	Coulter's matilija poppy	None/None/4.2	Chaparral, Coastal scrub; Often in burns/perennial rhizomatous herb/Mar–July/65–3935	Not expected to occur. No suitable habitat is present on the project site.
Scutellaria bolanderi ssp. *austromontana*	southern mountains skullcap	None/None/1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest; mesic/perennial rhizomatous herb/June–Aug/1390–6560	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Senecio aphanactis	chaparral ragwort	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub; sometimes alkaline/annual herb/Jan–Apr(May)/45–2625	Not expected to occur. No suitable habitat is present on the project site.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur on Project Site
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; alkaline, mesic/perennial herb/Mar–June/45–5020	Not expected to occur. No suitable habitat is present on the project site.
Suaeda esteroa	estuary seablite	None/None/1B.2	Marshes and swamps (coastal salt)/perennial herb/(May)July–Oct(Jan)/0–15	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Valley and foothill grassland (vernally mesic); near ditches, streams, springs/perennial rhizomatous herb/July–Nov/5–6695	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable habitat present.

Status Legend:
Federal Designation
FE: Federally listed as endangered
FT: Federally listed as threatened
FC: Federal Candidate for listing
State Designation
SE: State listed as endangered
ST: State listed as threatened
CNPS Designation
California Rare Plant Rank (CRPR)
- CRPR 1A: Plants presumed extinct in California
- CRPR List 1B: Plants rare, threatened, or endangered in California and elsewhere
- CRPR List 2: Plants rare, threatened, or endangered in California but more common elsewhere
- CRPR List 3: Plants about which more information is needed – a review list
- CRPR List 4: Plants of limited distribution – a watch list
  - .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
  - .2 – Fairly endangered in California (20% to 80% of occurrences threatened)
  - .3 – Not very endangered in California (less than 20% of occurrences threatened or no current threats known).

