

State Route 74 Shoulder Widening Project

ORANGE COUNTY, CALIFORNIA
DISTRICT 12 – ORA– 74 (PM 2.93-5.06)

12-0L7200/1200020180

Initial Study with [Proposed Mitigated Negative
Declaration]



**Prepared by the
State of California Department of Transportation**



MARCH 2013

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GENERAL INFORMATION PAGE

General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study (IS), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Orange County, California. The California Department of Transportation is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

Please read the document.

Additional copies of the document, as well as the technical studies we relied on to prepare it, are available for review at the district office and at the public library listed below:

Orange County Public Library
31495 El Camino Real, San Juan Capistrano, CA 92675
(949) 493-1752

Department of Transportation, Environmental Planning
3347 Michelson Drive, Suite 100, Irvine, CA 92612-1692

AND ONLINE AT:

http://www.dot.ca.gov/dist12/projects/SR-74_SPWES/index.htm

We'd like to hear what you think. If you have any comments regarding the proposed project, please send your written comments to the Department by the deadline.

- Submit comments via postal mail to:
Department of Transportation, Division of Environmental Analysis
Attention: Gabriela Jauregui
3347 Michelson Dr, Suite 100
Irvine, CA 92612-1692
- Submit comments via email to: D12_74SafeWS@dot.ca.gov

Be sure to submit comments by the deadline: April 24, 2013

What happens next:

After comments are received from the public and reviewing agencies, the Department, may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is appropriated, the Department could design and construct all or part of the project.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, Attn: Gabriela Jauregui, Associate Environmental Planner, Environmental Planning, 3347 Michelson Drive, Suite 100, Irvine, CA 92612-1692; (949) 724-2701 Voice, or use the California Relay Service TTY number, 711, or 1-800-735-2922.

SCH # _____
12-ORA-74 PM 2.93-5.06
0L7200 (1200020180)

Widen Shoulders, install Metal Beam Guardrail and Centerline Rumble Strip on State Route 74,
from east of Antonio Parkway/La Pata Road (PM 2.93) to Cristianitos Road (PM 5.06), Orange
County

INITIAL STUDY with (Proposed) Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

3/22/13

Date of Approval



Ryan Chamberlain
Deputy Director
California Department of Transportation
NEPA & CEQA Lead Agency

The following person may be contacted for additional information concerning this document:

Gabriela Jauregui (949) 724-2701
3347 Michelson Drive, Suite 100, Irvine, CA. 92612

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PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to widen the existing shoulder on State Route 74 (SR-74) to a continuous 4-foot shoulder in both directions, install centerline rumble strips, construct turn-outs and install metal beam guard rail (MBGR) at various locations. Shoulder widening will require roadway excavation and embankment in certain cut and fill sections. Retaining walls will be required. Most existing culverts within the project limits will be replaced. This safety project begins from east of Antonio Parkway/La Pata Avenue (PM 2.93) to west of Conrock Entrance (PM 5.06) in an unincorporated area of the County of Orange.

Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans's intent to adopt an MND for this project. This does not mean that Caltrans's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

The Department has prepared an Initial Study for this project; and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have **no effect** on:
Agriculture and Forestry, Greenhouse Gas Emissions, Land Use/Planning, Mineral Resources, Population/Housing, Public Services, Recreation, and Utilities/Service Systems

In addition, the proposed project would have **no significant effect** on:
Air Quality, Geology/Soils, Hazards and Hazardous Materials, Hydrology/Water Quality, Noise, and Traffic

The Proposed project would have **no significantly adverse effect** on Aesthetics, Biological Resources, and Cultural Resources because the project will implement avoidance, minimization and mitigation measures as discussed in sections 2.1.2, 2.4.4, and 2.5.2.

Ryan Chamberlain
District Director
Division of Environmental Analysis
California Department of Transportation, District 12

Date

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TABLE OF CONTENTS

CHAPTER 1 PROPOSED PROJECT	1
1.1 INTRODUCTION	1
1.2 PROJECT DESCRIPTION	7
1.3 PERMITS AND APPROVALS NEEDED	8
CHAPTER 2 CEQA ENVIRONMENTAL CHECKLIST FORM	9
2.1 AESTHETICS.....	10
2.2 AGRICULTURAL RESOURCES.....	12
2.3 AIR QUALITY	13
2.4 BIOLOGICAL RESOURCES	15
2.5 CULTURAL RESOURCES	25
2.6 GEOLOGY AND SOILS.....	33
2.7 GREENHOUSE GAS EMISSIONS	35
2.8 HAZARDS AND HAZARDOUS MATERIALS.....	36
2.9 HYDROLOGY AND WATER QUALITY	38
2.10 LAND USE PLANNING.....	44
2.11 MINERAL RESOURCES	45
2.12 NOISE.....	46
2.13 POPULATION AND HOUSING	47
2.14 PUBLIC SERVICES.....	48
2.15 RECREATION	49
2.16 TRANSPORTATION/TRAFFIC	50
2.17 UTILITIES AND SERVICE SYSTEMS.....	51
2.18 MANDATORY FINDINGS OF SIGNIFICANCE	53
CHAPTER 3 CLIMATE CHANGE	57
CHAPTER 4 CONSULTATION AND COORDINATION	67
CHAPTER 5 LIST OF PREPARERS	69
CHAPTER 6 DISTRIBUTION LIST	73
CHAPTER 7 REFERENCES	75
LIST OF FIGURES	
FIGURE 1: PROJECT VICINITY MAP	3
FIGURE 2: PROJECT LOCATION MAP	5
FIGURE 3-1: CALIFORNIA GREENHOUSE GAS FORECAST	61
FIGURE 3-2: MOBILITY PYRAMID	62
LIST OF TABLES	
TABLE 2.18-1: FUTURE ROAD PROJECTS.....	54
TABLE 3.1: CLIMATE CHANGE/CO2 REDUCTION STRATEGIES	63
APPENDICES	
A. ENVIRONMENTAL COMMITMENT RECORD	
B. NON-DISCRIMINATION POLICY STATEMENT	
TECHNICAL STUDIES/MEMORANDUMS PREPARED (BOUNDED SEPARATELY)	
A. HISTORIC PROPERTY SURVEY REPORT (MAR 2013)	
B. INITIAL SITE ASSESSMENT CHECKLIST (FEB 2012)	

- C. NATURAL ENVIRONMENTAL STUDY AND BIOLOGICAL ASSESSMENT (JAN 2013)
- D. STRUCTURES PRELIMINARY GEOTECHNICAL REPORT (APR 2009)
- E. PALEONTOLOGICAL RESOURCES IDENTIFICATION AND EVALUATION REPORT
(JAN2013)
- F. VISUAL IMPACT ASSESSMENT (OCT 2012)
- G. WATER QUALITY ASSESSMENT REPORT (OCT 2012)

Chapter 1 – Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to widen the existing shoulder on State Route 74 (SR-74) to a continuous 4-foot shoulder in both directions, install centerline rumble strips, construct turn-outs and install metal beam guard rail (MBGR) at various locations. Shoulder widening will require roadway excavation and embankment in certain cut and fill sections. Retaining walls will be required. Most existing culverts within the project limits will be replaced. The project begins from east of Antonio Parkway/La Pata Avenue (PM 2.93) to west of Conrock Entrance (PM 5.06) in an unincorporated area of the County of Orange. Caltrans is the Lead Agency under the California Environmental Quality Act (CEQA). An Initial Study (IS) has been prepared pursuant to CEQA.

This proposed project (project) is included in the 2011 Federal Regional Transportation Improvement Program (FTIP). It is also included in the Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan (RTP).

SR-74, also known as Ortega Highway, is a major east-west arterial in south Orange County extending from Interstate 5 (I-5) in the city of San Juan Capistrano northeast to Riverside County where it intersects with Interstate 15 (I-15). See Vicinity Map Figure 1. SR-74 then extends further northeast towards the city of Palm Desert in Riverside County. This section of SR-74 is a two-lane winding highway with hilly and mountainous terrain surrounded by undeveloped areas. See Project Location Map Figure 2.

The project is funded through the Traffic Safety Improvement Program (Collision Reduction) of the State Highway Operation and Protection Program (SHOPP) under Program Code 20.10.201.010, for the 2015/2016 fiscal year. This project will require Permanent Drainage Easement (PDE), Permanent Slope Easement (PSE), and Temporary Construction Easement (TCE). This project does not increase traffic capacity.

Purpose and Need

Most of the existing curves within these project limits do not meet standard stopping sight distance due to non-standard shoulder widths and non-standard horizontal clearance. The project is needed because SR-74 currently experiences high cross centerline collisions. The highway also has an inadequate number of turn out lanes for emergency stops. The purpose of the project is to reduce cross centerline collisions by widening the shoulders, installing metal beam guard rails, and construct turn-out lanes.

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SOURCE: ESRI NatGeo_World_Map

Vinicity Map Figure 1

<p>Legend</p> <p> Project Area</p>	<p>SR-74 Safety Project EA 0L720/ EFIS 1200020180 PM 2.93/5.06 Orange County, California</p>	<p>Scale: 0 1 2 3 4 Miles</p> <p>Albers Projection Central Meridian: -88 1st Std Parallel: 20 2nd Std Parallel: 00 Latitude of Origin: 40</p> <p> </p>
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SOURCE: ESRI NatGeo_World_Map

Location Map Figure 2



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1.2 Project Description

The project proposes to widen the shoulders, install centerline rumble strips, construct 12-foot turn-out lanes on the eastbound direction and 15-foot turn-out lanes in the westbound direction, and replace and install metal beam guard rail (MBGR) at various locations. The project begins from east of Antonio Parkway/La Pata Avenue (PM 2.93) to west of Conrock Entrance (PM 5.06) in an unincorporated area of the County of Orange. Most existing culverts within the project limits will be replaced. The proposed improvements will require roadway excavation and fill, construction of retaining walls, replacement of most culverts, and acquiring of temporary construction easements, permanent easements, and slope easements.

Within the project limits, SR-74 is a two-lane winding highway with hilly and mountainous terrain surrounded by undeveloped areas. The project is needed because SR-74 currently experiences high cross centerline collisions. The highway also has an inadequate number of turn out lanes for emergency stops. The purpose of the project is to reduce cross centerline collisions by widening the shoulders, installing centerline rumble strips and metal beam guard rails, and construct turn-out lanes.

Alternatives

This section describes the proposed action and design alternatives that were developed to meet the identified need by accomplishing the defined purposes while avoiding or minimizing environmental impacts. The alternatives considered are the “Build Alternative” and “No-Build Alternative”.

No-Build Alternative

The No-Build Alternative proposes no action and will result in SR-74 to remain in its present condition. This alternative will not address the safety issues and will not alleviate existing and projected congestion in the study area. This alternative will not meet the projects purpose and need.

Proposed Build Alternatives

The Build Alternative proposes to widen existing shoulder width to 4-foot in both directions, construct 12-foot turn-out lanes on the eastbound direction and 15-foot turn-outs on the westbound direction, and install metal beam guard rail/end treatments at various locations. The proposed improvements will require roadway excavation and fill, construction of retaining walls, replacement of most existing culverts, acquisition of temporary construction easement, permanent drainage easement, and slopes easement. Utilities within the project limits will be protected in place or relocated.

This alternative will include a few non-standard design features: non-standard stopping sight distance and non-standard horizontal clearance; non-standard shoulder widths; and non-standard existing horizontal curve radii.

1.3 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

Agency	Permit/Approval	Status
United States Fish and Wildlife Service	Section 7 Consultation for Threaten and Endangered Species	Pending, will be approved prior to approval of environmental document
California Department of Fish and Wildlife	1602 Lake and Streambed Alteration Agreement	Application of Section 1602 Permit anticipated after completion of Environmental Phase.
Regional Water Quality Control Board	Section 401 Water Quality Certification	Certification will be obtained after approval of environmental document and prior to construction
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States	Application of Section 404 Permit anticipated after completion of Environmental Phase.
State Water Resources Control Board	Section 402 NPDES/Caltrans NPDES Permit CAS00003 and CAS00002 (General Construction Permit)	Construction General Permit has been adopted and effective as of July 1, 2010

Chapter 2 – CEQA Checklist

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 3 for additional information.

<input checked="" type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards and Hazardous Materials	<input type="checkbox"/>	Hydrology/Water Quality
<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Utilities/Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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: <i>Smita Deshpande</i>	Date: <i>March 22, 2013</i>
Printed Name: Smita Deshpande	For:

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

2.1 Aesthetics

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities.” (CA Public Resources Code Section 21001[b])

A Visual Impact Assessment was completed for the project, by a District Landscape Architect, on October 12, 2012.

2.1.1 Discussion of Environmental Evaluation Questions

a) Less than Significant Impacts. Per the Visual Impact Assessment, the project would have a less than significant impact in the physical characteristics of the existing environment. The removed vegetation on the south for widening, existing vegetation and tree groupings beyond removal will still provide a vegetative background that should not affect visual character. The removed vegetation on the north could open up views to the lower San Juan Creek and floodplain below and in many places have existing vegetation beyond. There are no recognized scenic vistas within the project vicinity; therefore the project would not have a substantial affect on any scenic vistas in the area.

b) Less than Significant Impact with Mitigation. SR- 74 is not designated as a State Scenic Highway, but is eligible for designation. Native vegetation will be removed during construction. Native vegetation including oak trees would require highway revegetation as mitigation.

c) Less than Significant Impacts. The widening of shoulders, installation of centerline rumble strips, metal beam guard rails and construction of turn-out lanes will not degrade or substantially alter the visual character of the site and/or its surroundings. Per the Visual Impact Assessment, the visual character will remain similar to conditions before construction improvements. To minimize the impacts; retaining walls and concrete barriers will be stained to blend in with the surrounding area. A copper sulfate stain will be applied to the Metal Beam guard Rail to give it an aged appearance. Vegetation removed on the north side could improve views toward the Lower San Juan Creek and floodplain.

d) No Impacts. The project scope does not include the construction of any new sources of substantial light or glare which would adversely affect day or nighttime views in the area. No impacts related to light and glare would occur as a result of the project.

