PUBLIC REVIEW DRAFT

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

YORBA LINDA BOULEVARD WIDENING IMPROVEMENTS PROJECT

LSA

September 2020

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INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

YORBA LINDA BOULEVARD WIDENING IMPROVEMENTS PROJECT

Prepared for:

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September 2020

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L: TRAFFIC ANALYSIS MEMORANDUM

LIST OF ACRONYMS AND ABBREVIATIONS

AAQS	ambient air quality standards
AB	Assembly Bill
ADA	Americans with Disabilities Act (of 1990)
ADL	aerially-deposited lead
ADT	Average Daily Traffic
AELUP	Airport Environs Land Use Plan
ALUC	(Orange County) Airport Land Use Commission
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
bgs	below ground surface
BMPs	best management practices
CAAQS	California ambient air quality standards
California Register	California Register of Historical Resources
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGP	Construction General Permit
CH_4	methane
CIP	Capital Improvement Project
CMP	Congestion Management Plan

CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Corps	United States Army Corps of Engineers
County	Orange County
CSS	coastal sage scrub
cy	cubic yard/yards
DAMP	Drainage Area Management Plan
dBA	A-weighted decibels
DCF	Design Capture Flow
DOC	(California) Department of Conservation
DWR	California Department of Water Resources
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	(California Department of Conservation) Farmland Mapping and Monitoring Program Farmland Mapping and Monitoring Program
ft	foot/feet
FTA	Federal Transportation Administration
GCC	Global Climate Change
GHG	greenhouse gas
GIS	Geographic Information System
HCP	Habitat Conservation Plan
HFC	hydrofluorocarbon
HRI	Historic Resources Inventory
IA	Implementation Agreement
ICU	intersection capacity utilization

inch/sec	inches per second
IRWD	Irvine Ranch Water District
IS/MND	Initial Study/Mitigated Negative Declaration
JWA	John Wayne Airport
LACM	Natural History Museum of Los Angeles County
L_{eq}	equivalent continuous sound level
L_{max}	maximum instantaneous noise level
lf	linear feet
LID	low-impact development
LOS	Level of Service
LST	localized significance threshold
LUST	Leaking Underground Storage Tank
m	meter(s)
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MPAH	Master Plan of Arterial Highways
MRZ	Mineral Resource Zone
MT	metric tons
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NCCP	Natural Communities Conservation Plan
NEPA	National Environmental Policy Act
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NOI	Notice of Intent
NPDES	National Pollutant Elimination Discharge System
NRCS	National Resources Conservation Service
O_3	ozone
OCFA	Orange County Fire Authority

OCPL	Orange County Public Library
OCTA	Orange County Transportation Authority
OHP	Office of Historic Preservation
OPR	Governor's Office of Planning and Research
PA	Planning Area
PFC	perfluorocarbon
$PM_{2.5}$	particulate matter less than 2.5 microns in size
PM_{10}	particulate matter less than 10 microns in size
PRC	Public Resources Code
proposed project	Yorba Linda Boulevard Widening Improvements Project
RCEM	Roadway Construction Emissions Model
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SLIC	Spills, Leaks, Investigations, and Cleanups
SO_2	sulfur dioxide
sf	square foot/feet
sq mi	square mile(s)
SR-91	State Route 91
SRA	Seismic Response Area
State	State of California
STPs	shovel test pits
SWPPP	Stormwater Pollution Prevention Program
SWRCB	State Water Resources Control Board
TCEs	temporary construction easements
TIA	Traffic Impact Analysis
TMP	Transportation Management Plan

USDA	United States Department of Agriculture
USFWS	United State Fish and Wildlife Service
v/c	volume-to-capacity
VdB	vibration velocity decibels
VOC	volatile organic compound
WQMP	Water Quality Management Plan

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1.0 INTRODUCTION

1.1 PURPOSE OF THE INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

The purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to: (1) describe the proposed Yorba Linda Boulevard Widening Improvements Project (proposed project), which is located in the City of Yorba Linda (City); and (2) provide an evaluation of potential environmental impacts associated with the proposed project's construction and operation. Measures to avoid, minimize, and/or mitigate impacts on the environment are required for the proposed project as described in this IS/MND.

This IS/MND has been prepared pursuant to the California Environmental Quality Act (CEQA), as amended (California Public Resources Code [PRC] Section 21000 et seq.) and in accordance with the *State CEQA Guidelines* (California Code of Regulations [CCR] Title 14, Section 15000 et seq.). Pursuant to Section 15367 of the *State CEQA Guidelines*, the City of Yorba Linda is the Lead Agency for the project. The Lead Agency is the public agency that has the principal responsibility for carrying out or approving a project. The City, as the Lead Agency, has the authority for project approval and certification of the accompanying environmental documentation.

1.2 SUMMARY OF FINDINGS

Based on the environmental checklist form prepared for the proposed project and the supporting environmental analysis, the proposed project would have either no impact or less than significant impacts in the following environmental areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Cultural Resources
- Energy
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

The proposed project has the potential to have significant impacts in the following areas unless the recommended mitigation measures described herein are incorporated into the project:

- Biological Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Transportation

According to the *State CEQA Guidelines*, it is appropriate to prepare an IS/MND for the proposed project because, after incorporation of the recommended mitigation measures, potentially significant environmental impacts would be eliminated or reduced to a level considered less than significant.

1.3 PROJECT APPROVAL

This IS/MND has been distributed to potentially affected agencies and individuals (Appendix A). Notices of the availability of the IS/MND for review and comment and the Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) have been posted in appropriate public notice bulletin boards, The Orange County Register, and at the City of Yorba Linda (Appendix B). The environmental document will be available electronically on the City of Yorba Linda's website for review.

A 30-day public review period has been established for the Draft IS/MND. The review period has been established in accordance with Section 15073 of the *State CEQA Guidelines*. During review of the Draft IS/MND, affected regulatory agencies and the interested public should focus on the document's adequacy in identifying and analyzing the potential environmental impacts and the ways in which the potentially significant effects of the project limits can be avoided or mitigated.

Questions regarding this IS/MND should be directed to:

Tony Wang, Traffic Engineering Manager
City of Yorba Linda, Public Works Department
4845 Casa Loma Avenue
Yorba Linda, CA 92886
(714) 961-7170

Following receipt and evaluation of comments from public agencies, organizations, and/or individuals, the City will determine whether any substantial new environmental issues have been raised.

2.0 PROJECT SETTING AND DESCRIPTION

2.1 PROJECT LOCATION

The project location is in the eastern portion of the City of Yorba Linda on the border between the City of Yorba Linda and the City of Anaheim. The project limits measures approximately 0.40 mile (mi) along Yorba Linda Boulevard between La Palma Avenue and the State Route 91 (SR-91) westbound off-ramp and 0.10 mi along South Weir Canyon Road between the SR-91 eastbound off-ramp and Santa Ana Canyon Road. The project limits also extend approximately 0.65 mi east along La Palma Avenue from the Yorba Linda Boulevard intersection and approximately 0.10 mi west along Savi Ranch Parkway from the Yorba Linda Boulevard intersection. The project limits are shown on Figure 1.

2.2 ENVIRONMENTAL SETTING

Adjacent land uses within the project vicinity consist of commercial/retail development on the east and west sides of Yorba Linda Boulevard and South Weir Canyon Road. The Santa Ana River is within the project limits and runs under Yorba Linda Boulevard between La Palma Avenue and Savi Ranch Parkway. The Santa Ana River Trail (SART) is a Class I, off-street bike path located on the northern side of the river and a flood control access road is located on the south side of the river.

2.2.1 General Plan Designation

2.2.1.1 City of Anaheim

The City of Anaheim General Plan Circulation Element classifies South Weir Canyon Road as a Scenic Expressway (four to six lane divided facility) and the portion of Yorba Linda Boulevard within the City of Anaheim's jurisdiction is classified as a Primary Arterial (i.e., divided arterial highway with six travel lanes and no parking or four travel lanes and parking).

The land uses east of South Weir Canyon Road within the City of Anaheim's jurisdiction are designated as Low Office. Land uses west of South Weir Canyon Road and Yorba Linda Boulevard are designated as General Commercial. Land to the east and west of Yorba Linda Boulevard north of the Santa Ana River is designated Parks.

2.2.1.2 City of Yorba Linda

The City of Yorba Linda General Plan Circulation Element does not currently provide a classification for the portion of Yorba Linda Boulevard within the project limits that falls within the City of Yorba Linda's jurisdiction.

The land uses east of Yorba Linda Boulevard within Yorba Linda's jurisdiction consist of Open Space north of Crystal Drive and south of the SR-91 westbound off-ramp. Land uses south of Crystal Drive and north of the SR-91 westbound off-ramp are designated as Industrial Manufacturing.

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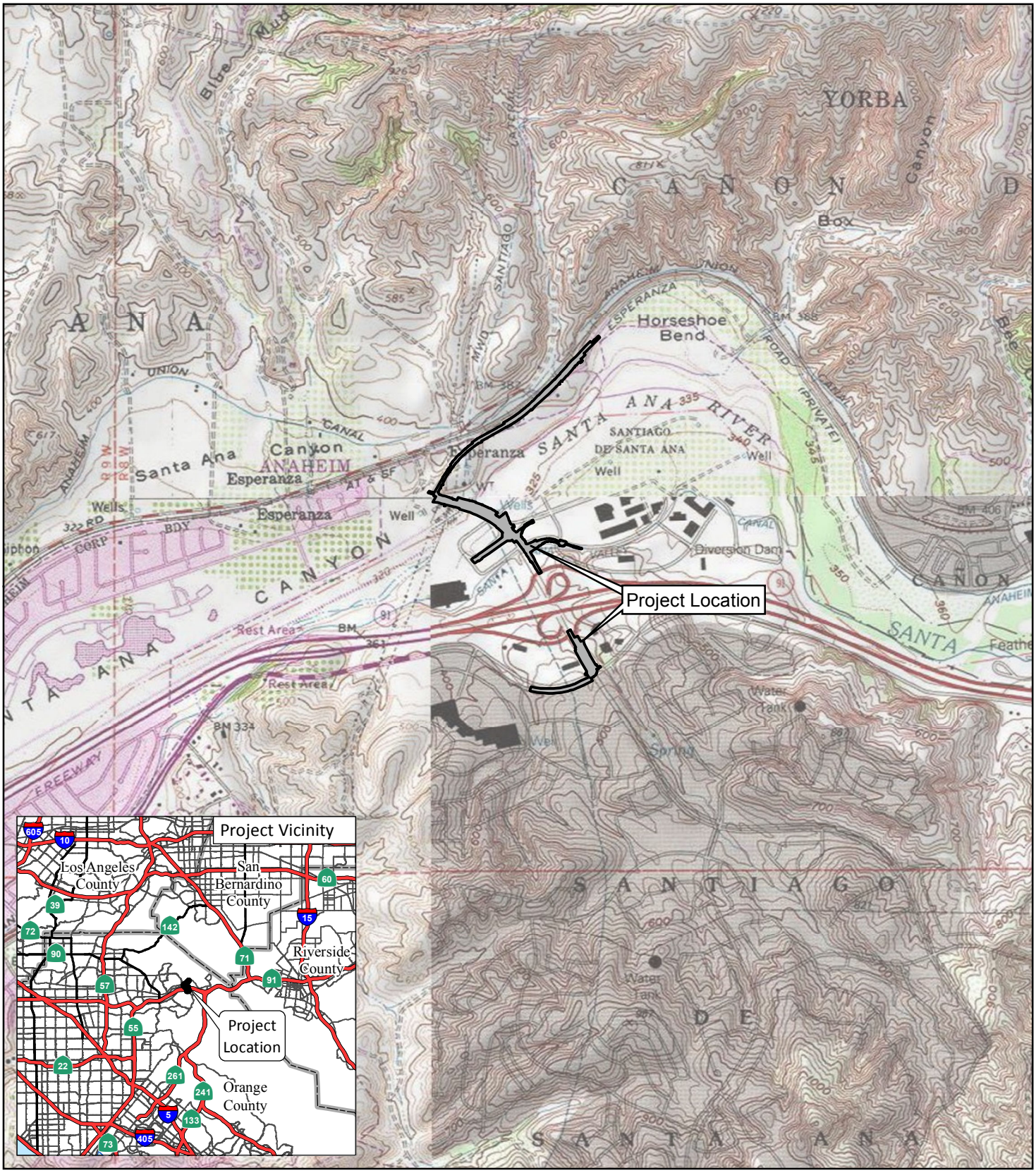

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Project Limits

FIGURE 1

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Yorba Linda Boulevard Widening Project

Regional and Project Location

SOURCE: USGS 7.5' Quads: Black Star Canyon (1988), Prado Dam (1981), CA

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2.2.2 Zoning

2.2.2.1 City of Anaheim

The City of Anaheim Zoning Map identifies General Commercial to the east and west of South Weir Canyon Road and west of Yorba Linda Boulevard within the project limits. General Commercial and Public Recreation are identified to the east of Yorba Linda Boulevard south of La Palma and Public Recreation is identified to the west.

2.2.2.2 City of Yorba Linda

The City of Yorba Linda Zoning Map identifies Open Space to the east of Yorba Linda Boulevard north of Crystal Drive and Planned Development -17 (Savi Ranch) to the east of Yorba Linda Boulevard south of Crystal Drive.

2.2.3 Planned Projects

A list of cumulative projects and their locations in the vicinity of the project limits is shown in Table 2.3.A, Planned Projects.

2.3 PROJECT CHARACTERISTICS

The City of Yorba Linda, as the Lead Agency under CEQA, in cooperation with the City of Anaheim, is proposing roadway improvements along Yorba Linda Boulevard as well as bike and pedestrian improvements along La Palma Avenue and Yorba Linda Boulevard. The proposed project would improve corridor operations by providing additional storage for turning movements as the intersections within the project limits have inadequate vehicle storage due to short turn pocket lengths. The proposed project would also increase multi-modal transportation with the inclusion of a Class I Bike Path providing connectivity between existing bike and pedestrian facilities along La Palma Avenue, the SART, Yorba Linda Boulevard and access to the Savi Ranch development. The project limits and proposed improvements are shown in Figure 2 and described in further detail below.

2.3.1 Yorba Linda Boulevard – La Palma Avenue to Savi Ranch Parkway

2.3.1.1 Northbound

Northbound Yorba Linda Boulevard at the La Palma Avenue intersection currently consists of two northbound through lanes, one combination through/right turn lane, one right turn lane, and two left turn lanes. The proposed project would include the following improvements:

- Widen northbound Yorba Linda Boulevard, including the bridge over the Santa Ana River, in order to provide a fourth through lane at the Savi Ranch Parkway intersection.

- Restripe northbound Yorba Linda Boulevard to extend the northbound right turn and left turn pockets at La Palma Ave.

Table 2.3.A: Planned Projects

Project Name	Description	Status/Phase
City of Yorba Linda Transportation Projects		
Annual Pavement Preservation	The City is divided into 7 different zones and each year one zone will receive a maintenance treatment of slurry seal and/or asphalt repair as needed.	Summer 2020
Bastanchury Road Improvement Project	Improve a segment of Bastanchury Road between Eureka Avenue and Casa Loma Avenue to enhance mobility and safety for drivers, bicyclists, and pedestrians within the project area.	Currently undergoing CEQA Review.
City of Anaheim Transportation Projects		
Lincoln Avenue Widening Project from East Street to Evergreen Street	Widen Lincoln Avenue from East Street to Evergreen Street.	To be completed June 2022.
City of Yorba Linda Development Projects		
Wedgewood (Shea Homes) TR 18061	22 single family homes on 15,000 sq. ft. lots	Under construction, to be completed by winter 2021.
Tran TTM 17234	11 single family homes on 35' wide lots and minimum lot sizes of 3,300 square feet	Zoning change application currently deemed incomplete.
ETCO Homes TR 17784	Senior Housing Development	Approved 2018. Permits for grading the site are anticipated to be issued by winter 2021.
Town Center/Zelman Retail Center PM2015-113	± 160,000 square feet of retail/restaurant/entertainment center. Implementing a portion of Town Center Specific Plan adopted in July 2011.	Nearly all tenant spaces have opened for business.
Toll Brothers TR16208, TR 17653, TR 17654	119 single family homes, "The Enclave"	Under construction, buildout should be completed by spring 2021.
Lennar Homes TR 18020	192 attached condominium units on 12.45 acres at the southeast corner of Bastanchury Road and Plumosa Drive	To be completed fall 2020.
Yorba Linda Gardens TTM 17928	12 detached single-family homes on ±6.9 acres at the south end of Eureka Avenue, just north of the YLWD's Highland Reservoir	TTM 17928 has expired as of November 2019.
The Church in Yorba Linda	Development of new church campus on vacant commercial property (former “Brewster property”) located at the intersection of Imperial Highway and Los Angeles Street.	CUP application deemed incomplete pending additional environmental analysis.
West Bastanchury Site TTM 18123	The Property consists of a total of ±40acres. It fronts on Bastanchury to the south and Lakeview Avenue to the north.	Tentative Tract Map 18123 approved by the Planning Commission on April 11, 2018.
Yorba Linda 15 TR 17793	15 detached single-family homes at the south end of the north leg of Highland Avenue, adjacent to YLWD's Highland Reservoir	Completed.
Toll Brothers (Estancia at Yorba Linda) TR 16595	TR 16595 located at the northwest corner of Bastanchury Road and Lakeview Avenue. Consists of the construction of 47 single-family homes.	Design Review approved 2018.To be completed by winter 2021.
Altrudy Site	Affordable senior multi-family development of up to 48 units	Approved by the Planning Commission on June 12, 2019.

Table 2.3.A: Planned Projects

Project Name	Description	Status/Phase
In-n-Out	Construction of an In-n-Out drive through at the current library site.	Approved.
Sioson Site	Construction of an 11,200-square-foot multistory building at 4901 Lakeview Avenue	Application approved by the Planning Commission on August 28, 2019.
Maserati Dealership	Construction of Maserati dealership at 22633 Oakcrest Cir	Approved by the Planning Commission on September 11, 2019
Trueblood House	Renovation of historic home for public/quasi-public use located at 4801 Park Ave	Approved by the Planning Commission on July 10, 2019. In plan check review.
Clyde's Hot Chicken	Construction of new restaurant on vacant City-owned parcel west of parking structure	Approved.
City of Anaheim Development Projects		
Victory Baptist and Townes at Magnolia	Demolish the existing Victory Baptist Church site and construct 59 attached, for-sale townhome residential units along with a new church and child day care campus.	Currently Undergoing CEQA Review
Lincoln Boulevard Widening	Demolish existing auto related facilities, including an auto dealership with auto/recreational vehicle storage, sales lot, and repair facility, and construction of a new mixed-use development that consists of a 381,525-square-foot (SF) mixed-use building, which wraps around a 239,072 SF parking structure.	Currently undergoing CEQA Review.
Lincoln at Euclid	Demolish all the existing commercial and industrial structures on the Project Site, totaling 32,100 square feet of demolished structures, and construct a residential development consisting of up to 115 single-family attached dwelling units on approximately 7.17 acres of land.	Currently Undergoing CEQA Review
Avanti Townhomes	Demolish an existing business park and 292 townhomes, including 29 affordable units on 11.87 acres	Currently Undergoing CEQA Review
The Residences at Nohl Ranch	Demolish the existing Serrano Center, a multi-suite commercial center consisting of seven one-story buildings, to construct 58 multifamily units, with a development density of 19.14 dwelling units per acre.	Approved in 2019.
County of Orange Development Projects		
Cielo Vista TTM 17341	The property consists of 80 lots for residential single family units on approximately 42.1 acres and to preserve the remaining 42.7 acres for permanent open space in unincorporated Orange County.	Approved in 2017.
Esperanza Hills TTM 17522	The property consists of 340 lots for residential single family units on approximately 469 acres in unincorporated Orange County.	Approved in 2017.

Source: City of Yorba Linda, Major Projects (2020, https://www.yorbalindaca.gov/339/Major-Projects); City of Anaheim, Current Major Projects (2020, https://www.anaheim.net/566/Current-Major-Projects).
CEQA = California Environmental Quality Act
YLWD = Yorba Linda Water District

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- Project Limits
- Proposed Right of Way
- Proposed Striping
- Temporary Construction Easement (TCE)
- Permanent Easement (PE)
- Footing Easement (FE)
- Proposed Retaining Wall
- Proposed Grading Limits
- Proposed Sidewalk
- Proposed Signage

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SOURCE: Google (2018), HNTB (2019)

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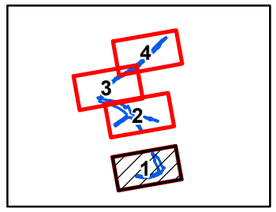

FIGURE 2
Sheet 1 of 4

Yorba Linda Boulevard Widening Project

Project Features

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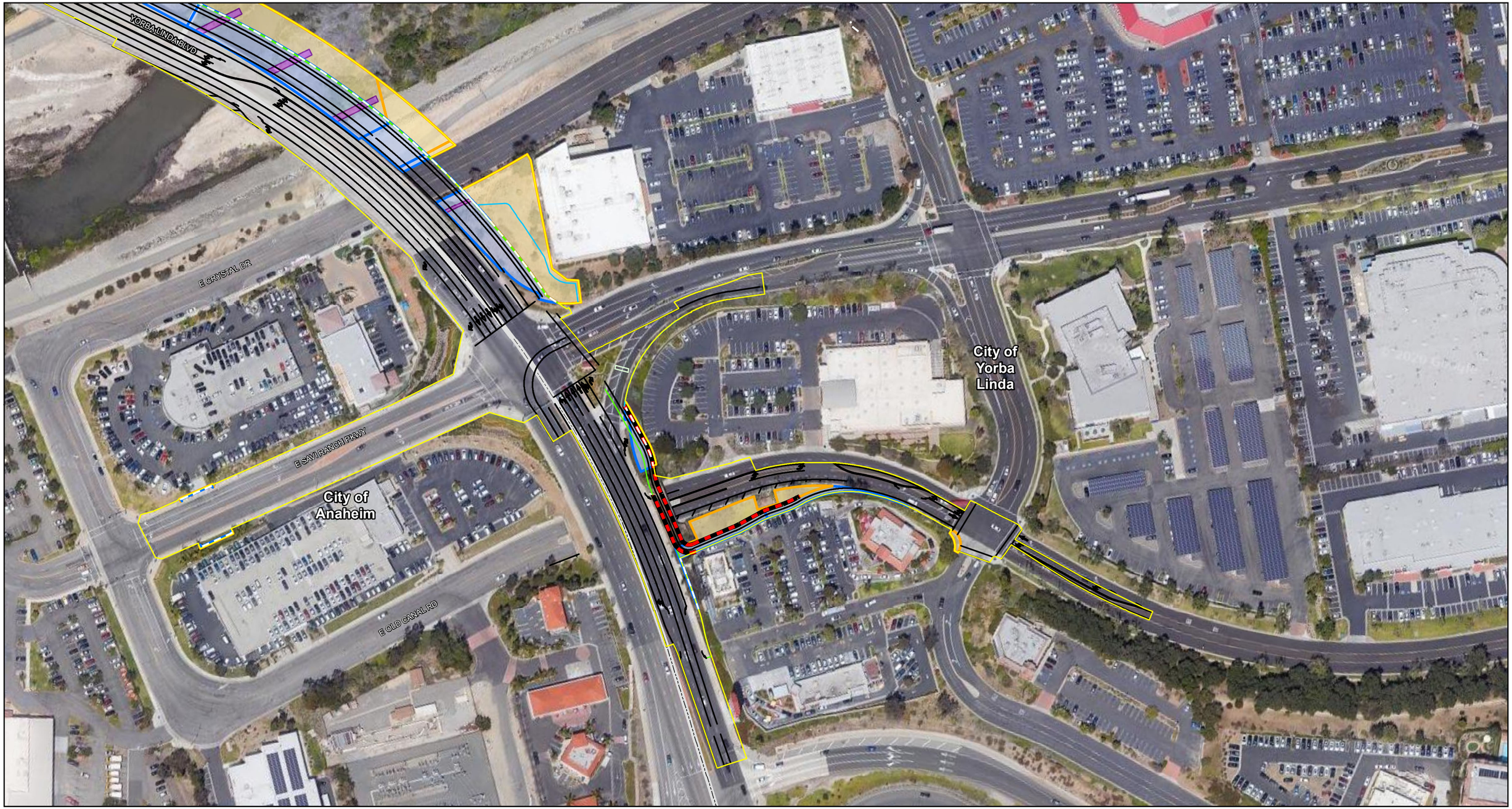

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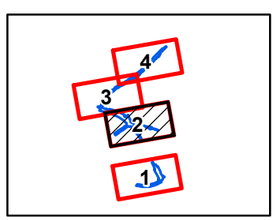

FIGURE 2
Sheet 2 of 4

Yorba Linda Boulevard Widening Project

Project Features

SOURCE: Google (2018), HNTB (2019)

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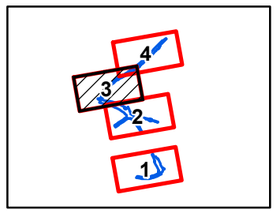

SOURCE: Google (2018), HNTB (2019)

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FIGURE 2
Sheet 3 of 4

Yorba Linda Boulevard Widening Project

Project Features

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LSA

LEGEND

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- Temporary Construction Easement (TCE)
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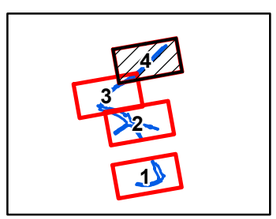

SOURCE: Google (2018), HNTB (2019)

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FIGURE 2
Sheet 4 of 4

Yorba Linda Boulevard Widening Project

Project Features

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- Convert the northbound shared through/right-turn lane to a through-only lane and provide a second exclusive northbound right-turn lane while maintaining the overlap signal phasing at La Palma.

- Provide a barrier separated 20-foot wide Class I Bike Path along the east side of Yorba Linda Boulevard from La Palma Avenue to Savi Ranch Parkway.

The widening of the bridge would require lengthening of the pier walls and the replacement of the existing pier wall debris nosing further upstream. The bridge would be widened a maximum of 40 feet. Depending on the pile type selected, either pile driving or drilling equipment will be required in the river channel, and special foundation design detail will be needed to avoid any impacts to the existing underground utilities.

2.3.1.2 Southbound

Southbound Yorba Linda Boulevard at the Savi Ranch Parkway intersection currently consists of one left turn lane, three through lanes, and one right turn lane. The proposed improvements would restripe southbound Yorba Linda Boulevard to provide a second left turn lane and to extend the right turn and left turn pockets at Savi Ranch Parkway.

2.3.2 Yorba Linda Boulevard – Savi Ranch Parkway to SR-91 Westbound Off-Ramp

Northbound Yorba Linda Boulevard at Savi Ranch Parkway currently consists of one left-turn lane, three through lanes, and a free-right turn lane. The proposed project would include the following improvements:

- Widen northbound Yorba Linda Boulevard and remove the existing free northbound right turn lane at Savi Ranch Parkway to provide a combination through/right and a standard right turn lane.

- Provide an 18-foot Class I Bike Path along the east side of Yorba Linda Boulevard that will connect to a proposed 12-foot Class I Bike Path along the south side of Old Canal Road, ending at Mirage Street.

- Reconfigure and extend the raised median from the westbound SR-91 on and off-ramps to Savi Ranch Parkway.

2.3.3 Yorba Linda Boulevard/Weir Canyon Road – SR-91 Eastbound Ramps to Santa Ana Canyon Road

Southbound Weir Canyon Road currently consists of two left-turn lanes, two through lanes, one through/right lane, and one right turn lane. The proposed project would include the following improvements:

- Widen southbound Weir Canyon Road between the eastbound SR-91 off-ramp and Santa Ana Canyon Road to accommodate a second right turn lane.

- Restripe southbound Weir Canyon Road to extend the right turn pocket.
- Convert the existing southbound through/right lane to a through only lane at Santa Ana Canyon Road.
- Reconfigure the raised median to extend the southbound left-turn pocket at Santa Ana Canyon Road.
- Restripe Santa Ana Canyon Road from Roosevelt Avenue to Weir Canyon Road to convert one through lane to become a third left turn lane.
- Widen the northeast corner of Weir Canyon Road and Santa Ana Canyon Road to extend the entrance lane to the eastbound SR-91 on-ramp and accommodate the proposed third left turn lane from Santa Ana Canyon Road.

2.3.4 La Palma Avenue

La Palma Avenue would be reconfigured in the eastbound direction from Yorba Linda Boulevard for approximately 0.65 mile to accommodate a 16-foot wide Class I Bike Path on the south side of La Palma Avenue from Yorba Linda Boulevard and would connect to the existing Santa Ana River Trail (SART), a Class I Bike Path. Construction access required for the reconfiguration of La Palma Avenue for the Class I Bike Path would be from the existing roadway.

2.4 OTHER IMPROVEMENTS

The proposed project includes improvements such as excavation, paving, curb and gutter, grading, drainage, curb ramps, utility relocations, signing and striping, street lighting, traffic signal modifications, retaining walls and landscaping.

2.4.1 Drainage Improvements

Drainage improvements for the proposed project include four Modular Wetlands System Linear vaults on Savi Ranch Parkway between Pullman Avenue and Yorba Linda Boulevard. Right-of-way acquisition will be required because these vaults are wider than existing right-of-way. Right-of-way acquisition would also be needed to include additional width to provide the desired sidewalk width around the back of the planted vault. One modular wetland system is also proposed along Weir Canyon Road between the SR-91 off-ramp and Santa Ana Canyon Road. The right-of-way acquisition required for the widening of Weir Canyon Road north of Santa Ana Canyon Road will also need to include right-of-way for the proposed vault.

2.5 MAXIMUM DISTURBANCE LIMITS

The maximum disturbance limits for the proposed project are the project limits shown on Figures 1 and 2 above. The anticipated maximum depth of excavation depths for the various components of the project are as follows: roadway construction will reach a depth of 2–3 ft, wall and slope construction will reach depths of 4–5 ft, sign foundations will reach a depth of 10 ft, and pier foundations will reach depths of 10–32 ft.

2.6 RIGHT-OF-WAY ACQUISITIONS

Temporary construction easements (TCEs) would be required for access to the construction areas and a construction staging area for materials and equipment storage. The TCEs would occupy parcels along the south side of Old Canal Road for construction of the bike path improvements, the north and south sides of Savi Ranch Parkway for placement of the modular wetlands, the eastern side of Yorba Linda Boulevard north of Savi Ranch Parkway and within the Santa Ana River Channel for the widening of the Yorba Linda Boulevard bridge. The proposed project would require approximately 52,547 sf of TCEs.

The Proposed Project would also result in permanent easements (PEs) on the north and south sides of Savi Ranch Parkway and the west side of Weir Canyon Road for the modular wetlands. Partial acquisitions, permanent easements and footing easements (FEs) would also be required for the widening of the Yorba Linda Boulevard Bridge and intersection reconfiguration at La Palma Avenue to extend the proposed right-of-way and extend the pier walls of the Yorba Linda Boulevard Bridge. The proposed project would require approximately 49,824 sf of PEs and approximately 3,927 sf of FEs. All TCEs, PEs, and FEs, and the proposed right-of-way are also shown on Figure 2, Project Features.

2.7 CONSTRUCTION ACTIVITIES AND ACCESS

Construction activities would include grading, open excavations, and vibration-generating activities. Temporary construction easements (TCEs) would be required for access to the construction areas and a construction staging area for materials and equipment storage. After completion of the proposed project, areas used for TCEs would be restored to their original, or better, condition after completion of construction.

Construction of the proposed project would require short-term temporary closures of a portion of the SART for widening of the bridge. The SART includes a Class I Bike Path on the northern side of the Santa Ana River in the vicinity of the improvements. There is also a flood control access road on the southern side of the Santa Ana River. The portion of SART affected by Project construction would need to be temporarily closed for the protection of the SART users during certain construction activities, particularly overhead operations such as demolition, erection of temporary falsework, installation of girders, and placement of concrete. It is anticipated that the SART would be closed approximately five times, up to a maximum of five days for each closure. During these periods, SART users would be detoured and signage would be provided to display the dates of the closures and to identify the detour routes. Other short-term closures of the SART of up to 15 minutes would be allowed with flagmen.

2.8 PROJECT SCHEDULE

Construction is anticipated to take 18 months and finish in 2026. Construction in the Santa Ana River channel is anticipated to take place during the dry season between April and October; however, dewatering may still be necessary for work related to the bridge. Construction activities will take place during daylight hours, as feasible, to minimize disturbances to wildlife species that move at night.

2.9 AGREEMENTS, PERMITS, AND APPROVALS

This IS/MND is intended to serve as the CEQA documentation for all actions associated with the proposed project, including all discretionary approvals requested or required to implement the project. In addition, this is the primary reference document for the development and implementation of a mitigation monitoring program for the proposed project.

The proposed project would require permits and approvals from the City of Yorba Linda and other agencies prior to construction. These permits and approvals are described below and may change as the project entitlement process proceeds.

2.9.1 City of Yorba Linda

- Adoption of the IS/MND
- Plan Review

2.9.2 City of Anaheim

- An Encroachment Permit for construction activities on the southbound lanes of Yorba Linda Boulevard and on South Weir Canyon Road
- Permanent easements for operation and maintenance of the Class I Bike Path along Yorba Linda Boulevard
- Right-of-way easement for extension of proposed right-of-way along Yorba Linda Boulevard
- Drainage easement for modular wetlands along Savi Ranch Parkway

2.9.3 County of Orange

- An Encroachment Permit from Orange County Flood Control District (OC Flood) for construction activities near their facilities along the Santa Ana River
- Permanent easements for operation and maintenance for the widening of Yorba Linda Boulevard within their facilities along the Santa Ana River
- Right-of-way easement for extension of proposed right-of-way along Yorba Linda Boulevard
- Footing easements for extension of the pier walls within the Santa Ana River

2.9.4 California Department of Transportation

- An Encroachment Permit from Caltrans for construction activities near the SR-91 on-ramp

2.9.5 U.S. Army Corps of Engineers

- Section 404 Nationwide Permit
- Section 408 Permission

2.9.6 Regional Water Quality Control Board

- Section 401 Water Quality Certification

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the proposed project and would involve at least one impact that is "Less Than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

3.1 DETERMINATION

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 EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

_____

Printed Name

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4.0 EVALUATION OF ENVIRONMENTAL IMPACTS

This section analyzes the potential environmental impacts associated with the proposed project. The issue areas evaluated in this Environmental Checklist include:

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 would 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, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation incorporated, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is 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.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or Negative Declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a. **Earlier Analysis Used:** Identify and state where they are available for review.

    b. **Impacts Adequately Addressed:** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. **Mitigation Measures:** For effects that are "Less Than Significant with Mitigation 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 into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. 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; and
    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

4.1 AESTHETICS

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

4.1.1 Existing Setting

The 2016 Yorba Linda General Plan[1] lists Telegraph Canyon, Brush Canyon, and San Juan Hills as scenic vistas and includes Chino Hills State Park, the Santa Ana River, Featherly Park, and Yorba Regional Park as scenic resources. The City of Anaheim General Plan Land Use Element[2] also identifies the Santa Ana River, Deer Canyon Park, and the Anaheim Hills Golf Course as scenic resources.

According to the Caltrans Scenic Highway Mapping Program[3], the nearest officially designated State Scenic Highway is the portion of State Route 91 (SR-91) from SR-55 near Santa Ana Canyon to east of Anaheim. This portion of SR-91 is also a County of Orange designated Viewscape Corridor. The City of Anaheim General Plan also designates Weir Canyon Road as a Scenic Expressway.

1 City of Yorba Linda. 2016a. 2016 Yorba Linda General Plan. Website: https://www.yorbalindaca.gov/DocumentCenter/View/475/2016-Yorba-Linda-General-Plan-PDF?bidId=.