B.4 SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROPOSED PROGRAM AREA

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur on the Project Site
Amphibians				
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	Not expected to occur. No suitable grassland or vernal pool habitat present on the project site.
Reptiles				
Actinemys marmorata	western pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. No suitable aquatic habitat present on the project site.
Arizona elegans occidentalis	California glossy snake	None/SSC	Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Not expected to occur. No suitable open sandy habitat present on the project site.
Aspidoscelis hyperythra	orange-throated whiptail	None/WL	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Not expected to occur. No suitable scrub or chaparral habitat present on the project site.
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Not expected to occur. No suitable chaparral or woodland habitat present on the project site.
Chelonia mydas	green sea turtle	FT/None	Shallow waters of lagoons, bays, estuaries, mangroves, eelgrass, and seaweed beds	Not expected to occur. No suitable aquatic habitat present on the project site.
Crotalus ruber	red diamondback rattlesnake	None/SSC	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Not expected to occur. No suitable scrub, chaparrla, or woodland habitat present on the project site.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Not expected to occur. No suitable open sandy areas or habitat present on the project site.
Salvadora hexalepis virgultea	coast patch-nosed snake	None/SSC	Brushy or shrubby vegetation; requires small mammal burrows for refuge and overwintering sites	Not expected to occur. No suitable habitat present on the project site.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Moderate potential to occur. Suitable nesting woodland habitat present on the project site.
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/PSE, SSC	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable wetland habitat present on the project site.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. No suitable scrub habitat present on the project site.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Not expected to occur. No suitable grassland or open scrub habitat present on the project site.
Ardea herodias (nesting colony)	great blue heron	None/None	Nests in large trees or snags; forages in wetlands, water bodies, watercourses, and opportunistically in uplands, including pasture and croplands	Not expected to occur. No suitable nesting habitat present on the project site.
Asio otus (nesting)	long-eared owl	None/SSC	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	Low potential to occur. Limited nesting habitat present on the project site.
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. No suitable grassland or scrub habitat present on the project site.
Buteo regalis (wintering)	ferruginous hawk	BCC/WL	Winters and forages in open, dry country, grasslands, open fields, agriculture	Not expected to occur. No suitable grassland or open habitat present on the project site.
Buteo swainsoni (nesting)	Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Not expected to occur. No suitable nesting habitat present on the project site.
Campylorhynchus brunneicapillus sandiegensis (San Diego & Orange Counties only)	coastal cactus wren	BCC/SSC	Southern cactus scrub patches	Not expected to occur. No suitable cactus scrub habitat present on the project site.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable dense riparian habitat present on the project site.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur on the Project Site
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Not expected to occur. No suitable riparian habitat present on the project site.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable dense riparian habitat present on the project site.
Eremophila alpestris actia	California horned lark	None/WL	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	Not expected to occur. No suitable habitat present on the project site.
Falco columbarius (wintering)	merlin	None/WL	Forages in semi-open areas, including coastline, grassland, agriculture, savanna, woodland, lakes, and wetlands	Low potential to occur. Limited suitable wintering riparian habitat present on the project site.
Falco peregrinus anatum (nesting)	American peregrine falcon	FDL, BCC/SDL, FP	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Not expected to occur. No suitable nesting habitat present on the project site.
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. No suitable dense riparian habitat present on the project site.
Laterallus jamaicensis coturniculus	California black rail	BCC/ST, FP	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No suitable marsh habitat present on the project site.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	None/SE	Nests and forages in coastal saltmarsh dominated by pickleweed (*Salicornia* spp.)	Not expected to occur. No suitable marsh habitat present on the project site.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. No suitable scrub habitat present on the project site.
Riparia riparia (nesting)	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	Not expected to occur. No suitable riparian habitat with vertical banks present on the project site.
Setophaga petechia (nesting)	yellow warbler	BCC/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Moderate potential to occur. Suitable riparian habitat for foraging, but limited nesting potential present on the project site.
Sternula antillarum browni (nesting colony)	California least tern	FE/SE, FP	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected to occur. No suitable estuarine or lagoon habitat present on the project site.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable dense riparian habitat present on the project site.
Fishes				
Catostomus santaanae	Santa Ana sucker	FT/None	Small, shallow, cool, clear streams less than 7 meters (23 feet) in width and a few centimeters to more than a meter (1.5 inches to more than 3 feet) in depth; substrates are generally coarse gravel, rubble, and boulder	Not expected to occur. No suitable stream substrates within riparian habitat present on the project site.
Gila orcuttii	arroyo chub	None/SSC	Warm, fluctuating streams with slow-moving or backwater sections of warm to cool streams at depths >40 centimeters (16 inches); substrates of sand or mud	Not expected to occur. No suitable stream substrates within riparian habitat present on the project site.
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Not expected to occur. No suitable habitat present on the project site.
Choeronycteris mexicana	Mexican long-tongued bat	None/SSC	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland; roosts in caves, mines, and buildings	Not expected to occur. No suitable habitat present on the project site.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. No suitable habitat present on the project site.
Lasionycteris noctivagans	silver-haired bat	None/None	Old-growth forest, maternity roosts in trees, large snags 50 feet aboveground; hibernates in hollow trees, rock crevices, buildings, mines, caves, and under sloughing bark; forages in or near coniferous or mixed deciduous forest, stream or river drainages	Not expected to occur. No suitable habitat present on the project site.
Lasiurus cinereus	hoary bat	None/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	Not expected to occur. No suitable habitat present on the project site.
Lasiurus xanthinus	western yellow bat	None/SSC	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Not expected to occur. No suitable habitat present on the project site.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/SSC	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Not expected to occur. No suitable habitat present on the project site.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur on the Project Site
Myotis yumanensis	Yuma myotis	None/None	Riparian, arid scrublands and deserts, and forests associated with water (streams, rivers, tinajas); roosts in bridges, buildings, cliff crevices, caves, mines, and trees	Not expected to occur. No suitable habitat present on the project site.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Not expected to occur. No suitable habitat present on the project site.
Nyctinomops macrotis	big free-tailed bat	None/SSC	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Not expected to occur. No suitable habitat present on the project site.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. No suitable habitat present on the project site.
Invertebrates				
Cicindela gabbii	western tidal-flat tiger beetle	None/None	Inhabits estuaries and mudflats along the coast of Southern California	Not expected to occur. No suitable estuarine habitat present on the project site.
Cicindela hirticollis gravida	sandy beach tiger beetle	None/None	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico	Not expected to occur. No suitable habitat present on the project site.
Cicindela latesignata latesignata	western beach tiger beetle	None/None	Mudflats and beaches in coastal Southern California	Not expected to occur. No suitable habitat present on the project site.
Cicindela senilis frosti	senile tiger beetle	None/None	Inhabits marine shoreline, from Central California coast south to saltmarshes of San Diego; also found at Lake Elsinore	Not expected to occur. No suitable habitat present on the project site.
Cincindela latesignata obliviosa	Oblivious tiger beetle	None/None	Inhabited the Southern California coastline, from La Jolla north to the Orange County line. Occupied saline mudflats and moist sandy spots in estuaries of small streams in the lower zone. Has not been observed in 20 years. The oblivious tiger beetle (C. l. obliviosa) is no longer the accepted name for this species (ITIS 2016).	Not expected to occur. No suitable habitat present on the project site.
Danaus plexippus	monarch	None/None	Wind-protected tree groves with nectar sources and nearby water sources	Not expected to occur. Suitable wind-protected, woodland habitat within the coastal zone for wintering roost sites is not present on the project site.

Status Legend:
Federal Designation
BCC: U.S. Fish and Wildlife Service birds of conservation concern
FE: Federally listed as endangered
FT: Federally listed as threatened
FC: Federal candidate for listing
State Designation
SE: State listed as endangered
ST: State listed as threatened
SDL: State-listed as delisted
SSC: California special concern species
FP: CDFW protected and fully protected species
WL: CDFW watch list species

APPENDIX C

Cultural Resources Records Search and Pedestrian Field Survey

DUKE CRM

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Irvine, CA 92618
949-303-0420
www.dukecrm.com

March 15, 2018

Eric Villagracia
City of La Mirada
Public Works Department
15515 Phoebe Avenue
La Mirada, California 90638

Subject: Cultural Resources Record Search and Field Survey Results, La Mirada Creek Park Project, La Mirada, California

Dear Mr. Villagracia:

At the request of the City of La Mirada (City), Duke Cultural Resources Management, LLC (DUKE CRM) has conducted a cultural resources record search and pedestrian field survey for the La Mirada Creek Park project (Project), located in the City of La Mirada, Los Angeles County, California.