2.1.2 Avoidance, Minimization, and/or Mitigation Measures

The following avoidance, minimization, and mitigation measures will be implemented to minimize potential impacts:

A - 1: If removal of native vegetation, including oak trees occurs, replanting of vegetation is required.

A – 2: Retaining walls and concrete barriers will be stained to blend in with surrounding area.

A – 3: A copper sulfate stain will be applied to the Metal Beam Guard Rail to give an aged appearance.

2.2 Agricultural 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. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forestland or conversion of forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 forestland to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

2.2.1 Discussion of Environmental Evaluation Questions

a) No Impact. According to the Farmland Mapping and Monitoring Program of the California Department of Conservation, Division of Land Resource Protection (2010), there is no designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance in the project area.

b) No Impact. According to the Farmland Mapping and Monitoring Program of the California Department of Conservation, Division of Land Resource Protection (2010), there is no existing zoning for agricultural use in the project area.

c) No Impact. There is no land within the project areas zoned as forest land or timberland.

d) **No Impact.** See response to c).

e) **No Impact.** The project area does not contain any farmland, agricultural land, or forest land.

2.2.2 Avoidance, Minimization, and/or Mitigation Measures

None required.

2.3 Air Quality

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

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂). Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), and particulate matter (PM). California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as SCAG for Orange County, and the appropriate federal agencies, such as the

Federal Highway Administration, makes the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter. A region is a “nonattainment” area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in “nonattainment” areas the project must not cause any increase in the number and severity of violations. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

An Air Quality Technical Memorandum was prepared by the District Environmental Engineer on June 14, 2012. It determined that this project is exempted, both locally and regionally, from all conformity analysis and would have no effect or impacts on greenhouse gases or climate change.

2.3.1 Discussion of Environmental Evaluation Questions

a) No Impact. The Air Quality Management Plan (AQMP) describes air pollution control strategies to be taken by a city, county, or region classified as a nonattainment area. The purpose of the AQMP is to bring the area into compliance with federal and State air quality standards. This project is exempt from project level conformity per 40 CFR 93.126, Table 2 Exemptions, *Shoulder Improvements*. Therefore, the project would not conflict with the AQMP or its implementation.

b) Less than Significant Impact. The proposed project is an safety improvement not a capacity increasing project and, hence, will not result in an increase in traffic generating more pollutants. There would be minimal exhaust emissions and fugitive dust generated from construction vehicles and equipment. With the implementation of Caltrans Standard Specifications, these impacts to air quality would be less than significant.

c) Less than Significant Impact. The project is exempted from project level conformity per 40 CFR 93.126; therefore a considerable net increase of any criteria pollutant is not anticipated.

d) Less than Significant Impact. Construction of the project may expose surrounding sensitive receptors to airborne particulates and fugitive dust as well as a minimal quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). With the implementation of Caltrans standard construction practices, the project will have less than significant impacts to air quality concentrations.

e) Less than Significant Impact. Some objectionable odors may emanate from the operation of diesel-powered equipment during construction of the project. These odors, however, would be limited to the construction period and therefore are considered less than significant.

2.3.2 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required; however, the following avoidance and/or minimization measures will be implemented to minimize potential impacts:

AQ – 1: All trucks that are to haul excavated or graded material on site shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.

AQ – 2: The contractor shall adhere to Caltrans Standard Specifications for Construction (Section 14-9 [Air Quality]).

2.4 Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A Natural Environment Study (NES) was completed in January 2013. In 2011 and 2012, biological resource surveys, habitat assessments, focused plant and wildlife surveys, an oak tree assessment, and a jurisdictional delineation (JD) were performed to document the existing biological conditions within the Biological Study Area (BSA). Focused surveys were conducted

for the federally-listed endangered arroyo toad (ARTO) and riparian birds (including the federally-listed endangered least Bell's vireo, LBVI). Habitat suitability assessments for the federally-listed threatened coastal California Gnatcatcher (CAGN) and bats were also conducted. A jurisdictional delineation was prepared to identify the extent of jurisdictional wetlands and non-wetland waters within the BSA.

The BSA, encompassing 19.61 acres (ac) is generally limited to Caltrans right of way (ROW) due to lack of access permission. San Juan Creek flows to the north of the BSA. Drainages and washes associated with tributaries of San Juan Creek occur throughout the BSA.

2.4.1 Discussion of Environmental Evaluation Questions

a) Less than Significant with Mitigation. A list of proposed, threatened, or endangered species potentially occurring with the BSA was provided by USFWS on 1/23/12. This list is included in the NES. One federally listed plant species thread-leaved brodiaea (*Brodiaea filifolia*) and three federally listed wildlife species including arroyo toad (*Anaxyrus californicus*; ARTO), coastal California gnatcatcher (*Polioptila californica californica*; CAGN), and least Bell's vireo (*Vireo bellii pusillu*; LBVI) have potential to occur in the BSA. The results of 2011 surveys indicated presence of ARTO. Surveys indicated the absence of thread-leaved brodiaea, CAGN and LBV.

A total of 9.53 ac of designated ARTO critical habitat would be permanently impacted by the project, although 5.86 ac of this permanently impacted area is characterized as having an asphalt surface that does not contain the constituent elements required for ARTO recovery. An additional 2.38 ac of ARTO critical habitat would be temporarily impacted by the project.

At a minimum, informal or formal Federal Section 7 consultation between Caltrans (authorized to act on behalf of the Federal Highway Administration) and the US Fish and Wildlife Service (USFWS) will occur to address potential impacts to designated critical habitat for the federally listed ARTO. In this case, the USFWS is likely to concur with a conclusion that the proposed action "may affect but is not likely to adversely affect" ARTO and its critical habitat. The project is not likely to adversely affect thread-leaved brodiaea, CAGN, or LBVI.

A Section 2080 permit from the California Department of Fish and Wildlife (CDFW) is not expected to be required for the proposed project.

Avoidance, minimization, and/or mitigation measures BIO 4-12 have been included for arroyo toad. ARTO populations have increased in San Juan Creek due to Caltrans-sponsored eradication efforts to eradicate American bullfrog (*Lithobates catesbeianus*) and red swamped crayfish (*Procambarus clarkia*) within the upper portions of San Juan Creek from the eastern section of Casper's Wilderness Park east to the Orange/Riverside County line. Due to the success of invasive species removal efforts within the watershed, Caltrans will likely expand upon this eradication effort, and propose it as project compensatory mitigation, if required.

Nuttall's woodpecker (*Picoides nuttallii*, California Special Animal) was observed within the BSA during bird surveys conducted in 2011. The proposed project is not anticipated to directly impact this species as a result of the Avoidance, minimization, and/or mitigation measures BIO

1-3 outlined for oak woodland and riparian/riverine natural communities; however, indirect and temporary impacts are anticipated through the loss of potential habitat.

Although no CAGN were observed during riparian bird surveys, and no breeding territories are expected to occur with the project area, the proposed project would impact coastal sage scrub (CSS) habitat. Avoidance, minimization, and/or mitigation measures for CSS BIO 1-3 also benefit CAGN. The proposed project would not impact any areas of designated CAGN critical habitat.

The proposed project is not expected to directly impact LBVI; however the proposed project may have indirect and temporary impacts to LBVI through the loss of potential habitat. Avoidance, minimization, and/or mitigation Measures BIO 1-2 will benefit this species.

A Bat Habitat Suitability Assessment was conducted in July, August, and September 2011 (Appendix G of NES). Yuma myotis (*Myotis yumanensis*) and small-footed myotis (*Myotis ciliolabrum*), both designated as California Special Animals, were detected acoustically near potential tree roost locations during nighttime surveys. Western mastiff bat (*Eumops perotis californicus*), a California Species of Special Concern, was present. Potential day roosting sites were observed throughout the BSA with night roosting observed at three culvert structures in the BSA. Avoidance, minimization, and/or mitigation measures BIO 14 – 18, 25 & 26 have been included to address impacts to bats.

A total of 6 of 50 special status plant species, with the potential to occur, were identified during the records search /literature review for the BSA are federal- and/or State-listed as endangered, threatened, or candidate species: Encinitas baccharis, thread-leaved brodiaea, slender-horned spineflower, Santa Monica Mountains dudleya, Laguna Beach dudleya, and big-leaved crown-beard. The BSA is outside of the expected range of all these species except for thread-leaved brodiaea. This species is federally listed as threatened, State-listed as endangered, and a CNPS List 1B species. Botanical surveys conducted in 2011 during the appropriate blooming period for this species were negative. No sensitive plant species were found during botanical surveys conducted in 2011 during the appropriate blooming period. Therefore, all of these special status species are considered absent from the BSA.

Temporary impacts to Yuma myotis, small-footed myotis, and western mastiff bat would include temporary indirect disturbance (such as noise, dust, night lighting, and human encroachment from construction). Construction could temporarily impede access to roost sites. Other permanent indirect issues such as the introduction of nonnative species and trash, would permanently contribute to the degradation of bat foraging habitat (riparian/riverine) in the vicinity. A total of 3 culverts, with bats observed present, indicate a small portion of roosting habitat on-site that may be permanently impacted; however, the modification of the culverts presents an opportunity to enhance bat habitat with such measures as bat panels. The project is not expected to substantially affect the bats' long-term use of the structures. Avoidance, Minimization, and/or Mitigation Measures, as discussed, have been included to address impacts to bats.

Raptors and other birds protected by the federal Migratory Bird Treaty Act (MBTA) may nest in existing trees and shrubs within and adjacent to the BSA. Impacts to these species can occur as a result of direct removal of nests (i.e., during vegetation clearing) or causing nest failure by excessive disturbance of the nesting birds (i.e., from excessive noise and disruption from increased human activities). Avoidance, Minimization, and/or Mitigation Measures, as discussed, have been included to address impacts to nesting birds.

The proposed project is expected to potentially result in indirect permanent impacts to special-status animal species through the removal of potential habitat. These species are expected to move out of the area during construction. No direct permanent impacts are expected.

b) Less than Significant with Mitigation. Three natural communities of special concern were identified within the BSA: coastal sage scrub, southern cottonwood-willow riparian forest, and coast live woodland.

The proposed project would temporarily impact approximately 0.57 acres of coastal sage scrub, 0.03 acres of southern cottonwood-willow riparian forest, and 1.83 acres of coast live oak woodland (approximately 115 trees). Following construction activities, disturbed construction areas would be replanted with appropriate noninvasive species suitable for roadside planting. The implementation of landscaping could occur either concurrently with construction of the proposed project or through a separate contract. Temporary impacts to oak trees would be limited to the duration of the project and would not affect the long-term viability of the trees and may include minor foot trimming, foot traffic within drip-lines, and dust.

The proposed project would permanently impact approximately 1.04 acres of coastal sage scrub, and 2.66 acres of coast live oak woodland (equates to approximately 175 trees). There would be no permanent impacts to southern cottonwood-willow riparian forest. The proposed project would result in direct impacts to potentially jurisdictional riparian/riverine habitat through disturbance and/or removal of existing vegetation. Avoidance, minimization, and/or mitigation measures BIO 1-3 have been incorporated to address impacts to oak trees/oak habitat along with riparian/riverine habitat.

Avoidance, minimization, and/or mitigation measures BIO1-3 have been included to minimize impacts to CSS. The proposed project will not impact any CAGN-designated critical habitat. The impacts proposed are not inconsistent with those identified in the Southern Subregion MSAA/ Habitat Conservation Plan (HCP) for the anticipated road improvements; therefore, no compensatory mitigation for impacts to CSS is required.

A total of 32 exotic plants occurring on California Invasive Plant Council's (Cal-IPC's) California Invasive Plant Inventory were identified within the project limits. In compliance with Executive Order (EO) 13112, invasive species would be removed from the project work area and controlled during construction. In addition, affected areas would not be revegetated with plant species listed in Cal-IPC's California Invasive Plant Inventory with a high or moderate rating.

c) Less than Significant with Mitigation. The Jurisdictional Delineation Report (November 2012) found no jurisdictional wetland waters of the United States. However, based upon the United States Army Corp of Engineers (USACE) significant nexus determination, the project may have an impact on wetlands. A total of 20 potential drainage systems and/or culverts located within the project limits were evaluated for this report.

The proposed project is expected to permanently impact approximately 0.015 ac and temporarily impact approximately 0.072 ac of non-wetland waters potentially subject to USACE jurisdiction. If the project is found not to be consistent with the San Juan Creek Special Area Management Plan (SAMP), an Individual Permit will be required. As part of the SAMP process, certain Nationwide Permits (NWP) have been revoked. For the proposed project, a NWP cannot be obtained. If the project is determined to be consistent with the San Juan Creek SAMP, a Letter of Permission (LOP) will be obtained and compensatory mitigation, if necessary, will be conducted as the SAMP conditions require. Compensatory mitigation will be determined as part of the regulatory permit process and may involve habitat restoration within Caltrans ROW, at agency-approved off-site locations, such as invasive plant removal in San Juan Creek or coordination with the City of San Juan Capistrano, payment of in-lieu fees, and/or participation in agency-approved mitigation banks. A LOP is anticipated for the proposed project.

The proposed project is expected to permanently impact approximately 0.533 ac and temporarily impact approximately 0.579 ac of streambeds potentially subject to CDFW jurisdiction. A Streambed Alteration Agreement (SAA) is expected to be required for this project.