2 City of Anaheim. 2020. General Plan Land Use Element. Website: http://www.anaheim.net/DocumentCenter/View/9522/E-Land-Use-Element?bidId=.

3 California Department of Transportation (Caltrans) Scenic Highway Program. 2020. Website: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

4.1.2 Discussion

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

Less Than Significant Impact. Limited views of the ridgelines designated as scenic vistas are available along on Yorba Linda Boulevard near La Palma Avenue and over the Santa Ana River; however views of these ridgelines are interrupted by topography, vegetation, and urban development. Views of Chino Hills State Park, Featherly Park, Deer Canyon Park, and the Anaheim Hills Golf Course are not available from the project limits. While the project limits include views of Yorba Regional Park and the Santa Ana River, the proposed roadway improvements would not involve construction of new structures or features that would impair views of scenic vistas. The proposed retaining wall along Yorba Linda Boulevard would be placed along the existing slope leading down to Old Canal Road to accommodate the new connection between the proposed Class I Bike Path on Yorba Linda Boulevard and the 12-foot bike path on Old Canal Road. The proposed retaining wall would not block views along Yorba Linda Boulevard and would not impair views of scenic vistas. Furthermore, the proposed improvements are consistent with the existing visual setting which consists of the existing roadway, development, and pedestrian and bike facilities these improvements would tie into. Construction activities and equipment may temporarily disrupt views of Yorba Regional Park and the Santa Ana River; however construction activities occurring on this portion of Yorba Linda Boulevard would be temporary and would not last the entire 18 month construction period. Therefore, the impact to scenic vistas would be less than significant, and no mitigation is required.

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

Less Than Significant Impact. The portion of SR-91 within the project limits is a Caltrans-designated Scenic Highway. However, the proposed roadway improvements would not damage scenic resources within a state scenic highway as the proposed improvements are limited to the existing roadway and adjacent right-of-way. Due to the existing Savi Ranch commercial development and topography, views of the proposed widening of Yorba Linda Boulevard, including the proposed Class I Bike Path and retaining wall near Old Canal Road, would not be visible from SR-91 or Weir Canyon Road, a City of Anaheim-designated Scenic Expressway. As Yorba Linda Boulevard trends lower in topographic relief as it travels north, and therefore the proposed improvements are below the line of sight visible from the SR-91 ramps. Furthermore, there are no rock outcroppings or historic buildings within the project limits and the Yorba Linda Boulevard Bridge is not considered a historic or scenic resource. The proposed widening improvements would require the removal of some ornamental trees along the existing right-of-way. Based on Chapter 16.08, Tree Preservation, of the City of Yorba Linda's Municipal Code, the project would require a tree removal permit issued by the Community Development Director. Impacts related to removal of trees would be less than significant. In addition, if the trees proposed for removal are within the City of Anaheim's right-of-way, the City of Yorba Linda will obtain a tree removal permit from the City of Anaheim and will adhere to the City of Anaheim's tree replacement requirements. Therefore, as the City of Yorba Linda would comply with the requirements of the applicable tree ordinances, the impact to scenic resources within a state scenic highway would be less than significant, and no mitigation is required.

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

Less Than Significant Impact. The proposed project is located within an urbanized area, and is surrounded primarily by commercial and retail land uses. The proposed roadway, pedestrian, and bike improvements are consistent with the City's General Plan Circulation Element, and the proposed project would comply with City design standards. The proposed improvements would not include any new structures or features with the capacity to interfere with scenic views or vistas. As the proposed improvements pertain to intersection reconfigurations, pedestrian and bike facilities, and associated roadway improvements, the proposed project would not result in any changes to existing or planned land uses and would not conflict with any zoning requirements or other regulations pertaining to scenic quality. As noted above in Response 4.1(a), the proposed project would not have any adverse effects on scenic vistas identified in the 2016 Yorba Linda General Plan. As described in response 4.1(b) above, ornamental trees would be removed as part of project implementation; however, any removals would be conducted consistent with the either the City of Anaheim or City of Yorba Tree Ordinance, and any visual impacts are considered less than significant. Therefore, impacts would be less than significant and no mitigation is required.

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

Less Than Significant Impact. Light and glare within the project limits is produced by vehicle headlights, street lighting, and lighting from the adjacent commercial and retail land uses identified. Construction equipment required for the proposed improvements would be present along various segments of the project limits for short-term durations and would largely be comprised of mobile equipment (e.g. trucks, loaders, and pavers). The presence of these types of construction equipment would not result in a new source of substantial glare. Furthermore, nighttime construction is not anticipated. In addition, while the proposed improvements would replace existing traffic signals, no new signals would be installed. Lighting from vehicle headlights would be similar to existing conditions since the proposed project is not anticipated to generate additional traffic beyond existing conditions. As such, the impact related to both short-term construction and long-term operation of the project would be less than significant and no mitigation is required.

4.2 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 Dept. 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 the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

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

4.2.1 Existing Setting

Maps of designated farmlands are compiled by the California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP), pursuant to the provisions of Section 65570 of the California Government Code. These maps use data from the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) soil survey and current land use information utilizing eight mapping categories, and represent an inventory of agricultural resources within the State. Orange County FMMP maps were reviewed to determine the potential for impacts to farmland as a result of the proposed project.

As described in Section 2.0 (Project Setting and Description) above, the land uses surrounding the southern portion of the project limits are designated as commercial and residential by the City of Anaheim, and land uses surrounding the northern portion of the project limits are designated as recreational and Planned Development (which includes uses commercial and industrial in nature) by

the City of Yorba Linda. Neither jurisdiction includes land use designations related to agricultural or farmland within the project limits.

4.2.2 Discussion

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. A review of the FMMP[1] indicates there are no designated Prime Farmlands, Unique Farmlands, or Farmlands of Statewide importance in the project limits or in the vicinity of the project. Therefore, the proposed project would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, and no impact would occur.

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

No Impact. According to the City of Anaheim Zoning Map (2019) and City of Yorba Linda Zoning Map (2019), the zoning designations within and adjacent to the project limits do not include any agricultural uses. Furthermore, there are no existing Williamson Act contracts within or adjacent to the project limits[2]. Therefore, the proposed project would not conflict with any zoning for agricultural uses or any Williamson Act contract, and no impact would occur.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. As described in Section 3.0 (Project Summary) above, surrounding land uses are characterized by suburban development and are zoned for commercial, planned development, open space, and recreational uses. No land within the project limits or surrounding vicinity is zoned for forest land or timber land uses. Therefore, the proposed project would not conflict with existing zoning for forest land or timberland, and no impact would occur.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As stated in 6.2(c) above, no land within the project limits or surrounding vicinity is zoned for forest land or timber land uses. Therefore, the proposed project would not result in the loss of forest land or the conversion of forest land to non-forest use, and no impact would occur.

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1 California Department of Conservation. 2018. Farmland Mapping and Monitoring Program (FMMP), Orange County Important Farmland 2016. Website: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/ora16.pdf (accessed February 13, 2020).

2 California Department of Conservation. 2016. The California Land Conservation Act of 1965, 2016 Status Report. Website: https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf (accessed February 13, 2020).

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?

No Impact. As stated in 6.2(c) above, no land within the project limits or surrounding vicinity is designated or zoned agricultural or forest land. The proposed project would not include changes in the existing environment that would result in conversion of farmland to non-agricultural use or forest land to non-forest use. Therefore, no impact would occur.

4.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

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

4.3.1 Existing Setting

The following section is based on air quality modeling and analysis conducted by LSA (February 2020). The air quality modeling worksheets are provided in Appendix C.

The proposed project is located within the Cities of Yorba Linda and Anaheim, which are part of the South Coast Air Basin (Basin). The Basin includes all of Orange County and portions of Los Angeles, Riverside, and San Bernardino Counties. Air quality within the Basin is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAQMD adopted the *2016 Air Quality Management Plan* (2016 AQMP) in March 2017.

The purpose of an Air Quality Management Plan (AQMP) is to describe air pollution control strategies to be taken by a city, county, or region classified as a nonattainment area.
A nonattainment area is considered to have worse air quality than the National Ambient Air Quality Standards (NAAQS) and/or the California Ambient Air Quality Standards (CAAQS), as defined in the federal Clean Air Act. The Basin is in nonattainment for the federal and State standards for ozone (O_3), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). In addition, the Basin is in nonattainment for the State particulate matter less than 10 microns in diameter (PM_{10}) standard, and in attainment/maintenance for the federal PM_{10}, carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) standards.

4.3.1.1 Criteria Pollutants

O_3 is a photochemical pollutant, and needs volatile organic compounds (VOCs), oxide of nitrogen (NOx), and sunlight to form smog; therefore, VOCs and NOx are O_3 precursors. To reduce O_3 concentrations, it is necessary to control the emissions of these ozone precursors. The SCAQMD uses the terms reactive organic gas (ROG) and VOC interchangeably. While O_3 in the upper atmosphere (stratosphere) protects the earth from harmful ultraviolet radiation, high

concentrations of ground-level O_3 (in the troposphere) can adversely affect the human respiratory system and other tissues. O_3 is a strong irritant that can constrict the airways, forcing the respiratory system to work hard to deliver oxygen. NOx are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NOx) is a reddish-brown gas that can cause breathing difficulties at elevated levels. PM_{10} refers to suspended particulate matter, which is smaller than 10 microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} penetrate into lungs and can potentially damage the respiratory tract. $PM_{2.5}$ refers to fine particulate matter 2.5 microns in diameters or less, and impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. CO is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. SO_2 is a colorless, irritating gas with a rotten egg smell; it is formed primarily by the combustion of sulfur-containing fossil fuels. Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics. SO_2 is often used interchangeably with SO_X.

4.3.2 Discussion

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

Less Than Significant Impact. Consistency with the 2016 AQMP for the Basin would be achieved if a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the federal and State air quality standards. Per the SCAQMD *CEQA Air Quality Handbook* (April 1993), there are two main indicators of a project's consistency with the applicable AQMP:

- ***Criterion 1:*** whether the project would increase the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the 2016 AQMP; and

- ***Criterion 2:*** whether the project would exceed the 2016 AQMP's assumptions for 2030 or yearly increments based on the year of project buildout and phasing.

For the proposed project to be consistent with the AQMP, the pollutants emitted from construction and operation of the project should not exceed the SCAQMD daily thresholds or cause a significant impact on air quality. Additionally, if feasible mitigation measures are implemented and are shown to reduce the impact level from significant to less than significant, a project may be deemed consistent with the AQMP. As discussed in Responses 4.3 (b) and 4.3 (c) below, neither construction nor operation of the proposed project would generate emissions that exceed SCAQMD thresholds. In addition, all required SCAQMD dust control techniques (i.e., daily watering), limitations on construction hours, and SCAQMD Rules 402 and 403 (which require watering of inactive and perimeter areas, track out requirements, etc.), would be adhered to during construction activities.

In the case of the 2016 AQMP, four sources of data form the basis for the projections of air pollutant emissions: the City of Yorba Linda General Plan, City of Anaheim General Plan, SCAG's regional growth forecast, and SCAG's 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2016b). The RTP/SCS also provides socioeconomic forecast projections of

regional population growth. The proposed project would improve traffic operations along a segment of Yorba Linda Boulevard to enhance the mobility and safety for drivers, bicyclists, and pedestrians within the project limits. The proposed improvements would occur within or directly adjacent to the existing roadway and would not result in changes to existing land uses within the project limits. Thus, the proposed project would be consistent with the types, intensity, and patterns of land use envisioned for the area as analyzed in the RTP/SCS. In addition, the proposed project would increase multi-modal transportation opportunities, consistent with the goals of the RTP/SCS to promote active transportation, within the project limits by providing connectivity to existing bike and pedestrian facilities with the proposed bike and pedestrian improvements.

The AQMP also contains air pollutant reduction strategies and demonstrates that the applicable ambient air quality standards can be achieved within the time frames required under Federal law. Growth projections from local general plans adopted by cities in the SCAQMD are provided to SCAG, which develops regional growth forecasts that are used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in the General Plan is considered to be consistent with the AQMP. As discussed above, the proposed improvements would occur mainly within the existing roadway and limited property acquisitions would be required to extend the right-of-way where roadway widening or pedestrian and bike facilities are proposed. These right-of-way acquisitions would be immediately adjacent to the existing roadway and would not alter the General Plan land use designations within the project limits. Therefore, the proposed project meets this AQMP consistency criterion.

The determination of consistency with the 2016 AQMP is primarily concerned with the long-term influence of a project on air quality in the Basin. Based on the discussion above, the proposed project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. Also, the proposed project would be consistent with the goals and policies of the 2016 AQMP for control of fugitive dust (e.g., SCAQMD Rule 403). As discussed above, the proposed project's long-term influence would also be consistent with the SCAQMD and SCAG's goals and policies and is considered consistent with the 2016 AQMP. Therefore, the impacts would be less than significant. No mitigation is required.

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

Less Than Significant Impact. As discussed in Response 4.3(a) above, specific criteria for determining whether the potential air quality impacts of a project are significant are set forth in SCAQMD's *CEQA Air Quality Handbook* (1993). The criteria include emission thresholds, compliance with State and national air quality standards, and conformity with the existing State Implementation Plan (SIP) or consistency with the current AQMP. A summary of the specific criteria contained in SCAQMD's *Air Quality Significance Thresholds* (April 2019) is presented in Table 4.3.A, below.

Projects in the Basin with emissions that exceed any of the mass daily emission thresholds in Table 4.3.A would be considered significant by the SCAQMD.

Table 4.3.A: SCAQMD Significance Thresholds

Air Pollutant (lbs/day)	Construction Phase	Operational Phase
VOC	75	55
CO	550	550
NO_X	100	55
SO_X	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55

Source: SCAQMD. Air Quality Significance Thresholds (April 2019).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particular matter less than 2.5 microns in size
PM_{10} = particular matter less than 10 microns in size
ROCs = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides

Construction Emissions. Air quality impacts would occur during demolition and construction of the proposed project due to soil disturbance and equipment exhaust. Major sources of emissions that would occur during grubbing/land clearing, grading/excavation drainage/utilities/sub-grading, and paving/construction include (1) exhaust emissions from construction vehicles, (2) equipment and fugitive dust generated by vehicles and equipment traveling over exposed surfaces; and (3) disturbances from compacting and cement and asphalt paving. Project phasing would start with the demolition, and continue with the construction of the proposed project. It is anticipated that construction activities would take approximately 18 months to complete.

Peak daily and annual emissions were analyzed using the Roadway Construction Emissions Model (RoadMod Version 9.0.0).[1] At the time of this analysis, it is not known what specific equipment will be used for construction. To be conservative, the following pieces of equipment were analyzed as a worst-case scenario: generator sets, crawler tractors, excavators, loaders, graders, rollers, scrapers, signal boards, compactors, pumps, and paving equipment. The air quality modeling worksheets from the Roadway Construction Emissions Model utilizing these assumptions are provided in Appendix C.

Construction activities are a source of fugitive dust emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in and around the project limits. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill, and truck travel on unpaved roadways (typically during demolition and construction activities). Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. As stated in Response 6.3(a) above, the project would implement all required SCAQMD dust control techniques (i.e., daily watering), limitations on construction hours, and adhere to SCAQMD Rules 402 and 403 (which require watering of inactive and perimeter areas, track out requirements, etc.), to reduce PM_{10} and $PM_{2.5}$ concentrations.

[1] Sacramento Metropolitan Air Quality Management District (SMAQMD). Roadway Construction Emissions Model (RoadMod). Website: http://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools (accessed February 2020).

Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project limits, employee commutes to the project limits, emissions produced on-site as the equipment is used, and emissions from trucks transporting materials to/from the project limits.

Table 4.3.B presents the peak daily construction emissions based on the RoadMod emission estimates. This table shows that construction equipment/vehicle emissions during construction periods would not exceed any of the SCAQMD daily emissions thresholds.

Table 4.3.B: Peak Daily Construction Emissions

	Peak Construction Emissions (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10} (total)**	**$PM_{2.5}$ (total)**
Grubbing/Land Clearing	0.91	7.22	9.56	0.02	50.23	10.60
Grading/Excavation	4.71	38.88	44.00	0.10	51.17	11.43
Drainage/Utilities/Sub-Grading	2.75	23.54	28.63	0.07	50.74	11.02
Paving/Construction	1.24	14.42	17.74	0.5	0.53	0.37
Highest Peak Daily Emissions	**4.71**	**38.88**	**44.00**	**0.10**	**51.17**	**11.43**
SCAQMD Construction Emissions Threshold	75.00	100.00	550.00	150.00	150.00	55.00
Exceed Significance?	No	No	No	No	No	No

Source: Compiled by LSA Associates, Inc. (September 2020).
CO = carbon monoxide
lbs/day = pounds per day
NO_x = nitrogen oxide
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
ROG = reactive organic gases
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxide

Therefore, impacts to air quality from the proposed project's short-term construction emissions would be less than significant. No mitigation is required.

Naturally Occurring Asbestos. Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the California Air Resources Board in 1986.

Asbestos can be released from serpentine and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to*

Contain Naturally Occurring Asbestos Report (August 2000), serpentine and ultramafic rocks are not known to occur within the project area. As a result, there would be no impact.

Operational Emissions. The City of Yorba Linda has identified LOS D as the limit of satisfactory intersection performance, meaning a significant impact would occur if the project degrades LOS from satisfactory LOS D or better to unsatisfactory LOS E or F (congested traffic conditions). An unsatisfactory LOS under existing and build conditions could worsen the air quality by increasing the average vehicle delay at intersections and the project segment, thereby causing more idling emissions to occur. The City of Anaheim has developed and adopted *The City of Anaheim Traffic Impact Analysis Guidelines from California Environmental Quality Act* (June 2020), which states LOS analysis will no longer be a part of a project's CEQA analysis. Therefore, for the purpose of the proposed project, the City of Yorba Linda LOS thresholds are utilized. According to the *Traffic Analysis Memorandum* (LSA, September 2020) (Appendix L), all four intersections at Yorba Linda Boulevard including La Palma Avenue, Savi Ranch Parkway, the SR-91 westbound ramps, SR-91 eastbound ramps, and the intersection at Weir Canyon Road and Santa Ana Canyon Road would operate with a level of services (LOS) condition D or better with implementation of the proposed project.

The proposed project would address existing deficiencies in traffic capacity and improve the project's volume to capacity ratio and LOS for the post-2035 time frame. These improvements would increase average vehicle speeds and reduce the average vehicle delay during peak-hour traffic. The *Traffic Analysis Memorandum* presents the comparison of current and proposed intersection geometrics in the existing and General Plan Buildout (2035) scenarios. The *Traffic Analysis Memorandum* concluded that the proposed project is not anticipated to result in a significant impact according to either the City of Yorba Linda or City of Anaheim traffic study guidelines.

The improvements in LOS that would occur as a result of the proposed improvements would reduce average vehicle delay times and the associated idling emissions as well as improve the average vehicle speed within the project limits. The increase in the average vehicle speed would likewise have a reduction in the rate of air pollutant emissions generated within the project limits. Because the proposed project would improve LOS and would reduce air pollutant emissions generated within the project limits, the proposed project would result in a beneficial impact to regional and local air quality during the operations phase of the project. Therefore, the localized operational impacts of the proposed project would not violate any air quality standard or contribute to an existing or projected air quality violation. Impacts related to the operational emissions are expected to be less than significant. No mitigation is required.

As summarized above, the proposed project's short-term construction emissions would be below the SCAQMD thresholds and would result in a less than significant impact. Furthermore, the proposed project would not result in long-term air quality impacts, as emissions would be reduced from existing baseline conditions due to reducing idling and congestion associated with the operational improvements. Thus, it can be reasonably inferred that the proposed project's construction and operational emissions would not contribute to a cumulatively considerable air quality impact for nonattainment criteria pollutants in the Basin and impacts would be less than significant.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive receptors typically include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. Sensitive receptors in the vicinity of the proposed project include residential land uses northwest of the Yorba Linda Boulevard/La Palma Avenue intersection and south east of the Weir Canyon Road/Santa Ana Canyon Road intersection. As described in Response 4.3(b), long-term operational emissions related to the proposed project would be less than significant as the roadway improvements would reduce emissions associated with existing traffic congestion and idling. Construction of the proposed improvements may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., diesel-fueled vehicles and equipment). However, as stated in Response 6.3(a) above, the construction contractors would be required to comply with SCAQMD's standard construction practices (Rules 402 and 403) by implementing measures to reduce or eliminate emissions. Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Some of the applicable dust suppression techniques from Rule 403 are summarized as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least twice daily (locations where grading is to occur will be thoroughly watered prior to earthmoving).
- All trucks hauling demolished material, dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard in accordance with the requirements of California Vehicle Code Section 23114 (freeboard means vertical space between the top of the load and top of the trailer).

As described above, the nearest sensitive receptors to the project limits include residential land uses. Table 4.3.C shows that construction emission rates would not exceed the local significance thresholds (LSTs) for the nearest single-family residences located approximately 200 ft (61 meters [m]) from the project limits.

Table 4.3.C: Construction Localized Impacts Analysis

Emissions Sources	Pollutant Emissions (lbs/day)			
	NOx	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions	21.57	36.77	21.38	5.37
LST	215.00	1,850.00	37.00	10.00
Significant Emissions?	No	No	No	No

Source: Compiled by LSA Associates, Inc. (September 2020).
Note: Source Receptor Area – North Orange County, 5 acres, receptors at 61 meters
CO = carbon monoxide
lbs/day = pounds per day
LST = local significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

Air Quality Health Impacts. Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, ozone precursors VOCs and NOx affect air quality on a regional scale. Health effects related to ozone are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and, as such, translating project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results. In other words, the proposed project's less than significant impacts related to regional air pollution from criteria air pollutants would have nominal or negligible impacts on human health.

Further, as noted in the Brief of Amicus Curiae by SCAQMD (April 6, 2015), SCAQMD acknowledged it would be extremely difficult, if not impossible to quantify health impacts of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form. In addition, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD) (April 13, 2015), SJVAPCD has acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

SCAQMD acknowledges that health effects quantification from ozone, as an example, is correlated with the increases in ambient level of ozone in the air (concentration) that an individual person breathes. SCAQMD's Brief of Amicus Curiae (2015) states that it would take a large amount of additional emissions to cause a modeled increase in ambient ozone levels over the entire region. SCAQMD also states that based on their own modeling in the 2012 Air Quality Management Plan, a reduction of 432 tons (864,000 pounds) per day of NOx and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce ozone levels at highest monitored site by only nine parts per billion. As such, SCAQMD concludes that it is not currently possible to accurately quantify ozone-related health impacts caused by NOx or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations. As the proposed project would not exceed SCAQMD thresholds for construction and would reduce operational air emissions, the proposed project would not result in potentially significant health impacts related to air quality.

Therefore, the proposed project would not expose sensitive receptors to substantial pollutant concentrations during construction or operation, and impacts are considered less than significant. No mitigation is required.

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

Less Than Significant Impact. SCAQMD's *CEQA Air Quality Handbook* (1993) identifies various secondary significance criteria related to odorous air contaminants. Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills, or heavy manufacturing uses. Pursuant to SCAQMD Rule 402, these sources shall include a quantitative assessment of potential odors and meteorological conditions. The proposed project does not include any such uses or activities that would result in potentially significant odor impacts.

Some nuisance odors may emanate from the operation of diesel-powered construction equipment during construction of the proposed project. However, these odors would be limited to the construction period and would disperse quickly. Furthermore, construction of the proposed project includes improvements along various roadway segments (i.e. Yorba Linda Boulevard, Weir Canyon Road, Santa Ana Canyon Road, Savi Ranch Parkway, and La Palma Avenue) that would occur in phases. Therefore, construction activities would not occur within the same location for the entire 18-month construction period. Therefore, impacts from objectionable odors related to construction equipment would be less than significant.

The proposed project consists of roadway widening, intersection, and pedestrian and bike facility improvements, the operation of which would not produce objectionable odors once constructed. Therefore, impacts related to objectionable odors from operation of the proposed project would be less than significant, and no mitigation is required.

4.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

4.4.1 Existing Setting

This section is based on the information provided in the *Biological Resources Report* (LSA, 2020) prepared for the proposed project (Appendix D). A *Bat Roosting Habitat Suitability Assessment* and *Jurisdictional Delineation Report* were also prepared for the proposed project and are included as Appendices E and F to the *Biological Resources Report*, respectively.

In August 2019, LSA biologists conducted a literature review and records search to identify the existence and potential for occurrence of special-status plant and animal species in the vicinity of the proposed project. Federal and State lists of special-status species were also examined. Current electronic database records reviewed included the California Natural Diversity Database (CNDDB), the California Native Plant Society's Inventory of Rare and Endangered Plants of California, and the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) Online System and National Wetlands Inventory. Historic and current aerial imagery, existing environmental reports for developments in the project vicinity, and regional habitat conservation plans and local land use policies related to biological resources were also reviewed.

A field survey covering the biological survey area (BSA) was conducted on November 7, 2019. The BSA included the original proposed project footprint, which did not include the Class I Bike Path improvements on La Palma Avenue, and a 500 foot (ft) buffer around the Yorba Linda Boulevard bridge over the Santa Ana River from La Palma Avenue to Crystal Drive, and a 100 ft buffer around the rest of the proposed project footprint. A field survey for the Class I Bike Path improvements on La Palma Avenue was conducted on December 12, 2019. This improvement and was added to the project description and BSA subsequent to the time of the original survey.

Sensitive Natural Communities. The CNDDB search identified occurrences of 12 sensitive natural (i.e., plant) communities within the nine-quadrangle search area: California Walnut Woodland, Canyon Live Oak Ravine Forest, Riversidean Alluvial Fan Sage Scrub, Southern Coast Live Oak Riparian Forest, Southern Coastal Salt Marsh, Southern Cottonwood Willow Riparian Forest, Southern Interior Cypress Forest, Southern Riparian Forest, Southern Riparian Scrub, Southern Sycamore Alder Riparian Woodland, Southern Willow Scrub, and Valley Needlegrass Grassland. Southern Cottonwood Willow Riparian Forest associated with the Santa Ana River exists within the BSA, east of Yorba Linda Boulevard. Southern Willow Scrub is also present within the BSA in the Santa Ana River channel, west of Yorba Linda Boulevard. Other sensitive plant communities that did not occur in the CNDDB search were observed within the BSA, including Mixed CSS, California Encelia Scrub, and Elderberry Woodland. While Scrub-Chaparral Ecotone does not have a rarity rank, it may be considered a sensitive natural community because of the CSS components present within this habitat type. There are also several disturbed scrub types, including Disturbed Mixed CSS and Disturbed California Encelia Scrub that may be considered sensitive natural communities but were differentiated based on the disturbed nature of those areas. Refer to Figure 3 for the vegetation within the BSA.

Special-Status Plant Species. The literature review identified 43 special-status plant species that are known to occur within a nine-quadrangle radius of the BSA. Based on site observations coupled with the habitat suitability analysis (Appendix D of the *Biological Resources Report*), no special-status plant species are likely to occur (i.e., have a Moderate or greater probability of occurrence) within the BSA.

Special-Status Animal Species. There are known occurrences of special-status animal species within the BSA, and one, the coastal California gnatcatcher (*Polioptila californica californica*), was observed during the November 2019 field survey. It is important to point out that coastal California gnatcatchers were moving (presumably foraging) between the Santa Ana River habitat and the adjacent upland scrub habitat near the corner of Yorba Linda Boulevard and La Palma Avenue (where they are known to occur).

The following special-status species are known to occur within the BSA, and suitable habitat is present within or adjacent to the project limits:

- **Invertebrates:** Crotch bumble bee (*Bombus crotchii*)
- **Fish:** Santa Ana sucker (*Catostomus santaanae*)
- **Reptiles:** red-diamond rattlesnake (*Crotalus ruber*) and coast horned lizard (*Phrynosoma blainvillii*)

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LSA

LEGEND

- Biological Study Area
- Project Limits
- Vegetation
- Developed
- Ornamental
- Ruderal

N

0 75 150
FEET

SOURCE: Nearmap (9/23/19)

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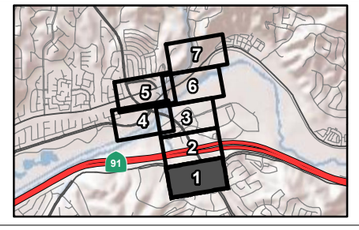

FIGURE 3
Sheet 1 of 7

Yorba Linda Boulevard Widening Project

Vegetation within the Biological Study Area

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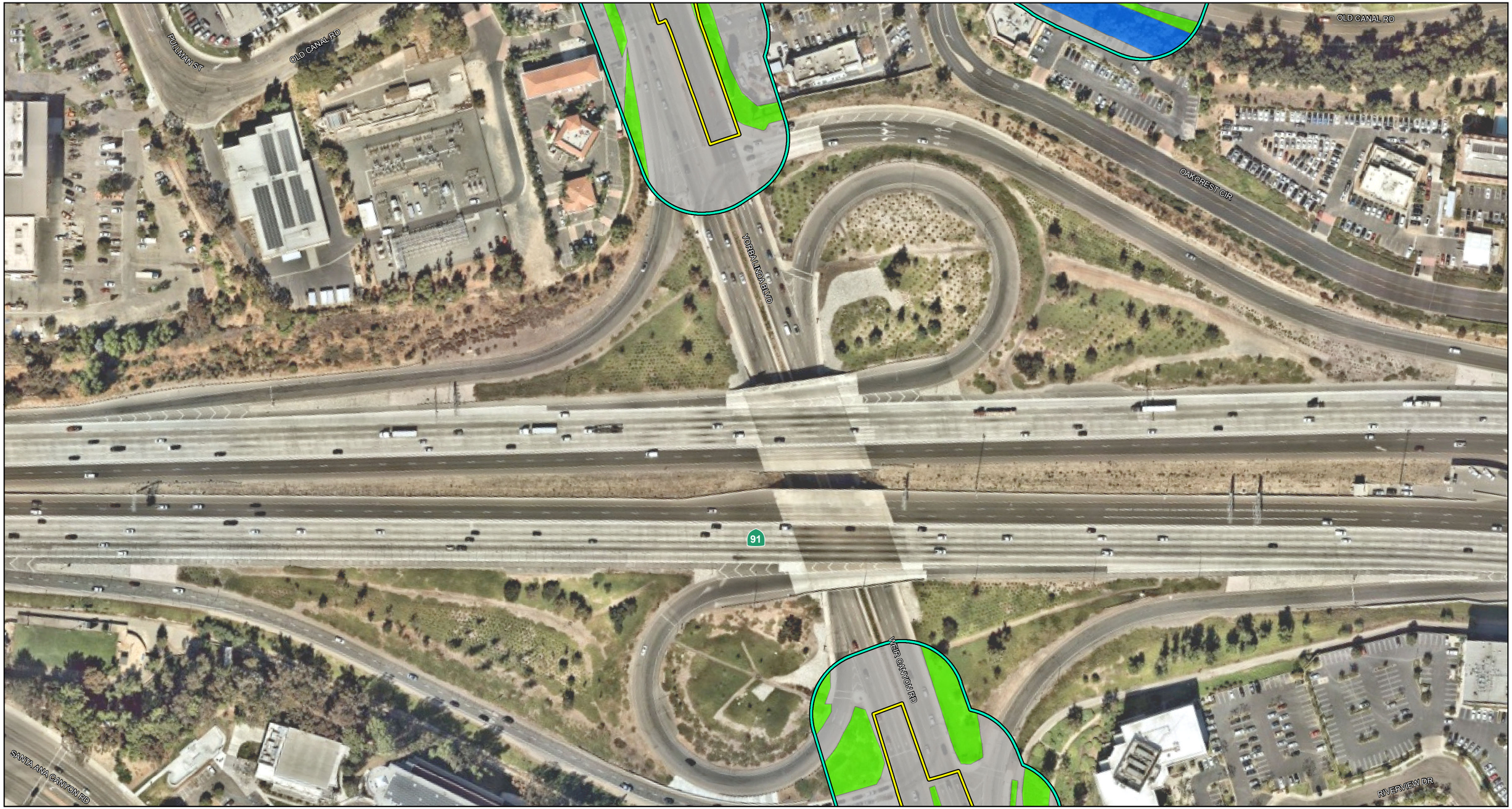

LSA

LEGEND

- Biological Study Area
- Project Limits
- Vegetation
- Coast Live Oak Woodland
- Developed
- Ornamental

0 75 150
FEET

SOURCE: Nearmap (9/23/19)

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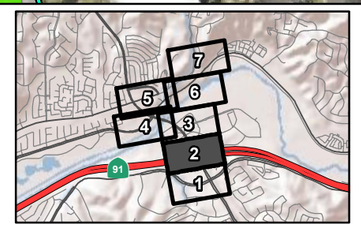

FIGURE 3
Sheet 2 of 7

Yorba Linda Boulevard Widening Project

Vegetation within the Biological Study Area

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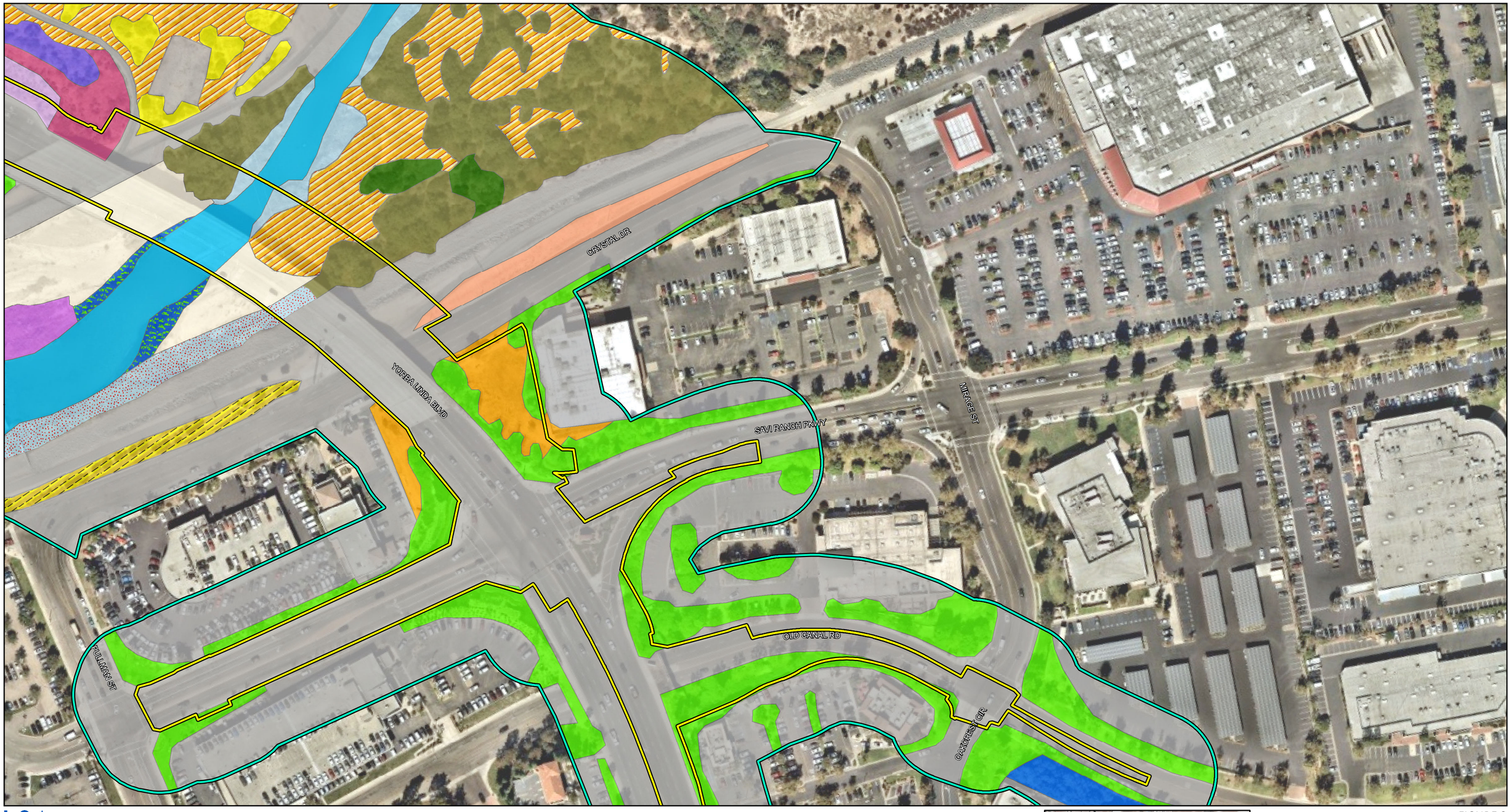