The Project is located north of Imperial Highway in the City of La Mirada, at 12065 Santa Gertrudes Ave, La Mirada, California. La Mirada Creek Park is bounded by Santa Gertrudes Avenue to the east, Golden Lantern Lane to the north, Stamy Road to the west, and Surrey Lane to the south. The park lies in Township 3 South, Range 11 West, in the SE ¼ of Section 11, and is depicted on the USGS *Whittier* (west) and *La Habra (*east*)*, *California* 7.5-minute quadrangles. Please see Attachment A, Project Maps.

The proposed Project involves the rehabilitation and naturalization of the existing La Mirada Creek Park through implementation of the La Mirada Creek Park Master Plan (Master Plan). As part of the Master Plan, the drainage features along the La Mirada Creek would be rehabilitated and naturalized to return the topography of the creek to contours that are more natural. Additionally, the concrete check dams and grouted riprap would be removed to enhance aesthetics of the natural topography. The proposed Project would result in reconfiguration of the creek's meanders to increase flow capacity and reduce hazardous conditions along the channel.

Additionally, the proposed Project would include upgrades to the existing amphitheater, replacement of the five existing foot bridges, improved pathways for walking and jogging, new picnic areas, benches, and shelters, demolition of the existing restroom facility and construction of two new Title 24 Handicap Accessibility Code compliant restroom facilities. The proposed project also includes new foot path spurs leading to the improved creek channel, improved connections to the equestrian facilities, and upgrades to existing parking lots, lighting, and landscaping, to be integrated within the existing context of the park. The proposed project would be located within the confines of the existing Creek Park, and as such, no expansion beyond the existing park boundaries is required. Project related ground disturbance is expected to be relatively shallow, no more than five feet in depth. However, a few locations related to the check dams and creek channel are planned to reach 10 feet in depth.

On September 11, 2017, Alex Bulato, B.A., archaeologist at DUKE CRM, conducted a records search at the South Central Coastal Information Center (SCCIC). The SCCIC is part of the California Historical Resources Information System (CHRIS) and is located at California State University, Fullerton. The records search included a review of all recorded historic and prehistoric archaeological sites within a one-mile radius of the Project, as well as a review of known cultural resource survey and excavation reports. In addition, Ms. Bulato examined the California State Historic Property Data File (HPD), which includes the National Register of Historic Places (National Register), California Register of Historical Resources (California Register), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). Results of the

records search indicated that no previous cultural resources studies have included the current Project. However, there have been 20 cultural resources studies conducted within a one-mile radius of the Project. Most were small cultural resource surveys of less than an acre in size; however, four of the study areas were larger than 50 acres, and one was a linear survey. Less than ten percent of the one-mile radius surrounding the Project has been surveyed for cultural resources. Table 1 includes four reports within ½ mile of the Project to demonstrate the variety of projects that have occurred in the vicinity.

Table 1. Selected Reports within ½ Mile of the Project Boundary

Report No.	Year	Author	Affiliation	Title	Resources	Distance from Project
LA-03071	1994	Maki, Mary K.	Fugro West, Inc.	A Phase 1 Cultural Resources Survey of 2.04 Acres at 15315 Leffing Well Road, Los Angeles County, California	None	½ Mile
LA-04838	1986	Bissell, Ronald M. and Rodney Raschke	Ronald Bissell	A Cultural and Paleontological Resources Assessment of the Chevron-La Mirada Project Property, Los Angeles County	None	½ Mile
LA-13021	2013	Brunzell, David	BCR Consulting LLC	Cultural Resources Assessment, Brookfield East Project, Unincorporated Los Angeles County, California	19-190927	½ Mile
LA-13209	2016	Roland, Jennifer	NWB Environmental Services, LLC	Phase I Investigation for the Crown Castle La Mirada Antenna Installation Project, La Mirada, Los Angeles County, California	None	¼ Mile

The results of this search indicate that there are no cultural resources recorded within the Project. However, there is one recorded historic resource and two unrecorded prehistoric isolates within a one-mile radius of the Project. The historic resource is an athletic track and field at Lowell High School (P-19-190927) just over a half-mile east of the Project (Brunzell 2013). The athletic track was evaluated in the report and determined ineligible for the National Register. The unrecorded isolates consist of a damaged mano fragment, and a single piece of chert debitage recovered during survey of the Chevron Oil Tank site (Bissell and Raschke 1986, Report # LA-04838). Some fragments of chione and pectin shell were also recovered but were later determined to be paleontological rather than archaeological in origin (Whitney-Desautels 1995). The two isolated artifacts were determined "nowhere sufficiently concentrated to warrant recording as an archaeological site" (Bissell and Raschke 1986:4), and no site records were submitted. Nor does the report contain the final disposition of the artifacts. The artifacts were discovered in an area of that project between ¾ and one mile from the La Mirada Creek Park Project. The closest recorded prehistoric resource is CA-ORA-572 (P-30-000572), 1.75 miles southeast of the Project, which yielded two metates, a mano, and an unknown number of pottery sherds.