The project is within the jurisdiction of the San Diego RWQCB. Upon a jurisdictional decision (concurrence) from the USACE, a Section 401 Water Quality Certification from the RWQCB will be required for the project based on the area defined in the jurisdictional determination from the USACE.

d) Less than Significant with Mitigation. SR-74 is an existing road so the proposed project would not further fragment habitat and does not include permanent installation or placement of barriers, like sound walls or median barriers, that could impede wildlife movement. The proposed project may have temporary impacts including construction lighting, noise or dust, construction equipment, and structures that may temporarily deter or disrupt wildlife movement across or under the road. Avoidance, minimization, and/or mitigation measures BIO 21-24 have been incorporated to address impacts to wildlife movement.

The proposed project includes culvert removal and replacement at most culvert locations. Culvert removal and replacement will likely benefit wildlife movement due to associated debris and vegetation removal.

San Juan Creek will continue to provide vegetative cover for wildlife upon project completion. Wildlife will continue to use the existing culverts and wildlife corridor, along San Juan Creek, upon completion of the proposed project.

e) Less than Significant with Mitigation. An oak tree assessment was completed in November 2012 (Appendix I of NES). The project is located in unincorporated Orange County and there is

no specific ordinance that provides guidance for evaluating oak woodland, nor determining mitigation for those impacts. According to the Oak Tree Inventory (November 2012), the oak trees along SR-74 in the project area are primarily coast live oak (*Quercus agrifolia*) interspersed with patches of scrub oak (*Q. berberidifolia*). Currently the Department maintains all trees within the ROW for sight distance, including oak trees. The dripline of oak trees in the BSA often extends into the SR-74 paved roadway.

The proposed project may temporarily impact approximate 115 oak trees and permanently impact approximately 175 oak trees. Measures incorporated to avoid, minimize, and/or mitigate impacts to oak trees and oak habitat include BIO 1-3. Any replacement planting of oaks is not anticipated to take place within the project limits, due to lack of right of way. Replacement plantings will likely take place in the City of San Juan Capistrano or suitable areas in proximity to the project.

Given the surrounding open spaces areas and presence of oaks and oak woodland in these areas, impacts to oaks are considered less than significant with mitigation.

f) Less than Significant with Mitigation. The Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP) was prepared in July 2006 and the associated Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was approved by the US Army Corps of Engineers and certified by the County. CDFW did not sign the Implementation Agreement for the NCCP portion of the plan (approved document referred to as MSAA/HCP). The MSAA/HCP acknowledges the need for future road improvements in the project area. The proposed project does not conflict with the MSAA/HCP; however, the project is not considered a covered activity since Caltrans is not a participating entity in the MSAA/HCP. The MSAA/HCP states that construction of infrastructure facilities is allowed in ARTO corridors such as San Juan Creek if the facilities are located outside of the ordinary high water mark (OHWM) of the creek. The project avoidance, minimization and/or mitigation measures proposed for the special-status biological resources occurring or potentially-occurring, within the BSA, are not expected to have an impact on the MSAA/HCP areas.

The areas of USACE and CDFW jurisdiction within the project alignment are included within the San Juan Creek SAMP. For the proposed project, a LOP is anticipated. Mitigation, if required, will be determined during the SAMP process.

Cumulative

The NES considered cumulative impacts to biological resources. The majority of the land within the BSA is currently developed or zoned as Open Space, according to the Orange County General Plan. Thus, it is reasonably foreseeable that those parcels that are not currently developed will not be developed in the future. In addition, development within San Juan Creek is limited. However, future widening projects are reasonably certain to occur. These projects have the potential to encroach further into adjacent riparian habitat. Other activities that may occur following the proposed construction, including maintenance clearing and fuel modification, may

have cumulative impacts to the surrounding environment. The impacts to oak trees would contribute cumulatively to the decline of oak woodland in the long term.

The proposed project impacts to CSS habitat or the special-status species associated with these areas (i.e., CAGN) would be minimal and not substantial with consideration of other project impacts and comprehensive habitat conservation, given the small amount of CSS in the BSA. Some cumulative impacts, through direct loss or degradation of USFWS-designated critical habitat for ARTO, are expected from the project. Cumulative effects from other proposed projects (e.g., the proposed SR-241 extension, the development on Rancho Mission Viejo (RMV)), may also affect critical habitat; however, direct effects to ARTO breeding pools are not expected, nor are substantial reductions of foraging habitat. Some of these projects have addressed effects and mitigation through participation in the County Natural Community Conservation Plan Program and/or a Master Streambed Alteration Agreement (NCCP/MSAA). It is expected that the remaining cumulative projects in the area not participating in the County NCCP and/or MSAA/SAMP will include appropriate avoidance, minimization, mitigation, and compensation measures to address the permanent and temporary impacts of those projects in ARTO habitat.

Typically, indirect impacts (e.g., human disturbance, increased occurrences of invasive plant species) to wildlife would be chronic and could seriously degrade the habitat value along the periphery of the proposed road widening; however, as there is an existing roadway present within the project area and the number of lanes will not increase, these impacts are not expected to significantly increase from the existing condition. Similarly, road runoff effects to water quality are not expected to significantly increase from the existing condition. Project-specific activities that may occur following the proposed construction, including periodic maintenance clearing and fuel modification, already occur along the project area, and these regular and confined activities are not expected to have increased cumulative impacts to adjacent potential ARTO habitat.

Cumulative effects to Nuttall's woodpeckers, bats, and LBVI are expected through the loss and degradation of potential habitat; however, these impacts are minimal and not substantial.

2.4.2 Avoidance, Minimization, and/or Mitigation Measures

These measures, as listed in the NES (January 2013), will be incorporated to avoid, minimize, and or mitigate impacts to sensitive biological resources:

BIO-1: Prior to clearing or construction, highly visible barriers (such as orange construction fencing) and, as needed, silt fencing will be installed around the protected zone of any oak tree, oak habitat, riparian/riverine vegetation, and CSS and designated as ESAs to be preserved. The protected zone will extend 5 ft (1.52 m) outside of the dripline or 15 ft (4.57 m) from the trunk of the tree, whichever is greater, unless the area includes a road shoulder or existing asphalt. In these instances, the road shoulder or existing asphalt will not be included in the ESA. No grading or fill activity of any type will be permitted within the ESA. In addition, heavy equipment, including motor vehicles, will not be allowed to operate within the ESAs. All construction equipment shall be operated in a manner so as to prevent accidental damage to nearby oaks. No structure of any kind, or incidental storage of equipment or supplies, shall be allowed within the

ESA. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where trees are immediately adjacent to planned construction activities.

BIO-2: In order to avoid impacts to nesting birds, any native vegetation removal or tree (native or exotic) trimming activities will occur outside of the nesting bird season (February 15–August 31). In the event that vegetation clearing is necessary during the nesting season, a qualified biologist will conduct a preconstruction survey to identify the locations of nests. Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist. This buffer will be clearly marked in the field by construction personnel under guidance of the qualified biologist, and construction or clearing shall not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active.

BIO-3: Inspection and cleaning of construction equipment will be performed to minimize the importation of nonnative plant material, and eradication strategies (i.e., weed abatement programs) will be employed should an invasion occur.

BIO-4: Construction activities should occur outside the rainy season (October–May) to ensure that sedimentation within the drainage does not occur during construction activities. If construction must occur during the rainy season, then protective measures include the preparation and implementation of a SWPPP and BMPs. The SWPPP and BMPs must include measures to keep sediment out of the creek during and after storm events (for example, excavation spoils being stored outside the creek). In addition, for the protection of sensitive resources, including sensitive species, conditions regarding dust, noise, lighting, and other construction monitoring activities shall be outlined in the SWPPP and BMPs.

BIO-5: Immediately prior to construction, the qualified biologist shall provide an employee education program for listed species that may be affected by project work activities for all personnel who will be working on site during construction.

BIO-6: No fueling, lubrication, storage, or maintenance of construction equipment within 150 ft (46 m) of the CDFW or USACE jurisdictional areas is permitted. Spoil sites shall not be located within the CDFW or USACE jurisdictional areas, or in areas where it could be washed into San Juan Creek or its tributaries.

BIO-7: To reduce impacts to ARTO, all construction-related activities shall be confined to the proposed impact boundaries by installing silt fencing along the boundary to prevent any construction activities from encroaching into adjacent areas and to prevent ARTO from moving into the construction area. Fencing shall be approximately 2 ft (0.61 m) in height, 1 ft (0.31 m) of which shall be buried below the ground surface. Fencing shall be installed at least 14 days prior to the initiation of construction activities and shall be of appropriate material to exclude ARTO from the construction site. A qualified biologist shall survey the area inside the enclosure for a minimum of 10 nights prior to construction to relocate any toads observed within the construction impact area. ARTO found by the qualified biologist within the construction area shall be removed and relocated in suitable habitat either upstream or downstream of the project area. The qualified biologist will prepare temporary storage prior to the capture of toads. Any biologists handling ARTO must be authorized to do so by the appropriate agencies. In addition,

construction access points shall be limited in proximity of this habitat type to the maximum extent feasible. During all construction activities, the construction contractor will take the appropriate measures to ensure that no waste material is discharged into the perennial watercourse. Trash and debris deposits adjacent to this sensitive habitat type will be disposed of daily. All silt fences shall be removed as a last order of work.

BIO-8: A qualified biologist will monitor all construction activities within and adjacent to ARTO sensitive habitat areas, as well as sensitive habitat for bat roosting, to ensure that the construction does not encroach into adjacent areas. In addition, the biological monitor should be present during vegetation clearing and grading activities to relocate any sensitive wildlife species. The qualified biologist shall provide quarterly monitoring reports documenting compliance with the avoidance and minimization measures. The report shall be submitted to the Department and the applicable resource agencies.

BIO-9: The construction contractor shall cover grubbing spoils and other grading debris with plastic sheeting to prevent ARTO and other toad species from opportunistically burrowing in these exposed and friable soils. The sheeting shall be placed on the soils prior to sunset and shall remain in place during nighttime hours. The areas where this measure will be implemented shall be determined by a qualified biologist in coordination with the USFWS.

BIO-10: No equipment or vehicles shall be driven on access roads adjacent to occupied ARTO habitat after sunset or prior to dawn. If the site must be accessed during these hours, a qualified biologist permitted by the appropriate resource agencies to handle ARTO must survey in front of the vehicle to identify and relocate individuals found on the road.

BIO-11: ARTO are nocturnal and can be particularly affected by nighttime artificial lighting. In order to minimize and avoid the effects of lighting on wildlife, construction lighting during nighttime construction activities shall be shielded away from natural areas, as feasible.

BIO-12: The District Biologist, in coordination with the engineer, will examine and approve all staging and storage areas.

BIO-13: In the event that vegetation clearing is necessary during the ringtail's denning season, a qualified biologist will conduct a preconstruction survey to identify potential locations of dens. Should nesting ringtails be found, an exclusionary buffer will be established by the qualified biologist. This buffer will be clearly marked in the field by construction personnel under guidance of the qualified biologist, and construction or clearing shall not be conducted within this zone until the qualified biologist determines that the den is no longer active.

BIO-14: A qualified bat biologist will survey the project area in June, prior to construction, to assess the potential for its use as a maternity roost, since maternity roosts are generally formed in late spring. If a June survey is not feasible due to contract award and/or the timing of construction, a qualified bat biologist will determine an appropriate alternative time of year for the survey. Project ground-disturbing activities shall not be initiated until this survey is complete. The qualified bat biologist shall also perform preconstruction surveys, since bat roosts can change seasonally. The surveys shall include a combination of structure inspection,

sampling, exit counts, and acoustic surveys. If a roost is found, the animals shall be excluded and the roosting materials removed immediately so that the bats cannot return, forcing the bats to find alternative roost sites.

BIO-15: Tree removal shall be completed between September and November to avoid hibernating bats (December–February) and maternity season (May–August) if feasible. If this is not feasible, bat exclusion devices will need to be installed under the supervision of a qualified biologist. Such exclusion efforts must be continued to keep the structures free of bats until the completion of construction. All bat exclusion techniques shall be coordinated between the District Biologist and the resource agencies.

BIO-16: Prior to the initiation of construction/excavation activities along the road cut slopes, a qualified bat biologist will inspect accessible crevices during the day using a fiber-optic scope or similar instrument and confirm that no bats are present within those crevices. If the absence of bats is confirmed in the crevices, they will be sealed that same day using a method approved by the bat biologist; methods may include (but are not limited to) sealing of individual crevices using exclusionary materials or the use of fine-weave mesh netting along relevant sections of the road cut slope. Crevice inspection and sealing activities shall occur outside of the maternity season (May–August) in order to avoid project delays.

BIO-17: Any removal of oaks, snags, or large tree limbs containing cavities or crevices shall be removed in two stages: on Day 1, branches identified by a qualified bat biologist will be removed; on Day 2, the remainder of the tree or tree limb will be removed.

BIO-18: Any removal of rock slopes identified as having suitable roost crevices shall be removed in two stages: on Day 1, rock slopes up to within 50 ft (15.24 m) of crevices will be cut or excavated; on Day 2, the remainder of the rock slope can be removed.

BIO-19: In order to ensure that any burrowing owls or American badgers that may occupy the site in the future are not affected by construction activities, preconstruction surveys will be required prior to any phase of construction. Burrowing owl preconstruction surveys are also required in order to comply with the federal MBTA and the California Fish and Game Code.

BIO-20: The American badger survey can be conducted simultaneously. If any of the preconstruction surveys determine that burrowing owls are present, one or more of the following mitigation measures may be required: (1) avoidance of active nests and surrounding buffer area during construction activities; (2) passive relocation of individual owls; (3) active relocation of individual owls; and (4) preservation of on-site habitat with long-term conservation value for the owl. The specifics of the required measures shall be coordinated between the District Biologist and the resource agencies.

BIO-21: Equipment maintenance, lighting, and staging must be in areas designated by a qualified wildlife biologist, away from wildlife corridor entrances.