LSA

LEGEND

- Biological Study Area
- Project Limits

Vegetation

- Coast Live Oak Woodland
- Cottonwood Willow Riparian Forest
- Coyote Brush Scrub
- Developed
- Disturbed
- Elderberry Woodland
- Freshwater Marsh
- Disturbed Freshwater Marsh
- Herbaceous Riparian
- Mixed Coastal Sage Scrub
- Disturbed Mixed Coastal Sage Scrub
- Mulefat Scrub
- Open Water
- Ornamental
- Ruderal
- Ruderal Herbaceous
- Sagebrush Scrub
- Unvegetated Riverbed
- Willow Riparian Scrub

N

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FEET

SOURCE: Nearmap (9/23/19)

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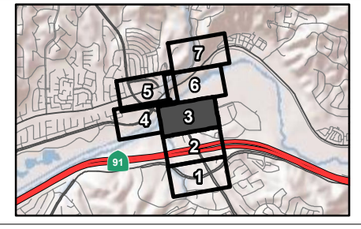

FIGURE 3
Sheet 3 of 7

Yorba Linda Boulevard Widening Project

Vegetation within the Biological Study Area

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LSA

LEGEND

- Biological Study Area
- Project Limits

Vegetation

- Cottonwood Willow Riparian Forest
- Coyote Brush Scrub
- Developed
- Elderberry Woodland
- Freshwater Marsh
- Disturbed Freshwater Marsh
- Herbaceous Riparian
- Mixed Coastal Sage Scrub
- Disturbed Mixed Coastal Sage Scrub
- Mulefat Scrub
- Open Water
- Ornamental
- Ruderal
- Ruderal Herbaceous
- Sagebrush Scrub
- Disturbed Sagebrush Scrub
- Unvegetated Riverbed
- Willow Riparian Scrub

N

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FEET

SOURCE: Nearmap (9/23/19)

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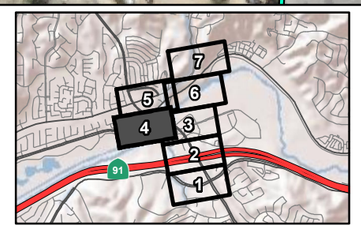

FIGURE 3
Sheet 4 of 7

Yorba Linda Boulevard Widening Project

Vegetation within the Biological Study Area

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LSA

LEGEND

- Biological Study Area
- Project Limits

Vegetation

- California Encelia Scrub
- Disturbed California Encelia Scrub
- Cottonwood Willow Riparian Forest
- Coyote Brush Scrub
- Developed
- Disturbed
- Freshwater Marsh
- Mixed Coastal Sage Scrub
- Disturbed Mixed Coastal Sage Scrub
- Open Water
- Ornamental
- Ruderal
- Ruderal Herbaceous
- Scrub-Chaparral Ecotone

N

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FEET

SOURCE: Nearmap (9/23/19)

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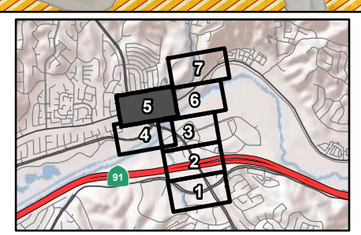

FIGURE 3
Sheet 5 of 7

Yorba Linda Boulevard Widening Project

Vegetation within the Biological Study Area

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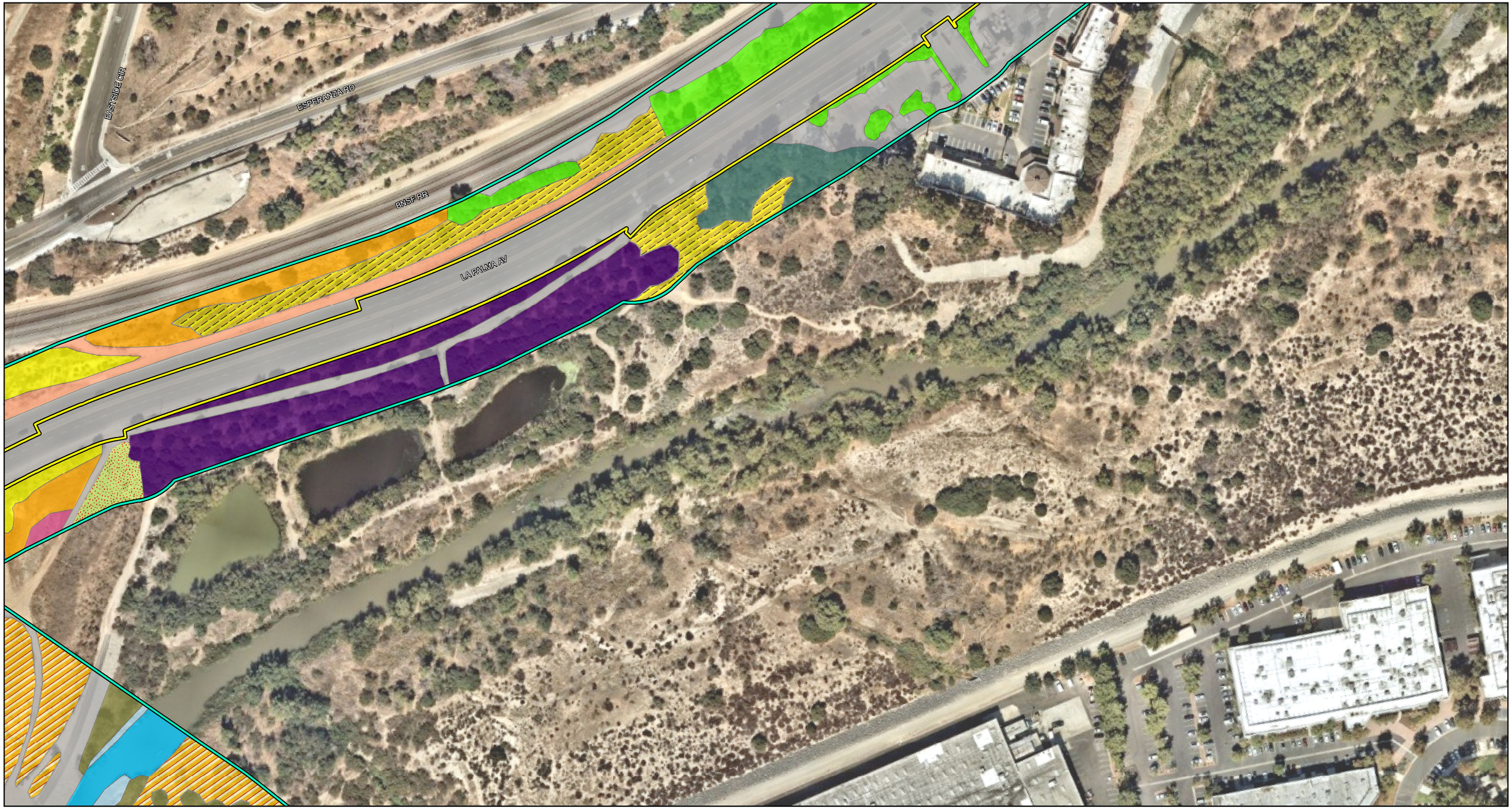

LSA

LEGEND

- Biological Study Area
- Project Limits

Vegetation

- Disturbed California Encelia Scrub
- Cottonwood Willow Riparian Forest
- Coyote Brush Scrub
- Developed
- Disturbed
- Eucalyptus Woodland
- Freshwater Marsh
- Mixed Coastal Sage Scrub
- Disturbed Mixed Coastal Sage Scrub
- Open Water
- Ornamental
- Ruderal
- Ruderal Herbaceous
- Scrub-Chaparral Ecotone

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SOURCE: Nearmap (9/23/19)

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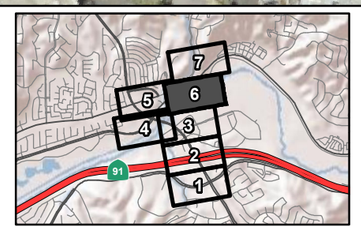

FIGURE 3
Sheet 6 of 7

Yorba Linda Boulevard Widening Project

Vegetation within the Biological Study Area

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LSA

LEGEND

- Biological Study Area
- Project Limits

Vegetation

- Coyote Brush Scrub
- Developed
- Mixed Coastal Sage Scrub
- Ornamental

N

0 75 150
FEET

SOURCE: Nearmap (9/23/19)

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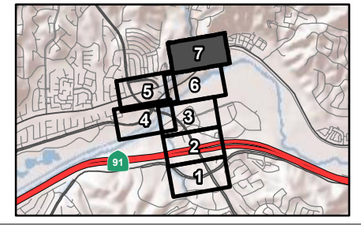

FIGURE 3
Sheet 7 of 7

Yorba Linda Boulevard Widening Project

Vegetation within the Biological Study Area

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- **Birds:** Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), white-tailed kite (*Elanus leucurus*), southwestern willow flycatcher (*Empidonax traillii extimus*), yellow-breasted chat (*Icteria virens*), coastal California gnatcatcher, yellow warbler (*Setophaga petechia*), and least Bell's vireo (*Vireo bellii pusillus*)

The BSA contains foraging habitat for common and special-status raptors such as the white-tailed kite; perennial shrubs and mature trees that serve as potential raptor nesting habitat is present within the project footprint, particularly within the Santa Ana River streambank. Suitable nesting habitat for a variety of common and special-status bird species occurs adjacent to the site within the mature riparian woodland associated with the Santa Ana River, as well as ornamental trees throughout the BSA.

Bat Habitat. All bat species (regardless of listing status) and other nongame mammals are protected by California Fish and Game Code Section 4150, which states that all nongame mammals or parts thereof may not be taken or possessed except as provided otherwise in the code or in accordance with regulations adopted by the California Fish and Game Commission. Activities resulting in the mortality of nongame mammals (e.g., destruction of an occupied bat roost, resulting in the death of bats) or disturbance that results in the loss of a maternity colony of bats (including the death of young) may be considered a "take" by the CDFW. Furthermore, any structure occupied by a bat maternity colony of any species is considered a native wildlife nursery site that is essential to the viability of local populations. Crevice habitat suitable for night-roosting and day-roosting bats, including maternity colonies, was identified at a single hinge near the middle of the bridge structure. Several other potentially suitable habitats for bats were identified, including a crevice at the northern bridge abutment, weep holes, cliff swallow mud nests, and mature riparian trees. During the nighttime emergence survey, an estimated 159 bats were observed emerging from the Yorba Linda Boulevard bridge structure.

Critical Habitat. As shown on Figure 4, Santa Ana Sucker Critical Habitat, a portion of the BSA including the Santa Ana River is located within Revised Final Critical Habitat for the Santa Ana sucker (USFWS 2010). No other designated or proposed critical habitat occurs within the BSA.

Jurisdictional Aquatic Resources. Delineated aquatic resources within the BSA include wetland and nonwetland waters of the United States associated with the Santa Ana River. In this particular case, the wetland and nonwetland waters of the United States are wholly within the streambed limits associated with the Santa Ana River, which is subject to jurisdiction by CDFW under Section 1600 of the California Fish and Game Code. Refer to Figures 5 and 6 for a map of the jurisdictional features within the BSA subject to jurisdiction under CDFW and USACE, respectively.

Wildlife Movement and Habitat Connectivity. Wildlife movement of species such as coyote (*Canis latrans*) and bobcat (*Lynx rufus*) is expected within portions of the BSA, particularly riparian habitat associated with the Santa Ana River, which connects Chino Hills State Park and the Santa Ana Mountains with resources downstream along the river. As no habitat for mountain lions (*Puma concolor*) is present downstream, there is low potential for mountain lions to utilize any portion of the BSA as a movement corridor. Migratory bird species may utilize the BSA for foraging and nesting during the bird breeding season.

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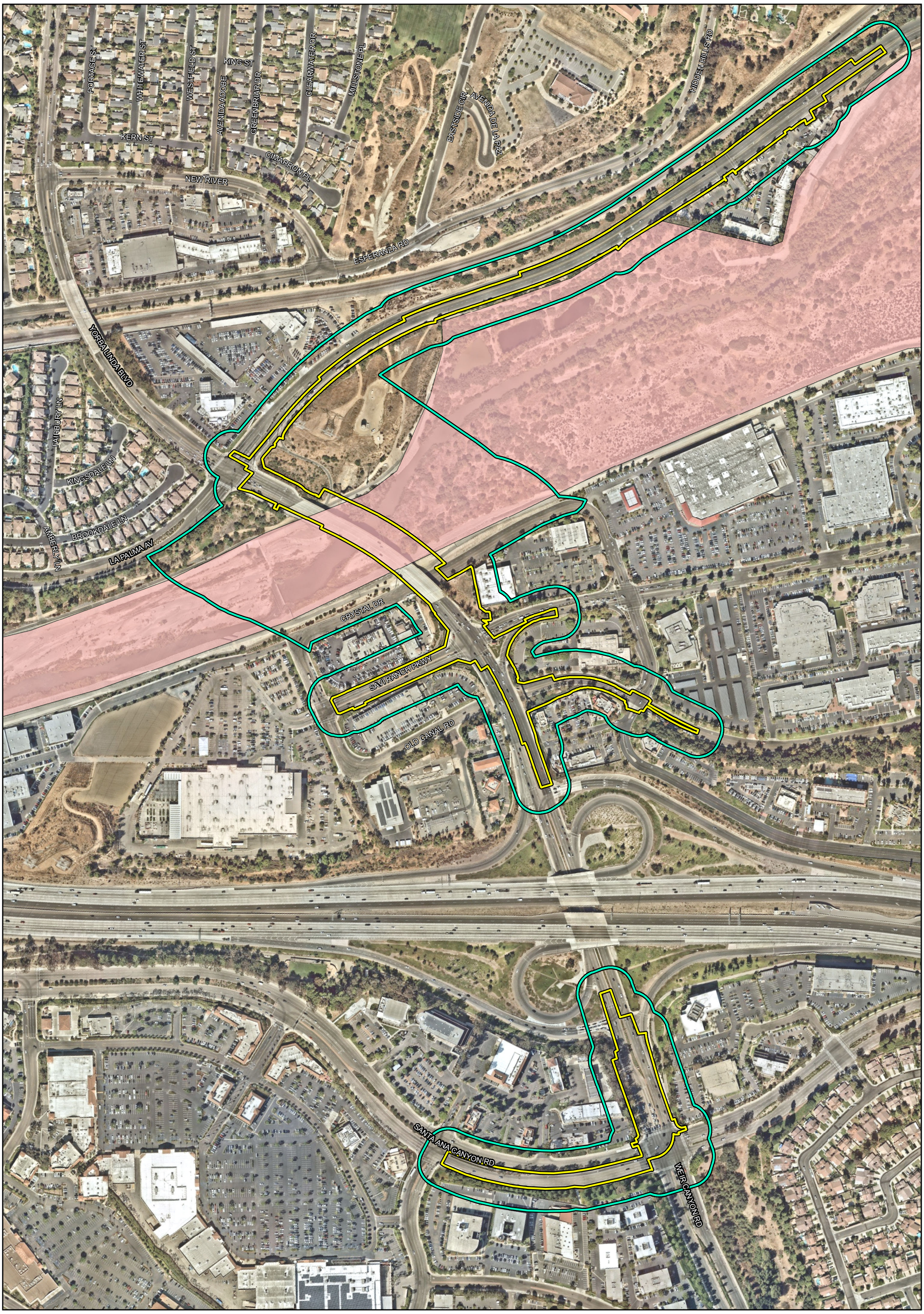

LSA

LEGEND

- Biological Study Area
- Project Limits
- Santa Ana Sucker Critical Habitat

N

0 200 400
FEET

SOURCE: Nearmap (9/23/19); County of Orange (2012)

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FIGURE 5

Yorba Linda Boulevard Widening Project

Santa Ana Sucker Critical Habitat

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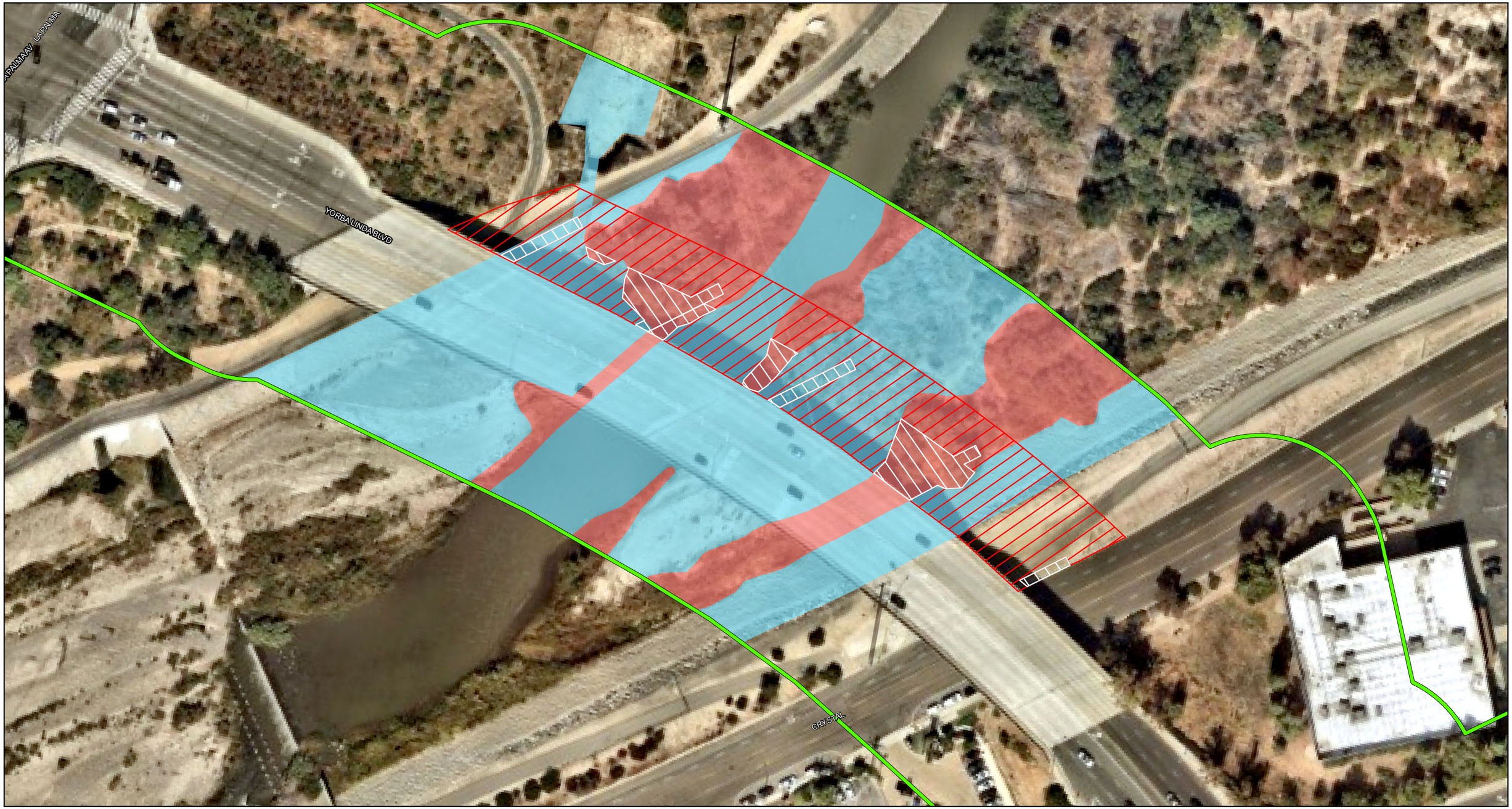


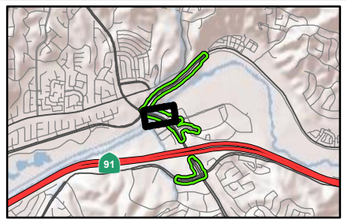
LSA

LEGEND

- Jurisdictional Delineation Study Area
- Temporary Impact
- Permanent Impact

CDFW 1602 Jurisdiction

- Nonriparian Streambed
- Riparian Vegetation in Streambed



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SOURCE: Nearmap (9/23/19)

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FIGURE 5

Yorba Linda Boulevard Widening Project

Jurisdictional Features (CDFW)

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LSA

LEGEND

- Jurisdictional Delineation Study Area
- Sample Pits
- Temporary Impact
- Permanent Impact

USACE 404 Jurisdiction

- Wetland Waters of the U.S.
- Nonwetland Waters of the U.S.

0 40 80
FEET

SOURCE: Nearmap (9/23/19)

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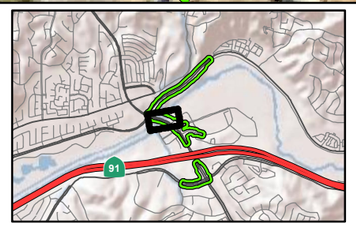

FIGURE 6

Yorba Linda Boulevard Widening Project

Jurisdictional Features (USACE)

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Regional Habitat Conservation Plans and Local Policies. The portion of the project limits south of SR-91 along Weir Canyon Road and Santa Ana Canyon Road is within the County of Orange Central/Coastal Subregion Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP). However, the proposed improvements are not located within designated reserve lands, special linkages, existing-use areas, or other conservation areas identified in the NCCP/HCP.

The Santa Ana River Canyon Habitat Management Plan (SARCHMP; OCFCD 2009), is a regional conservation plan covering Prado Dam to the Weir Canyon Road/Yorba Linda Boulevard overpass and is administered by the OC Public Works. Projects within the SARCHMP area are required to maintain baseline riparian habitat or mitigate impacted riparian habitat. The location of the SARCHMP area in proximity to the project limits is shown on Figure 7.

The City of Anaheim's Habitat Mitigation Plan for the Weir Canyon Road/La Palma Avenue Roadway Improvement Project (BonTerra Consulting 2006) is a local habitat mitigation plan (HMP) that will be affected by the proposed project. Coastal sage scrub (CSS) habitat is present within the project limits that was previously and is currently utilized by coastal California gnatcatchers and that was previously established as part of the 2006 HMP. This CSS habitat in Anaheim's 2006 HMP is located at the southeast corner of Yorba Linda Boulevard and La Palma Avenue, as shown on Figure 8.

4.4.2 Discussion

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 Wildlife or the U.S. Fish and Wildlife Service?

Less Than Significant with Mitigation Incorporated.

Special-Status Plant Species. No special-status plant species are likely (i.e., have a Moderate or greater probability of occurrence) to occur within the BSA or to be adversely affected by project construction. However, because there is marginally suitable habitat for some special-status plant species near the Santa Ana River channel, and the field surveys were conducted in November and December, outside of the typical springtime blooming season, construction of the proposed project may impact special-status plant species, if they are found to be present within the disturbance limits. With implementation of Mitigation Measure BIO-1, springtime botanical surveys would be required to confirm the absence of annual special-status species. If special-status plant species are present within the disturbance limits, construction activities including access and grading activities required for widening of Yorba Linda Boulevard and lengthening of the pier walls may direct disturbance or removal of these species. Impacts to special-status plant species from construction would be considered permanent and potentially significant. However, in accordance with Mitigation Measure BIO-1, a compensatory mitigation plan for the species shall be developed and approved in consultation with U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife, as applicable.

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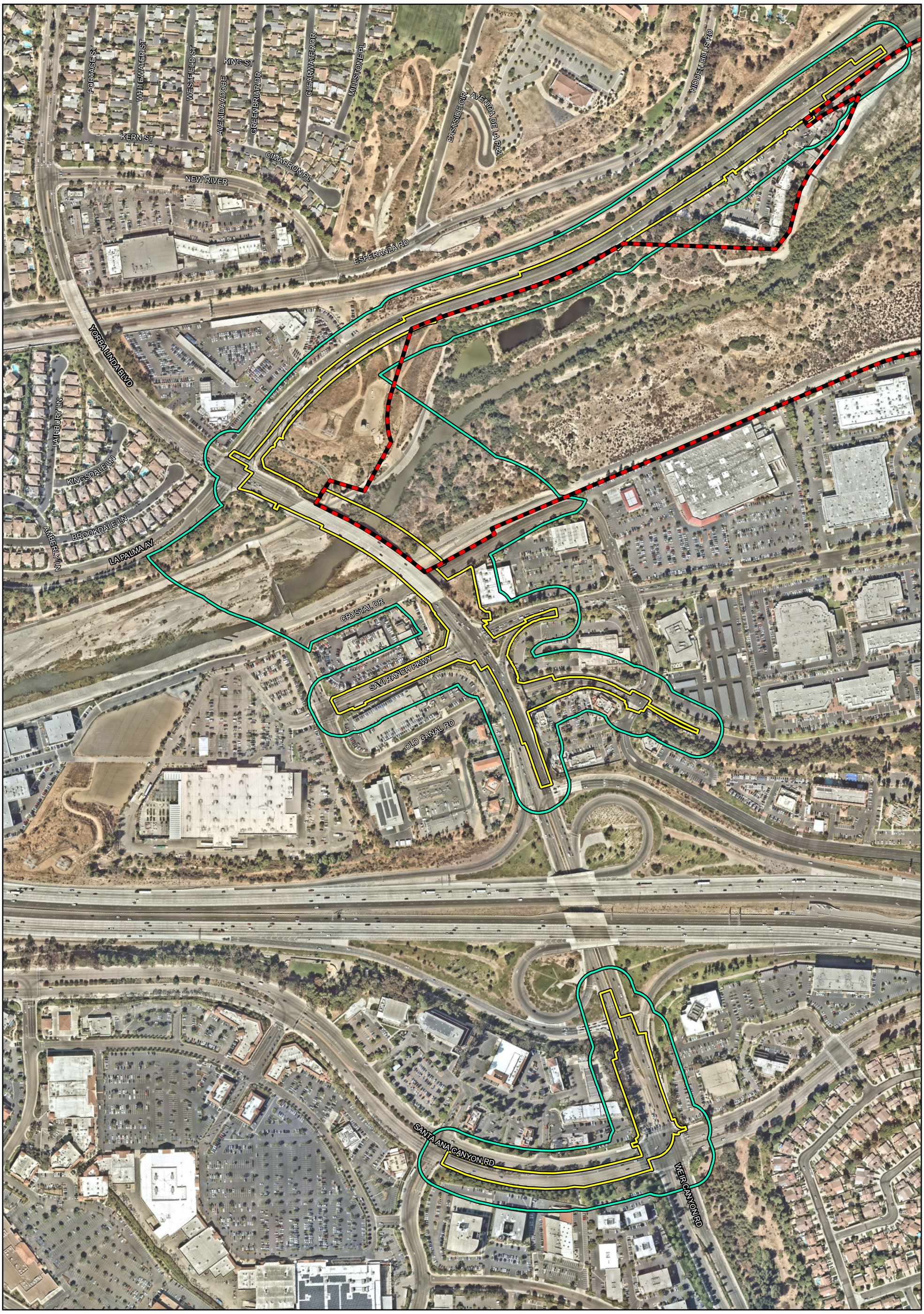

LSA

LEGEND

- Biological Study Area
- Project Limits
- Santa Ana River Canyon HMA Boundary (1,123.6 acres)

FIGURE 7

N

0 200 400
FEET

SOURCE: Nearmap (9/23/19); County of Orange (2012)

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Yorba Linda Boulevard Widening Project

Santa Ana River Habitat Management Area

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LSA

LEGEND

- Biological Study Area
- Project Limits
- CSS Habitat Mitigation Areas

N

0 200 400
FEET

FIGURE 8

Yorba Linda Boulevard Widening Project

City of Anaheim Habitat Mitigation Plan

SOURCE: Nearmap (9/23/19); County of Orange (2012)

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Potential indirect impacts to special-status plant species may also occur as a result of introduction of invasive plant material during construction. Introduction of invasive species from construction workers and equipment within the Santa Ana River channel would have a permanent impact on habitat suitability within the project limits and would have a potentially significant impact. With implementation of Mitigation Measure BIO-2, measures would be implemented by the Construction Contractor to prevent the introduction and spread of invasive species during construction. No permanent impacts would occur to special-status species as a result of construction of the bike path along La Palma Avenue as all construction work would occur from the existing roadway and there is no marginally suitable habitat adjacent to the other intersection improvements within the project limits.

Operation of the proposed project would result in an increase in stormwater runoff due to the additional impervious surface associated with widening Yorba Linda Boulevard. Increased runoff may result in erosion, which would have a potential direct impact on special-status species, if identified within habitat adjacent to the roadway. However, additional drainage improvements in the form of Modular Wetland Systems are proposed to accommodate runoff from the additional pavement. The additional runoff would be collected and treated and operations would not result in erosion or other water quality impacts to adjacent habitat. Therefore, the proposed project will not result in any new or increased operational impacts to special-status plant species.

Therefore, potentially significant impacts to special-status plant species would be reduced to less than significant with implementation of Mitigation Measures BIO-1 and BIO-2.

Special-Status Animal Species. Several special-status animal species, including red-diamond rattlesnake, coast horned lizard, western yellow-billed cuckoo, white-tailed kite, southwestern willow flycatcher, yellow-breasted chat, coastal California gnatcatcher, yellow warbler, least Bell's vireo, and Crotch bumble bee, also have potential to be temporarily, directly and indirectly affected during construction activities. However, prior to the start of construction activities, training for construction personnel about special-status species that may occur in the vicinity of the proposed project and what legal protections they are afforded, as outlined in Mitigation Measure BIO-3. In addition, pre-construction surveys will be conducted in accordance with Mitigation Measure BIO-4 to confirm the absence of special-status animal species within the maximum disturbance limits or to obtain approval from USFWS and/or CDFW prior to construction. During construction, biological monitoring in accordance with Mitigation Measure BIO-5 would ensure that special-status species are not on site or adversely affected during project construction.

Indirect impacts to species as a result of habitat disturbance may occur from construction access, grading, and other construction activities. However, Standard Condition SC-BIO-1 would require all areas temporary impacted by construction activities to be restored to pre-construction conditions. Other potential indirect impacts include increased noise, vibration, lighting, and dust. Such indirect disturbance has the potential to affect foraging patterns and disorient special-status animal species occurring in adjacent habitat areas. Increased anthropogenic disturbance and waste (e.g., litter) during and following project construction could also attract predators of special-status animal species, such as domestic and feral dogs and cats, crows/ravens, and coyotes, to the project vicinity. Standard Condition SC-BIO-2 includes a list of Best Management Practices (BMPs) for the construction contractor to implement that would minimize temporary construction disturbances.

Potential indirect impacts to special-status fish, including Santa Ana sucker, and other aquatic species occurring in adjacent aquatic habitats may occur due to construction-related impacts on hydrology and water quality. Construction of the proposed project would include grading and may result in a potential increase in erosion and sediment transport into adjacent or downstream aquatic areas. Chemical spills or leaks of fuel, transmission fluid, lubricating oil, or motor oil from construction equipment could also contaminate waters and degrade their quality. These potential impacts to hydrology and water quality would be avoided or substantially minimized through the erosion control BMPs required as a part of the NPDES Permit and Stormwater Pollution Prevention Program, described in Section 4.10, Hydrology and Water Quality, below.

As stated above, introduction of invasive plant material from construction activities would also result in permanent impacts to special-status species by degrading habitat suitability. However, as described above, Mitigation Measure BIO-2 includes measures to prevent the introduction and spread of invasive species during construction.

Potential permanent impacts to special-status animal species would occur as a result foraging or nesting habitat loss. Construction of the proposed project would include bridge widening, which would require lengthening of the pier walls, resulting in permanent impacts to habitats that support special-status species within the Santa Ana River channel, such as Cottonwood-Willow Riparian Forest and Mixed CSS. Construction activities would also result in 0.13 acre of permanent impacts to sagebrush scrub habitat, which supports the federally-listed coastal California gnatcatcher. Refer to Table 4.4.A below for a summary of impacts to vegetation types within the project limits.

Table 4.4.A: Impacts to Vegetation and Land Cover Types

Vegetation/Land Cover Type	Temporary Impacts[1] (acre)	Permanent Impacts[1] (acre)	Total Impacts[1] (acre)
Sagebrush Scrub	-	0.13	0.13
Disturbed Sagebrush Scrub	-	0.01	0.01
Coyote Brush Scrub	0.03	0.09	0.12
Mixed CSS	0.01	<0.01	0.01
Ruderal	0.25	0.07	0.32
Ruderal Herbaceous	0.10	0.13	0.23
Freshwater Marsh	0.06	0.02	0.08
Cottonwood-Willow Riparian Forest	0.18	0.12	0.30
Open Water	0.04	0.06	0.10
Unvegetated Riverbed	<0.01	0.07	0.07
Disturbed	0.01	0.01	0.02
Ornamental Landscaping	0.35	0.81	1.16
Developed	1.33	12.57	13.90
Total Impact Area	**2.36**	**14.09**	**16.44**

Source: Compiled by LSA Associates, Inc. (2020).
[1] All presented acreages are approximate and based on GIS measurements.
CSS = coastal sage scrub
GIS = geographic information systems

Mitigation Measure BIO-6 would require restoration or compensatory replacement for habitat that may support special-status animal species to any federally-listed species, including western yellow-billed cuckoo, southwestern willow flycatcher, coastal California gnatcatcher, and least Bell's vireo. An assessment of these impacts will be included in the Biological Assessment for the proposed project as a part of Section 7 Consultation with USFWS. The effects determination for these species will be finalized with USFWS in a Biological Opinion, as described in Regulatory Compliance Measure RC-BIO-1. In addition, consultation with CDFW for potential impacts to state-listed species, including western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo is required per Regulatory Compliance Measure RC-BIO-2. Consultation with USFWS and CDFW will provide mitigation ratios for occupied and/or critical habitat and will provide avoidance and minimization measures for special-status species. With adherence to RC-BIO-1 and RC-BIO-2 for the final measures provided from consultation with USWFS and CDFW and the implementation of Mitigation Measure BIO-6 for the restoration or compensation of habitat, potential impacts to special-status animal species from loss of suitable habitat would be reduced to less than significant.

One federally-listed fish species, Santa Ana sucker, is presumed present. As shown in Table 4.4.A above, the proposed project, and specifically the widening of the bridge, would result in permanent impacts to Open Water and Freshwater Marsh, habitat types that may support Santa Ana sucker. Mitigation Measure BIO-7 provides measures to divert the flow of the active channel to avoid adverse impacts to Santa Ana sucker. Furthermore, implementation of Mitigation Measure BIO-6 would require restoration or compensatory replacement of freshwater marsh habitat. Santa Ana sucker will also require consultation with the USFWS. Therefore, with adherence to RC-BIO-1 and with implementation of Mitigation Measures BIO-6and BIO-7, impacts to Santa Ana sucker would be reduced to less than significant.

As described above, with the drainage improvements included in the project design to address additional runoff form the increased impervious surfaces, operation of the proposed project would not have a significant impact on habitat for special-status species. Furthermore, the proposed project would not result in additional traffic noise that would indirectly impact special-status animal species.