On September 22, 2017, Benjamin Scherzer, M.S., performed a search of the online Paleobiology Database (PBDB) and other published literature for fossil localities from Pleistocene deposits in or near (within 3 miles) the Project. This search did not produce any fossil localities within the Project but did produce two fossil localities near the project; one to the south that produced abundant fossil material from large and small terrestrial mammals, birds, reptiles, and fish at a depth of approximately 14 feet below ground surface (Miller, 1971), and another in the Coyote Hills to the east that produced abundant marine invertebrates at a depth of approximately 10 – 15 feet below ground surface (Powell and Stevens, 2000). The surficial sediments in the Project have a low sensitivity in the shallower levels, but due to the potential to transition at depth into fossiliferous Pleistocene deposits, they are assigned a high sensitivity at depth. Considering the depths of fossil finds in nearby localities, this transition to high sensitivity probably occurs at approximately 10 feet below ground surface.

Table 2 - Geologic Units and Their Paleontological Potential

Age	Geologic Unit	Fossils Present	Paleontological Sensitivity
Holocene	Surficial sediments (Qa)	None	Low
Pleistocene	Older surficial sediments (Qoa)	Large and small terrestrial mammal, bird, reptile, fish, marine invertebrates[1]	High

[1] Miller, 1971; Powell and Stevens, 2000

Matthew Stever, M.A., RPA, archaeologist at DUKE C R M conducted a review of on-line historical aerial photographs. The oldest photograph found dates to 1953 (Historicaerials.com 2017) and shows the Project was a combination of open space along La Mirada Creek, surrounded by citrus groves. The amphitheater seating at the east end of the park was constructed from 1963-1972. Two check dams can be seen in the 1963 photograph; the remaining three appear in the 1972 photograph. Some of the check dams appear to have been altered at some time from 1963-1972, and all the check dams appear to have been heavily altered from 1994-2003. A review of historical topographic maps dating to 1896 (Historicaerials.com 2017) showed that there were no existing structures on the project property prior to the building of the check dams and amphitheater area.

The following was excerpted from the City of La Mirada website regarding the history of the project area:

> "The City of La Mirada was once part of the Los Nietos diseño, but though inheritance the original territory was broken up into other smaller pieces. One of these pieces was Rancho Los Coyotes now known as present-day cities of Cerritos, La Mirada, Stanton, and Buena Park. This rancho was handed down through family and eventually Andrés Pico owned it by marriage. Pico sold a portion of his land to Able Sterns who used it to graze his cattle and sheep until drought and flooding forced him to sell. Andrew McNally purchased 2,300 acres from the Able Sterns Rancho Trust in 1888 for $115,000 and became the last private owner.
>
> Andrew McNally was a successful businessman from Chicago who co-founded the Rand McNally Publishing Company. McNally came to California in 1880 and was influential in establishing the town of Altadena. With the land he purchased from the Able Sterns Rancho Trust, McNally wanted to create a new community of gentleman's ranches by selling 20-acre parcels. A few parcels did sell but an economic downturn stopped McNally from realizing his dream so he used the remaining land for agriculture. In 1901 Andrew McNally turned over The McNally Olive Oil Company and Windermere Ranch to his daughter Nannie and her husband, Edwin Neff. The Neff's appointed Robert McGill as the head accountant of the companies which flourished for 40 years under his care.
>
> After Robert McGill's death in 1939 William "Bill" Neff and his wife, Mina, moved back to La Mirada to assume supervision of the property. As a nature lover, Bill Neff stocked the property with ducks, chickens and geese to encourage other wild animals to nest in the trees. He and Jack George constructed dams across the La Mirada Creek to form large resting ponds for migrating birds" (City of La Mirada 2018)."

On September 21, 2017 a pedestrian field survey of La Mirada Creek Park was conducted by Mr. Stever. The ground surface had approximately 5% visibility due to well-maintained landscaping. Soils were visible at spots along the creek channel, around the base of trees, and under foot bridge caissons. Soils along the creek channel are tan silt with less than 1% gravels, and show evidence of fill/flood events to a depth of approximately 6 feet from present ground surface, evidenced by sharp horizontal strata and inclusions of modern materials in the soils. Soil around the trees and landscaping is generally a dark brown sandy loam, presumably fill material; there are also surficial soil exposures around some trees and along built features such

foot bridges, stacked rock walls, and amphitheater as they were potential historic resources due to their age. Please see Attachment B, Project Photographs.

Check Dams-The five check dams appear to have been heavily altered from their original construction (based on comparisons with historic aerial photographs) with the addition of concrete spillways, large rock rip-rap, and possible modifications to the height of the dams. The dams appear to fulfill their purpose of controlling the flow of water through the park, they do not appear to create ponds any longer as a result of changes to the topography of the park.

Foot Bridges- There are four existing foot-bridges within the park. One foot-bridge has been removed and only the concrete bridge caissons remain in place. The foot-bridges display evidence of repair and rebuilding of the decks and support posts evidenced by empty post holes in the concrete caissons and newly painted sections of decking. It is estimated that approximately 50% of the material in each bridge has been replaced.

Stacked Rock Walls- The low rock walls near the restroom facility in the north/central area of the park appear to be historic in age, and were likely built for either pedestrian traffic guidance, or simple aesthetics. Their position along the sidewalk indicates they were constructed at the same time as the rest of the park. The walls display no obvious diagnostic characteristics that indicate a built period, historic associations, or particular function.