BIO-22: Hours of construction will be limited to daylight hours to ensure utilization of wildlife corridors, except when nighttime work is necessary (i.e., for worker safety). If work must be

done at night, noise and direct lighting would be directed away from the culvert to the best extent feasible.

BIO-23: During non-working hours, the culverts will be kept clear of all equipment or structures that could potentially serve as barriers to wildlife passage.

BIO-24: The existing culvert structures that would be extended or modified by the proposed project would be designed so that they would be at least as compatible with wildlife usage as the existing culvert. For example, culvert entrances would have textured concrete drawdown pads.

BIO-25: To avoid direct mortality to bats roosting in areas subject to effects from construction activities, any structure with potential bat habitat will have temporary bat exclusion devices installed under the supervision of a qualified bat biologist prior to the initiation of construction activities. Exclusion should be conducted during the fall (September or October) to avoid trapping flightless young inside during the summer months or hibernating individuals during the winter. Such exclusion efforts must be continued to keep the structures free of bats until the completion of construction. Replacement roosting habitat may also be needed to minimize effects to excluded bats. All bat exclusion techniques will be coordinated between the District Biologist and the resource agencies. Any placement of exclusions outside the months of September and October will be coordinated among the District Biologist, project engineer, and resource agencies.

BIO- 26: Prior to the start of construction, a qualified bat biologist will verify that the final design plans include suitable designs and specifications for bat exclusions and habitat replacement structures that appropriately reflect minimization and mitigation measures. If structural features providing existing roosting habitat cannot be permanently retained following construction, the installation of alternative roosting habitat may be required and will be done, if required to reduce the effects of the project on bats' long-term use of the structure. When feasible, on-structure replacement habitat will be conducted.

2.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Cultural resources, as used in this document, refers to all historical and archaeological resources, regardless of significance.

The California Environmental Quality Act ([CEQA](#)) of 1970, and Public Resources Code [§5024](#) and [§5024.5](#) are the primary regulations governing consideration of cultural resources, supported by [Executive Order W-26-92](#). “Historical resource” is a state term specific to CEQA. State law identifies “historical resources” as properties that meet the criteria for listing in the National Register or the California Register of Historical Resources (CRHR), as well as properties that are designated as historic under local ordinances and properties that have been identified as significant in a local survey that meets the state Office of Historic Preservation (OHP) standards.

As part of its environmental policy, the Department considers historic properties and historical resources during the project development process. The result of this investigation has been documented within a Draft Historic Property Survey Report (HPSR March 2013) with a Finding of No Adverse Effect without Standard Conditions (NAE w/o SC).

Based on a record and literature search conducted at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System (CHRIS), located at California State University, Fullerton, on August 16, 2012, a total of 22 archaeological sites, three isolates, and four built environment resources have been identified within a 0.5 mile radius of the Area of Potential Effects (APE) for this project. The record and literature search includes the following inventories for historic and prehistoric resources: the NRHP, California Register of Historical Resources (CRHR), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), the California Historic Resources Inventory (HRI), as well as, examining known cultural resource reports and historic maps. The record search identified portions of three archaeological sites (30-000026, 30-000656, and 30-001102) that have been previously recorded within the APE, and one built environment resource (30-176620) that has been previously recorded adjacent to the APE. A total of 43 cultural resource studies have been conducted within 0.5 miles of the APE, 14 of which included portions of the APE.

In addition to the background information obtained from the record and literature search, the following agencies, groups and individuals, were also contacted for information pertaining to cultural resources within the APE:

- Native American Heritage Commission (NAHC)
- Ti’At Society/Inter-Tribal Council of Pimu – Cindi Alvitre, Chairwoman-Manisar
- Gabrielino Tongva Nation – Sam Dunlap, Chairperson
- Juaneno Band of Mission Indians Acjachemen Nation - David Belardes, Chairperson
- Juaneno Band of Mission Indians Acjachemen Nation – Joyce Perry, Representing Tribal Chairperson
- Juaneno Band of Mission Indians Acjachemen Nation – Anthony Rivera, Chairman
- Tongva Ancestral Territorial Tribal Nation, John Tommy Rosas, Tribal Administrator
- Gabrielino Tongva Indians of California Tribal Council – Robert Dorame, Tribal Chair
- Gabreileno/Tongva San Gabriel Band of Mission Indians – Anthony Morales, Chairperson
- United Coalition to Protect Panhe (UCPP) – Rebecca Robles
- Juaneno Band of Mission Indians – Alfred Cruz, Cultural Resources Coordinator

- Juaneno Band of Mission Indians – Anita Espinoza
- Gabrielino-Tongva Tribe – Linda Candelaria, Chairwoman
- Gabrieleno Band of Mission Indians – Andrew Salas, Chairperson
- Gabrielino-Tongva Tribe – Bernie Acuna

On August 13, 2012, a request for a search of the Sacred Lands File (SLF) was sent to the NAHC. On August 14, 2012, the NAHC responded that cultural resources were identified within 0.5 miles of the project APE and recommended contacting the individuals or groups listed above.

Between September 10 and 20, 2012, the Native Americans listed with the NAHC for the project area were sent letters, emails, or contacted via follow-up telephone calls to obtain information pertaining to cultural resources in the project area. The following responses were received:

- Ti'At Society/Inter-Tribal Council of Pimu – Cindi Alvitre – no response.
- Gabrielino Tongva Nation – Sam Dunlap – deferred to the Juaneno groups.
- Juaneno Band of Mission Indians Acjachemen Nation - David Belardes – referred to Joyce Perry's comments below.
- Juaneno Band of Mission Indians Acjachemen Nation – Joyce Perry – recommends Native American and Archaeological monitoring during all ground-disturbing activities and requested to continue to be updated as the project develops.
- Juaneno Band of Mission Indians Acjachemen Nation – Anthony Rivera – no response.
- Tongva Ancestral Territorial Tribal Nation, John Tommy Rosas – requested information on the survey and potential testing of 30-000656 and would like to be kept informed of any decisions regarding treatment of that site.
- Gabrielino Tongva Indians of California Tribal Council – Robert Dorame – no response.
- Gabreileno/Tongva San Gabriel Band of Mission Indians – Anthony Morales – no comment because the site is in Juaneno territory.
- United Coalition to Protect Panhe (UCPP) – Rebecca Robles – no response.
- Juaneno Band of Mission Indians – Alfred Cruz – is aware of at least one site (30-000656) in proximity to the APE that is sensitive and requested additional site information, including a visit to the site during the survey and monitoring by an Archaeologist and Native American during construction.
- Juaneno Band of Mission Indians – Anita Espinoza – referred cultural resources consultation to Alfred Cruz.
- Gabrielino-Tongva Tribe – Linda Candelaria – no response.
- Gabrieleno Band of Mission Indians – Andrew Salas – indicated that the project will be disturbing sensitive sites and would like to have the Tribe's Native American monitors present.
- Gabrielino-Tongva Tribe – Bernie Acuna – no response.

Field surveys for the project were conducted on September 7, 2012, October 17, 2012, December 12, 2012, and February 25, 2013. Pedestrian surveys were restricted to the Area of Direct Impact (ADI), as this segment of SR-74 is not owned by the Department, but rather is an easement that was granted in 1933. As such, a request to enter the adjacent property off the pavement and survey was requested from and ultimately granted by Rancho Mission Viejo for the ADI only. All areas in the ADI containing potentially intact ground were surveyed by walking single transects parallel to SR-74. It was determined that the majority of the ADI consists of extensive

cut slopes or fill, as this portion of SR-74 traverses an area of ridges and canyons south of San Juan Creek. The areas previously recorded as archaeological sites were intensively examined within the ADI. The field survey resulted in no cultural resources being identified within the ADI for two of the previously recorded archaeological sites (30-000026 and 30-001102). Within the site area for the third archaeological site previously recorded within the APE (30-000656), the survey resulted in identifying a potential flake and fire-affected rock (FAR) adjacent to SR-74. For the built environment resource previously recorded adjacent to the APE (30-176620), it is enclosed within a chain-linked fence and it was determined that the resource is located at a higher elevation than the portion of SR-74 in this area and the project would not affect it.

Archaeological Sites Identified in the APE

- 30-000026 is a prehistoric site recorded in 1977 as an extremely large site that was “completely graded away”. In 1980, the site is described as a substantial scatter of millstone assemblage artifacts that is bisected by SR-74 (Ortega Highway). Three loci (A, B, and C) were identified. In 1985, the site was later described as an extremely large area encompassing two bluffs in which historic and modern disturbances had occurred. In 2010, it is reported that the lone remnant of Locus A is within an area that has been extensively disturbed. The site has been previously determined not eligible for the NRHP with SHPO concurrence in 1987 and 2010. Due to the information gathered from previous archaeological investigations within the ADI for this site, it has been determined that the proposed project would not adversely affect this site with the following conditions. For the purposes of this undertaking only, the area of the site beyond the ADI will be assumed eligible for the NRHP, and will be designated as an Environmentally Sensitive Area (ESA), and Archaeological and Native American Monitoring will be conducted during all ground disturbing activities within the site area.
- 30-000656 is a prehistoric site first documented in 1973 as a large and deep site containing cores, manos, flakes, and shell. Subsurface archaeological investigations were conducted in 1985 for a proposed Ortega Highway Widening Project. These investigations revealed a horizontally and vertically stratified deposit with two distinct occupation components with a maximum depth of 4.6 feet. The upper component was characterized as a sparse Late Prehistoric deposit with limited evidence of extended habitation that lacked well-developed midden and contains sparse ecofactual remains and FAR. The upper component was interpreted as a seasonal camp for limited hunting and floral resource processing. The lower component that dates to the Intermediate or early Late Period, contains evidence of a much more intensive occupation and contains a well-developed midden, extensive artifactual and ecofactual remains, and abundant FAR. Two burned cranial fragments indicative of a secondary cremation were recovered from the site. Additional archaeological investigations were conducted at the site in 1989. The limited testing recovered very little cultural material, much of which was from highly

disturbed contexts. In 2001, a single 1 x 1 meter unit was excavated at the site near SR-74 and contained limited cultural material including charcoal, ocher, bone fragments, and two flakes. The site has previously been determined eligible for the NRHP under Criterion D with SHPO concurrence in 1988. Within the site boundaries, construction activities for this project will be confined to the existing roadcut for SR-74. Due to the limited construction disturbance proposed for the site area, it has been determined that the proposed project would not adversely affect this site with the following conditions. The area of the site beyond the existing roadcut will be designated as an Environmentally Sensitive Area (ESA), and Archaeological and Native American Monitoring will be conducted during all ground disturbing activities within the site area.

- 30-001102 was first documented in the 1980s for a proposed Ortega Highway Widening Project and described as a localized surface and subsurface deposit on a knoll. The site was interpreted as possibly representing a seasonal procurement processing location. The site has previously been determined ineligible for the NRHP with SHPO concurrence in 1988. Due to the information gathered from previous archaeological investigations within the ADI for this site, it has been determined that the proposed project would not adversely affect this site with the following conditions. For the purposes of this undertaking only, the area of the site beyond the ADI will be assumed eligible for the NRHP, and will be designated as an Environmentally Sensitive Area (ESA), and Archaeological and Native American Monitoring will be conducted during all ground disturbing activities within the site area.

A Paleontological Resources Identification and Evaluation Report (PIR/PER) was prepared for this project in January 2013. Under state law, paleontological resources are protected by both the California Environmental Quality Act (CEQA) and California Public Resources Code (PRC) 5097.5.

The project area is located at the northern end of the Peninsular Ranges Geomorphic Province of Southern California. The Peninsular Ranges contain extensive Cretaceous (more than 65 million years ago [mya]) and pre-Cretaceous igneous and metamorphic rock covered by limited exposures of post-Cretaceous sedimentary deposits. Within Orange County, these post-Cretaceous sedimentary deposits are believed to be some of the most important Tertiary marine fossil-producing areas in the world due to the completeness of the geologic record and general fossil abundance.

The paleontological locality search conducted as part of this analysis included a buffer area extending over 1 mile (mi) from the study area to assist with determining the paleontological sensitivities of geologic formations and units that are present within the project. No paleontological localities are known to be within the project boundaries. Within the study area, seven geologic units are either mapped as being exposed on the surface or subsurface, or known to be present within the project area. Four of these sediments, the San Onofre Breccia, Young Landslide Deposits, Young Axial Channel Deposits, and Artificial Fill, do not have the potential to contain paleontological resources because of their depositional environment, their young age

(less than 11,700 years), or disturbed context. The Santiago Formation, Very Old Axial Channel Deposits, and Old Axial Channel Deposits are also mapped or likely to occur within the project boundaries and have the potential to contain paleontological remains due to their age and record of producing fossils in the general area. The literature review and locality searches produced information showing that sediments dating from the Eocene through Pleistocene Periods within the study area have the potential to contain significant nonrenewal paleontological resources. As there are sediments within the project area that have a High paleontological sensitivity rating, it is recommended that a Paleontological Mitigation Plan (PMP) be prepared following Caltrans Standard Environmental Reference (SER) guidelines. Once the PMP has been prepared (Design phase), the paleontological resource impact minimization measures shall be incorporated into the plans, specifications, and estimates (PS&E) for the project. Implementation of the avoidance, minimization, and/or mitigation measures will reduce impacts to nonrenewable paleontological resources.