Special-Status Bat Species. As described above, all bat species are protected from potential impacts to roosting, including maternity colonies. Crevice habitat suitable for day- and night-roosting bats is present at the Yorba Linda Boulevard bridge over the Santa Ana River. Other suitable habitat for roosting bats include swallow nest habitat located on the bridge pier structures and tree and snag habitat east of the bridge structure within the Santa Ana River Channel. Project construction has the potential to indirectly impact the suitability of these habitats through noise and vibration. Because this focused bat survey was performed outside the bat maternity season (April 1–August 31), and given the suitability of the crevice habitat observed at this structure for maternity roosting, a preconstruction nighttime survey would performed at this location during the summer months (i.e., June–August) in order to confirm whether this structure serves as a maternity roost and to determine the numbers and species of any bats roosting there, in accordance with Mitigation Measure BIO-8. If a maternity colony is determined to be present following the nighttime survey, construction within a predetermined buffer distance would avoid the recognized bat maternity season. In addition, Mitigation

Measure BIO-9 would avoid direct permanent impacts including mortality to roosting bats from loss of crevice habitat by performing humane evictions and exclusions. Mitigation Measure BIO-10 would avoid direct permanent impacts to swallow nest habitat by requiring nest inspections prior to removal, if nests are required to be removed for the proposed bridge improvements. Permanent impacts to habitat would also be compensated for as described in Mitigation Measure BIO-11, alternate bat roosting habitat. Direct impacts to roosting bats would also occur from removal of trees required for grading and roadway widening that provide habitat near the Yorba Linda Boulevard bridge. The proposed project would avoid tree removal during the nesting bird season in compliance with the requirements of the Migratory Bird Treaty Act in accordance with RC-BIO-3. The nesting bird season coincides with the bat maternity season. If trimming or removal of trees during the bat maternity season cannot be avoided, Mitigation Measure BIO-5 would require monitoring of tree removal activities unless nighttime surveys confirm there is no roosting activity within one week of tree removal activities. With adherence to RC-BIO-3 and implementation of Mitigation Measures BIO-5, BIO-8, BIO-9, BIO-10, and BIO-11, impacts to bat species would be reduced to less than significant.

As described above, with the drainage improvements included in the project design to address additional runoff form the increased impervious surfaces, operation of the proposed project would not have a significant impact on habitat for bat species. Furthermore, the proposed project does not include permanent lighting fixtures and would not result in additional traffic noise or operational lighting that would indirectly impact bat species.

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

Less Than Significant with Mitigation Incorporated. As described above, the BSA includes several sensitive natural communities and riparian habitats. Potential temporary and permanent impacts to natural communities are shown in Table 4.4.A above. In addition, as described above and shown on Figure 4, Santa Ana Sucker Critical Habitat, the portion of the BSA at the Santa Ana River is located within Revised Final Critical Habitat for the Santa Ana sucker (USFWS 2010). No other designated or proposed critical habitat occurs within the BSA.

Construction of the proposed improvements would result in 0.18 acres of temporary impacts to Cottonwood Willow Riparian Forest from the bridge widening. Another sensitive natural community, Southern Willow Scrub, also occurs downstream of the proposed improvements and may be subject to temporary indirect impacts due to increased levels of dust and erosion, as well as decreased water quality during project construction activities. SC-BIO-1 would minimize temporary construction related impacts by requiring restoration of temporarily impacted native vegetation and SC-BIO-2 would minimize temporary construction-related impacts by providing best management practices (BMPs) for construction equipment staging, fueling, idling, and other activities that the construction contractor would implement as part of the project. In addition to the BMPs listed in SC-BIO-2, a Stormwater Pollution Prevention Program (SWPPP) would be required and would detail Erosion Control and Sediment Control BMPs to be implemented during project construction to minimize erosion and retain sediment on site (refer to Section 4.10, Hydrology & Water Quality).

Widening of the Yorba Linda Boulevard Bridge and lengthening of the pier walls would also result in permanent impacts to approximately 0.12 acre of Cottonwood Willow Riparian Forest and 0.13 acre of Sagebrush habitat. A small amount of Mixed CSS (<0.01 ac) would be permanently impacted by shading impacts resulting from the widened bridge. Mitigation Measure BIO-6 requires restoration or compensation for the loss of these habitat types. Sensitive natural communities may also be permanently impacted by the introduction of invasive plant material tracked in on equipment, clothing, and shoes. As described in Response 4.4(a) above, Mitigation Measure BIO-5 includes measures for the construction contractor to employ to avoid and minimize the spread of invasive species. As described above, with the drainage improvements included in the project design to address additional runoff form the increased impervious surfaces, operation of the proposed project would not have a significant impact on sensitive natural communities or riparian habitats. Therefore, permanent impacts to sensitive natural communities and riparian habitats would be reduced to less than significant with implementation of SC-BIO-1, SC-BIO-2 and Mitigation Measure BIO-6.

c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less Than Significant with Mitigation Incorporated. The proposed project would result in direct and indirect impacts to jurisdictional aquatic resources, including wetlands, as shown on Figures 5 and 6 above. Table 4.4.B below quantifies anticipated permanent and temporary impacts to jurisdictional aquatic resources.

Table 4.4.B: Impacts to Jurisdictional Aquatic Resources

Drainage	Permanent Impacts (ac)	Temporary Impacts (ac)	Total (ac)
USACE Non-Wetland Waters of the US	0.006	0.186	0.192
USACE Wetland Waters of the US	0.027	0.215	0.242
CDFW Streambed/Riparian	0.191	0.766	0.957

Source: Compiled by LSA Associates, Inc. (2020).
ac = acre/acres
CDFW = California Department of Fish and Wildlife
US = United States
USACE = United States Army Corps of Engineering

Temporary impacts to jurisdictional features from construction of the proposed widening improvements and additional pavement would occur in the form of indirect effects from erosion and sediment transport into adjacent or downstream aquatic areas. Chemical spills or leaks of fuel, transmission fluid, lubricating oil, or motor oil from construction equipment may also contaminate waters and degrade their quality. The bridge widening is also anticipated to result in temporary impacts to jurisdictional aquatic resources as a result of construction access and equipment over the Santa Ana River and associated river channel. Construction activities related to the bridge widening would have direct temporary impact to approximately 0.186 ac of non-wetland waters of the U.S. and 0.215 ac of wetland waters of the U.S. under the jurisdiction of the USACE. In addition, construction activities would also have direct temporary impacts to approximately 0.766 ac of streambed and associated riparian habitat under the jurisdiction of CDFW. Temporary construction-related impacts would be reduced with implementation of the BMPs included in SC-BIO-2 and the

erosion control measures required as part of the SWPPP (refer to Section 4.10, Hydrology & Water Quality).

The proposed improvements would also result in permanent impacts to jurisdictional aquatic resources, including wetlands, as shown on Figures 5 and 6. As shown in Table 4.4.B above, direct permanent impacts to would occur to approximately 0.006 ac of non-wetland water and 0.027 ac of wetland waters under USACE jurisdiction (a combined total of 0.033 ac) as a result of the fill required for the construction of extended bridge pier wall structures. Permanent impacts to CDFW jurisdictional areas include the direct impacts from the extension of the bridge pier walls (0.068 ac) as well as indirect shading impacts to existing riparian vegetation (0.123 ac) due to the proposed widening of the bridge deck. Permanent impacts wetlands and non-wetland waters under the jurisdiction of the USACE would require authorization under Section 404 of the Clean Water Act. Permanent impacts to streambed and riparian habitat under the jurisdiction of CDFW would require authorization under Section 1602 for a Lake and Streambed Alteration Agreement. Impacts to these resources would also require authorization under Section 401 of the Clean Water Act by the Regional Water Quality Control Board. Regulatory Compliance Measure RC-BIO-5 would require authorization through these permits prior to construction. In addition, as described above, Mitigation Measure BIO-6 requires restoration or compensation for the loss of sensitive natural communities, including wetlands and riparian habitat. With adherence to RC-BIO-5 and implementation of Mitigation Measure BIO-6, impacts to state or federally protected wetlands and aquatic resources would be reduced to less than significant.

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?

Less Than Significant Impact. The wildlife species that occur in the BSA and utilize the Santa Ana River as a movement corridor are adapted to the urban–wildland interface. The noise, vibration, light, dust, or human disturbance within construction areas would only temporarily deter wildlife from using areas in the immediate vicinity of construction activities. These temporary indirect effects could temporarily alter migration behaviors, territories, or foraging habitats in select areas. However, because these are temporary effects, it is likely that wildlife already living and moving in close proximity to urban development would alter their normal functions for the duration of the project construction and then reestablish these functions once all temporary construction effects have been removed. As described in the Section 2.8, Project Schedule, construction activities would occur during daylight hours, as feasible, which would minimize disturbances to wildlife species that move at night. Construction noise in the City is regulated by the Municipal Code Section 8.32.090. Specifically, Section 8.32090(D) restricts construction activity such that no person may engage in or conduct construction activity between the hours of 8:00 p.m. and 7:00 a.m., Monday through Saturday and prohibits construction activity on Sundays and Federally recognized holidays. In addition, the BMPs described in SC-BIO-1 would be implemented during construction to minimize temporary construction-related impacts to habitat, species, and wildlife movements within the project limits. As the proposed project would not introduce new land uses or activities nor expand existing activities within the project limits, no permanent impacts from noise would occur as a result of project operation. In addition, the proposed project does not include additional permanent

lighting fixtures that would impact wildlife corridors. Furthermore, the lengthening of the pier walls for the proposed bridge improvements would not provide a physical barrier or impede access to the Santa Ana River channel. Therefore, impacts related to wildlife corridors would be less than significant.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant Impact. The proposed project would require removal of portions of existing landscaping and ornamental vegetation along Yorba Linda Boulevard for the proposed roadway widening and pedestrian and bike facilities. Additional ornamental trees would be removed for construction of the modular wetland vaults proposed along Weir Canyon Road and Savi Ranch Parkway. Based on Chapter 16.08, Tree Preservation, of the City of Yorba Linda's Municipal Code, the proposed project would require a tree removal permit issued by the Community Development Director. In addition, for tree removal that would occur within the City of Anaheim's jurisdiction, a tree removal permit would be required and trees would be replaced in accordance with the City of Anaheim's tree ordinance and planting plan. Regulatory Compliance Measure RC-BIO-4 would require tree replacement in accordance with the applicable jurisdiction's tree ordinance. As described in response 4.4(a) above, the proposed project would comply with the provisions of the Federal Migratory Bird Treaty Act (MBTA) Per RC-BIO-3 would require a pre-construction nesting bird clearance survey prior to the start of construction or ground disturbing activities. With adherence to the requirements of RC-BIO-3 and RC-BIO-4, potential construction-related impacts to nesting birds and raptors would be less than significant. Operation of the proposed roadway improvements would improve traffic operations within the project limits and would not result in any maintenance activities that would conflict with local policies or ordinances protecting biological resources. Impacts would be less than significant and no mitigation is require.

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?

Less Than Significant with Mitigation Incorporated.

Orange County Central/Coastal NCCP/HCP. The proposed project would not conflict with the County of Orange Central/Coastal Subregion NCCP/HCP. A portion of the project south of SR-91 is within the NCCP/HCP boundaries but is not within designated reserve lands, special linkages, existing use areas, or other conservation areas identified in the NCCP/HCP and does not contain resources protected by the NCCP/HCP (Figure 6). Therefore, the proposed project would have no impact on the NCCP/HCP.

Santa Ana River Channel Habitat Management Area. The SARCHMP is applicable to the portion of the proposed project east of the Yorba Linda Boulevard bridge (Figure 7). Riparian habitat within the SARCHMP Habitat Management Areas must be maintained at the baseline amount. Therefore, there can be no net loss of existing native habitat within the SARCHMP area. Construction activities and access associated with the bridge widening and pier walls would result in approximately 0.58 acre of temporary impacts to riparian habitat with the SARCHMP. With implementation of Mitigation Measure BIO-12, temporary impacts to sensitive vegetation communities and species in the

SARCHMP area will be restored to pre-construction conditions. In addition, construction of pier walls and widening of the Yorba Linda Boulevard bridge would result in permanent impacts to 0.63 acres of riparian habitat within the SARCHMP. Mitigation Measure BIO-12 would also require permanent impacts would be mitigated through either restoration or replacement of native habitat within the SARCHMP area, subject to the approval of OC Public Works who manages the SARCHMP to ensure conservation of habitat. As described above, the drainage improvements included in the project design to address additional runoff form the increased impervious surfaces, operation of the proposed project would not have a significant impact on habitat with the SARCHMP area.

Habitat Mitigation Plan for the Weir Canyon Road/La Palma Avenue Roadway Improvement Project. The City of Anaheim's Habitat Mitigation Plan for the Weir Canyon Road/La Palma Avenue Roadway Improvement Project (BonTerra Consulting 2006) is a local habitat mitigation plan. This CSS habitat in Anaheim's habitat mitigation plan is located at the southeast corner of Yorba Linda Boulevard and La Palma Avenue (Figure 8). The proposed widening of Yorba Linda Boulevard and intersection reconfiguration at La Palma Avenue would result in temporary impacts to approximately 0.02 acre and permanent impacts to approximately 0.22 acre of the 1.37 acre mitigation area that was previously and is currently utilized by coastal California gnatcatchers, a federally-listed special-status species. RC-BIO-1 would require the City of Yorba Linda, in cooperation with the City of Anaheim, to initiate Section 7 Consultation with the United States Fish and Wildlife Service and California Department of Fish and Wildlife to address impacts to the Mitigation Plan. The results of this consultation will identify appropriate mitigation ratios and other measures for impacts to existing CSS habitat mitigation areas. In addition, Mitigation Measure BIO-12 would require the City of Yorba Linda to coordinate with City of Anaheim and USFWS for impacts to the habitat mitigation area and coastal California gnatcatcher. Temporary impacts to the habitat mitigation area would be restored to pre-construction conditions and permanent impacts would be mitigated at a ratio determined through Section 7 Consultation. Operation of the proposed roadway, pedestrian, and bike improvements would not introduce new uses or expand existing uses within the project limits that would contribute to operational noise. Therefore, operation of the proposed project would not have indirect noise impacts to coastal California gnatcatchers. In addition, the proposed drainage improvements included in the project design would address additional runoff from the increase in impervious surfaces. With these drainage improvements, the proposed project would not result indirect physical impacts on the habitat within the mitigation area from erosion.

Therefore, potential impacts to coastal California gnatcatchers and their associated CSS habitat in the 2006 habitat mitigation plan area near the intersection of Yorba Linda Boulevard and La Palma Avenue would be reduced to less than significant with implementation of Mitigation Measure BIO-12.

4.4.2.1 Regulatory Compliance Measures

The following Regulatory Compliance Measures are regulations that are applicable to the proposed project and are considered in the analysis of potential impacts related to biological resources. The City of Yorba Linda considers these regulations to be mandatory; therefore, they are not considered mitigation.

RC-BIO-1 **Section 7 Consultation.** During final design and prior to construction, Section 7 consultation with the USFWS will be required to address potential effects to federally listed special-status species, including the Santa Ana sucker, western yellow-billed cuckoo, southwestern willow flycatcher, coastal California gnatcatcher, and least Bell's vireo. Temporary and permanent impacts to occupied and/or critical habitat will be mitigated at a ratio determined appropriate by USFWS. Final mitigation ratios will be determined through the Section 7 Consultation process.

RC-BIO-2 **CDFW Consultation.** During final design and prior to construction, impacts to any State-listed species will be addressed as part of the Section 2081 incidental take permit process, as deemed necessary by the California Department of Fish and Wildlife. Restoration and/or replacement of native habitat within SARCHMP areas will be discussed and agreed upon with OC Public Works. Similarly, habitat restoration and/or replacement for impacts within the City of Anaheim's Habitat Mitigation Plan area will be discussed and agreed upon with the City of Anaheim and the federal and State resource agencies.

RC-BIO-3 **Migratory Bird Treaty Act Compliance.** If ground-disturbing activities or removal of any trees, shrubs, or any other potential nesting habitat are scheduled within the avian nesting season (nesting season generally extend from February 1 - August 31), a pre-construction clearance survey for nesting birds shall be conducted within three days prior to any ground disturbing activities. This measure shall apply to all areas within project site boundaries. The biologist conducting the clearance survey shall document the negative results if no active bird nests are observed on the project site during the clearance survey with a brief letter report indicating that no impacts to active bird nests would occur before construction can proceed. If an active avian nest is discovered during the pre-construction clearance survey, construction activities shall stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer shall be 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity.

RC-BIO-4 **Tree Replacement and Preservation.** Once project grading plans are finalized and approved (and prior to ground disturbance), an inventory of directly and indirectly affected trees shall be determined either by referencing existing tree inventory data collected on the subject property or by having a qualified arborist conduct an assessment based on the final, approved limits of development. The tree inventory will determine the species, number, sizes, and health of all trees to be impacted by the approved project, and will be used to determine compensation ratios.

For trees within the public right-of-way, the portion of the project within the City of Anaheim will be subject to the City of Anaheim's Street Tree ordinance (Section 13.12.060 of the Anaheim Municipal Code), and the portion of the project within the City of Yorba Linda will be subject to the City of Yorba Linda's Tree Preservation ordinance (Section 16.08.030 of the Yorba Linda Municipal Code). Protected trees shall not be removed or trimmed without proper permits from the City of Yorba

Linda or the City of Anaheim. Compensation ratios for loss of Specimen Trees within Anaheim's Scenic Overlay Zone will be subject to Section 18.18.040 of Anaheim's Municipal Code. Compensatory planting should be conducted within the portion of the project limits that would remain undeveloped under the approved plans, or at an off-site location as approved by the City.

RC-BIO-5 **Section 404 and Section 401 Permits, and Streambed Alteration Agreement.** Prior to commencement of construction activities, the City of Yorba Linda shall coordinate with the United States Army Corps of Engineers to receive authorization pursuant to Section 404 of the Clean Water Act. The City shall also coordinate with the Regional Water Quality Control Board to obtain a Water Quality Certification pursuant to Section 401 of the Clean Water Act. Furthermore, the City shall coordinate with the California Department of Fish and Wildlife to obtain a Streambed Alteration Agreement.

The permits outlined above shall include measures to mitigate temporary and permanent impacts to aquatic resources. Riparian vegetation that is temporarily disturbed during construction-related activities shall be successfully restored to preconstruction quality and kept free of exotic plants until riparian vegetation is reestablished. Restoration shall be performed at no less than a 1:1 ratio. If the site has not recovered within 5 years, the site shall be reseeded or replanted with container plants and/or cuttings from native riparian species. Areas that are permanently impacted by project construction activities shall be compensated for at no less than a 1:1 ratio through on-site or off-site mitigation as dictated by the permit. Exact requirements shall be negotiated during the permitting process.

4.4.2.2 Standard Conditions

The following Standard Conditions are included as required conditions of the proposed project and is considered in the analysis of potential impacts related to biological resources. The City of Yorba Linda considers these requirements to be mandatory; therefore, they are not considered mitigation.

SC-BIO-1 **Restoration of Temporary Impacts to Native Vegetation.** All areas temporarily disturbed by construction activities resulting in the removal of vegetation will be replanted. Replacement planting will be consistent with the City of Yorba Linda or City of Anaheim design guidelines, as applicable.

SC-BIO-2 **Best Management Practices.** Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities shall be minimized by adhering to the following measures:

- The project disturbance limits shall be clearly marked with construction fencing (or other highly visible material), and construction/materials staging and vehicle/equipment maintenance and fueling areas shall be located at least 200 feet (ft) away from riparian habitat associated with the Santa Ana River, where feasible.

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

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

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

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

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

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

4.4.2.3 Mitigation Measures

BIO-1 **Springtime Botanical Survey.** Prior to any project-related ground disturbance, a follow-up botanical survey shall be conducted by a qualified biologist/botanist during the typical springtime blooming season (April–May 2020) to confirm the absence of annual special-status plant species that bloom during this period. The results of the survey shall be documented and submitted to the City of Yorba Linda. For purposes of this measure, "special-status plant species" refers to those plant species that are listed or proposed for listing under the California Endangered Species Act or Federal Endangered Species Act and/or have a California Native Plant Society (CNPS) California Rare Plant Rank of 1A, 1B, 2A, or 2B. CNPS California Rare Plant Rank 3 or 4 plants have been excluded. Should any of these special-status

plant species be found within the project disturbance limits, a compensatory mitigation plan must be prepared and approved by the County of Orange prior to project-related ground disturbance. If listed special-status plant species are found, the compensatory mitigation plan must also be approved by the United States Fish and Wildlife Service and/or California Department of Fish and Wildlife, as applicable.

BIO-2 **Invasive-Species Control.** Prior to ground disturbance and during project construction activities, project measures shall be implemented by the Construction Contractor to ensure invasive plant material is not spread to areas outside the project limits by tracking seed on equipment, clothing, and/or shoes. Equipment/ material imported from an area where invasive plants exist must be identified, and measures (e.g., equipment cleaning) must be implemented to prevent importation and spreading of nonnative plant material within and outside of the project limits. All construction equipment accessing unpaved areas shall be cleaned with water to remove dirt, seeds, vegetative material, or other debris that could contain or hold seeds of noxious weeds before arriving at and leaving the project limits. Only certified weed-free straw, mulch, and/or fiber rolls shall be used for erosion control.

BIO-3 **Worker Environmental Awareness Training.** Prior to on-site work (including mobilization), Worker Environmental Awareness Training shall be conducted by a qualified biologist to educate all construction personnel on the relevant federal, State, and local laws related to regional special-status species known to occur in adjacent habitat types, particularly habitat associated with the Santa Ana River. The training session shall include training on identification of species that may be found in or adjacent to the project area, the status of those species, and any legal protection afforded to those species. Measures that are being implemented to protect those species shall also be explained. Personnel shall be advised to report the occurrence of any special-status species promptly. A fact sheet conveying this information shall be prepared for display or for distribution to anyone who may enter the project limits.

BIO-4 **Preconstruction Surveys.** Prior to ground disturbance, a qualified biologist shall conduct preconstruction surveys at the Santa Ana River to confirm the absence of special-status species with a moderate or higher potential to occur including crotch bumble bee, red-diamond rattlesnake, coast horned lizard, western yellow-billed cuckoo, white-tailed kite, southwestern willow flycatcher, yellow-breasted chat, coastal California gnatcatcher, yellow warbler, and least Bell's vireo within suitable habitat. The surveys will confirm that other special-status species with a low potential to occur are not on site. The preconstruction surveys shall take place no more than 24 hours prior to commencement of work activities. If listed species are observed within the work area (or areas potentially indirectly affected by project activities as determined by the qualified biologist) and the work cannot be postponed until the species is no longer present, the City of Yorba Linda shall obtain written approval from the United States Fish and Wildlife Service or the California

Department of Fish and Wildlife, as applicable, prior to completing project work at these locations.

BIO-5 **Biological Monitoring.** During project construction, a qualified biologist shall monitor construction activities, including clearing, grubbing, and excavation, at the Santa Ana River and within or adjacent to habitat that may support special-status species. The monitor shall ensure all construction personnel are within the designated project footprint and that practicable measures are being employed to avoid and minimize incidental disturbance to habitat and special-status species inside and outside the project footprint.

In addition, if trimming or removal of trees during the bat maternity season (April 1–August 31) cannot be avoided, a qualified biologist shall monitor tree removal unless nighttime surveys conducted within 1 week of removal indicate no tree-roosting bat activity within the project footprint.

BIO-6 **Restoration and/or Compensatory Habitat Replacement.** After completion of project construction activities, temporary and permanent impacts to sensitive natural communities and habitats that may support special-status species shall be restored at no less than a 1:1 ratio, and/or mitigation bank credits shall be purchased to offset impacts by the City of Yorba Linda.

Habitats that are temporarily impacted by project construction activities shall be restored to preconstruction quality following the conclusion of construction. Areas that are permanently impacted by project construction activities shall require compensatory mitigation. Compensatory mitigation may occur in applicable areas adjacent to the project limits, and/or mitigation bank credits may be purchased to compensate for permanent impacts (e.g., through the Soquel Canyon Mitigation Bank). Permittee-responsible mitigation areas shall be monitored for years post-restoration to ensure successful establishment of plant communities.

BIO-7 **Flow Diversion and/or Channel Realignment.** Prior to construction, measures shall be taken to ensure that a continuous flow of the stream within the Santa Ana River is maintained throughout project construction. Subject to the approval of the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), the stream channel shall be diverted away from the initial project construction area to minimize adverse effects to the Santa Ana sucker. If permanent impacts to channel flow from the extension of pier walls at the Yorba Linda Boulevard bridge occur, the active channel shall be realigned and restored to ensure that flow is not obstructed. Habitat within the Santa Ana River channel shall be restored at no less than a 1:1 ratio.

BIO-8 **Nighttime Survey for Maternity Colony.** Prior to construction, a California Department of Fish and Wildlife–approved bat biologist shall perform a nighttime acoustic and emergence survey at the Yorba Linda Boulevard bridge over the Santa Ana River during the summer months (i.e., June–August), when maternity colonies

are fully established, to confirm the presence of a maternity colony or colonies and to determine the numbers and species of bats present. If bat species are determined to be present, site-specific measures shall be identified to minimize impacts to roosting bats. This survey shall be performed before or during final design to allow adequate time for mitigation planning for the specific species and numbers of bats observed.

To avoid disturbance of maternity-roosting bats (if confirmed present) during project-related activities at the Yorba Linda Boulevard bridge over the Santa Ana River, work activities within a predetermined buffer distance of the maternity roost sites shall avoid the recognized bat maternity season (April 1–August 31) unless otherwise directed by CDFW. The buffer distance shall be determined by a CDFW-approved bat biologist and shall be based on what bat species are found to make up the maternity colony, since different bat species are known to have different tolerance levels for certain construction activities.

BIO-9 **Humane Evictions and Exclusions.** If necessary to avoid direct mortality, humane evictions and exclusions of roosting bats shall be performed under the supervision of a California Department of Fish and Wildlife–approved bat biologist in the fall (September or October) prior to the initiation of project-related construction activities at the bridge structure. To avoid potential mortality of flightless juvenile bats, evictions and exclusions of bats cannot be performed during the maternity season (April 1–August 31). Winter months are also inappropriate for bat eviction because not all individuals in a roost will emerge on any given night. In addition, long-distance movements to other roost sites are more difficult during the winter when prey availability is scarce, resulting in high mortality rates of evicted bats.

BIO-10 **Swallow Nest Inspection.** If swallow nests are required to be removed in order to prevent swallows from nesting during construction activities associated with the Yorba Linda Boulevard bridge, these nests shall be removed in the fall (i.e., September or October), prior to expected or potential overwintering use by bats, and in a manner that ensures they do not fall to the ground or are otherwise destroyed, unless the absence of bats is confirmed through inspection by a qualified bat biologist.

BIO-11 **Alternate Bat Roosting Habitat.** If bats are excluded from more than 25 percent of the available roosting habitat at the Yorba Linda Boulevard bridge, or if permanent impacts to bat roosting habitat will occur, alternate bat roosting habitat shall be provided prior to performing the humane eviction/exclusion. Alternate bat roosting habitat shall be provided by the City of Yorba Linda in a 0.5:1 ratio for temporary impacts and in a 1:1 ratio for permanent impacts. The specifications for this roosting habitat shall be designed in consultation with a qualified, California Department of Fish and Wildlife–approved bat biologist.

BIO-12 **Restoration and/or Compensatory Replacement for Habitat Conservation Plan Areas.** Prior to the start of construction activities, the City of Yorba Linda shall discuss and agree upon restoration and/or replacement of native habitat within Santa Ana River Canyon Habitat Management Plan (SARCHMP) with OC Public Works. Similarly, the City of Yorba Linda shall discuss and agree upon habitat restoration and/or replacement for impacts within the City of Anaheim's Habitat Mitigation Plan area with the City of Anaheim and the federal and State resource agencies during Section 7 Consultation.

Habitats within the SARCHMP and Anaheim Mitigation Plan area that are temporarily impacted by project construction activities shall be restored to preconstruction quality following the conclusion of construction. Areas that are permanently impacted by project construction activities will require compensatory mitigation at no less than a 1:1 ratio. Mitigation may occur in applicable areas adjacent to these existing mitigation and conservation lands, and/or mitigation bank credits may be purchased to compensate for permanent impacts (e.g., through the Soquel Canyon Mitigation Bank). Permittee-responsible mitigation areas shall be monitored for 5 years postrestoration to ensure successful establishment of plant communities.

4.5 CULTURAL RESOURCES

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

4.5.1 Existing Setting

The proposed project is located primarily within a modern built environment that is highly disturbed from construction of road alignments, buildings, and shopping centers over the past 50 years. Prior to construction of SR-91 in the vicinity of the project limits in 1971, most disturbance to the local landform was from agricultural use of the area and seasonal flooding from the Santa Ana River.

On July 24, 2019, a record search of previously recorded archaeological and historical sites and surveys was conducted at the South Central Coastal Information Center (SCCIC) of the California Historic Resource Information System (CHRIS), located at California State University, Fullerton. The record search was conducted for the project limits as well as a 1-mile radius and included a review of the California State Historic Resources Inventory (HRI) and Office of Historic Preservation (OHP) Historic Properties Directory which includes resource information listed on the National Register of Historic Places (*National Register*), the California Register of Historical Resources (*California Register*), California Historical Landmarks (CHL), California Points of Historical Interest, and various local historic registers. The record search results are included in Appendix E.

The record search shows that a total of 41 cultural studies have occurred within 1 mile of the project limits: 26 of these studies are outside of the project limits and 15 of the studies are within at least a portion of the project limits. The record search clearly shows that the project limits have been completely surveyed before, that portions of the project limits have been surveyed multiple times, and that nearby sites have undergone archaeological testing.

Previous studies have resulted in recording of 21 resources within 1 mile of the project limits: 20 prehistoric and 1 historic. The 1 historic resource is the BNSF Railway, originally the California Southern, later known as the Atchison, Topeka & Santa Fe that was built in 1886. The 20 prehistoric resources include 15 sites and 5 isolated finds.

The 15 prehistoric sites consist of habitation (2), artifact scatter (9), and lithic reduction quarry (4) sites. Quarry sites are areas where local rock was found in natural formations and used for lithic reduction purposes to make flakes and stone tools. Artifact scatter sites as those areas where both flaked and ground stone artifacts were used and left, while habitation sites usually contain a variety of stone tools as well as ecofacts such as marine shell, fire-affected rock, or bone exists, indicating that people lived or at least camped at the location. Isolated finds consist of just 1 or 2 artifacts. The

5 isolated finds identified by the record search are all reported as mano fragments, which are broken ground stone pieces that were held in the hand and used to grind seeds on a larger rock known as a metate. The presence of ground stone artifacts such as manos usually indicates collecting and processing of plant foods.

The closest two resources to the project limits CA-ORA-1067 (P-30-1067) and CA-ORA-614 (P-30-614), described in more detail below. The next nearest previously recorded cultural resource is located more than 600 ft (180 meters [m]) from the project limits.

Site CA-ORA-1067 is located near the project limits along the east side of Weir Canyon Road between the westbound SR-91 off-ramp and Old Canal Road, in what is now a parking lot between McDonald's, Taco Bell, and Chick-fil-A restaurants. The site was originally recorded as a subsurface deposit of ground and flaked stone artifacts within an area measuring 80x60 m, which is 260x197 feet (ft). The record search maps the site as encompassing an area measuring more than 120x120 m (394x394 ft). The area where the site was recorded is now a graded parking lot some 20–30 ft below the current Weir Canyon Road street level. The reason the site is depicted encroaching into the current project limits is due to the difference between the originally recorded site size (80x60 m) and the size of the site (over 120x120 m) as mapped on the record search. Due to the high degree of disturbance in this area it is unlikely that any portion of the site remains.

Site CA-ORA-614 is located atop an undeveloped knoll overlooking the Santa Ana River approximately 328 ft (100 m) northeast of Yorba Linda Boulevard and 82 ft (25 m) southeast of La Palma Avenue. The site is outside of the current project limits. Therefore, no cultural resources are located within the current project limits.

In addition to the records searches conducted for the proposed project, LSA also conducted field surveys of the project limits and immediate surrounding area. On July 31, 2019, the portion of the project limits south of La Palma Avenue was surveyed by LSA Archaeologist Ivan Strudwick who surveyed using linear transects separated by 5–7 m (15–23 ft). On October 30, 2019, the portion of the project limits along La Palma Avenue was surveyed by Mr. Strudwick. No cultural material was found during these surveys.

4.5.2 Discussion

a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact. Based on the results of the record searches and field surveys conducted for the proposed project, there are no known historical resources that have been previously recorded within the project limits. All buildings in the vicinity of the proposed project are of modern construction, and no known historical resource sites are present. Therefore, no impacts to historical resources are anticipated as a result of the proposed project. No mitigation is required.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact. The record search identified the edges of prehistoric cultural resource site CA-ORA-1067 within the project limits. However, as described above, the mapped resource measures 120x120 m (394x394 ft) in size, whereas the resource was recorded as measuring 80x60 m (260x197 ft) in size, which would not extend into the project limits. Additionally, the recorded location of the resource is now a paved parking lot situated in a commercial area, indicating that the area is extensively disturbed at depth. The site is likely completely destroyed. Furthermore, no archaeological resources were found during the field survey with exposed sediment along the north and west sides of the recorded site. In addition, Standard Condition (SC) SC-CUL-1 addresses cultural material encountered during construction. This standard condition would ensure that the proposed project would not cause a substantial adverse change in the significance of an archaeological resource. Therefore, potential impacts to archaeological resources would be less than significant.

c. Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. The proposed project would not disturb any known human remains, including those interred outside of formal cemeteries because no known human remains are known to exist in or near the project limits. In accordance with State law and as described in RC-CUL-1 below, if human remains are encountered during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur within the vicinity of the remains until the County Coroner has made a determination of origin and disposition pursuant to California PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). (Tribal Cultural Resources are addressed in a later section of this IS/MND; Appendix I includes Native American consultation information.) Following compliance with existing State regulations as described in RC-CUL-1, which detail the appropriate actions necessary in the event human remains are encountered, impacts would be less than significant.

4.5.2.1 Standard Conditions

The following Standard Condition is included as a required condition of the proposed project and is considered in the analysis of potential impacts related to cultural resources. The City of Yorba Linda considers this requirement to be mandatory; therefore, it is not considered mitigation.

SC-CUL-1 **Unanticipated Cultural Resources.** If any prehistoric or historic cultural material older than 50 years of age is encountered during construction, work in the area of the discovery will stop until a professional archaeologist can assess the nature and significance of the find and make appropriate recommendations concerning recording and potential removal of the resource. Resources determined to be eligible may require additional work such as data recovery to record that information considered important. Once professional archaeologist determines that the information making a resource important has been recorded, work can resume in the area of the find.

4.5.2.2 Regulatory Compliance Measures

The following Regulatory Compliance Measure is a regulation that is applicable to the proposed project and is considered in the analysis of potential impacts related to cultural resources. The City of Yorba Linda considers this regulation to be mandatory; therefore, it is not considered mitigation.

RC-CUL-1 **Human Remains.** If human remains are encountered during construction, 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 California PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County 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 non-destructive analysis of human remains and items associated with Native American burials.

4.6 ENERGY

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

4.6.1 Discussion

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. Sources of energy required for the proposed project include electricity, natural gas, and transportation fuel for vehicle trips associated with construction equipment on-site, and mobile trips to and from the project limits by construction workers, vendors, and soil hauling trucks, etc., during construction activities. The analysis of construction energy usage was conducted based on the Roadway Construction Emission Model (RoadMod) version 9.0 modeling results for the project, which quantifies fuel use. The results of the RoadMod modeling are included in Appendix C. The project's estimated construction energy consumption is summarized in Table 4.6.A. As shown in Table 4.6.A, the proposed projects construction fuel consumption would increase Orange County's consumption by 0.002 percent.