Amphitheater- The railroad tie seating within the amphitheater appears to be original construction. While most of the seating is intact, small sections of the wooden seating are in disrepair. The amphitheater fire ring is constructed of modern concrete landscape blocks; the original material is unknown.

No archaeological or paleontological resources were located on the surface within the park. Soils within the park have been previously disturbed by extensive grading and/or filling, and if undisturbed soils exist within the park, they are likely at a depth of at least six feet below present surface along the creek channel. Depth of prior disturbance in the remainder of the park is unknown, but likely similar based on observations of exposed surficial soils that match the color, texture, and gravel content of the lowest levels of the creek channel exposures. Therefore, the sensitivity for cultural resources in the Project is considered low due to the prior ground disturbances and alterations to structures. Due to the disturbed nature of the Project soils, the probability of encountering artifacts or historical material in a primary context is low. The possibility of subsurface cultural deposits exists in undisturbed soils; however, based on the record search and field survey results, the sensitivity for subsurface cultural deposits is low.

CEQA (PRC Chapter 2.6, Section 21083.2 and CCR Title 145, Chapter 3, Article 5, Section 15064.5) calls for the inventory and evaluation of historic and archaeological resources. The criteria for determining the significance of impacts to cultural resources are based on Section 15064.5 of the CEQA Guidelines and Guidelines for the Nomination of Properties to the California Register. Properties eligible for listing in the California Register and subject to review under CEQA are those meeting the criteria for listing in the California Register, National Register or designation under a local ordinance.

The California Register criteria are based on National Register criteria. For a property to be eligible for inclusion on the California Register, one of the following criteria must be met:

1. It is associated with the events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
2. It is associated with the lives of persons important to local, California, or national history;
3. It embodies the distinctive characteristics of a type, period, region, or method or construction, or represents the work of a master, or possesses high artistic values; and/or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time has passed since a resource's period of significance to "obtain a scholarly perspective on the events or individuals associated with the resource." Fifty years is used as a general estimate of time needed to develop the perspective to understand the resource's significance (CCR 4852 [d][2]).

The California Register also requires that a resource possess integrity. In general, properties eligible for listing in the California Register will meet the same criteria for listing in the National Register, but may have a lower level of integrity.

Nothing suggests that the park, or the check dams, amphitheater, rock walls, and foot bridges within it, are directly associated with a prominent historical event (Criterion 1). The check dams were constructed by two individuals from prominent families, (Bill Neff and Jack George), and were a part of the McNally Ranch. These individuals may have been locally prominent at the time the check dams were constructed (Criterion 2). The park and its structures do not embody distinctive characteristics of a type, period, or method of construction, nor do they exhibit any architectural or engineering merits (Criterion 3). Lacking important information value, the park and its structures have no archaeological data potential (Criterion 4) beyond what has already been documented. Therefore, despite the association with locally prominent individuals under Criterion 2, the park and its structures are not potential historical resources under CEQA due to the lack of physical integrity and lack of data potential, and the structures are considered not eligible for listing in the California Register. The results of our study indicate that there will be no impacts to historical resources. Therefore, DUKE C R M does not recommend archaeological construction monitoring at this time.

If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find.

Considering that project related ground disturbance is not expected to exceed 10 feet in depth, sediments of high paleontological sensitivity are not expected to be impacted, and DUKE C R M does not recommend paleontological construction monitoring at this time. If ground disturbance is altered to exceed 10 feet in depth in the future, additional paleontological mitigation would be required. If paleontological resources are encountered during earth moving activity, work shall be halted in that area until a qualified paleontologist can assess the significance of the find.

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Thank you for contacting DUKE C R M on this interesting project. If you have any questions or comments, you can contact me at (949) 356-6660, ext. 1006, or by e-mail at mattstever@dukecrm.com.