2.5.1 Discussion of Environmental Evaluation Questions

a) Less than Significant Impact with Mitigation. Portions of three archaeological sites have been identified within the APE. While one site has been previously determined eligible for the NRHP, it has been determined that based on the construction impacts proposed at the site location and mitigation measures including establishment of an Environmentally Sensitive Area (ESA) and Archaeological and Native American Monitoring during ground disturbing activities within the site vicinity, no adverse effects are proposed. Although the remaining two archaeological sites have been previously determined ineligible for the NRHP, for the purposes of this undertaking only, eligibility for the NRHP will be assumed for the portions of the sites beyond the Area of Direct Impact (ADI) and establishment of an ESA and Archaeological and Native American Monitoring during ground disturbing activities within the site vicinity will ensure that no adverse effects are proposed.

b) Less than Significant Impact with Mitigation. Portions of three archaeological sites have been identified within the APE. While one site has been previously determined eligible for the NRHP, it has been determined that based on the construction impacts proposed at the site location and mitigation measures including establishment of an Environmentally Sensitive Area (ESA) and Archaeological and Native American Monitoring during ground disturbing activities within the site vicinity, no adverse effects are proposed. Although the remaining two archaeological sites have been previously determined ineligible for the NRHP, for the purposes of this undertaking only, eligibility for the NRHP will be assumed for the portions of the sites beyond the Area of Direct Impact (ADI) and establishment of an ESA and Archaeological and Native American Monitoring during ground disturbing activities within the site vicinity will ensure that no adverse effects are proposed.

c) Less than Significant Impact with Mitigation. The study area includes sediments that have the potential to contain significant paleontological resources. To reduce the impacts to nonrenewable paleontological resources, a Paleontological Mitigation Plan (PMP) is required during the PS&E phase that outlines a mitigation strategy, including but not limited to, paleontological monitoring during construction in sensitive sediments.

d) Less than Significant Impact with Mitigation. Two cranial fragments have been previously identified within one of the archaeological sites identified within the APE. While the project as proposed, does not include construction activities beyond the existing roadcut within this site area, and it is not anticipated that additional human remains would be encountered based on the results of the record/literature search, consultation, and field surveys conducted for this site, there is always a possibility that human remains may be encountered when excavation occurs for projects. As such, with the establishment of an ESA and Archaeological and Native American Monitoring conducted during ground disturbing activities within the site vicinity, no adverse effects are proposed.

2.5.2 Avoidance, Minimization, and/or Mitigation Measures

The following conditions and avoidance, minimization, and/or mitigation measures will be implemented to minimize potential impacts:

CUL-1: Staging location of construction equipment/materials must be approved by Caltrans Environmental Planner prior to beginning any construction related activities.

CUL-2: The Department will ensure that the ESAs for archaeological sites 30-000026, 30-000656, and 30-001102, are clearly described and illustrated in the Plans, Specifications, and Estimates (PS&E) prepared for this project.

CUL-3: The ESA Action Plan will be part of the Resident Engineer (RE) Pending File and the project's Environmental Commitment Record (ECR).

CUL-4: The ESA's will be discussed during the pre-construction meeting and it will be explained that no construction activity, including storage or staging of equipment and materials, is allowed within the ESA. No entry into the ESA is permitted.

CUL-5: The RE will notify the Department's Archeologist at least 2 weeks in advance of construction activities within the ESA vicinities to ensure that Archaeological and Native American Monitors are available as needed to monitor all ground disturbing construction activities within these areas.

CUL-6: ESA fencing will be installed as delineated in the ESA Action Plan before initiating any construction work for the project.

CUL-7: Archaeological and Native American Monitoring will be performed during all ground disturbing activities within the ESA areas identified within the ESA Action Plan.

CUL-8: The Department Archaeologist will inspect the construction area on a weekly basis, or as needed, to ensure that the ESA is not inadvertently breached.

CUL-9: Should any anticipated finds be made within the APE, construction will be diverted away from the finds and sufficient time allowed to make a determination as to the nature and significance of the finds.

CUL-10: If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbance shall cease in any area or nearby area suspected to overlie the remains, and the County Coroner shall be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner shall notify the NAHC, which shall then notify the Most Likely Descendant (MLD). Further provisions of PRC 5097.98 are to be followed as applicable.

PAL-1: Prior to construction activities, the California Department of Transportation shall ensure that a Paleontological Mitigation Plan (PMP) is prepared and adhered to during construction of the project. The PMP shall include, but not be limited to, the following measures:

PAL-2: Recommendations for a qualified paleontologist or representative to attend the pregrade conference. At this meeting, the paleontologist will explain the likelihood for encountering paleontological resources, what resources may be discovered, and the methods of recovery that will be employed.

PAL-3: Recommendations for a preconstruction field survey in areas identified as having High paleontological sensitivity after vegetation and paving have been removed, followed by salvage of any observed surface paleontological resources prior to the beginning of additional grading.

PAL-4: During construction excavation, a qualified vertebrate paleontological monitor shall initially be present on a full-time basis whenever excavation will occur within the sediments that have a High paleontological sensitivity rating and on a spot-check basis for excavation in sediments that have a Low sensitivity rating. Monitoring may be reduced to a part-time basis if no resources are being discovered in sediments with a High sensitivity rating (monitoring reductions, when they occur, will be determined by the qualified Principal Paleontologist). The monitor shall inspect fresh cutsand/or spoils piles to recover paleontological resources. The monitor shall be empowered to temporarily divert construction equipment away from the immediate area of the discovery. The monitor shall be equipped to rapidly stabilize and remove fossils to avoid prolonged delays to construction schedules. If large mammal fossils or large concentrations of fossils are encountered, Caltrans will consider using heavy equipment on site to assist in the removal and collection of large materials.

PAL-5: Localized concentrations of small (or micro-) vertebrates may be found in all native sediments. Therefore, it is recommended that these sediments occasionally be spot-screened on site through 1/8- to 1/20-inch mesh screens to determine whether microfossils are present. If microfossils are encountered, sediment samples (up to 3 cy, or 6,000 pounds) shall be collected and processed through 1/20-inch mesh screens to recover additional fossils.

PAL-6: Recovered specimens shall be prepared to the point of identification and permanent preservation. This includes the sorting of any washed mass samples to recover small invertebrate and vertebrate fossils, the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and storage cost, and the addition of approved chemical hardeners/stabilizers to fragile specimens.

PAL-7: Specimens shall be identified to the lowest taxonomic level possible and curated into an institutional repository with retrievable storage. The repository institutions usually charge a one-time fee based on volume, so removing surplus sediment is important. The repository institution may be a local museum or university with a curator who can retrieve the specimens on request. Caltrans requires that a draft curation agreement be in place with an approved curation facility prior to the initiation of any paleontological monitoring or mitigation activities.

PAL-8: Preparation and submittal of the PMR documenting completion of the PMP for the Lead Agency (Caltrans).

2.6 Geology and Soils

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under the California Environmental Quality Act.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. The Caltrans Office of Earthquake Engineering is responsible for assessing the seismic hazard for department projects. The current policy is to use the anticipated Maximum Credible Earthquake (MCE), from young faults in and near California. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

2.6.1 Discussion of Environmental Evaluation Questions

a) i. Less than Significant Impact. Life in Southern California includes risks of loss, injury or death involving seismic activity. Compliance with existing building codes would ensure that the risk from geology and soils is at an accepted level. According to the U.S. Geological Survey and the California Geological Survey, 2008, and December 2010 the project falls outside the Alquist-Priolo Fault Zone Maps. The intent of the Alquist-Priolo Act of 1972 is to prohibit the location of developments and structures for human occupancy across the trace of active fault, thus avoiding the hazard of surface fault rupture.

a) ii. Less than Significant Impacts. Strong ground motion can trigger slope failures/deformations. Such slope failures or deformations could cause damages to roadway facilities including loss of roadway segments. These impacts will be minimized by properly designed stabilization measures.

a) iii. Less than Significant Impacts. See a)ii above.

a) iv. Less than Significant Impacts. Landslides could occur under static and design seismic conditions. However, the potential for slides can be minimized with appropriate stabilization methods.

b) Less than Significant Impacts. The current project site has concrete overlay and/or asphalt. Most of the soil erosion or loss of topsoil could occur during the construction phase. Slope erosion can cause losses or damages to the roadway segment and the adjoining properties. However such erosion will not be any worse than the current level of erosion experienced by the exposed slopes. The project would include erosion controls methods to mitigate erosion from the current levels and minimize potential impacts to the roadway and the adjacent properties.

c) Less than Significant Impacts. Many of the descending slopes which are located on the north side of the roadway, and a few of the ascending slopes, located on the south side of the roadway, could be potentially unstable and could fail during the lifetime of the project. Such constraints could be minimized through proper stabilization method.

d) Less than Significant Impacts. The highway (SR-74) is already in place and has not encountered any problems related to expansive soil.

e) No Impact. This is a shoulder widening project. It does not require wastewater facilities. Residential, commercial and industrial land uses are absent from the project site and therefore no wastewater facilities are needed.

2.6.2 Avoidance, Minimization, and/or Mitigation Measures

The following avoidance, minimization, and/or mitigation measures will be implemented to minimize potential impacts:

GS-1: Proper stabilization methods based on analysis and design will be implemented in order to mitigate potentially unstable conditions of the slopes.

GS-2: Appropriate erosion control BMP’s will be determined during the design phase. The contractor shall adhere to Caltrans Standard Specifications for Construction (Section 21- Erosion Control).

2.7 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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- 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?

An assessment of the greenhouse gas emissions and climate change is included Chapter 3. While the Department has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is the Department’s determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project’s direct and indirect impact with respect to climate change. The Department does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in Chapter 3.

2.8 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires; including where wildlands are adjacent to urbanized areas, or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Hazardous materials and hazardous wastes are regulated by many state laws which are discussed below.

Hazardous waste in California is regulated primarily under the authority of the federal [Resource Conservation and Recovery Act](#) of 1976, and the [California Health and Safety Code](#). Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health, safety, and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

2.8.1 Discussion of Environmental Evaluation Questions

a) Less Than Significant Impact. The project will not result in an increased significant hazard to the public or environment through routine transport, use or disposal of hazardous materials. Operation and maintenance of the facilities would continue existing transport of hazardous materials/waste associated with vehicles currently utilizing SR-74 within the project limits. No new permanent hazardous waste materials/waste effects (direct or indirect) beyond existing conditions related to hazardous materials are anticipated. Implementation of measures HM-1 through HM-3 would minimize and avoid any potential hazardous materials releases that may affect the public or the environment.

b) Less Than Significant Impact. See response a).

c) No Impact. There are no public schools within a quarter mile of the proposed project.

d) Less than Significant Impact. The project location is not included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. The soil in unpaved areas next to the shoulder might be contaminated with the lead from vehicle emissions. Soil samples will be collected, tested, and analyzed for lead contamination during the PS&E phase. If contamination is found, measures will be implemented to safely and properly dispose of the waste.

e) No Impact. The project is not located within an airport land use plan area. This project will not result in a safety hazard for people or property in the project area.

f) No Impact. See response to e).

g) Less Than Significant. The project will not impair any emergency response plan or emergency evacuation plan. There will be some closures for staging but the impacts will be minimized with the preparation and implementation of a Traffic Management Plan (TMP).

h) Less Than Significant. Most of the project area is rural undeveloped land with a few commercial businesses (Landscape, and Cement and Quarries) along with a few residential homes outside the project limits. The project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires. The Cleveland National Park is adjacent to the project however there are no urbanized areas or residences within the project limits.

2.8.2 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required; however, the following avoidance and/or minimization measures will be implemented to minimize potential impacts:

HM-1: SSP # 1.02K(6)(i)(iii) – Earth Material Containing Lead - Requires a lead compliance plan for soil disturbance when lead concentrations are non-hazardous.

HM-2: During the Plans, Specifications, and Estimates (PS&E) and Construction phases, testing and removal of yellow traffic stripes and pavement marking material will be performed in accordance with Standard Special Provision (SSP) 14-11.07.

HM-3: SSP # 14-11.07- Remove Traffic Yellow and Pavement Markings- Requires proper management of hazardous waste residue and a lead compliance plan.

HM-4: If signs of potential impact (odors, discolored soil, etc.) are observed during construction activity, construction shall cease and the California Department of Transportation’s Unknown Procedures for Construction should be followed. Should groundwater be encountered during construction activities, or if construction dewatering is necessary, then sampling and analysis of groundwater shall be conducted to identify the appropriate management and disposal of the groundwater (Caltrans Standard Specifications for Construction (Section 14-11- [Hazardous Waste and Contamination])).

2.9 Hydrology and Water Quality:

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

This project is within the San Juan Hydrologic Unit (HU) of the San Diego Regional Water Quality Control Board located in south Orange County. The two major natural surface water bodies within the San Juan HU are San Juan Creek and San Mateo Creek. The project discharges to San Juan Creek which runs parallel to Ortega Highway where it is joined by numerous small tributaries before it joins with Trabuco Creek and ultimately discharges to the Pacific Ocean at Doheny Beach.

A Water Quality Assessment Report (WQAR) was completed in October 2012.

2.9.1 Discussion of Environmental Evaluation Questions

a) Less than Significant Impact.

Construction

Under the “No Build” alternative, no improvements other than routine roadway maintenance would be made. The “No Build” alternative would result in no short-term water quality impacts from construction related activities.

Under build alternative the proposed project involves widening the existing shoulder width to 4 feet in both directions. In addition to widening the existing shoulders, the project will install centerline rumble strips, 12 foot turn-outs on the eastbound direction and 15 foot turn-outs on the westbound direction, and install metal beam guardrail. The proposed project will require roadway excavation, construction of retaining walls, and drainage system improvements (and/or drainage system replacements). Drainage improvements include but are not limited to invert paving, culvert extensions, construction of headwalls, flared end sections and velocity dissipation devices. If a drainage culvert will be replaced, the existing culvert will be removed and replaced with a new drainage culvert using trenching methods. Based on proposed project it is anticipated that the Disturbed Soil Area (DSA) for Build Alternative will be approximately 10.74 acres.