Table 4.6.A: Construction Energy Consumption

Energy Type	Project Annual Energy Consumption[1,3]	Orange County Annual Energy Consumption[2]	Percentage Increase Countywide[2]
Fuel Consumption			
Construction (Heavy Duty Diesel Vehicle) Fuel Consumption[4]	40,465 gallons	1,426,867,481 gallons	0.002%

1 As modeled in Roadway Construction Emission Model (RoadMod).
2 The project increases in automotive fuel consumption are compared with the projected Countywide fuel consumption in 2020, as calculated from the California Air Resources Board EMFAC2017.
3 The project is a roadway improvement project which would not involve new buildings, increased vehicular trips, or generate additional energy and natural gas consumption. As such, the project would not have annual energy, natural gas, or operational fuel consumption.
4 Project fuel consumption calculated based on RoadMod results.

Energy in the form of fossil fuels used for construction vehicles and equipment would be used during site clearing, grading, and construction. Energy consumed during construction would be temporary and would not represent a significant demand on energy resources. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than 5 minutes be turned off. Project construction

equipment would also be required to comply with the latest U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) engine emissions standards.

The proposed project would also require energy in the form of construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials (e.g., lumber and gas); however, the proposed project would not substantially increase the demand for energy compared to overall local and regional demand for construction materials. As indicated in Table 4.6.A, the proposed project's fuel consumption from construction would be 40,465 gallons, which would increase fuel use in Orange County by 0.002 percent. Therefore, construction-related energy consumption would have a nominal effect on the local and regional energy supplies. Construction-related energy use would be temporary and would cease upon completion of construction activities. Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. Impacts related to energy use from construction of the proposed project would be less than significant.

Typical operational energy consumption would be associated with fuel used for vehicle trips and electricity and natural gas use. However, the proposed project is a roadway project that would widen and provide improvements to Yorba Linda Boulevard and other local roadways. The proposed project would not generate additional vehicle trips through the project limits; and, therefore, would not increase fuel usage. The proposed project includes pedestrian and bike safety improvements to promote the use of alternative modes of transportation, which allow for a decreased dependence on nonrenewable energy resources and a reduction in energy use. Operation of the proposed project would not require the consumption of natural gas. Energy use consumed by the proposed project would only be limited to electricity consumption associated with additional street lighting along the project segment, which would be minimal. Electricity use would be provided through existing connections in the project vicinity. Therefore, implementation of the proposed project would not result in a long-term demand for electricity and natural gas nor would the project require new service connections or construction of new off-site service lines or substations to serve the project. The nature of proposed improvements would not require substantial amounts of energy for either construction or maintenance purposes. Therefore, the proposed project would not use non-renewable resources in a wasteful or inefficient manner. Therefore, operational energy impacts would be less than significant.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. As stated above in 6.6(a), the proposed project would not generate vehicular trips or require operational electricity, natural gas, or vehicular fuel consumption. As shown in Table 4.6.A, the project's construction fuel consumption would be minimal compared to the Orange County region, and construction would be short-term (approximately 18 months in total) and would cease immediately following completion. As such, the proposed project would not conflict with any State or local plan for renewable energy or energy efficiency and impacts would be less than significant.

4.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? 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 direct or indirect 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?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

4.7.1 Existing Setting

This section is based on the *Structure Preliminary Geotechnical Report* (Earth Mechanics, Inc., 2019; Appendix F) which was prepared for the Yorba Linda Boulevard Bridge, but includes descriptions of the surrounding area which encompass the project limits. In addition, project plans, geologic maps of the area within the project limits, and relevant geological and paleontological literature were reviewed to determine which geologic units are present within the project limits and whether fossils have been recovered within the project limits or from similar geologic units elsewhere in the region. A search for known fossil localities was conducted through the Natural History Museum of Los Angeles County (LACM) to determine the status and extent of previously recorded paleontological resources within and surrounding the project limits. The results of this record search are provided in Appendix G. Pedestrian field surveys were completed to note the sediments and to identify any unrecorded paleontological resources exposed on the surface within the project limits.

4.7.1.1 Fault Rupture

Southern California is subject to the effects of seismic activity due to the active faults that traverse the region. Active faults are defined as those that have experienced surface displacement within Holocene time (approximately the last 11,000 years) and/or are in a State-designated Alquist-Priolo Earthquake Fault Zone.

The *Structure Preliminary Geotechnical Report* also identified active faults within the region including the Elsinore Fault Whittier Section located approximately one mile north of the project limits and the Glen Ivy and Chino Sections located approximately four miles from the project limits. The Peralta Hills Fault and Yorba Linda Seismicity Zone are approximately two miles from the project limits and the Coyote Hills Blind Thrust Fault is approximately seven miles from the project limits.

4.7.1.2 Seismic Ground Shaking

Earthquakes are characterized by a moment magnitude, which is a quantitative measure of the strength of the earthquake based on strain energy released during the event. The magnitude is independent of the site, but is dependent on several factors including the type of fault, rock type, and stored energy. Moderate to severe ground shaking will be experienced at the project site if a large magnitude earthquake occurs on one of the nearby principal late Quaternary faults; moderate to severe ground shaking can cause structural damage to on-site improvements.

4.7.1.3 Liquefaction

Liquefaction of cohesionless soils can be caused by strong vibratory motion due to earthquakes. Liquefaction is characterized by a loss of shear strength in the affected soil layers, thereby causing the soils to behave as a viscous liquid. Susceptibility to liquefaction is based on geologic and geotechnical data. River channels and floodplains are considered most susceptible to liquefaction, while alluvial fans have a lower susceptibility. Depth to groundwater is another important element in the susceptibility to liquefaction. Groundwater shallower than 30 feet results in high to very high susceptibility to liquefaction, while deeper water results in low and very low susceptibility. The California Division of Mines and Geology (California Geological Survey) prepared Seismic Hazard Zone Reports for the Black Star Canyon, Yorba Linda, Orange, and Prado Dam 7.5-minute quadrangles (CDMG, 2000a, 2005, 1997, 2000b) which include historical groundwater maps. Based on information in these reports, the highest historical groundwater near the project site ranged between zero feet and 30 feet below the ground surface. Existing groundwater information was gathered from the California Department of Water Resources website. Six groundwater monitoring wells are located within one-half mile of the bridge site. Based on the measurements in the six wells, the depth from the ground surface to the shallowest groundwater level varied from about 7 to 42 feet, which corresponds to elevations ranging from about +308 to +326 feet.

4.7.1.4 Landslides

According to the State of California Earthquake Zones of Required Investigation maps for the Black Star Canyon, Yorba Linda, Orange, and Prado Dam Quadrangles, the project is not located within an area designated as an earthquake-induced landslide zone. The terrain within the project limits is relatively flat aside from the banks of the Santa Ana River channel; therefore, seismically-induced landsliding is not a concern.

4.7.1.5 Geologic Units and Soils

The results of the literature review indicate that the project is located at the northern end of the Peninsular Ranges Geomorphic Province, a 900-mile long northwest-southeast-trending structural block that extends from the Transverse Ranges in the north to the tip of Baja California in the south

(California Geological Survey, 2002; Norris and Webb, 1976). Surficial geologic mapping indicates that within the project limits, there are Very Young Wash Deposits, Very Young Alluvial Fan Deposits, Young Axial Channel Deposits, and Very Old Alluvial Fan Deposits (Morton and Miller, 2006). Although not mapped by Morton and Miller (2006), some areas within the project limits also likely contain Artificial Fill placed during construction of the existing roads and businesses. Dates for the geologic time intervals are derived from the *International Chronostratigraphic Chart* prepared by the International Commission on Stratigraphy (ICS) (Cohen et al., 2019).

4.7.1.6 Expansive Soils

Soils that undergo relatively significant volume change (shrink and swell) due to changing moisture content are characteristically expansive soils. Soil moisture content can change due to rainfall, irrigation, water line leaks, fluctuating groundwater elevation, hot weather, drought, or other natural or human factors. Based on the available subsurface information, the existing soils within the bridge area are expected to be primarily composed of sand and gravel, which are not expansive soils.

4.7.1.7 Collapsible Soils

Collapsible soils are soils that collapse (settle) under applied loads when water is introduced into the soil. Soil collapse, due to the introduction of water, is also referred to as hydro-consolidation. Natural deposits susceptible to hydro-consolidation are typically aeolian, alluvial, or colluvial soils with high apparent dry strength. The dry strength of the soils may be attributed to capillary tension, the clay and silt constituents in the soil, or the presence of cementing agents (i.e. salts). Once these soils are subjected to excessive moisture and embankment or foundation loads, the constituency including soluble salts or bonding agents is weakened or dissolved and collapse occurs resulting in settlement. Typical collapsible soils are light colored, low in plasticity, and have relatively low densities. The available subsurface information does not note the presence of collapsible soils and laboratory test data is not available; therefore, it is unknown if collapsible soils exist. Based on the known information, presence of collapsible soils is not likely.

4.7.2 Discussion

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

No Impact. The *Structure Preliminary Geotechnical Report* concluded there are no known active faults that traverse through project limits, and the project is not located within an Alquist-Priolo Earthquake Fault Zone. Therefore, the risk of ground surface rupture and related hazards at the project site is expected to be low. While the faults identified in the vicinity of the project limits are capable of generating earthquakes with maximum magnitudes ranging from 6.1 to 7.7 Mw, the proposed project is not located within a designated Alquist-Priolo Earthquake Fault Zone. In addition, the proposed project includes roadway improvements and would not include the construction or rehabilitation of structures for human occupancy. Therefore, the proposed project

would not result in the exposure of people or structures to potential substantial adverse effects related to fault rupture as provided in the Alquist-Priolo Earthquake Fault Zoning Act. Implementation of the proposed project would not result in the rupture of a known Alquist-Priolo earthquake fault and no impact would occur in this regard.

ii. Strong seismic ground shaking?

Less Than Significant Impact. Southern California has numerous active seismic faults subjecting residents to potential earthquake and seismic-related hazards. Seismic activity poses two types of potential hazards for residents and structures, categorized either as primary or secondary hazards. Primary hazards include ground rupture, ground shaking, ground displacement, subsidence, and uplift from earth movement. Primary hazards can also induce secondary hazards such as ground failure (lurch cracking, lateral spreading, and slope failure), liquefaction, water waves (seiches), movement on nearby faults (sympathetic fault movement), dam failure, and fires. Although no known active or inactive faults exists within the project limits and there is a very low probability of exposure to primary seismic hazards, potential impacts from secondary hazards as a result of the proposed project's proximity to active regional faults may occur. However, the proposed project includes roadway widening and pedestrian and bike facilities would not affect subsurface geology or the probability of a seismic event. Neither construction nor operation of the proposed project would include activities that would have the potential to induce seismic ground shaking or exacerbate existing seismic hazards.

The pier structures required for the widening of the Yorba Linda Boulevard bridge would be designed based on the results of the *Structure Preliminary Geotechnical Report*, which concluded a design magnitude of 7.1 and a preliminary peak ground acceleration of 0.65g. In order to address the potential for strong seismic ground shaking at the bridge structure, Standard Condition GEO-1 (SC-GEO-1) would be required to ensure implementation of the design recommendations provided in the *Structure Preliminary Geotechnical Report*. In addition, one of the recommendations of the *Structure Preliminary Geotechnical Report* is to prepare a Design-Level Geotechnical Report during the design phase in order to determine soil stabilization and foundation recommendations to reduce seismic risks. The roadway design and pavement construction would also comply with existing City standards, including Title 15, Chapter 15.40, Grading, of the City's Municipal Code. Thus, with adherence to the Grading Code and SC-GEO-1, the potential impact pertaining to strong seismic ground shaking would be less than significant level.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Based on the depth to groundwater within the project limits described in the Existing Setting above, the project is located within a liquefaction zone identified in the Santa Ana Quadrangle. Because the proposed project includes widening of the bridge, which spans an active river bed and there is potential for high groundwater, there may be layers of sandy soils that are susceptible to liquefaction under strong ground shaking. Therefore, it should be assumed that soil liquefaction can occur due to a strong earthquake event. Soil liquefaction will be assessed during the design phase after supplemental exploratory boreholes have been conducted and subsurface soil samples have been collected and tested (see SC-GEO-1). If soil liquefaction is found to be possible, the final foundation design will incorporate the effects of soil liquefaction. As noted above,

roadway design and pavement construction would comply with existing City standards, including Title 15, Chapter 15.40, Grading, of the City's Municipal Code. Thus, with adherence to the Grading Code and SC-GEO-1, the impact pertaining to seismic-related ground failure would be less than significant.

iv. Landslides?

Less Than Significant Impact. According to the California Seismic Hazard Zones map, the project is located outside of the earthquake induced landslides zone (California Department of Conservation 2006). The proposed project would not introduce any new topographical features or elements that would increase the risk of landslide within the project vicinity. Per the requirements of SC-GEO-1 below, the recommendations for construction of the bridge structure included in the *Structure Preliminary Geotechnical Report* and in the Design-Level Geotechnical Report will be implemented to ensure construction of the bridge structure would not result in landslides along the slopes of the Santa Ana River channel. Furthermore, all construction activities would comply with the City's standards including Title 15, Chapter 15.40, Grading of the City's Municipal Code. Therefore, with adherence to the City's Municipal Code and SC- GEO-1, impacts related to landslides would be less than significant.

b. Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The majority of the proposed improvements would occur within the existing roadway. However, during construction, earthwork and grading activities would disturb and expose soils from the shoulders of Yorba Linda Boulevard, Weir Canyon Road, Savi Ranch Parkway. Soil disturbance would occur during construction of the proposed project due to roadway widening, pedestrian and bike facilities or drainage improvements. However, as discussed in Section 6.10 (Hydrology and Water Quality) below, the National Pollutant Discharge Elimination System (NPDES) program regulates storm water and non-storm water discharges associated with construction or demolition activities including, but not limited to, clearing, grading, grubbing, or excavation, or any other activities that results in a land disturbance equal to or greater than 1 acre. The NPDES program requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which will prescribe Best Management Practices (BMPs) that the discharger will use to protect stormwater runoff and provide erosion control. In addition, the proposed project would not alter the composition of onsite soils, and would result in no potential for soil erosion or loss of topsoil. The impacts related to soil erosion in this regard would be less than significant.

c. Be located on a geologic unit or soil that is 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 topography within the project limits is composed of relatively flat terrain with the exception of the side slopes of the Santa Ana River. If soil liquefaction is determined to occur, then lateral spreading may occur. Seismic slope stability will be assessed during the design phase of the project after additional subsurface information is collected (see SC-GEO-1). A comprehensive geotechnical investigation will be conducted during the design phase of the project to assess the presence of collapsible soils and determine the impact of collapsible soils on the proposed bridge widening if such soils exist. In addition, roadway design and pavement construction

would comply with existing City standards, including Title 15, Chapter 15.40, Grading, of the City's Municipal Code, and recommendations with the Design-Level Geotechnical Report would be adhered to as noted in SC-GEO-1. With adherence to these regulations and recommendations, construction activities would not result in unstable soils on or off-site that would potentially result in landslides, lateral spreading, subsidence, liquefaction or collapse. Furthermore, operation of the proposed roadway improvements and bike and pedestrian facilities would not result in unstable soils on or off-site. Therefore, with adherence to the City's Municipal Code and SC- GEO-1, impacts related to unstable geologic units would be less than significant.

d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. As discussed above, existing soils within the project limits have a low potential for expansion. As noted above, roadway design and pavement construction would comply with existing City standards, including Title 15, Chapter 15.40, Grading, of the City's Municipal Code. In addition, grading and construction activities associated with the project would be conducted in accordance with the recommendations included in the site specific, design phase investigation and Design-Level Geotechnical Report, related to site preparation, grading, fill material/placement, and trenching, among others required by Standard Condition GEO-1 (SC-GEO-1). Thus, with adherence to the Grading Code and SC-GEO-1, impacts related to expansive soils would be less than significant level.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed project includes roadway improvements and pedestrian and bike facilities and would not involve the use of septic tanks or alternative waste water disposal systems, and no impact would occur in this regard.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation Incorporated. According to the locality search conducted by the LACM (see Appendix G), there are no known fossil localities within the project limits. In addition, no vertebrate paleontological resources were found on the surface within the project limits during the field survey. Within the project limits, there are six geologic units, including Artificial Fill, Very Young Wash Deposits, Very Young Alluvial Fan Deposits, Young Axial Channel Deposits, Young Alluvial Fan Deposits, and Very Old Alluvial Fan Deposits. Artificial Fill has no paleontological sensitivity. The Very Young Wash Deposits, Very Young Alluvial Fan Deposits, Young Axial Channel Deposits, and Young Alluvial Fan Deposits have low sensitivity from the surface to a depth of 10 ft and high sensitivity below that mark. The Very Old Alluvial Fan Deposits have high paleontological sensitivity. Excavation depths for the various components of the project are as follows: roadway construction would reach a depth of 2–3 ft, wall and slope construction will reach depths of 4–5 ft, sign foundations would reach a depth of 10 ft, and pier foundations will reach depths of 10–32 ft. Many of these activities would occur in deposits with high paleontological sensitivity, either at the surface or at depth depending on the specific location of the activity. Therefore, there is the

potential for construction of the proposed project to impact scientifically significant paleontological resources. To reduce potentially significant impacts to undiscovered paleontological resources, the preparation and implementation of a monitoring program, monitoring of construction activities, appropriate treatment of newly discovered resources, and preparation of a final monitoring report, would be required as outlined in Mitigation Measures PAL-1, PAL-2, and PAL-3 described below. With the implementation of these mitigation measures, impacts to paleontological resources would be less than significant.

4.7.2.1 Standard Conditions

The following Standard Condition is included as a required condition of the proposed project and is considered in the analysis of potential impacts related to geology and soils. The City of Yorba Linda considers this requirement to be mandatory; therefore, it is not considered mitigation.

SC-GEO-1 **Design-Level Geotechnical Report.** All grading and construction activities shall be conducted in conformance with the recommendations included in the *Structure Preliminary Geotechnical Report* for the proposed project prepared by Earth Mechanics, Inc. (November 2019). The geotechnical investigation includes detailed recommendations related to the widening of the Yorba Linda Boulevard Bridge over the Santa Ana River. This report also recommends performing a supplemental geotechnical field investigation to collect sufficient and appropriate information to characterize the subsurface soils and stratigraphy.

During final design, the City Engineer or designee will ensure that a design-level geotechnical report is prepared for the project. This report will document soil-related constraints and hazards such as slope instability, settlement, liquefaction, or related secondary seismic impacts that may be present. This report will document and provide design recommendations for seismic hazards such as fault-induced ground rupture, ground shaking, co-seismic deformation, slope instability, seismic settlement, liquefaction, or related secondary seismic impacts that may be present along the alignment of the proposed project. The report will also provide design recommendations for geology-related constraints such as settlement, collapse potential, expansion, landslides, and erosion. The performance standard for this report will be the geotechnical design standards of the City of Yorba Linda.

The Project Engineer will incorporate the measures recommended in the geotechnical report into the final design and project specifications. The Construction Contractor will implement the recommendation in the design-level geotechnical report as included in the project design and specifications.

The City of Yorba Linda City Engineer shall verify that these recommendations have been incorporated into project plans and specifications prior to the issuance of any grading permit for the proposed project.

4.7.2.2 Mitigation Measures

PAL-1 **Paleontological Resources Impact Mitigation Program (PRIMP).** A qualified, professional paleontologist who meets the standards set by the Society of Vertebrate Paleontology (SVP) shall be retained to develop a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP shall be consistent with the guidelines of the SVP and shall include the methods that will be used to protect paleontological resources that may exist within the project limits, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of ground disturbance.

PAL-2 **Unanticipated Discovery.** Ground-disturbing activities in deposits with high paleontological sensitivity (i.e., Very Young Wash Deposits, Very Young Alluvial Fan Deposits, and Young Axial Channel Deposits below a depth of 10 ft; and the Very Old Alluvial Fan Deposits) shall be monitored by a qualified paleontological monitor following a PRIMP. No monitoring is required for excavations in deposits with no or low paleontological sensitivity (i.e., Very Young Wash Deposits, Very Young Alluvial Fan Deposits, and Young Axial Channel Deposits above a depth of 10 ft; and Artificial Fill). If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction away from the area of the find in order to assess its significance. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected and the paleontologist shall be contacted to assess the find and determine the appropriate actions.

PAL-3 **PRIMP Findings Report.** Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a museum repository. At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program.

4.8 GREENHOUSE GAS EMISSIONS

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

4.8.1 Existing Setting

Global climate change (GCC) describes alterations in weather features (e.g., temperature, wind patterns, precipitation, and storms) that occur across the Earth as a whole. Global temperatures are modulated by naturally occurring components in the atmosphere (e.g., water vapor, carbon dioxide [CO_2], methane [CH_4], and nitrous dioxide [N_2O]) that capture heat radiated from the Earth's surface, which in turn warms the atmosphere. This natural phenomenon is known as the "greenhouse effect." That said, excessive human-generated greenhouse gas (GHG)[1] emissions can and are altering the global climate.

The CEQA statutes, the California Office of Planning and Research (OPR) guidelines, or the changes to the State CEQA Guidelines currently prescribe specific quantitative thresholds of significance or a particular methodology for conducting an impact analysis related to GHG effects on global climate. Rather, as with most environmental topics, significance criteria are left to the judgment and discretion of the Lead Agency.

4.8.1.1 Senate Bill 97

On June 19, 2008, the Office of Planning and Research (OPR) released a technical advisory on addressing climate change. This guidance document outlines suggested components to CEQA disclosure, including quantification of GHG emissions from a project's construction and operation; determination of significance of the project's impact to climate change; and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

SB 97, passed in August 2007, is designed to work in conjunction with CEQA and AB 32. SB 97 requires OPR to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including, but not limited to, the effects associated with transportation and energy consumption. The Draft Guidelines Amendments for Greenhouse Gas Emissions ("Guidelines Amendments") were adopted on December 30, 2009 and address the specific obligations of public

[1] The principal GHGs of concern contributing to the greenhouse effect are CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Water vapor is the largest naturally occurring GHG; however, it is not identified as an anthropogenic constituent of concern.

agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the Guidelines Amendments.[1] The Guidelines Amendments require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines Amendments give discretion to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

- The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[2]

The administrative record for the Guidelines Amendments also clarifies "that the effects of greenhouse gas emissions are cumulative and should be analyzed in the context of California Environmental Quality Act's requirements for cumulative impact analysis."[3]

The California Natural Resources Agency is required to periodically update the Guidelines Amendments to incorporate new information or criteria established by CARB pursuant to AB 32. Senate Bill 97 applies to any environmental impact report (EIR), negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized.

4.8.1.2 SCAQMD Thresholds

The SCAQMD has formed a GHG CEQA Significance Threshold Working Group (Working Group) to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the last Working Group meeting (Meeting No. 15) held in September 2010, the

1 See 14 California Code of Regulations Section 15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects), 15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).

2 14 California Code of Regulations Section 15064.4(b).

3 Letter from Cynthia Bryant, Director of the Governor's Office of Planning and Research to Mike Chrisman, California Secretary for Natural Resources, dated April 13, 2009.

SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.[1]

With the tiered approach, the project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For all non-industrial projects, the SCAQMD is proposing a screening threshold of 3,000 metric tons of CO_2 equivalent ($MTCO_2e$) per year. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

4.8.2 Discussion

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

Less Than Significant Impact.

Construction GHG Emissions. GHG emissions associated with the proposed project would occur over the short term from construction activities, lasting approximately 18 months and consisting primarily of emissions from equipment and vehicle exhaust. The calculation presented below includes construction emissions in terms of annual CO_2e GHG emissions. The GHG emissions estimates were calculated using the Roadway Construction Emissions Model Version 9.0.

Construction activities would produce combustion emissions from various sources such as grubbing/land clearing, grading/excavation, drainage/utilities/sub-grading, paving, construction equipment hauling materials to and from the site, and motor vehicles transporting the construction crew. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. Table 4.8.A presents the total construction emissions based on the RoadMod emission estimates. Results indicate that project implementation would generate 1,467 MT CO_2e during the construction period. Per SCAQMD guidance, due to the long-term nature of the GHGs in the atmosphere, instead of determining significance of construction emissions alone, the total construction emissions are amortized over 30 years (an estimate of the life of the project) and included in the operations analysis. To amortize the emissions over the life of the project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, and dividing that total by a 30-year project life. Amortized over 30 years, the total construction emissions would generate 49 MT CO_2e per year.

[1] The most recent SCAQMD GHG CEQA Significance Threshold Working Group meeting was held on September 2010.

Table 4.8.A: Project Construction Greenhouse Gas Emissions

Emissions	Pollutant Emissions			
	CO_2 (tons/period)	CH_4 (tons/period)	N_2O (tons/period)	CO_2e (MT/period)
Total Project Construction Emissions	1,445.07	0.34	0.04	1,466.97
Amortized Emissions	48.17	0.01	0.00	48.89

Source: Compiled by LSA Associates, Inc. (September 2020).
Note: Numbers in table may not appear to add correctly due to rounding of numbers. All values for CO_2, CH_4, and N_2O are in tons per construction period. CO_2e value is in metric tons per period. One ton equals 0.9071847 metric ton.
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
Tons/period= tons per period
MT/period = metric tons per period
N_2O = nitrous oxide

As shown in Table 4.8.A above, construction activity would be temporary, and impacts from short-term construction emissions would be less than the SCAQMD screening threshold of 3,000 MT CO_2e per year. Therefore, construction-related greenhouse gas emissions would be less than significant, and no mitigation is required.

Operational GHG Emissions. In terms of operational GHG emissions, the proposed project involves roadway improvements as well as pedestrian and bike facilities and does not propose a trip-generating land use. The proposed project would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable GHG emissions from project operations. The proposed project does not include any new structures or buildings that would result in permanent sources or stationary sources of greenhouse gas emissions. In addition, the proposed project would not directly generate vehicle trips or not result in an increase in the rate of vehicle trips, a predominant source of GHG emissions. Rather, the proposed roadway improvements would provide improved mobility and safety for the drivers by addressing intersection operation deficiencies and reducing congestion. The proposed pedestrian and bike facility improvements would also reduce GHG emissions by providing alternative modes of transportation.

Therefore, neither construction nor operation of the proposed project would generate GHG emissions that would exceed the SCAQMD screening threshold of 3,000 MTCO_2e per year resulting in potentially significant impacts. The proposed project would relieve congestion and improve roadway operations consistent with the General Plan and would not directly generate new trips or GHG emissions. Therefore, the proposed project's impacts from long-term regional GHG emissions would be less than significant. No mitigation is required.

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

Less Than Significant Impact. As indicated above, the proposed project would not generate operational GHG emissions. The project is a roadway improvement project that would improve deficient stopping sight distances for motorists, and enhance mobility and safety for drivers, bicyclists, and pedestrians within the project limits consistent with the General Plan. Additionally, the proposed project would extend the existing Class I Bike Path along La Palma Avenue and would

add a new Class I Bike Path along Yorba Linda Boulevard and Old Canal Road, which supports the State's goal of promoting alternate modes of transportation. As such, the proposed project would also improve forms of mobility in the project limits that do not require the usage of fossil fuels. Further, as shown in Table 4.8.A, when amortized over the life of the project, the annualized project emissions would be 49 MT CO_2e per year and additional operational GHG emissions would not occur. Therefore, the proposed project would not conflict with the provisions of Assembly Bill (AB) 32, the SCAQMD 2016 Air Quality Management Plan (2016 AQMP), or any other State or regional plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. In addition, the City of Yorba Linda has neither adopted a Climate Action Plan nor adopted or established any quantitative GHG emissions significance criteria for GHG emissions. Thus, a less than significant impact would occur. No mitigation is required.

4.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

4.9.1 Existing Setting

This section is based on the Initial Site Assessment Report Proposed Yorba Linda Boulevard Widening Project Orange County California (ISA) (Leighton Consulting, Inc., 2020; Appendix H).

Based on the age of the roadway structure, lead-based paint may be present in the traffic striping within the project limits and aerially deposited lead (ADL) may be present within the roadway right-of-way. Phasedown of lead in gasoline began in 1974, but lead was not banned as a fuel additive in California until 1992[1]. ADL-contaminated soils still exist along roadsides and medians and can also be found underneath some existing road surfaces due to past construction activities, depending on the original construction of the roadway. Both represent recognized environmental conditions (RECs) within the project limits.

[1] California DTSC. 2020. Caltrans Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils. Website: https://dtsc.ca.gov/caltrans/ (accessed March 3, 2020).

Historically, orchards and/or row crops were located within and adjacent to Yorba Linda Boulevard south of the Santa Ana River, Savi Ranch Parkway, Old Canyon Road, and East Santa Ana Canyon Road within the southern portion of the proposed project. Organochlorine pesticides (OCPs) and arsenical pesticides may have been utilized in these areas and also represent a REC within the project limits. Although not considered a REC, the ISA indicated the potential for asbestos-containing materials within the Yorba Linda Boulevard Bridge as a potential environmental concern.

Also, a review of the Geosearch RecSearch Reports included in the ISA identified four properties with a low environmental concern within the project limits. There were no moderate or high risk sites identified within the project limits. A summary of the information provided by the Geosearch RecSearch Reports and other agency records and observations included in the ISA are included below:

- **PetSmart, Medical Management Inc., and Bansfield Pet Hospital**, located at 5521 Mirage Street in Yorba Linda, is listed in the Enforcement Compliance History Information (ECHOR09), Facility Registry System, Hazardous Waste Tanner Summary, Orange County Waste Facilities (OCHWFAC), and RCRA-Non-Generator (RCRANGR09) databases. This facility operates as a pet store and animal hospital which includes the processing of photo chemical waste and bulking of spent chemicals and photo film for recycling. This facility does not have any recorded releases or remedial action clean ups and is considered a low potential risk property.

- **Sprouts Farmers Market**, at 22401 Old Canal Road in Yorba Linda, is listed in the Enforcement Compliance History Information (ECHOR09), Facility Registry System, Hazardous Waste Tanner Summary, and RCRA Non-Generator (RCRANGR09) databases. The facility at this address operates as a grocery store that disposed of small quantities of regulated waste. This facility does not have any recorded releases or remedial action cleanups and is considered a low potential risk property.

- **Shell Service Station (aka Tesoro Shell, Weir Canyon Shell, and Tersoro Shell),** located at 8275 East Santa Ana Canyon in Anaheim, is listed in the RCRA-Generator (RCRAGR09), RCRA-Non-Generator (RCRANGR09), Statewide Environmental Evaluation and Planning System, and Permitted Underground Storage Tanks databases. This facility operates as a gas station with multiple permitted underground storage tanks (USTs) containing motor vehicle fuel. This facility disposes of waste under regulations as a small quantity generator. Based on observations made during reconnaissance of the proposed project, the USTs associated with the Shell Service Station are located approximately 55 feet east of the proposed project limits.

- **East Hill Cleaners (aka East Hill Dry Cleaners, Advanced Cleaners, and Paul Jo East Hills Cleaners)**, located at 8285 East Santa Ana Canyon Road in Anaheim, is listed in the Dry Cleaners Facilities, RCRAGenerator (RCRAGR09), and RCRA-Non-Generator (RCRANGR09) databases. This facility operates as a dry cleaner and generates small quantities of regulated waste. This facility does not have any recorded leaks or releases and is considered a low potential risk property.

There were no moderate or high risk sites identified outside of the project limits by the ISA. Three low potential facilities were identified outside of the project limits, but within the surrounding vicinity in the GeoSearch RecSearch Reports and a summary of those facilities is provided below:

- **Pep Boys Store#0809,** located at 8205 East Santa Ana Canyon in Anaheim, is located approximately 400 feet west of the proposed project. This facility is listed in the RCRA-Non-Generator (RCRANGR09) databases. This facility operates as a motor vehicle supplies and repair facility conducting vehicle maintenance including oil and filter changes. This facility does not have any recorded leaks or releases and is considered a low potential risk property.

- **Riverbend Hand Car Wash**, located at 22280 La Palma Avenue in Yorba Linda, is located adjacent to the southeast of East La Palma Avenue in the northern portion of the proposed project. This facility is listed in the Geotracker Cleanup Site (CLEANUPSITES), Leaking Underground Storage Tanks (LUST), and Orange County Leaking Underground Storage Tanks (OCLUST) databases. A leak was reported in 1950 with the contaminant of concern listed as gasoline. Closure was granted by the Orange County Health Care Agency (OCHCA) in October 2013. According to information provided on the RWQCB's Geotracker online database, the most recent groundwater sampling event was completed in September 13, 2011. During this event, groundwater was encountered at depths between 35 and 37 feet bgs. Gasoline contaminants were not detected at concentrations greater than the laboratory detection limits in all four groundwater wells (MW-1 to MW-4) associated with the property, with the exception of MTBE. The majority of soil contamination identified during past assessments is located approximately 100 feet south of East La Palma Avenue and the proposed project limits.

- **Weir Canyon Honda**, located at 8323 La Palma Avenue in Yorba Linda, is located approximately 100 feet northwest of the project limits, on the north side of East La Palma Avenue. This facility is listed in the Geotracker Cleanup Site (CLEANUPSITES), Leaking Underground Storage Tanks (LUST), Statewide Environmental Evaluation and Planning System, RCRA-Generator (RCRAGR09), and Underground storage tanks databases. A leak was reported in 1950 with the contaminant of concern listed as gasoline. Closure was granted by the OCHCA in September 2008. The source of the leak was determined to be a 1,000-gallon gasoline UST that was removed from the property in April 2003. Groundwater was determined to be not be impacted by the leak.

The closest active Cleanup Program site identified by the SWRCB GeoTracker database is located approximately 2.5 miles from the project limits.

4.9.2 Discussion

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact. As a transportation improvement project, the operation of the proposed project would improve traffic operations and provide additional pedestrian and bike facilities within the project limits and would not increase the routine transport, use, or disposal of hazardous materials compared to existing conditions. Project-related construction activities would involve limited transport, storage, use, and disposal of hazardous materials associated with construction. Heavy equipment utilized during construction is typically fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which are considered hazardous if improperly stored or handled. Improper use, storage, or transportation of hazardous materials can result in accidental releases or spills, potentially posing health risks to

workers, the public, and the environment. However, all storage, handling, and disposal of these materials are regulated by the California Department of Toxic Substances Control (DTSC), the EPA, and the Occupational Safety and Health Administration (OSHA). The construction contractor would adhere to these agencies' regulatory requirements Therefore, impacts would be less than significant and no mitigation is required.

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?

Less Than Significant with Mitigation Incorporated.

Construction. During construction, accidental release of hazardous materials such as petroleum-based fuels or hydraulic fluid used for construction equipment has the potential to occur. However, potential impacts related to the accidental release of hazardous substances would be less than significant due to the small volume and low concentration of hazardous materials utilized during construction. In addition, as discussed in Section 4.10, Hydrology & Water Quality below, BMPs would be implemented as part of the SWPPP required by the NPDES Program to minimize potential contamination of the Santa Ana River. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, State, and Federal law.

As discussed above, all sites identified from the review of the Geosearch RecSearch Reports and other agency records and observations included in the ISA were classified as low risk sites. These sites are facilities that have completed remediation or have historically utilized only small amounts of known contaminants. Residual contamination from these sites would not impact the proposed project. Based on regulatory compliance and/or the lack of evidence for unauthorized releases, no additional investigation is recommended for facilities that are ranked low. As such, these sites would not create a significant hazard to the public or the environment.

In addition, based on the ISA, prepared by Leighton Consulting Inc., in March 2020 (Appendix H), there is the potential for hazardous materials including aerially deposited lead (ADL), pesticides, asbestos, and lead-based paint within the project limits.

Aerially Deposited Lead. The proposed project includes improvements along Yorba Linda Boulevard and adjacent roadways. Yorba Linda Boulevard is considered a major thoroughfare and ADL may be present in unpaved areas adjacent to the current roadways within the project limits. Because the majority of parcels affected are located within unpaved areas adjacent to major thoroughfares, ADL would be considered a potential REC. Construction activities including grading, soil excavation, and pavement demolition for the widening of Yorba Linda Boulevard and proposed pedestrian, bike, and drainage improvements may result in the disruption of pavement containing ADL. Mitigation Measure HAZ-1 would ensure that soil sampling is conducted by a certified consultant within the project limits to determine the presence of ADL, if any. With implementation of Mitigation Measure HAZ-1, impacts related to ADL would be reduced to less than significant.