Sincerely,

DUKE CULTURAL RESOURCES MANAGEMENT, LLC

Matthew Stever, M.A., RPA
Archaeologist

Attachment A: Project Maps
Attachment B: Project Photographs

REFERENCES

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ATTACHMENT A

PROJECT MAPS

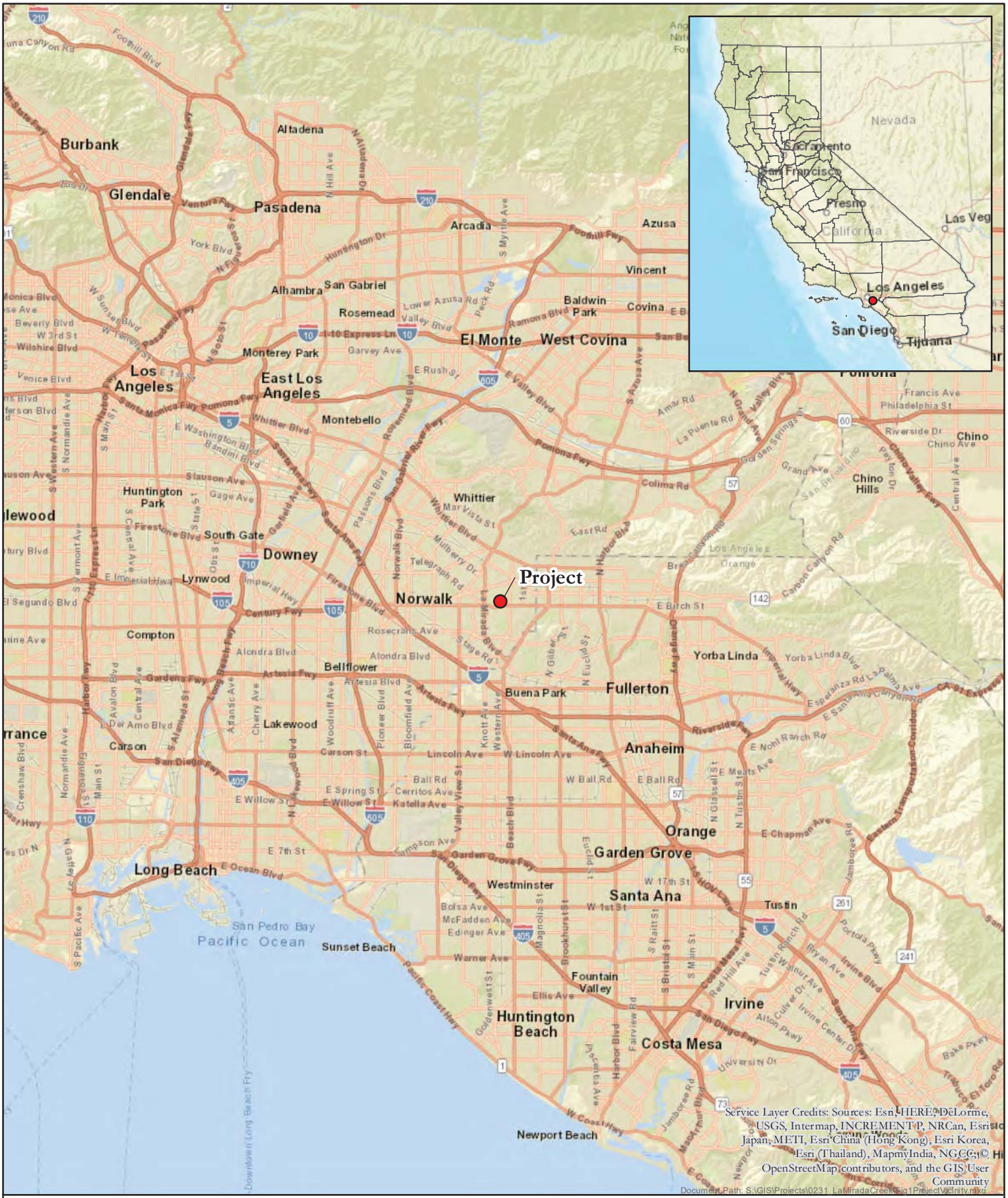

Figure 1- Project Vicinity
La Mirada Creek Park Project
City of La Mirada, Los Angeles County