Potential temporary impacts to water quality that can be anticipated during construction for the Build Alternative include sediments from grading and excavation operations created in the widening of the shoulders, construction of the retaining walls and drainage system improvements, trash from workers and construction waste, petroleum products from construction equipment and/or vehicles, concrete waste, sanitary wastes from portable toilets and any other chemicals used for construction such as coolants used for equipment and/or concrete curing compounds. It is anticipated that the Build Alternative will not encounter groundwater during the construction since the existing groundwater levels historically measured less than 20 feet in the lower and middle San Juan Subbasins. If the project requires the discharge of groundwater encountered/ extracted during the construction, the discharge must comply with General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region Except for San Diego Bay (Order No. R9-2008-0002, NPDES No. CAG919002) and any subsequent updates to the permit at the time of construction.

To comply with the Construction General Permit (CGP), the Build Alternative will be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) and determine a Risk Level based on potential erosion and transport to receiving waters. The SWPPP will identify temporary Best Management Practices (BMPs) to address the potential temporary impacts to water quality. The BMPs identified in the project SWPPP will include measures such as temporary soil stabilization measures, linear sediment barriers (i.e. silt fence, gravel bag berms, fiber rolls), and construction site waste management (i.e. concrete washout, construction materials storage, litter/ waste management).

Operation

Under the “No Build” alternative, no improvements other than routine roadway maintenance would be made. The “No Build” alternative would not increase the impervious surface to the area, however, existing runoff would continue.

Under build alternative the proposed project involves widening the existing shoulder width to 4 feet in both directions. In addition to widening the existing shoulders, the project will install centerline rumble strips, 12 foot turn-outs on the eastbound direction and 15 foot turn-outs on the westbound direction, and install metal beam guardrail. The proposed project will require roadway excavation, construction of retaining walls, and drainage system improvements (and/or drainage system replacements). Drainage improvements include but are not limited to invert paving, culvert extensions, construction of headwalls, flared end sections and velocity dissipation devices. If a drainage culvert will be replaced, the existing culvert will be removed and replaced with a new drainage culvert using trenching methods. The existing impervious surface for the Build Alternative is 7.25 acres and with the widening of the existing shoulder width to 4 feet, the additional impervious surface created is 1.04 acres. This alternative does not involve any lane additions thus the increase of impervious surface will solely be from the shoulder widening.

Pollutants typically generated during the operation of a transportation facility include sediment/turbidity, nutrients, trash and debris, bacteria and viruses, oxygen demanding substances, organic compounds, oil and grease, pesticides and metals. Although the impervious surface will increase due to the widening of the existing shoulders, the increase in impervious surface caused by the project is relatively small. The proposed project widening is linear and with many discharge points which will distribute the additional runoff and would have minimal downstream effects. Since the project will not construct any lane additions to the highway, it has been determined that there will be no additional pollutant loading that is typically found during the operation of a transportation facility.

The project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from the State of California, Department of Transportation (CALTRANS) Properties, Facilities and Activities (Order No. 99-06-DWQ, NPDES No. CAS000003) issued by the SWRCB and any subsequent permits in effect at the time of construction. The project will evaluate treatment BMP measures to the Maximum Extent Practicable (MEP) and/or evaluate Low Impact Development (LID) strategies consistent with Caltrans guidance.

With the implementation of a SWPPP and selected temporary BMPs during construction as well as evaluating and implementing post construction BMPs/LID strategies, no water quality standards or waste discharge requirements would be violated.

b) Less than Significant Impact. Groundwater in the San Juan Creek Watershed exists unconfined in a generally narrow, shallow, alluvium-filled valley in the San Juan Canyon area and its tributaries. The alluvium consists of a heterogeneous mixture of sand, silt and gravel in the eastern portion of the basin, to coarse sand near the center, to silts, clays, coarse sand, fine gravel and sediments in the southern portion. The depths of the alluvial fill range from 200-feet at the coast to zero feet at the end of the main canyon tributaries in the Santa Ana Mountains.

It is anticipated that the build alternative will not encounter groundwater during construction. If groundwater is encountered, construction site dewatering must comply with the General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region Except for San Diego Bay (Order No. R9-2008-0002, NPDES No. CAG919002) and any subsequent updates to the permit at the time of construction. This Permit addresses temporary dewatering operations during construction. Dewatering BMPs must be used to control sediment and pollutants, and the discharges must comply with the WDRs issued by the San Diego RWQCB

The project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

c) Less than Significant Impact. The project will not substantially alter the drainage pattern of the site or area nor will there be an alteration of a stream or river. Based on the build alternative, the widening of the existing shoulders will increase the impervious surface by 1.04 acres. The proposed project widening is linear with many discharge points throughout the watershed, which will distribute the additional runoff and have minimal downstream effects that would produce erosion or siltation off site. The project includes drainage improvements to the existing culverts such as invert paving, culvert extensions, construction of headwalls, flared end sections and velocity dissipation devices. During construction it is not expected that there will be alteration of the drainage pattern that would result in on-site erosion or siltation. Any erosion and siltation that can occur during construction will be from Disturbed Soil Areas (DSA) from the project's excavation/grading. The potential erosion/siltation will be addressed by the installation and implementation of temporary Best Management Practices (BMPs) identified in the project's Storm Water Pollution Prevention Plan (SWPPP).

d) Less than Significant Impact. The project will not substantially alter the drainage pattern of the site or area nor will there be an alteration of the course of a stream or river. The project will increase the impervious surface by 1.04 acres. This increase is relatively small and will not substantially increase the rate or amount of runoff in a manner that would result in flooding on or off site.

e) Less than Significant Impact. The proposed project will not exceed the capacity of the existing or planned storm water drainage systems. The project will provide drainage

improvements to the existing culverts such as invert paving, culvert extensions, construction of headwalls, flared end sections and velocity dissipation devices. As indicated previously, the project may contribute additional sources of pollutants during construction. Potential temporary impacts to water quality that can be anticipated during construction include sediments from grading and excavation operations created in the widening of the shoulders and/or utility relocations, trash from workers and construction waste, petroleum products from construction equipment and/or vehicles, concrete waste, sanitary wastes from portable toilets and any other chemicals used for construction such as coolants used for equipment and/or concrete curing compounds.

Pollutants typically generated during the operation of a transportation facility include sediment/turbidity, nutrients, trash and debris, bacteria and viruses, oxygen demanding substances, organic compounds, oil and grease, pesticides and metals. Since the project does not include any lane additions to the highway, it has been determined that there will be no additional pollutant loading that is typically found during the operation of a transportation facility.

With the implementation of a SWPPP and selected temporary BMPs during construction as well as evaluating and implementing post construction BMPs/LID strategies, the project will not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff.

f) Less than Significant Impact. With the implementation of the Caltrans NPDES Permit, the General NPDES Permit for Construction Activities, a Storm Water Pollution Prevention Plan (SWPPP) and temporary and permanent BMPs, the project will not substantially degrade water quality.

g) No Impact. The project is a transportation improvement project and does not include the construction of residential housing.

h) No Impact. There are no FEMA Flood Insurance Maps for the project area. The project proposes to rehabilitate/replace a structure that is in channels that are dry throughout the year and only has a flow when flash flooding returns during the rainy season.

i) No Impact. There are no levees or dam structures within or near the project area. There would be no substantial flood-related risks to life or property associated with the implementation of this project.

j) No Impact. Due to the project's distance from the ocean and elevation, there is no foreseeable risk of tsunami inundation. There is no risk from seiches (oscillations in enclosed bodies of water caused by seismic waves) or mudflows in the project area.

2.9.2 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required; however, the following avoidance and/or minimization measures will be implemented to minimize potential impacts:

WQ – 1: The project will comply with the provisions of the *National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from the State of California, Department of Transportation Properties, Facilities and Activities Order No. 99-06-DWQ, NPDES No. CAS00003* and the *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-0009-DWQ, NPDES No. CAS000002* and any subsequent permits in effect at the time of construction.

WQ – 2: The project will comply with the Construction General Permit by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) to address all construction-related activities, equipment, and materials that have the potential impact water quality for the appropriate Risk Level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management and non-storm water BMPs. All work must conform to the Construction Site BMP requirements specified in the latest edition of the *Storm Water Quality Handbooks: Construction Site Best Management Practices Manual* to control and minimize the impacts of construction and construction related activities, material and pollutants on the watershed. These include, but are not limited to temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-storm water BMPs.

WQ – 3: Design Pollution Prevention Best Management Practices (BMPs) shall be implemented such as preservation of existing vegetation, slope/ surface protection systems (permanent soil stabilization), concentrated flow conveyance systems such as ditches, berms, dikes and swales, overside drains, flared end sections, and outlet protection/ velocity dissipation devices.

WQ – 4: Caltrans approved treatment Best Management Practices (BMPs) will be implemented to the Maximum Extent Practicable (MEP) consistent with the requirements of the NPDES Permit for Storm Water Discharges from the State of California, Department of Transportation (CALTRANS) Properties, Facilities and Activities (Order No. 99-06-DWQ, NPDES No. CAS000003) and any subsequent permits in effect at the time of construction. Treatment BMPs may include biofiltration strips, biofiltration swales, infiltration basins, detention devices, dry weather flow diversion, Gross Solids Removal Devices (GSRDs), media filters and wet basins.

WQ – 5: Construction site dewatering must comply with the General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region Except for San Diego Bay (Order No. R9-2008-0002, NPDES No. CAG919002) and any subsequent updates to the permit at the time of construction. These permits address temporary dewatering operations during construction. Dewatering BMPs must be used to control sediment and pollutants, and the discharges must comply with the WDRs issued by the San Diego RWQCB.

WQ – 6: Comply with Section 13 - Water Pollution Control, of the 2010 Caltrans Standard Specifications.

2.10 Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.10.1 Discussion of Environmental Evaluation Questions

a) No Impact. The project area is completely within the State of California, Department of Transportation’s right of way. Land use designations around the project area shown by the County of Orange General Plan 2005 shows the majority of the project limits to be in the Open Space designation. A small portion of the project limits at Antonio Parkway/La Pata Avenue (PM 2.930) is designated as Urban Activity Center. To the west, outside of the project area is designated as Suburban Residential and Urban Activity center. To the east, the project neighbors the Cleveland National park continuing on to Lake Elsinore. To the east, past Antonio/La Pata are the San Juan Capistrano city limits.

Currently, most of the project area is rural undeveloped land with a few commercial businesses (Landscape, and Cement and Quarries) along with a few residential homes outside the project limits. However, the area is zoned for the Ranch Plan Planned Community Program (2004) also known as the Rancho Mission Viejo Plan. The first ranch community is being built and scheduled for purchase in the spring of 2013. It is the Village of Sendero with an estimated 690 acres and an approximate 940 residents and 200 apartment units. The plan includes many amenities such as a centrally located community hall, clubhouse and recreational park, hiking/biking trails, a 10-acre retail plaza, a fire station and a child day care center as described in the June 6th 2012 Orange County Register Article.

b) No Impact. See response a)

The project area is within the State of California, Department of Transportation’s right of way and is meant to be developed for highway construction. The project will not conflict with any of the adopted land use plans, policies, or zoning ordinances. Land Use elements of the Orange County General Plan 2005 are consistent with the safety elements of the project.

c) No Impact. The project is part of an existing transportation corridor and is not located in an area proposed or adopted as part of a habitat conservation plan (HCP) or a natural community conservation plan (NCCP).

2.10.2 Avoidance, Minimization, and/or Mitigation Measures

None required.

2.11 Mineral Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.11.1 Discussion of Environmental Evaluation Questions

a) No Impact. The proposed project is not in a region of significant mineral resources according to the California Geological Survey and U.S Geological Survey (2008) Minerals Yearbook and the County of Orange General Plan 2005. The project area has construction materials (e.g., sand and gravel). There are a couple of extractive operations located approximately within a mile outside the project area (e.g., Carmeuse Industrial Sands, and Ortega Rock Quarry). The project is contained completely in Caltrans right of way, therefore, no loss of a known mineral resource that would be of value to the region and the residents of the state would occur.

b) No Impact. See comment a). There is no locally important mineral resource recovery site in the project area.

2.11.2 Avoidance, Minimization, and/or Mitigation Measures

None required.

2.12 Noise

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

CEQA requires a strictly baseline (existing) versus build analysis to assess whether a project will have a noise impact. If a project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

2.12.1 Discussion of Environmental Evaluation Questions

a) Less than significant. The project is non capacity increasing and does not qualify as a Type I Project according to the Caltrans Traffic Noise Analysis Protocol under 23 CFR 772 Noise Analysis. There could be some minimal short term noise impacts from the operation of construction equipment. These impacts would be negligible when minimization measures as recommended in Section 2.12.2 are implemented and would cease when construction is complete. Further noise analysis is not required.

b) Less than significant. Existing ground borne vibration is anticipated to remain the same as current conditions with project implementation. Due to the location of the project site and the level of traffic noise emanating from the highway, any noise generated during construction activities would be considered negligible.

c) No Impact. The project is non capacity increasing, therefore a permanent increase in ambient noise levels is not anticipated.

d) Less than significant. Temporary increases in ambient noise levels are anticipated during project construction. However due to the location of the project site and the level of traffic noise

emanating from the highway, any noise generated during construction activities would be consider negligible.

e) No Impact. The project is not located within an airport land use plan.

f) No Impact. The project is not located within the vicinity of a private airstrip.

2.12.2 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required, but the following avoidance and/or minimization measures are required:

N-1: Noise levels should not exceed 86 dBA at 50 feet from the job site activities from 9PM to 6AM. An alternative warning method should be used, instead of a sound signal unless required by safety laws (Caltrans 2010 Standard Specifications for Construction (Section 14-8- [Noise and Vibration])).

N-2: Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without a muffler (Caltrans 2010 Standard Specifications for Construction (Section 14-8- [Noise and Vibration])).

2.13 Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The California Environmental Quality Act (CEQA) requires the analysis of a project’s potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents “...discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment...”