Pesticides. Additionally former agriculture uses were located within and adjacent to Yorba Linda Boulevard south of the Santa Ana River, Savi Ranch Parkway, Old Canyon Road, and Mirage Road within the northern section of the project side and the west side of Weir Canyon Road and East Santa Ana Canyon Road within the southern portion of the project site. OCPs and arsenical pesticides may have been utilized in these areas and would be considered potential RECs. The proposed roadway widening and the proposed pedestrian and bike improvements within and adjacent to Yorba Linda Boulevard south of the Santa Ana River, Savi Ranch Parkway, Old Canyon Road, and Mirage Road within the northern section of the project side and the west side of Weir Canyon Road and East Santa Ana Canyon Road within the southern portion of the project site may potentially result in the disturbance of soil containing OCP and arsenic due to former agricultural uses in those areas. Mitigation Measure HAZ-2 would ensure that that soil sampling is conducted by a certified consultant within the project limits to determine the presence of OCP and arsenic on soils located within the project limits. With implementation of Mitigation Measure HAZ-2, impacts related to pesticides would be reduced to less than significant.

Asbestos/Lead. Additionally, although not considered potential RECs, asbestos-containing materials, within the Yorba Linda Boulevard Bridge and elevated concentrations of lead and chromium in striping paint used on the existing roadways within the proposed project limits were identified as environmental concerns in the ISA. Hazardous waste may be generated during construction activities including the removal of existing striping and pavement markings containing lead and chromium, removal of lead-based paint on the Yorba Linda Boulevard bridge for roadway widening, and the proposed pedestrian, bike, and drainage improvements. Hazardous waste may also be generated during the widening of the Yorba Linda Boulevard Bridge due to the potential for asbestos-containing materials, within the Yorba Linda Boulevard Bridge. However, Mitigation Measure HAZ-1 would ensure that, if present, potential lead-based paint materials are properly disposed of during construction. Additionally, Mitigation Measure HAZ-3 would ensure that an asbestos-containing materials (ACM) survey would be conducted in conformance with the United States Environmental Protection Agency (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR regulation, and South Coast Air Quality Management District (SCAQMD) Rule 1403. With implementation of Mitigation Measures HAZ-1 and HAZ-3, the proposed project would not create a hazard to the public through release of hazardous materials and impacts would be less than significant.

Operation. Over the long term, the potential for the release of hazardous materials into the environment would be limited to vehicles on the roadway. This potential exists currently within the project limits and would not be exacerbated with the implementation of the proposed project. Vehicles and trucks currently utilizing the roadways within the project limits may transport hazardous substances that could spill and impact the roadway, adjacent properties, or resources. However, the transport of hazardous materials is subject to strict regulations established by the California Department of Toxic Substances Control. Local police and fire departments are trained in emergency response procedures for safely responding to accidental spills of hazardous substances on public roads. Additionally, the proposed project would reduce vehicle queuing and improve intersection operations, which would reduce the potential for traffic-related accidents that may result in a spill. Therefore, impacts associated with reasonably foreseeable upset and accident

conditions involving the release of hazardous materials into the environment would be similar to existing conditions and are considered less than significant.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?

Less Than Significant Impact. There are three schools located within approximately 0.25 mile of the project limits: AmeriMont Academy Elementary—Anaheim, Saint Francis of Assisi Catholic School, and German School—Anaheim Hills. AmeriMont Academy Elementary—Anaheim Hills is a private elementary school at 160 South Old Springs Road in Anaheim and Saint Francis of Assisi Catholic School is a private school serving students from preschool through eighth grade at 5330 Eastside Circle in Yorba Linda. German School—Anaheim Hills is a German Saturday school serving students from preschool through high school at 191 South Old Springs Road in the City of Anaheim.

As described in response 6.9(b) above, any hazardous materials required during construction would be used and disposed of in compliance with applicable laws and regulations. Operation of the proposed project would improve traffic operations and provide pedestrian and bike facilities and would not emit hazardous emissions or involve handling hazardous materials. With the exception of petroleum and standard cleaning and maintenance products used for the maintenance and operation of equipment, no other hazardous materials would be used during project operations. Therefore, impacts related to the emission or handling of hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school would be less than significant. No mitigation is required.

d. Be located on a site which is included on a list of hazardous material 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. The project is not located within or adjacent to any sites included on the Hazardous Waste and Substances Sites (Cortese) List.[1] Additionally, according to the SWRCB GeoTracker database, the project is not located within or adjacent to any listed hazardous materials cleanup sites.[2] As stated in response 6.9(a) above, all sites identified from the review of the Geosearch RecSearch Reports and other agency records and observations included in the ISA were classified as low risk sites. These sites are facilities that have completed remediation or have historically utilized only small amounts of known contaminants. The closest active cleanup site is 2.5 miles from the project limits. Therefore, no impact related to hazards from sites on the Cortese List or other governmental databases compiled pursuant to Government Code Section 65962.5 would occur and no mitigation is required.

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1 California Department of Toxic Substances Control. The Hazardous Waste and Substances Sites (Cortese) List. 2020. Website: https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_type=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM,COLUR&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+(CORTESE) (accessed March 2, 2020).

2 State Water Resources Control Board. 2018. GeoTracker Database. Website: https://geotracker.waterboards.ca.gov/map/ (accessed March 2, 2020).

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

No Impact. The project limits are not within an airport land use plan, or within 2 miles of a public airport or public use airport. The nearest airport is the Corona Municipal Airport, located approximately 8 miles northeast of the project limits. Therefore, the proposed project would not result in an aviation-related safety hazard or excessive noise for people residing or working in the vicinity of the proposed project. No impact would occur and no mitigation is required.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant with Mitigation Incorporated. The proposed project would require partial/temporary lane closures and reductions in speed limits during construction to ensure construction worker safety. The portion of Yorba Linda Boulevard and La Palma Avenue within the project limits are identified as emergency evacuation routes by the Orange County Fire Authority (OCFA).[1] As discussed in Section 6.15, Public Services, and 6.17, Transportation, the proposed project would not interfere with fire or police response times or emergency evacuation routes and access with the inclusion of Mitigation Measure TR-1, Transportation Management Plan, during construction. As such, impacts would be less than significant with the implementation of Mitigation Measure TR-1.

There would be no long-term operational impacts related to emergency response and evacuation resulting from the proposed project. The proposed project consists of roadway improvements as well as the bike and pedestrian improvements along existing roadways to improve corridor operations and provide additional storage for turning movements. Therefore, the proposed project would result in improved access for emergency services/evacuation by reducing congestion and queuing throughout the project limits. Therefore, operation of the proposed project would not impair the implementation of, or physically interfere with, any adopted emergency response plan or emergency evacuation plan and impacts related to operation would be less than significant.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less Than Significant Impact. The proposed project is located within an urbanized area and is surrounded by primarily commercial, retail, open space, and recreational uses. As discussed in 6.20, Wildfire, below, the portion of the project limits that extends east of Yorba Linda Boulevard along La Palma Avenue, is designated as a Very High Fire Hazard Severity Zone (City of Yorba Linda, 2016). However, construction of the bike and pedestrian facilities along La Palma Avenue would occur from the existing roadway and no construction access would be required within the vegetation and open

[1] Orange County Fire Authority, 2013. Evacuation Route Map, Website: https://www.yorbalindaca.gov/DocumentCenter/View/134/Evacuation-Routes-PDF?bidId= (accessed March 2, 2020).

space south of La Palma Avenue. TCEs would be required for construction access along other portions of the project limits and all construction equipment would be required to follow best management practices (BMPs) regarding vehicle idling and potential fire ignition point in accordance with the most current (2016) California Fire Code (CCR Title 24 Part 9; adopted by reference in Chapter 15.08 [Fire Code] of the Yorba Linda Municipal Code), which sets forth requirements including those for building materials and methods pertaining to fire safety. The proposed project would consist of roadway improvements along existing roadways and would not include any new habitable structures or facilities. Therefore, construction and operation of the proposed project would result in less than significant impacts related to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires. No mitigation is required.

4.9.2.1 Mitigation Measures

HAZ-1 **Lead-Based Paint (LBP) Survey.** During final design, the City of Yorba City Engineer shall ensure that a certified consultant shall conduct lead-based paint (LBP) surveys of pavement materials that will be demolished as part of the proposed project. Also, a certified consultant shall conduct soil samples within project limits to determine if aerially deposited lead (ADL) is present. The results of this survey shall be submitted to the City Engineer for review and approval, prior to the start of construction. If pavement materials or soil are determined to contain lead, these materials shall be disposed of at an appropriate, permitted disposal facility as determined by a lead specialist.

HAZ-2 **Organochlorine pesticides (OCP) and Arsenic Survey.** During final design, the City of Yorba Linda City Engineer shall ensure that a certified consultant shall conduct soil sample testing for the presence of Organochlorine pesticides (OCP) and arsenic on soils located within the project limits. If OCPs or arsenic are identified within the project limits, this soil survey shall identify procedures for the handling, treatment, and disposal of soils contaminated with OCPs and/or arsenic. The results of this survey shall be submitted to the City Engineer for review and approval, prior to the start of construction.

HAZ-3 **Asbestos-Containing Materials (ACM) Survey.** During final design, the City of Engineer shall ensure that a certified consultant shall conduct an asbestos-containing materials (ACM) Yorba Linda Boulevard Santa Ana River Overcrossing. This survey should be conducted in conformance with the United States Environmental Protection Agency (EPA) National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR regulation, and South Coast Air Quality Management District (SCAQMD) Rule 1403. Additionally, notification of the SCAQMD prior to any structure renovation or demolition is mandatory according to Rule 1403 (d)(1)(B). The results of this survey shall be submitted to the City Engineer for review and approval, prior to the start of construction.

4.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

4.10.1 Existing Setting

This section is based on the *Structure Preliminary Geotechnical Report* (Earth Mechanics, Inc., November 2019) (Appendix F) and *Preliminary Drainage Report* (HNTB, December 2019) (Appendix J) prepared for the proposed project.

4.10.2 Discussion

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact.

Construction. Pollutants of concern during construction of the proposed project include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. During construction activities, soil would be disturbed, and there would be an increased potential for soil erosion compared to existing conditions. During a storm event, soil erosion could occur at an accelerated rate. Additionally, construction-related pollutants such as liquid and petroleum products and concrete-related waste to be spilled or transported via storm runoff into adjacent drainages and

into downstream receiving waters. Any of these pollutants have the potential to be transported via storm water runoff into receiving waters (i.e., the Santa Ana River).

Construction in the Santa Ana River channel would take place during the dry season between April and October, which would minimize impacts to water quality within the river from storm events. However, because the Santa Ana River has perennial flow and is expected to be flowing within the project area year-round, water diversion may be necessary for work related to the bridge. Conducting construction activities outside of any areas with water present within the Santa Ana River channel would reduce the potential for construction activities to contribute pollutants to the Santa Ana River. In addition, BMPs from the California Stormwater Quality Association (CASQA) *California Stormwater BMP Handbook Construction* (2015 or latest edition) would be implemented for construction within the Santa Ana River to reduce impacts to water quality. These BMPs may include, but are not limited to, dewatering operations (NS-2), temporary stream crossing (NS-4), clear water diversion (NW-5), and pile driving operations (NS-11).

Because project construction would disturb greater than 1 acre of soil, the proposed project is subject to the requirements of the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWG and 2012-0006-DWQ, NPDES No. CAS000002) (Construction General Permit), as specified in Standard Condition SC-WQ-1. In compliance with the Construction General Permit, the construction contractor would be required to prepare a SWPPP and implement Construction BMPs detailed in the SWPPP and Erosion Control Plan during construction activities. Construction BMPs would include Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site, and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters. With implementation of construction BMPs, construction would not introduce pollutants to receiving waters at levels that would violate water quality standards or waste discharge requirements or degrade water quality. Impacts to water quality from construction activities would be less than significant.

Based on the *Structure Preliminary Geotechnical Report* (Earth Mechanics, Inc., November 2019), groundwater measurements from nearby monitoring wells indicates that the shallowest groundwater is present at a depth ranging from 7 to 44 feet below ground surface (ft bgs). Groundwater levels can fluctuate due to several reasons including variation in seasonal precipitation, irrigation, groundwater injection or extraction, improvements to or addition of flood control facilities, or numerous other man-made and natural influences. It is not know at this time if groundwater dewatering would be required during construction, so for purposes of this analysis is it conservatively assumed that there is a potential for groundwater to be encountered during excavation and pier construction and for groundwater dewatering to be required.

Groundwater may contain high levels of total dissolved solids, nitrate, sediment, or other constituents, or high or low pH levels that could be introduced to surface waters when dewatered groundwater is discharged to surface waters. Groundwater dewatering activities during excavation and pier construction would be conducted in accordance with the Santa Ana RWQCB's *General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality (*Order No. R8-2015-0004, NPDES No. CAG998001) as

specified in Standard Condition SC-WQ-2. This permit requires testing and treatment (as necessary) of groundwater encountered during groundwater dewatering prior to release to surface waters. As a result, groundwater dewatering would not introduce pollutants to receiving waters at levels that would violate water quality standards or waste discharge requirements or degrade water quality. Impacts to water quality from groundwater dewatering would be less than significant and no mitigation is required.

Operation. Land within the project limits is mostly developed with a transportation uses along Yorba Linda Boulevard, La Palma Avenue, Weir Canyon Road, Savi Ranch Parkway, Old Canal Road and Santa Ana Canyon Road. The proposed project would not change the existing uses within the project limits and would not change the operational pollutants of concern that occur from these transportation uses. According to the *Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans* (County of Orange, May 2011), expected pollutants of concern from streets includes suspended solids/sediments, nutrients, heavy metals, pathogens (bacteria/virus), pesticides, oil and grease, toxic organic compounds, and trash and debris. The proposed project includes the widening of Yorba Linda Boulevard over the Santa Ana River and would increase impervious surface area by 52,811 square feet (1.21 acres). This increase in impervious surfaces would increase stormwater runoff from the project limits, which can more effectively transport pollutants into receiving waters.

The proposed project would be required to comply with the requirements of the Santa Ana RWQCB's *Waste Discharge Requirements for the County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff Orange County* (North Orange County MS4 Permit) and associated guidance documents. The North Orange County MS4 Permit requires that a WQMP be prepared for priority new development and redevelopment projects. The project is considered a priority project because it meets the priority project category of "Streets, Roads, Highways, and Freeways." This category includes the addition of any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles. As such, a WQMP is required to be prepared for the project, as specified in Standard Condition SC-WQ-3. WQMPs specify the operational BMPs that would be implemented to capture, treat, and reduce pollutants of concern in stormwater runoff. The North Orange County MS4 Permit also requires that the project comply with the EPA's Green Street guidance "*Managing Wet Weather with Green Infrastructure Municipal Handbook Green Streets."*

According to the *Preliminary Drainage Report* (HNTB, December 2019) prepared for the project, the proposed BMPs for the project include Modular Wetlands System Linear Vaults (manufactured by BioClean) in compliance with the North Orange County MS4 Permit and Green Street requirements. The vaults would be located on Savi Ranch Parkway between Pullman Avenue and Yorba Linda Boulevard and on Weir Canyon Road between SR-91 and Santa Ana Canyon Road. The proposed BMPs would reduce pollutants of concern in stormwater runoff prior to discharge to receiving waters. Additionally, the proposed BMPs would treat stormwater and reduce pollutants of concern before it could infiltrate and reach groundwater. With implementation of BMPs, operation of the proposed project would not introduce pollutants to receiving waters at levels that would violate

water quality standards or waste discharge requirements or degrade water quality. Impacts to water quality during operation would be less than significant and no mitigation is required.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact.

Construction. As discussed above, there is a potential for groundwater dewatering within the Santa Ana River to be required during construction. However, groundwater dewatering would be localized and temporary, and the volume of groundwater removed would not be substantial. In addition, any volume of water removed during groundwater dewatering would be minimal compared to the size of the Coastal Plain of the Orange County Groundwater Basin, which has a surface area of 350 sq mi and a storage capacity of 38,000,000 acre-feet (af) according to the California Department of Water Resources *Bulletin 118* (2004). Groundwater dewatering would not interfere with the sustainable management of the groundwater basin because the groundwater basin has been sustainably managed over the last 10 years and will continue to be sustainably managed (refer to response to Threshold 4.10.e for additional discussion on sustainable groundwater management). Therefore, construction impacts related to a decrease in groundwater supplies or interference with groundwater recharge in a manner that may impede sustainable groundwater management would be less than significant, and no mitigation is required.

Operation. As described in Threshold 4.10a, development of the proposed project would increase impervious surface area by 52,811 square feet, which would decrease on-site infiltration. However, any decrease in infiltration would be minimal in comparison to the size of the Orange County Groundwater Basin. Furthermore, neither groundwater extraction nor injection would occur during operation. For these reasons, impacts related to depletion of groundwater supplies or interference with groundwater recharge in a manner that may impede sustainable groundwater management would be less than significant, and no mitigation would be required.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

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

Less Than Significant Impact.

Construction. During project construction activities, soil would be exposed and disturbed, drainage patterns would be temporarily altered during grading and other construction activities, and there would be an increased potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. As discussed above in response to Threshold 4.10.a, the Construction General Permit requires preparation of a SWPPP (SC-WQ-1).The SWPPP would detail Erosion Control and Sediment Control BMPs to be implemented during project construction to minimize erosion and retain sediment on site. With compliance with the requirements of the Construction General Permit and with

implementation of the construction BMPs, construction impacts related to on- or off-site erosion or siltation would be less than significant, and no mitigation is required.

Operation. In the proposed condition, land within the project limits would continue to consist primarily of impervious surface areas, which are not prone to on-site erosion or siltation because no soil would be included in these areas. Land within the project limits that would consist of pervious surface area would contain landscaping that would minimize on-site erosion and siltation by stabilizing the soil. Therefore, on-site erosion and siltation impacts would be minimal. However, the proposed project would increase impervious area within the project limits by 52,811 square feet, which would result in a net increase in stormwater runoff that can lead to downstream erosion in receiving waters (Santa Ana River). However, according to the *Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans* (County of Orange, May 2011), the proposed project is not located within the Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility and the Santa Ana River downstream of the project limits is not susceptible to hydromodification impacts.[1] Therefore, the increased impervious surface area and increased runoff would not increase downstream erosion or siltation impacts.

A *Santa Ana River Preliminary Hydrology and Hydraulics* memorandum was prepared for the project, which included design scour calculations to determine the scour potential at the proposed bridge structure. The analysis determined that there is scour potential in the proposed condition. Due to the potential scour impacts from new structures within the Santa Ana River, a Design-Level Scour Analysis is required during final design. Standard Condition SC-WQ-6 would be required to ensure implementation of the design recommendations provided in the scour analysis. With adherence to SC-WQ-6, operation impacts related to substantial on- or off-site erosion or siltation would be less than significant, and no mitigation is required.

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

Less Than Significant Impact.

Construction. As discussed in response to threshold 4.10.a, project construction would comply with the requirements of the Construction General Permit and would include the preparation and implementation of a SWPPP, as required by Standard Condition SC-WQ-1. The SWPPP would include construction BMPs to control and direct on-site surface runoff and would include detention facilities, if required to ensure that stormwater runoff from the construction site does not exceed the capacity of the stormwater drainage systems. With implementation of BMPs, construction impacts related to a substantial increase in the rate or amount of surface runoff that would result in flooding would be less than significant, and no mitigation is required.

[1] Hydromodification is the alteration of the hydrologic characteristics of water bodies. Increased stream flows and changes in sediment transport caused by increased impervious areas from urbanization or other land use changes can result in increased stream flows, erosion, and changes in sediment transport.

Operation. According to the *Preliminary Drainage Report* (HNTB, December 2019) prepared for the project, the streets within the project limits are tributaries to two existing storm drain systems; one owned and operated by the City of Anaheim and the other by Caltrans. Stormwater runoff from the majority of the project limits (Savi Ranch Parkway and Yorba Linda Boulevard north of Savi Ranch Parkway) flows to two existing catch basins on Savi Ranch Parkway east of Pullman Avenue, which connect to a 60-inch reinforced concrete pipe storm drain located in Pullman Avenue which is owned and maintained by the City of Anaheim. Stormwater runoff along Yorba Linda Boulevard between Savi Ranch Parkway and SR-91 flows to catch basins located on the west side of Weir Canyon Road, just south of the SR-91 eastbound off-ramp. These catch basins are part of the drainage system constructed for the SR-91/Yorba Linda Boulevard interchange, which is owned and maintained by Caltrans.

The proposed project would increase impervious surface area by 52,811 square feet, which would result in a net increase in stormwater runoff. According to the *Preliminary Drainage Report* (HNTB, December 2019) prepared for the project, the project would result in a net increase in stormwater runoff to the existing 60-inch RCP storm drain in Pullman Avenue. The widening of Yorba Linda Boulevard between La Palma Avenue and Savi Ranch Parkway would result in an increase in 0.73 acres of impervious area in an area that is currently tributary directly to the Santa Ana River. The project would convey stormwater runoff to the two catch basins located on Savi Ranch Parkway east of Pullman Avenue, instead of flow being conveyed directly into the Santa Ana River. Stormwater discharge to the 60-inch storm drain in Pullman Avenue would increase from 19.1 cubic feet per second (cfs) to 26.0 cfs. The hydraulic calculations in the *Preliminary Drainage Report* demonstrate that the existing catch basins and storm drain system have adequate capacity to accommodate the additional flow. As such, the increase in stormwater runoff would not exceed the capacity of the existing City of Anaheim storm drain system or result in downstream flooding.

The proposed project would not substantially increase stormwater runoff to the existing catch basins on Weir Canyon Road (the increase would be 0.02 cfs during a 25-year storm event). The increase in stormwater runoff would not exceed the capacity of the existing Caltrans storm drain system or result in downstream flooding.

As specified in Standard Condition SC-WQ-4, a Final Drainage Report would be required to be prepared based during final design. The Final Drainage Report would be based on the final design plans and would verify the conclusions of the *Preliminary Drainage Report*, that the increase in stormwater runoff would be accommodated by the existing storm drain system.

The proposed project would widen the Yorba Linda Boulevard bridge over the Santa Ana River by a maximum of 40 feet in the northbound direction. The widening of the bridge would require lengthening of the pier walls and the replacement of the existing pier wall debris nosing further upstream. Although the project would place additional materials within the floodplain, the project would not alter the course of the river in a manner that could result in flooding. Rather, the improvements to the existing pier walls would allow flood waters to continue being conveyed downstream through the piers. Additionally, the 100-year storm event would continue to be contained within the Santa Ana River channel. For these reasons, impacts related to on- or off-site flooding would be less than significant and no mitigation is required.

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

Less Than Significant Impact.

Construction. As discussed above in response to Threshold 4.10.a, construction of the proposed project has the potential to introduce pollutants to the storm drain system from erosion, siltation, and accidental spills. However, as specified in Standard Condition SC-WQ-1, the Construction General Permit requires preparation of a SWPPP, which would identify construction BMPs to be implemented during construction to reduce impacts to water quality, including those impacts associated with soil erosion, siltation, and spills. In addition, any groundwater extracted during groundwater dewatering activities that is discharged to surface waters would be tested and treated (if necessary) to ensure that any discharges meet the water quality limits specified in the De Minimus Permit (as specified in Standard Condition SC-WQ-2). Standard Conditions SC-WQ-1 and SC-WQ-2 are existing NPDES requirements with which the Project is required to comply. These measures would prevent substantial additional sources of polluted runoff being discharged to the storm drain system through implementation of construction BMPs that target pollutants of concern in runoff from the project area as well as testing and treatment (if required) of groundwater prior to its discharge to surface waters.

Additionally, as discussed above in response to Threshold 4.10.c.ii, the SWPPP would include construction BMPs to control and direct surface runoff on site and would include detention measures if required to ensure that stormwater runoff from the construction site does not exceed the capacity of the stormwater drainage systems. For these reasons, construction impacts related to creation or contribution of runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff would be less than significant, and no mitigation is required.

Operation. As discussed above in response to Threshold 4.10.i, operation of the proposed project has the potential to transport pollutants to the storm drain system from the existing on-site transportation uses. However, as specified in Standard Condition SC-WQ-3, permanent operational BMPs that target and reduce pollutants of concern in stormwater runoff would be implemented and maintained throughout the life of the project. Standard Condition WQ-3 requires compliance with the existing NPDES permit. This measure would prevent substantial additional sources of polluted runoff being discharged to the storm drain system through implementation of operational BMPs to target pollutants of concern in runoff from the project limits. Additionally, as discussed above in response to Threshold 4.10.c.ii, the increase in stormwater runoff resulting from the additional impervious surface area would not exceed the capacity of the downstream storm drain systems. As specified in Standard Condition SC-WQ-4, a Final Drainage Report would be prepared to verify the conclusions of the *Preliminary Drainage Report*, that the increase in stormwater runoff would be accommodated by the existing storm drain system. For these reasons, operational impacts related to creation or contribution of runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff would be less than significant, and no mitigation is required.

iv. Impede or redirect flood flows?

Less Than Significant Impact. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps Nos. 06059C0157J, 06059C0069J, 06059C0009J, and 06059C0180J (dated December 3, 2019), the Santa Ana River floodplain within the project limits is designated as Zone A, areas subject to inundation by the 1 percent annual chance flood (100-year flood) with base flood elevations not determined. However, the FEMA FIRM indicates that 100-year flood is contained within the Santa Ana River flood control structure. Yorba Linda Boulevard from approximately La Palma Avenue to SR-91 is within Other Areas of Flood Hazard Zone X, areas with reduced flood risk due to levee. The remainder of the project area is within Zone X, areas of minimal flood hazard (i.e. areas outside the 500-year floodplain).

The proposed project would widen the Yorba Linda Boulevard bridge over the Santa Ana River by a maximum of 40 feet in the northbound direction. The widening of the bridge would require lengthening of the pier walls and the replacement of the existing pier wall debris nosing further upstream, which would encroach on the 100-year floodplain. A *Santa Ana River Preliminary Hydrology and Hydraulics* memorandum was prepared for the project, which included preliminary hydraulic analysis of the Santa Ana River using the USACE approved Hydrologic Engineering Center's River Analysis System (HEC-RAS) hydraulic model. The preliminary hydraulic analysis indicated that the project would increase the water surface elevation in the Santa Ana River upstream of the proposed bridge by up to 2.51 feet; however, there would be adequate freeboard[1] available at the levee to accommodate the increase in water surface elevation. With implementation of the project, the freeboard available freeboard would be at least 8.62 feet at the locations where an increase in water surface elevation would occur. As such, the 100-year storm event would continue to be contained within the Santa Ana River channel. Although the project would place additional materials within the floodplain, the project would not place new structures within a floodplain that could impede or redirect flow. Rather, the improvements to the existing pier walls would allow flood waters to continue being conveyed downstream through the piers.

As stated in Standard Condition WQ-5, the proposed project would comply with all FEMA and City requirements regulating development within a floodplain. The project would comply with Section 15.12, Flood Damage Protection, of the City Municipal Code obtain either a floodplain development permit or a variance from the City Floodplain Administrator. The Additionally, the City Floodplain Administrator would coordinate with Orange County Flood Control District (OCFCD) and FEMA to determine if a Conditional Letter of Map Revision (CLOMR) and a Letter of Map Revision (LOMR) are required for the project. A CLOMR is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a floodplain and thus result in the modification of the existing floodplain or floodway or the base flood elevation. A LOMR officially amends an effective FIRM. The CLOMR and LOMR or would ensure that the FEMA FIRM reflects any changes to the floodplain that would result from project implementation. Compliance with regulatory requirements would ensure that the proposed project would result in a less than significant impacts related to impeding or redirecting flood flows. No mitigation is required.

[1] Freeboard is the distance between the top of the water surface and the top of the levee.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact. As discussed above in response to threshold 4.10.c, there is a 100-year floodplain associated with the Santa Ana River. Additionally, Yorba Linda Boulevard from approximately La Palma Avenue to SR-91 is protected from flood risk by a levee. During construction, equipment and construction materials would be utilized within the Santa Ana River which can increase the risk of pollutant discharge from spills or leaks. However, equipment and materials would not be staged or stored within the Santa Ana River. Additionally, Good Housekeeping BMPs would be implemented to prevent spills, leaks, and discharge of construction debris and waste into receiving waters, as required by Standard Condition SC-WQ-1. Construction would disturb soil within the Santa Ana River which would increase the potential for erosion and sedimentation. However, Erosion Control and Sediment Control BMPs would be implemented to minimize erosion and retain sediment on site, as required by Standard Condition SC-WQ-1. Additionally, construction within the Santa Ana River would only occur during the dry season when there is a lower probability of a storm event occurring and producing flow within the Santa Ana River. In the event that a storm event were to occur during the dry season, construction activities would temporarily cease within the floodplain during the storm event. Therefore, the risk of release of pollutants during a flood event would be less than significant during construction. The proposed improvements would not introduce new uses within the project limits, which is currently used for transportation. Therefore, there would be no risk of release of pollutants during a flood event during project operation. No mitigation is required.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The project limits are within the jurisdiction of the Santa Ana RWQCB. The Santa Ana RWQCB adopted a Basin Plan that designates beneficial uses for all surface and groundwater within its jurisdiction and establishes the water quality objectives and standards necessary to protect those beneficial uses. As discussed in detail above in response to Thresholds 4.10.a, the proposed project would comply with existing NPDES requirements and would implement construction and operational BMPs to reduce pollutants of concern in stormwater runoff (Standard Conditions SC-WQ-1 and SC-WQ-3). Additionally, during construction, any dewatered groundwater would be tested and treated (if necessary) prior to discharge to surface waters (Standard Condition SC-WQ-2). Compliance with these regulatory requirements would ensure that proposed project would not degrade or alter water quality, cause the receiving waters to exceed the water quality objectives, or impair the beneficial use of receiving waters. As such, the proposed project would not result in water quality impacts that would conflict with the Santa Ana RWQCB Water Quality Control Plan (Basin Plan). Construction and operational impacts related to a conflict with the Basin Plan would be less than significant, and no mitigation is required.

The Sustainable Groundwater Management Act (SGMA), which was enacted in September 2014, requires governments and water agencies of high- and medium-priority basins to halt overdraft of groundwater basins. The SGMA requires the formation of local groundwater sustainability agencies, which are required to adopt Groundwater Sustainability Plans to manage the sustainability of the groundwater basins. The proposed project is located within the Coastal Plain of the Orange County Groundwater Basin, which is managed by the Orange County Water District (OCWD). The Coastal

Plain of the Orange County Groundwater Basin is identified by the California DWR as a medium priority basin; therefore, OCWD is required to develop a Groundwater Sustainability Plan and bring the groundwater basin into balanced levels of pumping and recharge by 2042. The SGMA established a process for local agencies to develop an alternative in lieu of a Groundwater Sustainability Plan. In compliance with this requirement, OCWD prepared and submitted the *Basin 8-1 Alternative – OCWD Management Area* (OCWD 2017) to the California DWR as an alternative to a Groundwater Sustainability Plan (California DWR 2019). The *Basin 8-1 Alternative – OCWD Management Area* demonstrates that the groundwater basin has been sustainably managed over the last 10 years and will continue to be sustainably managed. As detailed in response to Threshold 4.10.b, any groundwater extracted during groundwater dewatering during construction would be minimal and would not interfere with the sustainable management of the groundwater basin. Additionally, project operation would not require groundwater extraction. Additionally, the proposed landscaping would be the only project feature that would require water use and would not substantially increase water use compared to existing conditions. For these reasons, the proposed project would not conflict with or obstruct the implementation of a sustainable groundwater management plan. Therefore, construction and operational impacts related to conflict with or obstruction of water quality control plans or sustainable groundwater management plans would be less than significant, and no mitigation is required.

4.10.2.1 Standard Conditions

The following Standard Conditions are existing regulations that are applicable to the proposed project and are considered in the analysis of potential impacts related to hydrology and water quality. The City of Yorba Linda considers these requirements to be mandatory; therefore, they are not mitigation measures.

SC-WQ-1 **Construction General Permit.** Prior to commencement of construction activities, the City of Yorba Linda shall obtain coverage under the *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit),* NPDES No. CAS000002, Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ and Order No. 2012-0006-DWQ, or any other subsequent permit. This shall include submission of Permit Registration Documents (PRDs), including permit application fees, a Notice of Intent (NOI), a risk assessment, a site plan, a Stormwater Pollution Prevention Plan (SWPPP), a signed certification statement, and any other compliance-related documents required by the permit, to the State Water Resources Control Board via the Stormwater Multiple Application and Report Tracking System (SMARTS). Construction activities shall not commence until a Waste Discharge Identification Number (WDID) is obtained for the project from the SMARTS. The construction contractor shall comply with all applicable requirements specified in the Construction General Permit, including but not limited to, preparation of a SWPPP and implementation of construction site Best Management Practices (BMPs) to address all construction-related activities, equipment, and materials that have the potential to impact water quality for the appropriate risk level identified for the project. The SWPPP shall identify the sources of pollutants that may affect the quality of stormwater and shall include BMPs (e.g., Sediment

Control, Erosion Control, and Good Housekeeping BMPs) to control the pollutants in stormwater runoff. Construction Site BMPs shall also conform to the requirements specified in the latest edition of the Orange County Stormwater Program *Construction Runoff Guidance Manual for Contractors, Project Owners, and Developers* to control and minimize the impacts of construction and construction-related activities, materials, and pollutants on the watershed. Upon completion of construction activities and stabilization of the project area, a Notice of Termination shall be submitted via SMARTS.

SC-WQ-2 **Groundwater Dewatering Permits.** If groundwater dewatering is required during excavation activities, the City of Yorba Linda shall obtain coverage under the *General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality (*Order No. R8-2009-0003, NPDES No. CAG998001) covers discharges to surface waters that pose an insignificant (de minimus) threat to water quality within. This shall include submission of a Notice of Intent (NOI) for coverage under the permit to the Santa Ana Regional Water Quality Control Board (RWQCB) at least 45 days prior to the start of dewatering. Groundwater dewatering activities shall comply with all applicable provisions in the permit, including water sampling, analysis, treatment (if required), and reporting of dewatering-related discharges. Upon completion of groundwater dewatering activities, a Notice of Termination shall be submitted to the Santa Ana RWQCB.

SC-WQ-3 **Water Quality Management Plan.** Prior to initiation of construction, the City of Yorba Linda shall prepare a Final Water Quality Management Plan (WQMP) in compliance with the *Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the Incorporated Cities of Orange County within the Santa Ana Region Areawide Urban Storm Water Runoff Orange County* (North Orange County MS4 Permit), Order No. R8-2009-0030, NPDES No. CAS618030 (as amended by Order No. R8-2010-0062). The Final WQMP shall be prepared consistent with the requirements of the *Model Water Quality Management Plan (WQMP*) (County of Orange 2011), *Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (WQMPs)* (County of Orange 2013), the City of Yorba Linda *Local Implementation Plan (LIP)* (2010), and *Managing Wet Weather with Green Infrastructure Municipal Handbook Green Streets* (EPA 2008), or subsequent guidance manuals. The Final WQMP shall specify the BMPs to be incorporated into the project design to target pollutants of concern in runoff from the project area. The BMPs specified in the Final WQMP shall be incorporated into the final project design.