DUKE CRM

0 5 10 Miles

N

1 inch = 5 miles 1:316,800

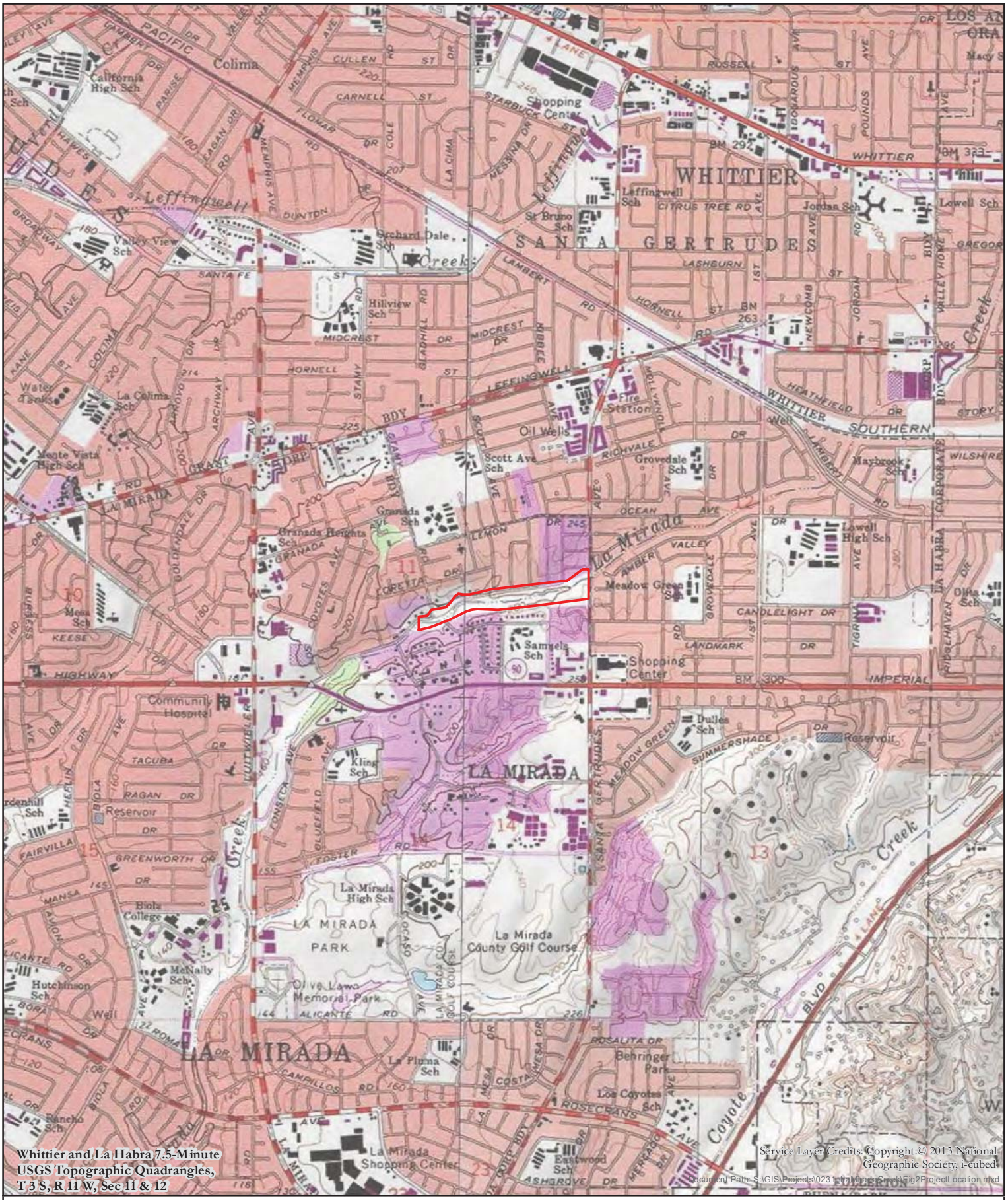

Figure 2- Project Location
La Mirada Creek Park Project
City of La Mirada, Los Angeles County

DUKE CRM

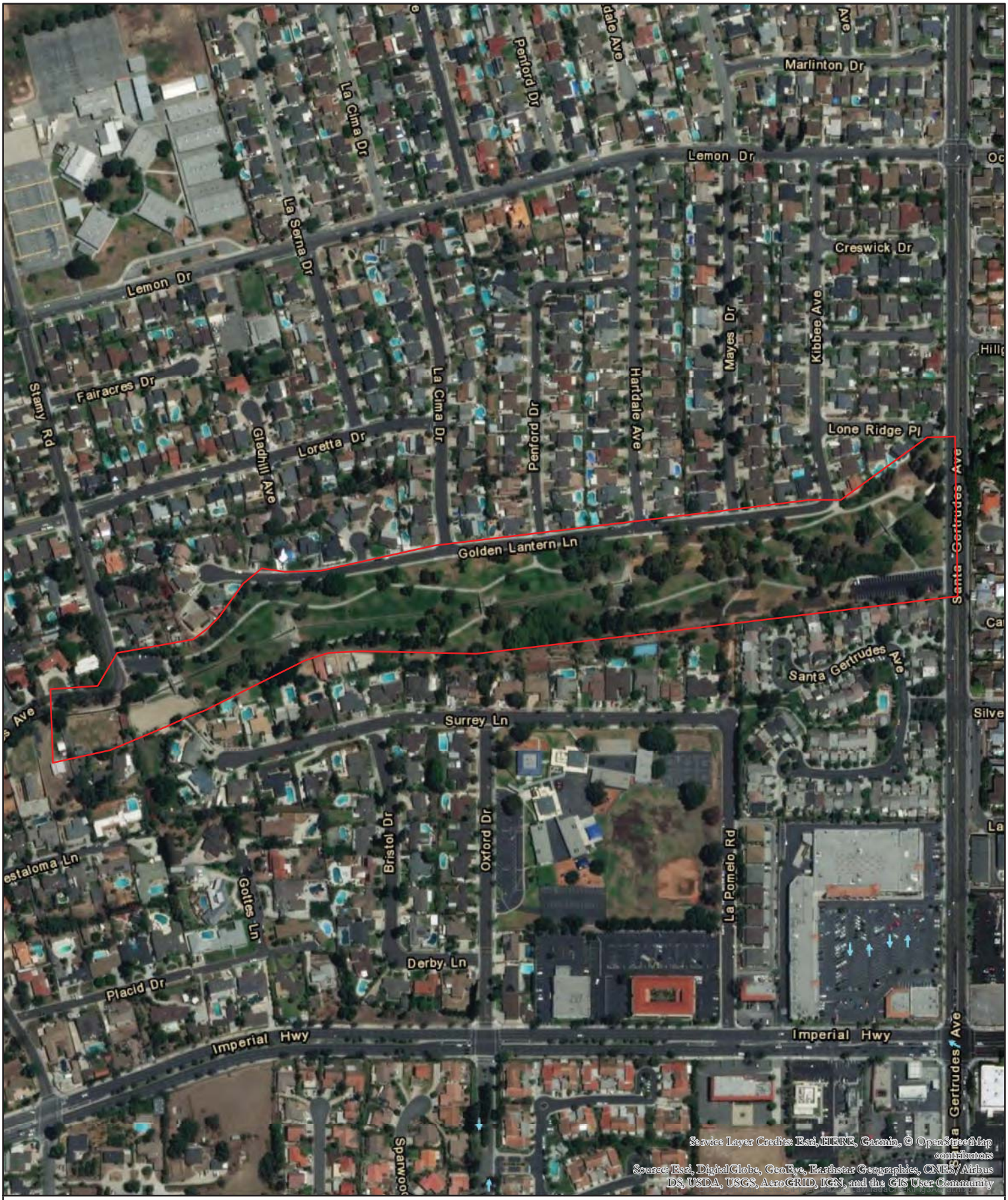

Figure 3- Project Aerial
La Mirada Creek Park Project
City of La Mirada, Los Angeles County