2.13.1 Discussion of Environmental Evaluation Questions

a) No Impact. New development (e.g., residential or commercial) is not an element for the proposed project. The proposed project is designed to increase the safe use of the current

infrastructure. Currently, the project area has a small population and based on the County of Orange, California Adopted Housing element (2011), the unincorporated population areas of Orange County have declined by nearly 30% to 118,136 persons. This project will not open up new areas to development directly or indirectly; nor will it make travel easier by adding more lanes. The project would also not induce growth (e.g., creation of new jobs or housing). The project is an improvement and would not induce growth or cause displacement. See Land Use Section 2.10.1 a) for projected future development that would result in an increase in future population for the project area.

b) No Impact. See response to a) above

c) No Impact. See response to a) above

2.13.2 Avoidance, Minimization, and/or Mitigation Measures

None required.

2.14 Public Service

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.14.1 Discussion of Environmental Evaluation Questions

a) No Impact. The project does not involve the altering or expansion of any public/government facilities that provide public services such as fire or police protection, education, parks or other public facilities as stated above. The eastern portion of the project area is within the vicinity of several parks (e.g., Ronald W. Caspers Wilderness Park of County of Orange, and the

Cleveland National Park), as well as the Prima Deshecha Landfill, also known as the Orange County Landfill Site, which is located approximately 3 miles southwest of the project area.

A Transportation Management Plan (TMP), a standard condition implemented on construction projects, will be prepared to minimize construction activity-related motorists' delays, queuing and accidents by the effective application of traditional traffic handling practices and innovative approaches. As part of the TMP, Caltrans, District 12, Irvine would coordinate with emergency response providers to ensure the project does not in any way interfere with emergency response times.

2.14.2 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required; however, the following avoidance and/or minimization measures will be implemented to minimize potential impacts:

PUB – 1: A TMP will be prepared and finalized during the design phase.

2.15 Recreation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There are two recreational facilities located near the project area - The Ronald W. Caspers Wilderness Park of the County of Orange and the Cleveland National Forest. They are both approximately 2 miles miles to the East of the project area and will be fully accessible. Refer to Project Vicinity Map Figure 1. There are no bike paths in the project area.

2.15.1 Discussion of Environmental Evaluation Questions

a) No Impact. The proposed project would address the safety concerns of the highway by trying to provide a continuous 4-foot foot shoulder in both directions, install centerline rumble strips, construct turn-outs and install metal beam guard rail at various locations. These actions are not expected to increase the usage of the existing parks in the project area; therefore, an increase in the use of the existing regional park is not anticipated.

b) No Impact. The project does not propose to include, construct, or expand any recreational facilities.

2.15.2 Avoidance, Minimization, and/or Mitigation Measures

None required.

2.16 Transportation/Traffic

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

Caltrans, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans is committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

2.16.1 Discussion of Environmental Evaluation Question for Transportation and Traffic

a) No Impact. The project will not conflict with a plan, ordinance or policy pertaining to the performance of the circulation system. The build alternative is consistent with the General Plan goals and policies to maintain efficient traffic operations in the county. The project is also consistent with regional planning goals and is programmed in the Federal Transportation Improvement Program (FTIP).

b) No Impact. See response to a) above. SR-74 is subject to a congestion management plan (CMP) established by the Orange County Transportation Authority (OCTA). The implementation of this project will not conflict with any standards established by the CMP.

c) No Impact. The project is a transportation improvement project and will have no impact on air traffic patterns.

d) No Impact. The project does not include hazardous design features nor will it create any incompatible uses. The intent of the project is to improve the roadway and prevent less accidents.

e) Less than Significant Impact. Emergency access to and through the project area would not be impacted; however, the required Transportation Management Plan (TMP) would be prepared prior to project construction and would seek to avoid and minimize construction-related traffic and circulation impacts of the project.

f) No Impact. There are no bike paths or pedestrian facilities within the project area.

2.16.2 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required; however, the following avoidance and/or minimization measure will be implemented to minimize potential impacts:

T – 1: A TMP will be prepared during the design phase to minimize inconvenience to drivers during construction activities.

2.17 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

2.17.1 Discussion of Environmental Evaluation Question

a) No Impact. The project is a shoulder widening project and does not create any wastewater demand. Therefore, the project does not have a potential to exceed wastewater treatment requirements of the Regional Water Quality Control Board.

b) No Impact. The project will not create a demand requiring the construction of new water or wastewater treatment facilities or expansion of existing facilities. Therefore, there will be no construction which could cause significant environmental impacts.

c) Less Than Significant Impact. The project will require drainage system improvements and or drainage system replacements. Drainage improvements include but are not limited to culvert extensions, construction of headwalls, and construction of dirt swales. If a drainage culvert will be replaced, the existing culvert will be removed and replaced with a new drainage culvert using trenching methods.

d) No Impact. As the project is a shoulder widening project, it will not create a permanent demand for water supplies.

e) No Impact. Additional wastewater is not anticipated as a result of the project. See (a) above.

f) No Impact. Construction waste from the project site will likely be taken to Prima Deshecha Landfill. The implementation of the project does not propose to produce an abundance of solid waste that would exceed the current permitted capacity of the landfill.

g) No Impact. The project is in compliance with all federal, state, and local statutes and regulations regarding solid waste and as stated above, the project does not create a permanent demand for solid waste facilities.

2.17.2 Avoidance, Minimization, and/or Mitigation Measures

None required.

2.18 Mandatory Findings of Significance

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal; or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The California Environmental Quality Act (CEQA) requires the analysis of a project's mandatory findings of significance. The analysis of the mandatory findings of significance of the project is based on the findings of the project's impacts on all the required issue areas.

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, and disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act (CEQA) Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines.

2.18.1 Discussion of Environmental Evaluation Questions

a) Less than Significant Impacts with Mitigation. As described in section 2.4, the project effects to biological resources (including plant and wildlife species, habitat communities and wildlife movement) were determined to be less than significant or reduced to below a level of significance with mitigation measures implemented.

As described in section 2.5, portions of three archaeological sites have been identified within the APE and sediments that have the potential to contain significant paleontological resources have been identified. It has been determined that based on the construction impacts proposed at the site location and mitigation measures including establishment of an Environmentally Sensitive Area (ESA) and Archaeological and Native American Monitoring during ground disturbing activities within the sites vicinity, no adverse effects are proposed. To reduce the impacts to nonrenewable paleontological resources, a Paleontological Mitigation Plan (PMP) is required during the PS&E phase that outlines a mitigation strategy, including but not limited to, paleontological monitoring during construction in sensitive sediments.

b) There are several foreseeable projects within the project area as shown in Tables 2.18-1 below:

Table 2.18-1 Future Road Projects

EA	Description	Location
04321	Widen roadway and bridges	In Orange County near San Juan Hot Springs from San Juan Canyon Bridge to Riverside County line
0L460	Remove slide debris, grading and placement of rock slope protection	In Orange County on Rte-74, between PM 1.5 and 12.0.
0L480	Build and place culvert drainage system to stabilize roadway embankment	In Orange County on Rte-74 between PM 6.00 and 7.00
04322	Establish planting and install irrigation system	In Orange County near San Juan Hot Springs from San Juan Canyon Bridge to Riverside County line
0E310	Reconstruct Rte-74	In San Juan Capistrano between I-5 and East of city limit
08692	Widen from 2 lanes to 4 lanes	In the city of San Juan Capistrano from Calle Entradero to the city/county limit
08691	Widen from 2 lanes to 4 lanes	In Orange County, from San Juan Capistrano city limit to San Antonio Parkway

0J430	Pavement Rehabilitation	In the city of San Juan Capistrano and in unincorporated County of Orange
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c) **No Impact.** By its nature, the proposed action would have no impacts to human beings, either directly or indirectly. Refer to the discussions in the other sections for additional information that supports this finding.

2.18.2 Avoidance, Minimization, and/or Mitigation Measures

With the implementation of the measures as stated in the previous sections, impacts would be reduced to below a level of significance.

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Chapter 3 – Climate Change

3.1 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988, has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles make up the largest source (second to electricity generation) of GHG emitting sources. The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing GHG emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)¹.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing growth of vehicle miles traveled (VMT), 3) transitioning to lower GHG emitting fuels, and 4) improving vehicle technologies. To be most effective all four strategies should be pursued collectively. The following Regulatory Setting section outlines state and federal efforts to comprehensively reduce GHG emissions from transportation sources.

Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change.

¹ http://climatechange.transportation.org/ghg_mitigation/

Assembly Bill 1493 (AB 1493), Pavley. Vehicular Emissions: Greenhouse Gases, 2002: requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year. In June 2009, the U.S. Environmental Protection Agency (U.S. EPA) Administrator granted a Clean Air Act waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. California agencies will be working with federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

Executive Order (EO) S-3-05: (signed on June 1, 2005, by former Governor Arnold Schwarzenegger) the goal of this EO is to reduce California's GHG emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by the 2020, and 3) 80 percent below the year 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

AB 32, the Global Warming Solutions Act of 2006, Núñez and Pavley: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan, (which includes market mechanisms) and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06: (signed on October 18, 2006 by former Governor Arnold Schwarzenegger) further directs state agencies to begin implementing AB 32, including the recommendations made by the California's Climate Action Team.

Executive Order S-01-07: (signed on January 18, 2007 by former Governor Arnold Schwarzenegger) set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least ten percent by the year 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007: required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Caltrans Director's Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to Caltrans stewardship goal to preserve and enhance California's resources and assets.

Federal

Although climate change and GHG reduction is a concern at the federal level; currently there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. As stated on FHWA's climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change

mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the state has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in the growth of vehicle hours travelled.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the “National Clean Car Program” and EO 13514 - *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA’s *Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles*, which was published on September 15, 2009². On

² <http://www.epa.gov/oms/climate/regulations.htm#1-1>

May 7, 2010 the final [Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards](#) was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the [first-ever GHG regulations for heavy-duty engines and vehicles](#), as well as [additional light-duty vehicle GHG regulations](#). These steps were outlined by President Obama in a Presidential [Memorandum on May 21, 2010](#).³

The final combined U.S. EPA and NHTSA [standards](#) that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO₂) per mile, (the equivalent to 35.5 miles per gallon [MPG] if the automobile industry were to meet this CO₂ level solely through fuel economy improvements. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On November 16, 2011, U.S. EPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles.

Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.⁴ In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult, if not impossible, task.

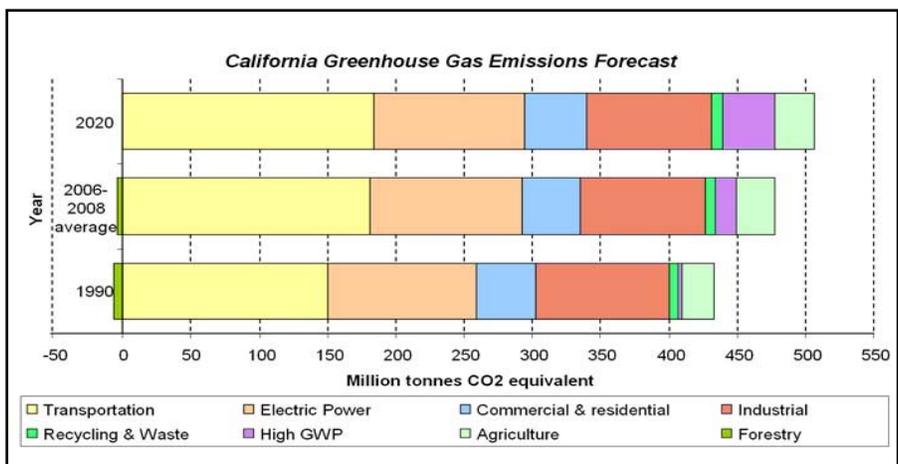
The [AB 32](#) Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for

³ <http://epa.gov/otaq/climate/regulations.htm>

⁴ This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

FIGURE 3.1 CALIFORNIA GREENHOUSE GAS FORECAST



Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the [Climate Action Program at Caltrans](#) that was published in December 2006.⁵

The purpose of the proposed project is to improve the highway for the traveling public along State Route 74 in Orange County. The project proposes to widen the shoulder in both directions, install centerline rumble strips, construct turn-outs and install metal beam guard rail (MBGR) at various locations. These activities will not increase or change traffic volumes and is not expected to result in an overall increase of operational GHG emissions.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

⁵ Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

CEQA Conclusion

While construction would result in a slight increase in greenhouse gas emissions during construction, Caltrans expects that there will be no operational increase in GHG emissions associated with this proposed project. However, it is Caltrans determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and California Environmental Quality Act significance, it is too speculative to make a determination on the projects direct impacts and its contribution on the cumulative scale to climate change. Nonetheless, Caltrans is taking further measures to help reduce energy consumption and greenhouse gas emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

AB 32 Compliance

Caltrans continues to be actively involved on the Governor’s Climate Action Team as ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from



Figure 3.2: Mobility Pyramid

the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger’s Strategic Growth Plan calls for a \$222 billion infrastructure improvement program to fortify the state’s transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding during the next decade. The Strategic Growth Plan targets a significant decrease in traffic congestion below today’s level and a corresponding

reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO₂ reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in Figure 3.2: The Mobility Pyramid.

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities but does not have local land use planning authority. Caltrans assists efforts

to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. EPA and ARB.

Table 3.1 summarizes the Departmental and statewide efforts that Caltrans is implementing in order to reduce GHG emissions. More detailed information about each strategy is included in the [Climate Action Program at Caltrans](#) (December 2006).