SC-WQ-4 **Final Drainage Report.** Prior to issuance of grading permits, the City of Yorba Linda shall prepare a Final Drainage Report. The Final Drainage Report shall be prepared consistent with the requirements of the Orange County Hydrology Manual (Orange County Environment Agency 1986) and Orange County Hydrology Manual

Addendum No. 1 (Orange County Environment Agency 1996), or subsequent guidance manuals. The Final Drainage Report shall confirm that the on-site storm facilities are appropriately sized to accommodate stormwater runoff from the design storm and that the downstream storm drain facilities have adequate capacity to accommodate the increase in stormwater runoff from the project area. The drainage facilities specified in the Final Drainage Report shall be incorporated into the final project design.

SC-WQ-5 **Floodplain Development**. Prior to the issuance of any grading or construction permits, the City of Yorba Linda Floodplain Administrator shall verify that the project complies with Federal Emergency Management Agency (FEMA), Orange County Flood Control District (OCFCD), and City regulations for development within floodplains. The Floodplain Administrator shall ensure that a Floodplain Development Permit or a variance is obtained for the project, in compliance with City Municipal Code Section 15.12, Flood Damage Protection. The City Floodplain Administrator shall coordinate with the OCFCD and FEMA to determine if a Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) is required for the project. If determined to be required, the Floodplain Administrator shall process the CLOMR through OCFCD and FEMA. Project construction shall not commence until the CLOMR is approved by FEMA. Upon completion of construction, the Floodplain Administrator shall process the LOMR through OCFCD and FEMA.

SC-WQ-6 **Design-Level Scour Report.** During final design, the City Engineer or designee will ensure that a design-level scour analysis is prepared for the project. This report will document the scour potential at the proposed Santa Ana River bridge structures. The scour analysis will assess the suitability of the existing grouted riprap to resist the predicted water velocities at the bridge abutments and piers within the Santa Ana River. The scour analysis will document and provide design recommendations for to reduce scour potential at the proposed bridge abutments and piers.

The Project Engineer will incorporate the measures recommended in the scour analysis into the final design and project specifications. The Construction Contractor will implement the recommendations of the scour report as included in the project design and specifications. The City of Yorba Linda City Engineer or designee shall verify that the scour recommendations have been incorporated into project plans and specifications prior to the issuance of any grading permit for the proposed project.

4.11 LAND USE AND PLANNING

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

4.11.1 Existing Setting

The proposed project includes improvements located along north-south trending Yorba Linda Boulevard and Weir Canyon Road, and along east-west trending La Palma Avenue, Savi Ranch Parkway, Old Canal Road and Santa Ana Canyon Road. The project limits include land within both the City of Yorba Linda and the City of Anaheim.

4.11.1.1 Yorba Linda

The City of Yorba Linda's jurisdiction extends east of Yorba Linda Boulevard and north of SR-91. The Land Use Element of the City of Yorba Linda General Plan (2016)[1] designates the land uses east of the Yorba Linda Boulevard between Crystal Drive and Old Canal Road as Industrial. Land east of Yorba Linda Boulevard north of Crystal Drive and South of Old Canal Road is designated Open Space. There is also a portion of land designated Commercial south of La Palma Avenue east of the City of Anaheim's jurisdiction.

4.11.1.2 Anaheim

The City of Anaheim's jurisdiction extends west of Yorba Linda Boulevard and south of SR-91. The Land Use Element of the Anaheim General Plan (2019)[2] designates the land uses west of Yorba Linda Boulevard and Weir Canyon Road as General Commercial and Open Space. To the east of South Weir Canyon Road, the City of Anaheim General Plan designates the land use as Commercial Recreation north of Santa Ana Canyon Road and Open Space south of Santa Ana Canyon Road. To the east of South Weir Canyon Road, the City of Anaheim General Plan designates the land as Low Office south of Santa Ana Canyon Road and General Commercial north of Santa Ana Canyon Road.

4.11.2 Impact Analysis

a. Physically divide an established community?

Less Than Significant with Mitigation Incorporated. The proposed improvements are in a largely developed suburban area. During construction, the areas required for TCEs would not restrict vehicular, pedestrian, or bicyclist access to residential, commercial, or recreational areas in the

1 https://www.yorbalindaca.gov/DocumentCenter/View/465/2016-General-Plan-Land-Use-Map-PDF
2 http://www.anaheim.net/DocumentCenter/View/9519/Z0-GeneralPlan_24x55_Map?bidId=

vicinity of the project limits. However, construction of the proposed project would require short-term temporary closures of a portion of the SART for widening of the bridge. The portion of SART affected by proposed project construction would need to be temporarily closed for the protection of the SART users during certain construction activities, particularly overhead operations such as demolition, erection of temporary falsework, installation of girders, and placement of concrete. It is anticipated that the SART would be closed approximately five times, up to a maximum of five days for each closure. As part of Mitigation Measure TR-1, Transportation Management Plan, (refer to Section 4.17, Transportation/Traffic), SART users would be detoured and signage would be provided to display the dates of the closures and to identify the detour routes.

Once operational, the proposed project would promote multimodal transportation by adding bike and pedestrian facilities. In addition, the proposed project would improve intersection operations along Yorba Linda Boulevard. Therefore, the proposed project would not physically divide an established community, and no impacts would occur.

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The City of Anaheim General Plan Circulation Element (2018) classifies South Weir Canyon Road as a Scenic Expressway (four to six lane divided facility) and the portion of Yorba Linda Boulevard within the City of Anaheim's jurisdiction is classified as a Primary Arterial (i.e., divided arterial highway with six travel lanes and no parking or four travel lanes and parking).

The City of Yorba Linda General Plan Circulation Element does not currently provide a classification for Yorba Linda Boulevard within the project limits. However, portions of Yorba Linda Boulevard surrounding the project limits are classified as Primary Arterial (4 Lane) roadway, according to the Yorba Linda General Plan Circulation Element (2016).

In addition, the proposed bike and pedestrian facilities include a 20 foot wide barrier separated path for a two-way cycle track and pedestrians along the east side of Yorba Linda Boulevard. This portion of the proposed project would provide connectivity to the existing SART. In addition, the proposed two-way cycle track and pedestrian facility along the east side of Yorba Linda Boulevard would connect to a proposed 12 foot bike path along the south side of Old Canal Road. These changes would not conflict with existing or planned uses and zoning designations for these areas. The proposed bike and pedestrian facilities are consistent with the planned Corridor K, identified in OC Foothills Bikeways Strategy (OCTA 2016) and would also provide the linkage to the proposed riding and hiking trail along the south side of the Santa Ana River.

Further, the proposed project would improve corridor operations and provide additional storage for turning movements, as the intersections within the project limits currently have short turn pocket lengths. The proposed project is consistent with the goals and policies of the Cities of Yorba Linda and Anaheim, according to the goals of their respective Circulation Elements. Both cities have similar traffic study guidelines in that both cities have identified that LOS D is the limit of satisfactory intersection performance. Both cities determine that a significant impact occurs if the project degrades LOS from satisfactory LOS D or better to unsatisfactory LOS E or F. The proposed project is

not anticipated to result in a significant impact according to either the City of Yorba Linda or City of Anaheim traffic study guidelines.

Implementation of the proposed roadway improvements, bike and pedestrian facilities, and associated landscaping and drainage improvements would not result in a conflict with existing or planned uses as designated and zoned under the current General Plan designations and zoning designations for these areas, as described above. Existing land uses comply with these designations, and would continue to comply after construction of the project is complete. In summary, the proposed project would not conflict with any plans applicable to the land within the project limits and the proposed project. Therefore, the project is not inconsistent with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and no impacts would occur.

4.11.2.1 Mitigation Measures

Refer to Section 4.17, Transportation, below, for Mitigation Measure TR-1, Transportation Management Plan.

4.12 MINERAL RESOURCES

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

4.12.1 Existing Setting

Mineral resources consist of natural rock materials that have commercial value. For the purpose of CEQA analysis, mineral resources refer to aggregate resources that consist of sand, gravel, and crushed rock. Mineral Resource Zones (MRZs) are classified by the State Geologist through the California Geological Survey (CGS) under the California State Department of Conservation, according to the presence or absence of significant mineral resources. Of the four potential categories, lands classified as MRZ-2 are of the greatest importance, and "adequate information indicates that significant mineral deposits are present, or likely to be present, and development should be controlled." According to the Yorba Linda General Plan Conservation Element, aggregate resources are present in the natural sand and gravel deposits along the Santa Ana River and there are MRZ-2 lands within the project limits[1]. However, there are no active quarries in the City of Yorba Linda[2]. In addition, the City of Anaheim General Plan designates aggregate sand and gravel deposits in an MRZ-2 zone between Orangethorpe Avenue and La Palma Avenue; are however these resources are located outside of the project limits[3].

4.12.2 Impact Analysis

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. Despite the minor encroachment into an MRZ-2 area that would result from the proposed improvements to the bridge over the Santa Ana River, no mineral resource extraction or processing activity would occur as result of construction or operation of the proposed project. Therefore, the proposed project would not result in the loss of a valuable commercial or locally important mineral resource, and no impact would occur.

1 Department of Conservation. 1994. Mineral Lands Classification Map of Orange County.
2 City of Yorba Linda. 2016b. General Plan Update Program EIR.
3 City of Anaheim. 2018. General Plan. Green Element, Mineral Resource Map. Website: http://www.anaheim.net/DocumentCenter/View/9521/F-Green-Element?bidId=

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. While there are known mineral resources within the project limits, neither construction nor operation of the proposed project would impact the availability of these resources. No mineral resource extraction or processing activity would occur as a result of construction or operation of the proposed project. Therefore, implementation of the proposed project would not 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 impacts would occur as a result of the proposed project.

4.13 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.13.1 Existing Setting

Noise-sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to noise. Sensitivity to noise increases during the evening and at night. Noise-sensitive land uses located in close proximity to the project limits include single-family residences and are located at the northern and southern limits of the project. Non-noise-sensitive land uses adjacent to the project limits include commercial and office uses. The existing noise environment within the project limits is influenced by traffic noise on Yorba Linda Boulevard, State Route 91 (SR-91), and other roadways in the project vicinity.

4.13.2 Discussion

a. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact.

Construction Impacts. There are two types of short-term noise impacts could occur during construction of the proposed project. The first includes noise from construction crew commutes and the transport of construction equipment and materials to the project limits, which would incrementally increase noise levels on access roads leading to the project location. Although there would be a relatively high single event noise exposure potential causing intermittent noise nuisance (passing trucks at 50 ft would generate up to a maximum of 84 dBA shown in Table 4.13.A), the effect on longer-term (hourly or daily) ambient noise levels would be small. Based on the Road Construction Emissions Model (version 9.0.0) in the air quality analysis, the grading/excavation phase and paving phase would generate the majority of trips during the construction phase, at 60 vehicles per hour or 103 vehicles per day. Yorba Linda Boulevard would be used for construction access. The existing hourly/daily traffic volumes on Yorba Linda Boulevard is estimated to be 3,210/32,100 ADT. Construction-related traffic would increase traffic noise levels by up to 0.1 dBA

Table 4.13.A: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor[1]	Maximum Noise Level (L_{max}) at 50 ft[2]
Backhoe	40	80
Compactor (ground)	20	80
Compressor	40	80
Crane	16	85
Dozer	40	85
Dump Truck	40	84
Excavator	40	85
Flatbed Truck	40	84
Forklift	20	85
Front-End Loader	40	80
Grader	40	85
Impact Pile Driver	20	95
Jackhammer	20	85
Pickup Truck	40	55
Pneumatic Tools	50	85
Pump	50	77
Rock Drill	20	85
Roller	20	85
Scraper	40	85
Tractor	40	84
Welder	40	73

Source: FHWA Highway Construction Noise Handbook, Table 9.1 (FHWA 2006).
Note: The noise levels reported in this table are rounded to the nearest whole number.
[1] Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.
[2] Maximum noise levels were developed based on Spec 721.560 from the CA/T program to be consistent with the City of Boston, Massachusetts, Noise Code for the "Big Dig" project.
CA/T = Central Artery/Tunnel
FHWA = United States Federal Highway Administration
ft = foot/feet
L_{max} = maximum instantaneous noise level

along Yorba Linda Boulevard. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, short-term construction-related impacts associated with construction worker commutes and equipment transport would be less than significant.

The second type of short-term noise impact is related to noise generated during grubbing/land clearing, grading/excavation, drainage/utilities, and paving. Due to the linear nature of the proposed improvements, construction would be performed in various sequential phases and the character of the noise generated within the project limits would change over the course of construction. Therefore, the noise levels would vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 4.13.A lists the maximum noise levels (L_{max}) recommended for noise impact assessments for typical construction equipment included in the FHWA Highway Construction Noise Handbook[1], based on a distance of 50 ft between the equipment and a noise receptor.

Typical maximum noise levels range up to 88 dBA L_{max} at 50 ft during the noisiest construction phases. The site preparation phase, which includes excavation and grading of the site, tends to generate the highest noise levels because the noisiest construction equipment is the earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front-end loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders.

Project construction is expected to require the use of scrapers, excavators, and water trucks/pickup trucks on the project site. Based on the information in Table 4.13.A, the maximum noise level generated by each scraper is assumed to be 85 dBA L_{max} at 50 ft from the scraper. Each excavator would also generate 85 dBA L_{max} at 50 ft. The maximum noise level generated by water trucks/pickup trucks is approximately 55 dBA L_{max} at 50 ft from these vehicles. Each doubling of the sound sources with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, the worst-case combined noise level during this phase of construction would be 88 dBA L_{max} at a distance of 50 ft from the active construction area.

In addition to standard construction equipment, the proposed project may require the use of pile drivers for the bridge in the river channel. As shown in Table 4.13.A, pile driving generates noise levels of approximately 95 dBA L_{max} at 50 ft.

The closest residences are located approximately 165ft from the project limits and approximately 480 ft from the location where pile driving may be required for the bridge. Therefore, the closest residence may be subject to short-term noise reaching 80 dBA L_{max}. Although the noise generated by project construction activities would be higher than the ambient noise levels and may result in a temporary increase in the ambient noise levels, construction noise would stop once project construction is completed. Compliance with the construction hours specified by the Cities of Anaheim and Yorba Linda, in combination with Regulatory Compliance Measure RC-N-1 below for construction listed below would minimize construction noise. Therefore, noise generated from project construction activities would be less than significant. No mitigation measures are required.

Operational Impacts. Potential long-term noise impacts associated with project operations would occur solely from traffic noise. Long-term operational noise impacts were evaluated based on the City of Anaheim's noise standards and City of Yorba Linda's Criteria for Noise-Compatible Land Use[2]

1 United States Federal Highway Administration (FHWA). 2006. FHWA Highway Construction Noise Handbook. Roadway Construction Noise Model, FHWA HEP-06-015. DOT-VNTSC-FHWA-06-02. NTIS No. PB2006-109012. August.

2 City of Yorba Linda. 2016c. General Plan Noise Element. October. Website: www.yorbalindaca.gov/DocumentCenter/View/471/2016-GP-Noise-Element?bidId= (accessed February 2020).

in their Noise Element of the General Plan. The City of Anaheim has interior noise standards of 50 and 55 dBA CNEL for office and commercial uses. The City does not have exterior noise standards for office and commercial uses. In the City of Yorba Linda, office and commercial land uses exposed to noise levels of 50 dBA CNEL to 70 dBA CNEL are considered "Normally Acceptable" and noise levels of 60 dBA CNEL to 75 dBA CNEL are considered "Conditionally Acceptable."

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108)[1] was used to evaluate traffic-related noise conditions within the limit of the proposed project. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. The existing (2019) and General Plan Buildout (2035) average daily traffic (ADT) volumes within the project limits and surrounding vicinity were obtained from the project's traffic memorandum[2]. ADT volumes on SR-91 was obtained from the Caltrans Annual Average Daily Trucks on the California State Highway System.[3]

A total of 18 modeled receptors located adjacent to the project limits were evaluated. Traffic noise from Yorba Linda Boulevard, SR-91, and other roadways such as Santa Ana Canyon Road, Savi Ranch Parkway, and La Palma Avenue were calculated at each model receptor location. Table 4.13.B shows the existing (2019) and General Plan Buildout (2035) exterior traffic noise levels with and with the proposed project at each modeled receptor location. The detailed noise calculations along with the FHWA Highway Traffic Noise Prediction Model printouts are provided in Appendix K. The locations of the modeled receptors are shown on Figure 9. As shown in Table 4.13.B, commercial uses located in the City of Yorba Linda (Receptors R-8 through R-11 and R-16) located adjacent to the project limits would be exposed to traffic noise levels that are "Normally Acceptable" to "Conditionally Acceptable" under the General Plan Buildout (2035) with project condition. Also, the project-related traffic noise increase would reach up to 0.1 dBA because traffic on SR-91 dominate noise environment within the project limits along with traffic on Santa Ana Canyon Road and Savi Ranch Parkway. A noise level increase of less than 3 dBA would not be perceptible to the human ear in an outdoor environment.

1 U.S. Federal Highway Administration (FHWA). 1977. Highway Traffic Noise Prediction Model, FHWA RD 77-108.

2 LSA Associates, Inc. 2020. Traffic Analysis Memorandum for the Proposed Improvements to Yorba Linda Boulevard.

3 California Department of Transportation (Caltrans). 2018. *Annual Average Daily Truck Traffic on the California State Highway System*. Website: https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/census/aadt/2018_truck_aadtt_xlsx.xlsx (accessed February 2020).

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LSA

LEGEND

- Modeled Receptor Locations
- Existing Right of Way
- Proposed Right of Way
- Proposed Improvements
- Bridge Easements
- Footing Easements
- Permanent ROW Easements
- Proposed Grading Limits
- Proposed Sidewalk

N

0 75 150
FEET

SOURCE: Google (2018), HNTB (2019)

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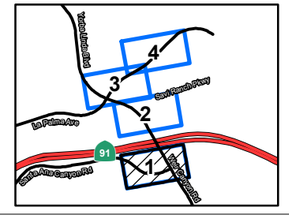

FIGURE 9
Sheet 1 of 4

Yorba Linda Boulevard Widening Project
Modeled Receptor Locations

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LSA

LEGEND

- Modeled Receptor Locations
- Existing Right of Way
- Proposed Right of Way
- Proposed Improvements
- Bridge Easements
- Footing Easements
- Permanent ROW Easements
- Proposed Grading Limits
- Proposed Sidewalk

N

0 75 150
FEET

SOURCE: Google (2018), HNTB (2019)

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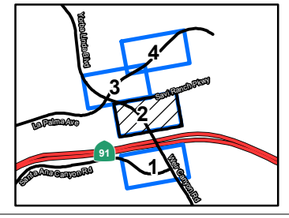

FIGURE 9
Sheet 2 of 4

Yorba Linda Boulevard Widening Project

Modeled Receptor Locations

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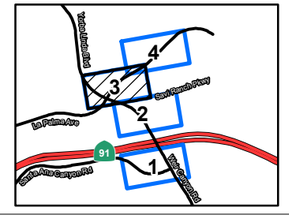
LSA

LEGEND

- Modeled Receptor Locations
- Existing Right of Way
- Proposed Right of Way
- Proposed Improvements
- Bridge Easements
- Footing Easements
- Permanent ROW Easements
- Proposed Grading Limits
- Proposed Sidewalk

0 75 150
FEET



SOURCE: Google (2018), HNTB (2019)

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FIGURE 9
Sheet 3 of 4

Yorba Linda Boulevard Widening Project
Modeled Receptor Locations

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LSA

LEGEND

- Modeled Receptor Locations
- Existing Right of Way
- Proposed Right of Way
- Proposed Improvements
- Bridge Easements
- Footing Easements
- Permanent ROW Easements
- Proposed Grading Limits
- Proposed Sidewalk

0 75 150
FEET

SOURCE: Google (2018), HNTB (2019)

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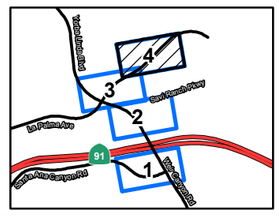

FIGURE 9
Sheet 4 of 4

Yorba Linda Boulevard Widening Project

Modeled Receptor Locations

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Table 4.13.B: Exterior Traffic Noise Levels

Receptor No.	City	Land use	Existing (2019) Noise Level (dBA CNEL)		Change (dBA)	General Plan Buildout (2035) Noise Level (dBA CNEL)		Change (dBA)
			No Project	With Project		No Project	With Project	
R-1	Anaheim	Office	69.6	69.6	0.0	71.3	71.3	0.0
R-2	Anaheim	Office	70.6	70.6	0.0	73.1	73.1	0.0
R-3	Anaheim	Office	72.6	72.6	0.0	74.9	74.9	0.0
R-4	Anaheim	Commercial	69.7	69.7	0.0	70.8	70.8	0.0
R-5	Anaheim	Commercial	69.7	69.7	0.0	70.8	70.8	0.0
R-6	Anaheim	Commercial	69.5	69.5	0.0	70.8	70.8	0.0
R-7	Anaheim	Commercial	69.5	69.5	0.0	70.9	70.9	0.0
R-8	Yorba Linda	Commercial	70.5	70.5	0.0	72.1	72.1	0.0
R-9	Yorba Linda	Commercial	70.3	70.4	0.1	71.0	71.1	0.1
R-10	Yorba Linda	Commercial	68.4	68.4	0.0	69.3	69.3	0.0
R-11	Yorba Linda	Commercial	67.4	67.4	0.0	67.9	67.9	0.0
R-12	Anaheim	Commercial	72.4	72.4	0.0	74.8	74.8	0.0
R-13	Anaheim	Commercial	71.4	71.4	0.0	73.3	73.3	0.0
R-14	Anaheim	Commercial	70.7	70.6	-0.1	71.5	71.5	0.0
R-15	Anaheim	Commercial	69.3	69.2	-0.1	69.9	69.8	-0.1
R-16	Yorba Linda	Commercial	67.4	67.5	0.1	67.7	67.8	0.1
R-17	Anaheim	Animal Hospital	67.5	67.4	-0.1	67.8	67.7	-0.1
R-18	Anaheim	Trail	69.6	69.6	0.0	71.3	71.3	0.0

Source: LSA Associates, Inc. (2020)
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel

Table 4.13.B shows the General Plan Buildout (2035) with project interior traffic noise levels modeled receptor locations in the City of Anaheim. The interior noise level was calculated using an exterior-to-interior noise level reduction of 24 dBA based on standard construction for Southern California (warm climate) buildings from the United States Environmental Protection Agency's (EPA) Protective Noise Levels[1]. As shown in Table 4.13.C, none of the receptors in the City of Anaheim would exceed the City's interior noise standard of 50 and 55 dBA CNEL for office and commercial uses, respectively, except for Receptor R-3. Although the City's interior noise standard of 50 dBA CNEL for office uses would be exceeded at Receptor R-3, there would no project-related traffic noise increase for all receptors located in the City of Anaheim (Receptors R-1 through R-7, R-12 through R-15, R-17, and R-18) because traffic on SR-91 dominate noise environment within the project limits along with traffic on Santa Ana Canyon Road. Therefore, traffic noise would be less than significant and no mitigation measures are required.

[1] United States Environmental Protection Agency (EPA). 1978. *Protective Noise Levels: Condensed Version of EPA Levels Document*. EPA 550/9-79-100. November.

Table 4.13.C: Interior Traffic Noise Levels

Receptor No.	City	Land use	General Plan Buildout (2035) with Project Noise Level (dBA CNEL)		Interior Noise Standard (dBA CNEL)[1]	Exceed Interior Noise Standard?
			Exterior	Interior		
R-1	Anaheim	Office	71.3	47.3	50	No
R-2	Anaheim	Office	73.1	49.1	50	No
R-3	Anaheim	Office	74.9	50.9	50	Yes
R-4	Anaheim	Commercial	70.8	46.8	55	No
R-5	Anaheim	Commercial	70.8	46.8	55	No
R-6	Anaheim	Commercial	70.8	46.8	55	No
R-7	Anaheim	Commercial	70.9	46.9	55	No
R-8	Yorba Linda	Commercial	72.1	48.1	--[2]	--
R-9	Yorba Linda	Commercial	71.1	47.1	--	--
R-10	Yorba Linda	Commercial	69.3	45.3	--	--
R-11	Yorba Linda	Commercial	67.9	43.9	--	--
R-12	Anaheim	Commercial	74.8	50.8	55	No
R-13	Anaheim	Commercial	73.3	49.3	55	No
R-14	Anaheim	Commercial	71.5	47.5	55	No
R-15	Anaheim	Commercial	69.8	45.8	55	No
R-16	Yorba Linda	Commercial	67.8	43.8	--	--
R-17	Anaheim	Animal Hospital	67.7	43.7	55	No
R-18	Anaheim	Trail	71.3	--[3]	--	--

Source: Compiled by LSA Associates, Inc. (2020)

[1] An exterior-to-interior noise level reduction of 24 dBA was used to calculate the interior noise level based on the EPA Protective Noise Levels (EPA 1978).

[2] Interior noise levels were not calculated for receptors located in the City of Yorba Linda because the City does not have interior noise standards for commercial uses.

[3] Not applicable.

CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel

b. Result in generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact.

Construction Impacts. Vibration generated by construction equipment can result in varying degrees of ground vibration, depending on the equipment. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings on soil near an active construction area respond to these vibrations, which range from imperceptible to low rumbling sounds with perceptible vibrations and slight damage at the highest vibration levels. Typically, construction-related vibration does not reach vibration levels that would result in damage to nearby structures.

The Caltrans Transportation and Construction Vibration Guidance Manual[1] shows that the vibration damage threshold for continuous/frequent intermittent sources is 0.5 peak-particle velocity (PPV) (inches per second [in/sec]) for new residential structures and modern commercial buildings. The manual shows the vibration annoyance potential criteria to be barely perceptible at 0.01 PPV (in/sec), distinctly perceptible at 0.04 PPV (in/sec), and strongly perceptible at 0.10 PPV (in/sec) for continuous/frequent intermittent sources. These thresholds were used to evaluate the potential for short-term construction-related ground-borne vibration during construction of the proposed project.

Pile driving and loaded trucks used for construction of the proposed project would generate the highest ground-borne vibration levels. Based on the Caltrans' Transportation and Construction Vibration Guidance Manual, pile driving and loaded trucks would generate vibration levels of 0.644 PPV (in/sec) and 0.076 PPV (in/sec), respectively, when measured at 25 ft.

The formula for vibration transmission is provided below:

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

Table 4.13.D lists the projected vibration levels from the use of pile driving and loaded trucks during project construction on the closest buildings. As shown in Table 4.13.D, the vibration levels at closest structure to pile driving and loaded trucks would be 0.065 PPV (in/sec) and 0.038 PPV (in/sec), respectively. Although vibration levels would be the barely perceptible to distinctly perceptible, vibration levels would not exceed the damage threshold of 0.5 PPV (in/sec) for new residential structures and modern commercial structures. Therefore, short-term construction impacts related to ground-borne vibration or ground-borne noise would be less than significant and no mitigation measures are required.

Table 4.13.D: Construction Vibration Levels

Land Use	Equipment/Activity	Reference Vibration Level (PPV) at 25 ft	Distance to the Building Structure (ft)	Maximum Vibration Level (PPV)
Residential (East Brookdale Lane)	Pile Driving	0.644	480	0.008
	Loaded Trucks	0.076	165	0.004
Yorba Linda Regional Animal Hospital	Pile Driving	0.644	220	0.025
	Loaded Trucks	0.076	124	0.007
Commercial (8285 East Santa Ana Canyon Road)	Pile Driving	0.644	115	0.065
	Loaded Trucks	0.076	40	0.038

Source: Compiled by LSA Associates, Inc. (2020)
ft = foot/feet PPV = peak particle velocity in/sec = inches per second

[1] California Department of Transportation (Caltrans). 2013. *Transportation and Construction Vibration Guidance Manual*. September. Website: http://website.dot.ca.gov/env/noise/docs/tcvgm-sep2013.pdf (accessed February 2020).

Operational Impacts. Once operational, the proposed project would not generate any additional traffic, and regional traffic trips are expected to remain the same. Roads are not typically major sources of ground-borne noise or vibration. Ground-borne vibration is mostly associated with passenger vehicles and trucks traveling on roads with poor conditions (e.g., potholes, bumps, expansion joints, or other discontinuities in the road surface). Vibration effects of passenger vehicles and trucks (e.g., rattling of windows) are almost always a result of airborne noise. The proposed project would include new asphalt pavement with proper maintenance. As a result, there would be no potholes, bumps, or other discontinuities in the road surface that would generate ground-borne vibration or noise impacts from vehicular traffic traveling on Yorba Linda Boulevard. Therefore, ground-borne vibration and noise impacts generated by vehicles traveling through the project corridor would be less than significant, and no mitigation measures are required.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The closest airports to the project limits are the Fullerton Municipal Airport and John Wayne Airport, which are located approximately 10.6 mi west and 12.4 mi southwest of the project respectively. The proposed project is not located within the planning areas of the Airport Environs Land Use Plan (AELUP) for Fullerton Municipal Airport[1] or John Wayne Airport[2]. In addition, the proposed project is not located in the vicinity of a private airstrip. Also, the proposed project is a transportation project and does not involve the introduction of residential or employment uses. Therefore, the proposed project would not expose people residing or working in the project vicinity to aviation-related excessive noise levels, and no impacts would occur.

4.13.2.1 Regulatory Compliance Measures

The following Regulatory Compliance Measure is a regulation that is applicable to the proposed project and is considered in the analysis of potential impacts related to noise. The City of Yorba Linda considers this regulation to be mandatory; therefore, it is not considered mitigation.

RC-N-1 **Noise Ordinance Compliance.** The following conditions would apply to ensure compliance with applicable noise ordinances and to minimize noise related to temporary construction activities:

- The construction contractor shall limit construction activities to between the hours of 7:00 a.m. and 7:00 p.m. weekdays including Saturdays. No construction

1 Airport Land Use Commission. 2019. Airport Environs Land Use Plan for Fullerton Municipal Airport. February 21. Website: https://www.ocair.com/commissions/aluc/docs/AELUP%20for%20FMA%2005092019.pdf (accessed February 2020).

2 Airport Land Use Commission. 2008. Airport Environs Land Use Plan for John Wayne Airport. April 17. Website: http://www.ocair.com/commissions/aluc/docs/jwa_aelup-april-17-2008.pdf (accessed February 2020).

activities shall be permitted outside these hours and any time on Sunday or a federal holiday.

- During all project site excavation and grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and most noise-sensitive receptors nearest the project site during all project construction.
- The construction contractor shall place all stationary construction equipment so that the emitted noise is directed away from the sensitive receptors nearest the project site.

4.14 POPULATION AND HOUSING

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

4.14.1 Existing Setting

The proposed project is located in both the Cities of Yorba Linda and Anaheim, in Orange County, California. According to the United State Census Bureau, there were 64,234 people in the City of Yorba Linda and 336,265 people in the City of Anaheim per the April 2010 Census[1]. Based on the Southern California Association of Governments (SCAG) 2016 adopted growth estimates, the population of the City of Anaheim is projected to reach 382,000 by 2035 and 403,400 by 2040 and the population of the City of Yorba Linda is projected to reach 70,400 by 2035 and 70,500 by 2040.[2]

4.14.2 Discussion

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

No Impact. The proposed project consists of roadway improvements as well as the bike and pedestrian improvements along existing roadways to improve corridor operations and provide additional storage for turning movements. As such, the proposed project does not include the development of new residences or businesses and does not include any improvements that are anticipated to induce growth. In addition, the proposed roadway improvements would address existing operational deficiencies within the project limits but would not result in induced traffic demand or additional vehicle trips within the project limits resulting in substantial growth. There would be no impacts related to population growth.

1 United States Census Bureau. 2019. Quick Facts: Yorba Linda and Anaheim, California. Website: https://www.census.gov/quickfacts/fact/table/anaheimcitycalifornia,yorbalindacitycalifornia/PST045218

2 Southern California Association of Governments (SCAG). 2016a. 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Final Growth Forecast by Jurisdiction. Website: https://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf (accessed February 26, 2020).

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. As discussed in Section 2.6 above, the newly proposed right-of-way would only require partial acquisitions of vacant land. No residences or businesses would be acquired for the proposed project. Therefore, the proposed project would not displace existing people or housing, and no replacement housing would be required. Therefore, no impacts related to residential displacement, necessitating the construction of replacement housing elsewhere, would occur as a result of the proposed project.

4.15 PUBLIC SERVICES

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

4.15.1 Existing Setting

Fire protection and paramedic services are provided to the Cities of Anaheim and Yorba Linda by the Orange County Fire Authority (OCFA). The City of Anaheim also has an independent fire department (Anaheim Fire and Rescue).The nearest fire and paramedic stations include Anaheim Fire and Rescue Weir Canyon Station 10 on Monte Vista Road in the City of Anaheim, approximately 0.45 mile south of the project limits and OCFA Station 32 on Yorba Linda Boulevard in the City of Yorba Linda, approximately 1.5 miles north of the project limits.[1,2] Police services are provided by both the City of Anaheim Police Department and the City of Yorba Linda Police Department. Two school districts serve the surrounding area; the Placentia-Yorba Linda Unified School District (PYLUSD) and the Orange Unified School District (OUSD). The PYLUSD has 34 school sites for ages K-12 and hosts roughly 24,900 students[3]; the OUSD has 36 schools sites for ages K-12 and hosts roughly 28,000 students[4]. The Cities of Anaheim and Yorba Linda each have their own City library systems. There are seven library branches serving the City of Anaheim, and the closest library to the

1 City of Yorba Linda. 2016d. Yorba Linda General Plan, Public Services and Utilities Element. Website: https://www.yorbalindaca.gov/DocumentCenter/View/474/2016-GP-Public-Services-and-Utilities-Element?bidId=.

2 City of Anaheim. 2004b. General Plan. Public Services and Facilities Element. Website: http://www.anaheim.net/DocumentCenter/View/2038/G-Public-Services-and-Facilities-Element-?bidId=

3 Placentia-Yorba Linda Unified School District. 2020. About Us. Website: https://www.pylusd.org (accessed February 26, 2020).

4 Orange Unified School District. 2020. About Us. Website: https://www.orangeusd.org/ (accessed February 26, 2020).

project limits is the East Anaheim Branch[1]. Parks and recreation facilities near the project limits include Yorba Regional Park and the Santa Ana River Trail (SART).

4.15.2 Discussion

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

i. Fire protection?

Less Than Significant with Mitigation Incorporated. The proposed project includes improvements to existing roadways and new pedestrian and bike facilities and would not result in any new land uses that would require fire protection. Weir Canyon Road and Yorba Linda Boulevard are both used by Anaheim Fire and Rescue and the OCFA to access land uses in this part of the two cities. The proposed project would improve traffic flow and intersection operations within the project limits due to the reconfigured intersections, added turn lanes and extended turn pockets. Short-term shoulder and lane closures along Yorba Linda Boulevard are anticipated during construction. However, no long-term road closures are anticipated through the project limits during construction. Construction is anticipated to take 18 months and finish in 2026. In addition, the project would be constructed in phases and would not impact the entire project limits for the 18-month construction period.

As part of Mitigation Measure TR-1, Transportation Management Plan, (refer to Section 4.17, Transportation/Traffic), the City of Yorba Linda as the lead agency and the Construction Contractor would coordinate with OCFA as well as Anaheim Fire and Rescue regarding construction activities that may result in temporary lane closures and speed reductions that could affect the movement of traffic through the project limits and potentially affect their ability to provide emergency services. Coordination for the development of the TMP (per Mitigation Measure TR-1), would allow these fire services to provide input on the various provisions to ensure continuous and adequate emergency access within the project limits during the construction process. Therefore, impacts to fire protection response times would be less than significant with implementation of Mitigation Measure TR-1.

The proposed project is anticipated to improve traffic along Weir Canyon Road, Santa Ana Canyon Road, and Yorba Linda Boulevard once improvements are operational. Therefore, the proposed project would have a beneficial impact on emergency services response times within the project limits and the surrounding area. The proposed project would not generate demand for fire protection, and no additional or expanded facilities would be needed. Therefore, impacts to

[1] City of Anaheim. Library Services. Website: http://www.anaheim.net/903/Locations-Hours (accessed February 27, 2020)

emergency services related to fire protection would be less than significant with mitigation incorporated.

ii. Police Protection?