Project Boundary

0 375 750 Feet

N

1 inch = 375 feet 1:4,500

DUKE CRM

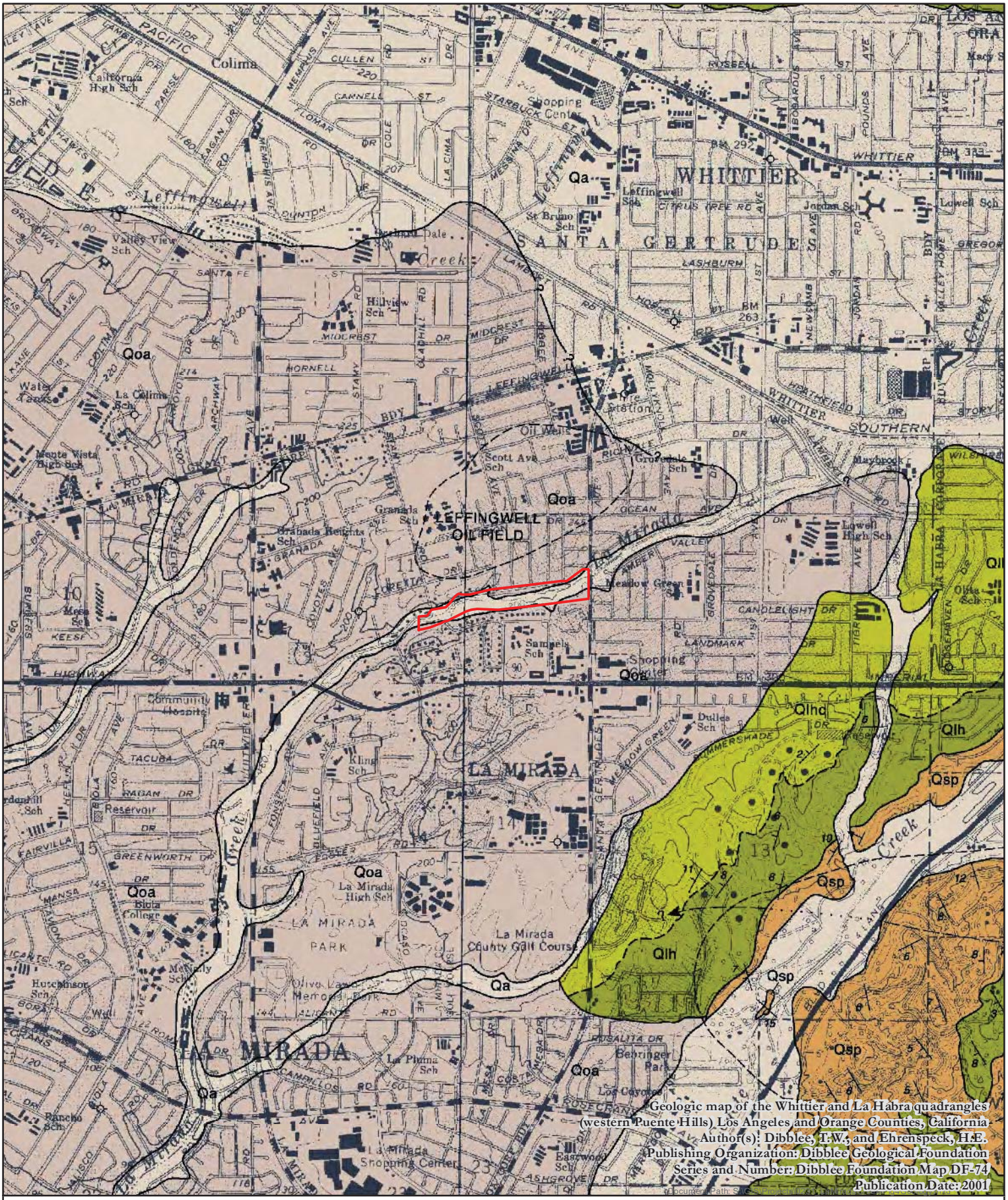

Figure 4- Geology
La Mirada Creek Park Project
City of La Mirada, Los Angeles County

0 2,000 4,000 Feet

N

1 inch = 2,000 feet 1:24,000

DUKE CRM

Attachment B

Project Photographs

DSCF0003, Overview West, Near Santa Gertrudes Ave.

DSCF0031, Overview Southwest, Mid-Park

DSCF0005, Amphitheater Seating, Overview East

DSCF0035, Check Dam and Foot Bridge, Mid-Park, View West

DSCF0024, Creek Channel Soil Profile, Mid-Park, View South

DSCF00