Less Than Significant with Mitigation Incorporated. As discussed under Response 4.15(a)(i), above, the proposed project would result in improvements to existing roadways and would not result in any new land uses that would require police protection. No long-term road closures or closures during peak travel hours are anticipated through the project limits during construction of the roadway widening. Mitigation Measure TR-1, Transportation Management Plan, (refer to Section 4.17, Transportation/Traffic), would require coordination with police services regarding construction activities that could affect the movement of traffic through the project limits and potentially affect the either City of Anaheim or Yorba Linda's abilities to provide emergency services. Therefore, police protection response times would be less than significant with implementation of Mitigation Measure TR-1.

The proposed project would improve traffic operations along Yorba Linda Boulevard once the project is operational. The proposed project would not include the development of new land uses that would generate demand for police protection, and no additional or expanded facilities would be needed. Therefore, impacts to emergency services related to police protection would be less than significant with mitigation incorporated.

iii–v. Schools? Parks? Other public facilities?

No Impact. The proposed project includes improvements to existing roadways and new pedestrian and bike facilities and would not include the development of land uses that would generate additional habitable structures or employment opportunities that would result in an increase in population. Therefore, the proposed project would not result in the need for new or expanded school facilities, parks, or libraries. There would be no project-related impact to schools, parks, or libraries. Potential construction and operations impacts to parks and recreation facilities are analyzed in Section 4.16, Recreation, below.

4.15.2.1 Mitigation Measures

See Section 4.17, Transportation/Traffic, below, for Mitigation Measure TR-1, Transportation Management Plan.

4.16 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☒	☐	☐

4.16.1 Existing Setting

The Land Use Element of the City of Anaheim General Plan has designated areas of recreation to the east and west of Yorba Linda Boulevard south of La Palma Avenue. This recreation area includes Yorba Regional Park, which borders the project limits to the west in the City of Anaheim. The land uses east of Yorba Linda Boulevard within the project limits under the City of Yorba Linda's jurisdiction consist of Open Space north of Crystal Drive and south of the SR-91 westbound off-ramp. The Santa Ana River Trail is also located within the project limits, but is grade separated from Yorba Linda Boulevard.

Yorba Regional Park is a 106-acre park located between the Sana Ana River and La Palma Avenue in the City of Anaheim. Part of the Orange County Parks system, the park provides playground and restroom facilities, group picnicking facilities with more than 400 picnic tables (many with permanent shade structures), volleyball courts, horseshoe puts, two ball diamonds, a physical fitness course and some 200 barbecues. A series of four lakes with connecting streams provides opportunities for fishing and model boat sailing. The park includes bike trails connecting to the Santa Ana River Trail.

The Santa Ana River Trail is a multi-use trail complex that runs alongside the Santa Ana River. The trail stretches approximately 30 miles from the Pacific Ocean at Huntington Beach along the Santa Ana River to the Orange–Riverside county line. Many intersections with local streets are grade separated with bridges or underpasses making it a Class I Bike Path.

4.16.2 Discussion

a. 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. As discussed in Section 4.16, Population and Housing, above, the proposed project would not include improvements that would increase population or induce growth that would generate new park users or increase the use of the park or existing pedestrian and bike facilities. All TCE areas, including those along the SART, would be returned to a condition as good as that which existed prior to completion of the proposed project. In addition, the proposed pedestrian and bike facilities would provide safety and connectivity for existing users of the bike and pedestrian

facilities along La Palma Avenue to Yorba Linda Boulevard to Old Canal Road. The proposed improvements would not create a new connection to the SART that would increase the use of existing recreational facilities. Therefore, the proposed project would have a less than significant impact on existing parks and recreational facilities and would not lead to park deterioration.

b. 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 with Mitigation Incorporated. The proposed project does not include new park facilities, but would include the addition of pedestrian and bike facilities along La Palma Avenue and Yorba Linda Boulevard that would connect to the existing bike facilities along La Palma Avenue and Old Canal Road. Users of the parks in the surrounding area would experience conditions similar to the existing setting at those recreation areas, and users of the SART would experience improved connectivity to bike and pedestrian facilities along the roadways within the project limits.

Construction of the proposed project would require temporary closures of a portion of the SART for widening of the bridge. It is anticipated that the SART would be closed approximately five times, up to a maximum of five days for each closure. During these periods, SART users would be detoured and signage would be provided to display the dates of the closures and to identify the detour routes. However, access to the trail would be maintained during construction. As part of Mitigation Measure TR-1, Transportation Management Plan, (refer to Section 4.17, Transportation), a trail detour plan would be included to identify a planned detour route and to identify planned signage for providing adequate notification of the detours to trail users.

Further, a Class I Bike Path would be added to the north side of the Yorba Linda Boulevard bridge as part of this project, which would provide a link to the existing Class I Bike Path and the SART along La Palma Avenue. Therefore, operation of the proposed project would improve safety and connectivity to adjacent roadways for existing users of these facilities. Impacts would be less than significant with mitigation incorporated.

4.16.2.1 Mitigation Measures

See Section 4.17, Transportation, below, for Mitigation Measure TR-1, Transportation Management Plan.

4.17 TRANSPORTATION

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

4.17.1 Existing Setting

The following section is based on the analysis provided in the *Traffic Analysis Memorandum* (LSA, September 2020) (Appendix L).

Yorba Linda Boulevard provides a connection between Anaheim and Yorba Linda. South of State Route 91 (SR-91), the roadway is called Weir Canyon Road and lies entirely within the city limits of Anaheim. This portion is a six-lane divided roadway. North of SR-91, the roadway is called Yorba Linda Boulevard. Yorba Linda Boulevard straddles the border between Anaheim and Yorba Linda between SR-91 and the Santa Ana River. This portion is also a six-lane divided roadway. Between the Santa Ana River and Esperanza Road, Yorba Linda Boulevard is entirely within the city limits of Anaheim. North of Esperanza Road, Yorba Linda Boulevard is entirely within the city limits of Yorba Linda and is a four-lane divided roadway. It should be noted that Yorba Linda Boulevard is grade separated at Esperanza Road, and the two roadways do not have an intersection.

Five signalized intersections are located on Yorba Linda Boulevard within the project limits. All five of these intersections were included in the traffic study area. These intersections comprise the following:

1. Yorba Linda Boulevard/La Palma Avenue
2. Yorba Linda Boulevard/Savi Ranch Parkway
3. Yorba Linda Boulevard/SR-91 Westbound Ramps
4. Yorba Linda Boulevard/SR-91 Eastbound Ramps
5. Weir Canyon Road/Santa Ana Canyon Road

LSA contracted with an independent data collection company to collect turn volumes during the a.m. and p.m. peak periods at the study intersections. This data was collected in May 2019. To forecast future traffic volumes at General Plan Buildout (2035), the City of Anaheim applied traffic growth rates from the Anaheim Transportation Analysis Model (ATAM) to the 2019 existing traffic volumes and post-processed the resulting traffic volumes using the same methodology as previous

General Plan traffic analyses. The resulting intersection turn volumes, provided to LSA by the City of Anaheim, represent the General Plan Buildout (2035) condition.

4.17.2 Discussion

a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant with Mitigation Incorporated. North of SR-91, the City of Anaheim Circulation Element (revised June 2018) classifies Yorba Linda Boulevard as a Primary Arterial (six lanes without parking). South of SR-91, the City of Anaheim Circulation Element classifies Weir Canyon Road as a Scenic Expressway (four to six divided lanes). The City of Yorba Linda (City) Circulation Element (October 2016) does not identify a classification for Yorba Linda Boulevard until it is north of Esperanza Road and entirely within city limits. That portion of Yorba Linda Boulevard is classified as a Primary Arterial.

Yorba Linda Boulevard is classified as a Primary Arterial (four divided lanes) north of SR-91 on the Orange County Master Plan of Arterial Highways (MPAH) (Orange County Transportation Authority [OCTA], December 2019) and as a Major Arterial (six divided lanes) south of SR-91.

The proposed project would provide intersection configuration improvements and extended turn pockets at the intersections of Yorba Linda Boulevard and La Palma Avenue, Yorba Linda Boulevard and Savi Ranch Parkway, and Weir Canyon Road and Santa Ana Canyon Road. These proposed improvements would not conflict with the roadway designations in the Cities' Circulation Elements or the MPAH, as described above.

In addition, both cities have similar traffic study guidelines in that both cities have identified that LOS D is the limit of satisfactory intersection performance. Both cities determine that a significant impact occurs if the project degrades LOS from satisfactory LOS D or better to unsatisfactory LOS E or F or if the project increases the v/c ratio of an LOS E or F intersection by 0.01 or greater. The City of Anaheim further determines that a significant impact occurs if the project increases the v/c ratio of an LOS D intersection by 0.02 or increases the v/c ratio of an LOS C intersection by 0.04.

Table 4.13.E presents the comparison of current and proposed intersection geometrics in the existing and General Plan Buildout (2035) scenarios. As Table 4.13.E shows, the proposed project is consistent with the City of Yorba Linda or City of Anaheim traffic study guidelines.

In addition to the intersection improvements described above, the proposed project includes pedestrian and bike improvements within the project limits. The Yorba Linda Boulevard corridor is identified as Corridor K in the OC Foothills Bikeway Strategy Plan. A Class I Bike Path would be added to the north side of the Yorba Linda Boulevard bridge as part of the proposed project, which would provide a link to the Santa Ana River Trail consistent with the OC Foothills Bikeways Strategy Plan. The Class I Bike Path would also provide connections into Savi Ranch and to a Class I Bike Path along the south side of La Palma Avenue.

Table 4.13.E: Yorba Linda Boulevard Project Level of Service Summary

	Existing Conditions (2019)				Proposed Project (General Plan Build Out - 2035)				Project Change	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM	PM
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS		
Yorba Linda Boulevard/La Palma Avenue[1]										
Existing	0.690	B	0.846	D	0.690	B	0.805	D	0.000	(0.041)
2035	0.697	B	**0.922**	**E**	0.697	B	0.882	D	0.000	(0.040)
Yorba Linda Boulevard/Savi Ranch Parkway[2]										
Existing	0.641	B	0.837	D	0.615	B	0.641	B	(0.026)	(0.196)
2035	0.657	B	0.832	D	0.632	B	0.690	B	(0.025)	(0.142)
Yorba Linda Boulevard/SR-91 Westbound Ramp[3]										
Existing	0.518	A	0.615	B	0.518	A	0.615	B	0.000	0.000
2035	0.577	A	0.632	B	0.57	A	0.632	B	0.000	0.000
Yorba Linda Boulevard/SR-91 Eastbound Ramps[4]										
Existing	0.594	A	0.582	A	0.594	A	0.582	A	0.000	0.000
2035	0.602	B	0.742	C	0.603	B	0.742	C	0.000	0.000
Weir Canyon Road/Santa Ana Canyon Road[5]										
Existing	0.596	A	0.656	B	0.550	A	0.578	A	(0.046)	(0.078)
2035	0.686	B	0.873	D	0.631	B	0.799	C	(0.065)	(0.074)
Weir Canyon Road/Santa Ana Canyon Road[6]										
Existing	0.596	A	0.656	B	0.550	A	0.578	A	(0.046)	(0.078)
2035	0.686	B	0.873	D	0.631	B	0.799	C	(0.065)	(0.074)

Source: Compiled by LSA Associates, Inc. (2020).
Note: Shaded cells do not achieve satisfactory LOS D.
[1] Convert the northbound shared through/right-turn lane to a through-only lane, and construct a second northbound right-turn lane.
[2] Widen Yorba Linda Boulevard to provide a fourth northbound through lane (which would be added as a shared through/right- turn lane), convert the northbound free right-turn lane to a standard right-turn-only lane, add northbound right-turn overlap signal phasing, and construct a second southbound left-turn lane in addition to a third westbound left-turn lane added by the Savi Ranch Parkway project.
[3] No changes.
[4] No changes.
[5] Convert the third eastbound through lane to a third left-turn lane, and make no changes to southbound approach.
[6] Convert the third eastbound through lane to a third left-turn lane, convert the southbound through/right-turn lane to the third through lane, and add a second southbound right-turn lane.
ICU = intersection capacity utilization
LOS = level(s) of service
SR-91 = State Route 91

Construction of the proposed project would require short-term temporary closures of a portion of the SART for widening of the bridge. The portion of SART affected by proposed project construction would need to be temporarily closed for the protection of the SART users during certain construction activities, particularly overhead operations such as demolition, erection of temporary falsework, installation of girders, and placement of concrete. It is anticipated that the SART would be closed approximately five times, up to a maximum of five days for each closure. As part of Mitigation Measure TR-1, Transportation Management Plan, SART users would be detoured onto La Palma west of Yorba Linda Boulevard until just west of the bridge. Signage would be provided to display the dates of the closures and to identify the detour routes. The TMP would also include safety provisions that would be implemented along these detour routes for bicyclists and pedestrians.

Therefore, with implementation of Mitigation Measure TR-1 the proposed project would not conflict with any program plans, ordinances, or policies addressing the circulation system, including transit, bike, and pedestrian facilities.

b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?

Less Than Significant Impact. On December 28, 2018, the California Office of Administrative Law cleared revised CEQA guidelines for use. Among the changes to the guidelines was the removal of vehicle delay and LOS from consideration under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on vehicle miles traveled (VMT). Lead agencies were allowed to opt-in to the revised transportation guidelines, but the new guidelines must be used starting July 1, 2020. Both the City of Anaheim and the City of Yorba Linda adopted guidelines establishing thresholds for analysis of the VMT impacts of land development projects. Neither established thresholds for the analysis of transportation projects. However, *The Technical Advisory on Evaluating Transportation Impacts in CEQA* (Governor's Office of Planning and Research, December 2018) states the following:

Projects that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis, include [27 examples of which are]:

- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit.

The proposed project would extend the existing northbound right-turn lane at Yorba Linda Boulevard/La Palma Avenue (as an auxiliary lane) approximately 970 ft to the intersection of Yorba Linda Boulevard/Savi Ranch Parkway, add a fourth northbound through lane (serving the auxiliary lane) on Yorba Linda Boulevard south of Savi Ranch Parkway for 400 ft, add a Class I Bike Path along Yorba Linda Boulevard, construct bike connections to Savi Ranch, construct bike connections to the Santa Ana River Trail, and extend a Class I Bike Path along La Palma Avenue.

The proposed project substantially conforms to the examples of an auxiliary lane less than 1 mile in length (970 ft) and the addition of roadway capacity (for 400 ft) that also improves conditions for cyclists (addition or extension of two Class I Bike Paths and an improved connection between the Santa Ana River Trail and Savi Ranch). In addition, beyond the 0.7 mile project limits, Yorba Linda Boulevard would continue to provide four lanes north of La Palma Avenue. Weir Canyon Road would continue to provide six through lanes south of Santa Ana Canyon Road. As such, the proposed project would not lead to a substantial increase in vehicle travel, would not require an induced travel analysis, and would be presumed to have a less-than-significant transportation impact under the revised CEQA guidelines.

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant with Mitigation Incorporated. The proposed project would not introduce geometric design features that would be hazardous or create incompatible uses within the project limits. The reconfigured intersections and widening roadway would be consistent with the Cities' General Plan Circulation Elements and would improve intersection operations and reduce queuing lengths. Therefore, the proposed project would result in long-term operational benefits.

During the short-term construction process, the proposed project would require partial/temporary shoulder and lane closures and reductions in speed limits to ensure construction worker safety, which may result in temporary hazards for the traveling public. Mitigation Measure TR-1 would require implementation of a Transportation Management Plan (TMP), which would include various provisions to ensure continuous and adequate emergency access within the project limits during the construction process. The TMP would include, but not be limited to, measures such as construction signage, pedestrian protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, identification of alternate bus stops during potential short-term bus stop closures, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use. With implementation of Mitigation Measure TR-1, impacts from construction-related hazards would be less than significant.

d. Result in inadequate emergency access?

Less Than Significant with Mitigation Incorporated. As discussed in Responses 4.15(a)(1) and 4.15(a)(2), above emergency fire and police services near the project limits are provided by OCFA, Anaheim Fire and Rescue, the City of Anaheim Police Department, and the City of Yorba Linda Police Department. Project construction would not affect emergency access within or near the project limits with the implementation of Mitigation Measure TR-1. After construction is completed, operation of the proposed project would facilitate improved emergency access within the project limits, resulting in a beneficial long-term impact. Therefore, impacts would be less than significant with implementation of Mitigation Measure TR-1.

4.17.2.1 Mitigation Measures

TR-1 **Traffic Management Plan (TMP).** Prior to the initiation of construction, the City of Yorba Linda City Engineer shall ensure that a Traffic Management Plan (TMP) has been prepared for the proposed project in coordination with the City of Anaheim City Engineer and the County of Orange County Engineer. The City of Yorba Linda Engineer shall also coordinate with OCFA, Anaheim Fire and Rescue, the City of Anaheim Police Department, and the City of Yorba Linda Police Department for measures related to emergency access. The TMP shall include measures to minimize the potential safety impact during the short-term construction process, when partial lane closures may be required. It shall include measures such as construction signage, detour routes and signage, pedestrian and bicyclist protection, limitations on timing for lane closures to avoid peak hours, temporary striping plans, identification of alternate bus stops during potential short-term bus stop closures, construction vehicle routing plans, and the need for a construction flagperson to direct traffic during heavy equipment use. The TMP shall be incorporated into project specifications for verification prior to final plan approval.

4.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. 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)? Or	☐	☐	☐	☒
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.	☐	☐	☒	☐

4.18.1 Discussion

As of July 1, 2015, California Assembly Bill 52 (AB 52) was enacted and expanded CEQA by establishing a formal consultation process for California tribes within the CEQA process. The bill specifies that any project may affect or cause a substantial adverse change in the significance of a tribal cultural resource would require a lead agency to "begin consultation with a California Native American tribe that is traditional and culturally affiliated with the geographic area of the proposed project." Section 21074 of AB 52 also defines a new category of resources under CEQA called "tribal cultural resources." Tribal cultural resources are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is either listed on or eligible for the California Register of Historical Resources (CRHR) or a local historic register, or if the lead agency chooses to treat the resource as a tribal cultural resource.

In compliance with AB 52, the City of Yorba Linda distributed letters notifying each tribe that requested to be on the City's list for the purposes of AB 52 of the opportunity to consult with the City regarding the proposed project. The letters were distributed by certified mail on April 13, 2020. In addition to the 30-day response period provided by AB 52, Executive Order (EO) N-54-20 went into effect on April 22, 2020 providing an extended response period for tribal consultation. Under this Executive Order, time elapsed prior to April 22, 2020 is accounted for in an additional 30-day extension. Therefore, the tribes were given an additional 23 days to respond to the City's request for consultation. This response period closed on July 15, 2020 and no responses were received.

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)

No Impact. As detailed in Response 4.5(a), no historic resources listed or eligible for listing in a State or local register of historic resources are located on-site. Therefore, no impacts related to historic tribal cultural resources defined in Public Resources Code Section 5020.1(k) would occur in this regard.

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. As noted above, the City distributed letters to potentially affected Native American tribes which have cultural or traditional affiliation with the City in accordance with AB 52 requirements on April 13, 2020. As described above, in accordance with AB52 and EO N-54-20, the tribes were given a total of 53 days to respond and no responses were received. Therefore, no known tribal cultural resources have been identified and no impacts to known tribal cultural resources are anticipated. As stated in Section 4.5 above, the project's proposed ground disturbance activities could uncover previously undiscovered tribal cultural resources. In addition, SC-CUL-1 would ensure that in the event unknown cultural resources, including archaeological and tribal cultural resources are discovered during ground-disturbing activities, appropriate measures are taken. Compliance with Section 5097.9 of the California Public Resources Code as required in RC-CUL-1 would preclude potential impacts to human remains and associated funerary objects. Refer to Section 4.5, Cultural Resources, for the full text of these standard conditions. Due to compliance with SC-CUL-1 and RC-CUL-1, impacts to tribal cultural resources would be less than significant.

4.19 UTILITIES AND SERVICE SYSTEMS

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

4.19.1 Existing Setting

4.19.1.1 Water

Yorba Linda Water District (YLWD) provides domestic water service to the portion of the project site that is within the City of Yorba Linda, and the City of Anaheim Public Works Department provides domestic water service to the portion of the project site that is within the City of Anaheim. YLWD's 2015 *Urban Water Management Plan* (UWMP) demonstrates that YLWD has adequate domestic water supply for future water demands through 2040. YLWD relies on a combination of approximately 70% local groundwater (sourced from the Orange County Groundwater Basin) and approximately 30% imported water (sourced from the Colorado River and delivered by Municipal Water District of Orange County) to meet supply demand.[1] The total projected water demand for customers served by YLWD is approximately 19,946 acre-feet per year (afy) in 2020; the projected water demand increased every 5-year period, totaling 21,582 afy by 2040.[2] YLWD's planned water supplies for 2020 and 2040 total 19,946 afy and 21,582 afy, respectively. With implementation of the conservation and resource management measures described in the 2015 UWMP by YLWD and its customers, YLWD's groundwater and imported water supplies are expected to remain highly reliable through 2040. The 2015 UWMP attributes the projected reliability of YLWD's water supply to increasingly aggressive conservation efforts. Furthermore, as analyzed in the UWMP, YLWD's

1 Yorba Linda Water District. 2015. *Urban Water Management Plan* (UWMP). Website: https://www.ylwd.com/images/news/ylwd-reports/DRAFT_YLWD_UWMP_2016-04-20.pdf (accessed March 2, 2020)

2 Ibid.

supply is anticipated to remain reliable through 2040 during both the single dry year and multiple dry year scenarios.[1]

The City of Anaheim's Public Utilities Department (Public Utilities Department)'s 2015 UWMP demonstrates that the Public Utilities Department has adequate domestic water supply for future water demand through 2040. The total projected demand for customers served by the Public Utilities Department is approximately 61,895 afy in 2020 and increases incrementally to a projected demand of 66,988 afy by 2040.[2]

4.19.1.2 Wastewater

YLWD and the Anaheim Public Works Department are responsible for maintaining the sanitary sewer system in the project limits. YLWD owns and maintains nearly 150 miles of sewer pipes and one sewer lift station. The Public Utilities Department maintains municipal wastewater collector facilities throughout their service area. Wastewater collected within both the YLWD and Public Utilities Department sanitary sewer system is conveyed to the Orange County Sanitation District (OCSD) trunk sewer line for treatment and disposal.

4.19.1.3 Storm Water Drainage Facilities

The capacity of the downstream storm drain network depends on peak discharge rates entering the system. As discussed further in Section 6.10, Hydrology and Water Quality, the project site is currently developed and contains impervious surfaces. In its existing condition, stormwater runoff outflows to the YLWD's and the Public Utilities Department's stormwater drainage system flows into facilities that are owned, operated, and maintained by the Orange County Flood Control District.

4.19.1.4 Energy

Electrical power would be supplied to the portion of the project site within the City of Yorba Linda by Southern California Edison (SCE) and to the portion of the project site within the City of Anaheim by the Anaheim's Public Utilities Department. Natural gas services are provided to both the Cities of Yorba Linda and Anaheim by Southern California Gas Company.

4.19.1.5 Solid Waste

The City of Yorba Linda contracts with both Yorba Linda Disposal and Republic Services to collect and dispose of the solid waste. The City of Anaheim contracts with Republic Services Anaheim for the collection and disposal of its solid waste. OCWR owns and operates three active landfills (i.e., the Olinda Alpha Landfill in Brea, the Frank R. Bowerman Landfill in Irvine, and the Prima Deshecha Landfill in San Juan Capistrano). All three landfills are permitted as Class III landfills, which only accept non-hazardous municipal solid waste for disposal; no hazardous or liquid waste is accepted.

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1 Yorba Linda Water District. 2015. *Urban Water Management Plan* (UWMP). Website: https://www.ylwd.com/images/news/ylwd-reports/DRAFT_YLWD_UWMP_2016-04-20.pdf (accessed March 2, 2020)

2 City of Anaheim Public Works Department UWMP. 2015. Website: https://www.anaheim.net/DocumentCenter/View/11777/Anaheim-UWMP-2016?bidId= (Accessed March 2, 2020).

Of the three Class III landfills, the closest to the project site is the Olinda Alpha Landfill, 6.6 miles northwest. The Olinda Alpha Landfill is currently permitted by the California Department of Resources, Recycling, and Recovery (CalRecycle) to receive a maximum of 8,000 tons per day (tpd) of waste. The landfill currently receives an average of approximately 7,000 tpd, and as such is currently operating at approximately 87.5 percent of its daily capacity. As of November 2014, the Olinda Alpha Landfill had an estimated remaining disposal capacity of 34,200,000 cubic yards. The Olinda Alpha Landfill is scheduled to close in approximately 2030, at which time it will be converted to a County regional park.

4.19.2 Discussion

a. Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact. As stated in Section 4.3, Air Quality, construction activities would include site grading and soil disturbance that would require compliance with SCAQMD's standard construction practices Rules 402 and 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. The increased demand of water supply associated with these measures during construction of the proposed project would be minimal and temporary in nature. Operation of the proposed project would improve transportation operations within the project limits and provide pedestrian and bike facilities and is not anticipated to generate an increase in water demand as compared to existing conditions. Therefore, water usage onsite during both project construction and operation would be negligible and would fall within YLWD's and the Public Utilities Department's existing capacity and available supply. As such, the proposed project would not necessitate new or expanded water entitlements, and YLWD and the Public Utilities Department would be able to accommodate the demand for potable water without a disruption of service to existing customers.

The project includes the widening of several roadways and associated improvements, all of which involve the expansion of impervious surfaces as compared to existing conditions, which would increase runoff within the project limits. As discussed in Section 4.10, Hydrology and Water Quality, a Final WQMP would be prepared for the project in compliance with the Orange County Flood Control District MS4 Permit. Adherence to the Final WQMP, including operational BMPs, would minimize impacts related to surface water runoff. Therefore, the proposed project would not exceed the capacity of downstream stormwater drainage facilities or cause the expansion of existing facilities. Impacts to stormwater drainage facilities would be less than significant.

As the proposed project includes roadway widening, intersection improvements, and pedestrian and bike facilities, neither construction nor operation of the proposed project would require additional wastewater, natural gas, electrical, or telecommunication facilities as compared to existing conditions. Underground utilities, such as water conveyance systems, telecommunication lines, electrical facilities, and natural gas lines, would be protected in place to the extent possible, and would be relocated within the project limits if necessary. Relocations would not result in a service disruption and all connections would remain intact. Furthermore, as operation of the proposed project would not result in additional habitable structures, or other land uses that would generate

demand for utilities, the levels of service to existing off-site receivers of the above-mentioned utilities would not be adversely affected. Therefore, impacts related to the relocation or construction of new facilities would be less than significant and no mitigation is required.

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant Impact. The proposed project involves improvements to existing roadway and associated bike and pedestrian facilities, and would not introduce any new land uses or facilities requiring additional water connections or supply. As such, project operation is not anticipated to generate an increase in water demand as compared to existing conditions. As described in Response 4.19(a), construction of the proposed project would require a temporary increase in water demand; however, the relatively small increase in water use would be minimal and intermittent during construction activities. As such, construction-related water demand would be accounted for by YLWD and Anaheim Public Works Department. Per the UWMPs for both YLWD and the Public Utilities Department, these agencies are able to meet demand in the multiple dry year scenarios for the years 2020, 2025, 2030, and 2040. Therefore, water demand from the proposed project would be within the providers' current and projected water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts related to water supplies would be less than significant, and no mitigation would be required.

c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. As described in Response 4.19(a) above, neither construction nor operation of the proposed project would generate wastewater or include development of land uses that would result in additional wastewater. Therefore, impacts related to wastewater treatment would be less than significant, and no mitigation would be required.

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact. Non-hazardous solid waste generated by construction and operation of the project would be collected and transported to the Olinda Alpha Landfill, as the closest Class III landfill to the project limits. Construction of the proposed project is not anticipated to result in a significant production of solid waste that would exceed the daily available capacity (1,000 tpd) at the Olinda Alpha Landfill; therefore, the proposed project would not result in an impact related to City, State, or federal statutes and regulations related to solid wastes. Although the project may require the disposal of debris during the grading/excavation process (e.g., asphalt and other demolition waste), the generation of these materials would be short-term in nature and would not have the capability to substantially affect the capacity of regional landfills. Moreover, the minimal solid waste produced during construction and maintenance of the proposed project would not impair the attainment of solid waste reduction goals. Therefore, the proposed project would result in a less than significant impact to solid waste and landfill facilities, and no mitigation would be required.

e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. Solid waste generated during construction of the proposed project would be limited to construction debris (e.g., concrete, rebar, and vegetation associated with clearing and grading, and associated roadway improvements. As described in Response 4.19(d) above, construction debris would not generate an excessive amount of solid waste that would exceed the daily or overall capacity of the Olinda Alpha Landfill. Construction waste would be disposed of in accordance with federal, State, and local regulations related to recycling, including the California Integrated Waste Management Act of 1989 (AB 939). Operation of the completed project would generate very limited waste material associated with roadway, bike, and pedestrian facility maintenance, which would be collected and disposed of consistent with City policies similar to existing conditions. Therefore, no impact would occur. No mitigation is required.

4.20 WILDFIRE

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

4.20.1 Existing Setting

The California Department of Forestry and Fire Protection (CAL FIRE) identifies Fire Hazard Severity Zones and shares that information with local agencies. CAL FIRE map areas of Fire Hazard Severity Zones within Local Responsibility Areas (LRAs) and State Responsibility Areas. Wildland fire protection in the State is the responsibility of either the local government, the State, or the federal government. LRAs include incorporated cities with service provided by municipal fire departments or fire protection districts.

The City of Anaheim establishes its own map of Fire Protection Areas, while the City of Yorba Linda adopted the CAL FIRE designations. For the portion of the project limits that extend from South Weir Canyon Road to SR-91, the City of Anaheim designates a Special Protection Area (City of Anaheim, 2004b). The Special Protection Area provisions emphasize the prevention and control of urban/ wildland interface fires through the enforcement of fire regulations such as the removal of combustible vegetation, establishment of wet zones, and preventive building features such as spark arrestors on fire places. For the portion of the project limits that extend east of Yorba Linda Boulevard along La Palma Avenue, the City of Yorba Linda adopts a Very High Fire Hazard Severity Zone (City of Yorba Linda, 2016a).

The Santa Ana Canyon, which begins to the east of the Cities of Anaheim and Yorba Linda, has an extensive wildland fire history. The canyon's geographical location plays a major role in directing wildland fire into Orange County. Since 1980, the Santa Ana Canyon area has experienced more than

25 separate wildland fires, burning a total of 82,734 acres with the events ranging from one to more than 30,000 acres[1].

4.20.2 Discussion

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant with Mitigation Incorporated. As discussed in Section 4.9, Hazards and Hazardous Materials, both the Cities of Anaheim and Yorba Linda have independent emergency response plans. A Transportation Management Plan would be included as part of Mitigation Measure TR-1 that would require the City of Yorba Linda, as the lead agency, to coordinate with the emergency service providers of both the Cities of Yorba Linda and Anaheim to ensure emergency evacuation routes would be usable or detours would be identified during the construction period in the event of a wildfire event. Furthermore, operation of the proposed project would improve traffic operations along Weir Canyon Road, Santa Ana Canyon Road, Yorba Linda Boulevard, and La Palma Avenue. Therefore, no emergency response plans or evacuation routes would be impaired in the long term. Impacts to emergency response plans related to wildfire would be less than significant with mitigation incorporated.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less Than Significant Impact. A portion of the project limits along La Palma Avenue do extend into a Very High Fire Severity Zone. The topography does vary throughout the project limits, and along La Palma Avenue there are some areas where vegetation covers slopes towards the Santa Ana River channel adjacent to the project limits. However, all work along La Palma Avenue would occur from the existing roadway and no TCEs would be required outside the current roadway along La Palma Avenue. Furthermore, all construction equipment would be required to follow best management practices (BMPs) regarding vehicle idling and potential fire ignition points per the City of Yorba Linda's Municipal Code. The proposed project includes roadway improvements and pedestrian and bike facilities. The proposed project would not include any new habitable structures or facilities. Therefore, the proposed project would not exacerbate wildfire risks that could otherwise expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant and no mitigation is required.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The proposed project includes infrastructure improvements such as roadway widening, pedestrian and bike facilities, and associated landscaping and drainage improvements. The proposed project would not include any new habitable structures or facilities. Therefore, the

[1] City of Yorba Linda. 2016a. Yorba Linda General Plan, Public Health and Safety Element. Page PS-21.

proposed project would already improve infrastructure within the project limits and would not require the installation or maintenance of additional infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The portion of La Palma Avenue within the project limits that is furthest east is located in a Landslide Zone as defined by the Yorba Linda General Plan Safety Element (Yorba Linda 2016a). However, the proposed improvements along La Palma Avenue would include restriping within the existing roadway for the proposed bike path and construction access would be from the existing roadway. No grading or ground disturbance would occur within these landslide areas along La Palma Avenue. The proposed project would not cause an increased risk of downslope or downstream flooding or landslides as a result of runoff or post-fire slope instability. Therefore, no impact to people or structures would occur and no mitigation is required.

4.20.2.1 Mitigation Measures

See Section 4.17, Transportation, above, for Mitigation Measure TR-1, Transportation Management Plan.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

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

4.21.1 Discussion

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

Less Than Significant with Mitigation Incorporated. As concluded in Section 4.4, Biological Resources, with adherence to Regulatory Compliance Measures RC-BIO-1 through BIO-5 and Standard Conditions SC-BIO-1 and SC-BIO-2 and upon implementation of recommended Mitigation Measures BIO-1 through BIO-12, impacts to biological resources would be less than significant. As indicated in Section 4.5, Cultural Resources and Section 4.18, Tribal Cultural Resources, the potential for encountering cultural and tribal cultural resources as a result of project construction is considered low. However, in the unlikely event resources are discovered during ground disturbance, SC-CUL-1 and RC-CUL-1 would minimize potential impacts. As discussed in Section 4.7, Geology and Soils, construction activities would occur in deposits with high paleontological sensitivity. Therefore, Mitigation Measures PAL-1, PAL-2, and PAL-3 would be implemented to reduce potentially significant impacts to paleontological resources to less than significant. With adherence to the Regulatory Compliance Measures and Standard Conditions and implementation of the recommended Mitigation Measures, the proposed project is not anticipated to eliminate important examples of the major periods of California history or prehistory. Thus, impacts in this regard would be less than significant with mitigation incorporated.

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. A significant impact may occur if a proposed project, in conjunction with related projects, would result in impacts that are less than significant when viewed separately, but would be significant when viewed together. As concluded in Sections 4.1 through 4.20, the proposed project would not result in any significant and unavoidable impacts in any environmental categories with implementation of project mitigation measures. In addition, according to the list of planned projects within the Cities of Yorba Linda and Anaheim provided in Section 2.0, Table 2.3.A above, none of these proposed projects are within or adjacent to the proposed project limits. In addition, the City of Yorba Linda City Engineer would coordinate the implementation of the proposed roadway improvements with the timing of the City's annual pavement preservation work. Implementation of mitigation measures at the project-level would reduce the potential for the incremental effects of the proposed project to be considerable when viewed in connection with the effects of past projects, current projects, or probable future projects.

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

Less Than Significant Impact. Previous sections of this Initial Study reviewed the proposed project's potential impacts related to aesthetics, air quality, noise, hazards and hazardous materials, traffic, and other issues. As concluded in these previous discussions, the proposed project would not have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly, following conformance with the existing regulatory framework and mitigation measures. Further, as a roadway improvement, project features would be designed to meet the needs of humans and are not anticipated to result in direct or indirect adverse effects. Impacts would be less than significant in this regard.

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