Table 3.1 Climate Change/CO₂ Reduction Strategies						
Strategy	Program	Partnership		Method/Process	Estimated CO₂ Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	.975	7.8
Operational Improvements & Intelligent Transportation System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, ARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	.0045	.0065 .045 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	.117	.34

Portland Cement	Office of Rigid Pavement	Cement and Construction Industries	2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	4.2 3.6
Goods Movement	Office of Goods Movement	Cal EPA, ARB, BT&H, MPOs	Goods Movement Action Plan	Not Estimated	Not Estimated
Total				2.72	18.18

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1. Caltrans and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS commonly consists of electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.
2. According to Caltrans Standard Specifications, the contractor must comply with all of the local Air Pollution Control District's (APCD) rules, ordinances, and regulations regarding to air quality restrictions.

Adaptations Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency report on October 14, 2010 outlining recommendations to President Obama for how Federal Agency policies and programs can better prepare the U.S. to respond to the impacts of climate change. The [*Progress Report of the Interagency Climate Change Adaptation Task Force*](#) recommends that the federal government implement actions to expand and strengthen the nation’s capacity to better understand, prepare for, and respond to climate change.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, former Governor Arnold Schwarzenegger signed EO S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop. [*The California Climate Adaptation Strategy*](#) (Dec 2009)⁶, which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010⁷ to advise how California should plan for future sea level rise. The report is to include:

- Relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates.
- The range of uncertainty in selected sea level rise projections.
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems.
- A discussion of future research needs regarding sea level rise.

⁶ <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

⁷ Pre-publication copies of the report, *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, were made available from the National Academies Press on June 22, 2012. For more information, please see http://www.nap.edu/catalog.php?record_id=13389.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data

Interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation as of the date of [EO S-13-08](#), and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

Chapter 4 – Consultation and Coordination

Coordination with California Fish and Wildlife will take place. On January 23, 2012, the United States Fish and Wildlife Service sent a letter to Caltrans and provided a list of proposed, threatened, and endangered species potentially occurring in the vicinity of the project site. Also, in January 2012, Caltrans and USFWS discussed how best to move forward with the federally listed wildlife species (arroyo toad [ARTO, *Anaxyrus californicus*]) Section 7 consultation process. It is anticipated that the USFWS will concur with a “Not Likely to Adversely Affect” determination. Measures as recommended will be implemented.

The Native American Heritage Commission (NAHC) was contacted on August 13, 2012, for a Sacred Lands File (SLF) search. The NAHC responded on August 14, 2012, and advised that Native American cultural resources were identified within 0.5 mile of the project APE and recommended contacting 14 individuals representing 11 Juaneno and Gabrielino groups that may have knowledge of cultural resources in or close to the project area. The following local Native American groups were contacted by letter on August 20, 2012:

- Ti’At Society
- Gabrielino Tongva Nation
- Juaneno Band of Mission Indians
- Tongva Ancestral Territorial Tribal Nation
- Gabrielino Tongva Indians of California Tribal Council
- Gabrieleno/Tongva San Gabriel Band of Missions Indians
- Gabrielino-Tongva Tribe
- Juaneno Band of Mission Indians Acjachemen Nation
- Gabrieleno Band of Mission Indians
- United Coalition to Protect Panhe (UCPP)

One initial response was received on August 29, 2012, as a result of the letter notification. Mr. Anthony Morales, Chairperson for the Gabrieleno/Tongva San Gabriel Band of Mission Indians had no comment because the project was in Juaneno territory. Follow-up calls and emails were made to the local Indian tribes and individuals between September 10 and 20, 2012. As a result, the following responses were received. Mr. Andrew Salas, Chairperson for the Gabrieleno Band of Mission Indians responded on September 10, 2012, that his group acknowledges that the project will be disturbing sensitive village sites and request to have one of their Native American monitors present. On September 10, 2012, Ms. Joyce Perry Representing Tribal Chairperson for one group of the Juaneno Band of Mission Indians Acjachemen Nation recommended Native American and archaeological monitoring during all ground disturbing activities and requested to be kept updated as the project develops. Mr. John Tommy Rosas, Tribal Administrator for the Tongva Ancestral Territorial Tribal Nation responded on September 20, 2012, requesting additional information regarding the survey and potential testing of an archaeological site (CA-ORA-656). Mr. Sam Dunlap, Chairperson for the Gabrielino Tongva Nation responded on September 24, 2012, that they will defer to the Juaneno groups. On October 12, 2012, Mr. Alfred Cruz, the Cultural Resources Coordinator for one group of the Juaneno Band of Mission

Indians requested information about the sites that will be impacted and is aware that there is at least one site in proximity to the APE that has ancestral remains. He requested attendance during a site visit by the archaeologists and recommended monitoring by an archaeologist and Native American during construction. On December 16, 2012 an email response was sent to Mr. Cruz. The response detailed the restrictions of the specific site visit by the property owner and asked Mr. Cruz if he would like to reschedule for a site visit at a later time. No additional responses were received.

Chapter 5 – List of Preparers

This document has been prepared by the Department of Transportation as the lead agency under CEQA with the assistance from LSA Associates, Inc. The following individuals were involved in the preparation of this IS:

Arman Behtash, Environmental Engineer, B.S. Civil and Environmental Engineering, University of Wisconsin, Madison. 19 years of experience.

Contribution: Preparation and review of air quality technical memo.

Arianne Preite, Associate Environmental Planner (Biology). B.A Biology. California State University Fullerton.

Contribution: Review and editing of biological technical studies, and prepared related section in the environmental document.

Bob Bazargan, Project Manager. Ph.D. Engineering Science, Clarkson University, Potsdam, NY. 21 years experience in highway design and project management.

Contribution: Project Management for District 12.

Cheryl Sinopoli, Associate Environmental Planner (Archaeology). B.A. Anthropology, California State University, Bakersfield. 15 years experience.

Contribution: Review and editing of cultural and paleontological technical studies, and prepared related section in the environmental document.

Chris Flynn, Senior Environmental Planner. M.S. Environmental Science, San Jose State University, 2001, PMP 2004. 28 years experience in environmental project management and construction.

Contribution: Senior review of environmental document, technical reports, and technical editing for cultural, paleontological and biological sections.

Gabriela Jauregui, Associate Environmental Planner. B.A. Environmental Economics. University of California Riverside. 6 years experience in Environmental Planning.

Contribution: Document Preparer and Coordinator

Gamini Weeratunga, Transportation Engineer. M.S., P.E., G.E., Geotechnical Engineering, University of Kentucky, Lexington, KY. 24 years of experience in geotechnical engineering.

Grace Pina-Garrett, Senior Transportation Engineer – NPDES Unit. B.S. Civil Engineering, California State University, Long Beach. 19 years experience in engineering and water quality.

Contribution: Senior review of water technical study and related section in the environmental document.

Hector Salas, Associate Environmental Planner. B.A. Environmental Analysis and Design, University of California, Irvine. 11 years experience.

Contribution: Preparation and review of water technical study (Water Quality Analysis Report) and water quality section.

Jonathan M. Wright, Associate Environmental Planner (Archaeology). B.A. Anthropology, San Diego State University. 5 years experience in Environmental Planning.

Contribution: GIS-Map preparation.

Joseph Lee, Transportation Engineer Civil. B.S. Civil Engineering, Oregon State University. 19 years experience in civil engineering.

Contribution: Project Engineer

Majid Ghaboosi, Ph.D., PE, PMP, Civil Engineering/Hydraulics and Sediment Transportation, Colorado State University, B.S. Hydraulics, University of Tehran, Iran. 30 years experience in civil engineering.

Contribution: Review of hydrology technical area.

Mitch Khalilifar, Environmental/Civil Engineering (Hazardous Waste), P.E., M.S. Civil and Environmental Engineering, Utah State University. 24 years of experience in hazardous waste.

Contribution: Preparation and review of hazards and hazardous materials technical study.

Reza Aurasteh, Senior Environmental Engineer. P.E., Ph.D. Engineering, Utah State University. 28 years experience in consulting engineering, academic, transportation engineering, and environmental engineering.

Contribution: Senior review of air quality technical study (Memo), and hazardous waste, noise and air quality sections.

Robin Ridley, Associate Environmental Planner. J.D. Law, Southwestern University of Law, Los Angeles, 7 years experience in Environmental Planning.

Contribution: Environmental document, technical study preparation.

Rola Arafat, Transportation Engineer. California State University Long Beach. Civil Engineering. 13 years experience in civil engineering.

Contribution: Preparation and review of transportation/traffic section.

Ronald Wong, Landscape Architect.

Contribution: Preparation and review of visual impact assessment (VIA) technical study and aesthetic section.

Smita Deshpande, Senior Environmental Planner. B.A. Geography, University of Pune, India; M.S., Regional Planning, Indiana University of Pennsylvania, Indiana, PA (Aug 1991). 20 years experience in Environmental Planning.

Contribution: Senior review of environmental document.

Sylvia Vega, Deputy District Director, Division of Environmental Analysis. B.S. California Polytechnic State University, San Luis Obispo, CA. 27 years of experience in transportation and environmental planning.

Contribution: Supervisory review of the environmental document.

Tan Nguyen, 25 years experience with Caltrans.

Contribution: Preparation and review of hydrology section.

Tara Ziaeian, Transportation Engineer. Civil Engineering. Environmental Engineering.

Contribution: Review of noise analysis.

LSA Associates, Inc.

Angela Roundy, Senior Biologist. M.B.A. Agricultural Business, Iowa State University. 8 years of experience as a professional biologist.

Contribution: Preparation of the Natural Environment Study and Biological Assessment.

Brooks Smith, Associate/Paleontologist. B.S. Earth Science, University of California, Santa Cruz. 20 years of experience as a professional paleontologist mitigation.

Contribution: Preparation of paleontological reports such as: Paleontological Investigation Report (PIR), Paleontological Evaluation Report (PER) and Paleontological Mitigating Plan (PMP).

Ingri Quon, Associate/Biologist. B.S. Biology, Lewis & Clark College. 19 years of experience as a professional biologist.

Contribution: Oversight of report preparation and field manager/biologist for the preparation of the Natural Environmental Study (NES), Biological Assessment (BA), jurisdictional delineation (JD), oak assessment, and focused survey reports.

Phil Fulton, Senior Cultural Resource Manager, Archaeologist. B.A. Environmental Studies, University of California, Santa Barbara. 26 years of experience as a professional archaeologist.

Contribution: Preparation of the Archaeological Survey Report and Historic Property Survey Report.

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Chapter 6– Distribution List

The Initial Study and the Notice of Availability will be distributed to local, and regional agencies and utility providers affected by the proposed project.

California Department of Fish & Wildlife
3883 Ruffin Road
San Diego, CA 92123

Carmeuse Industrial Sands
31302 Ortega Highway
San Juan Capistrano, CA 92675

City of Lake Elsinore
130 South Main Street
Lake Elsinore, CA 92530

Office of Planning and Research (OPR)
P.O. Box 3044
Sacramento, CA 95812-3044

Ortega Rock Quarry
33977 Ortega Hwy
San Juan Capistrano CA, 92675

Orange County-Clerk
12 Civic Center Plaza,
Room 101 and Room 106
Santa Ana, CA 92701

City of Temecula
41000 Main Street
Temecula, Ca 92590

Prima Deshecha Landfill
32250 La Pata Avenue
San Juan Capistrano, Ca 92675

Quest Diagnostics
33608 Ortega Highway
San Juan Capistrano, CA 92675

Santa Ana RWQCB
3737 Main Street, Suite 500
Riverside, CA 92501-3348

State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812-3044

U.S. Fish and Wildlife Service
Carl Benz
2493 Portola Road, Suite B
Ventura, CA 93003

United States Army Corp of Engineers
Los Angeles District
915 Wilshire Blvd, Suite 1101
Los Angeles CA, 90017

City of Murrieta
1 Town Square
Murrieta, CA 92562

City of San Juan Capistrano
32400 Paseo Adelanto
San Juan Capistrano, CA 92675

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Chapter 7– References

California Department of Conservation, Farmland Mapping and Monitoring Program, Division of Land Resource Protection (2010).

California Department of Conservation, California Geological Survey Surface Mining and Reclamation Act of 1975 (SMARA), Mineral Land Classification (2006)

California Geological Survey. www.consrv.ca.gov/cgs

California State Parks. www.parks.ca.gov

Orange County, California. OC Planning- Community Development. www.ocplanning.net

Orange County. General Plan 2005.

State Water Resources Control Board. www.swrcb.ca.gov

Southern California Association of Governments (SCAG). www.scag.ca.gov

United States Census Bureau, *United States Census 2010*. www.census.gov

United States Geological Survey. www.usgs.gov

Appendix A Environmental Commitment Record

ENVIRONMENTAL COMMITMENT RECORD				Dist-County-Route		12-ORA-74		
Originating date		03/08/2013		Document Type		IS/CE		
Current date:				EA		01/200		
ECR Last revised date:				PM		2.93-5.06		
PROJECT DESCRIPTION:								
This project proposes to widen the shoulders, install centerline rumble strips, construct 12-foot turn-out lanes on the eastbound direction and 15-foot turn-out lanes in the westbound direction, and replace and install metal beam guard rail (MBGR) at various locations.								
PROJECT PHASE	PID		ENVIRONMENTAL GENERALIST:	Gabriela Jauregui	949-724-2701			
	PA&E	X						
	85% PS&E							
	65% PS&E		PROJECT ENGINEER:	Joseph Lee	949-724-2144			
	95% PS&E							
PRE-CONSTRUCTION								
CONSTRUCTION		PROJECT MANAGER:	Bob Bazargan	949-724-2100				
POST CONSTRUCTION								
			RESIDENT ENGINEER:					
ENVIRONMENTAL COMMITMENTS								
NO.	DESCRIPTION OF COMMITMENT1	NSSP	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (Sign and Date)	COMMITMENT SOURCE	Reference by Section #	COMMENTS
1	Comply with Section 14 - Environmental Stewardship, 2010 State Standard Specifications	NO	PE RE	DESIGN CONSTRUCTION		Division of Environmental Analysis, Branch A	IS/CE	
2	The project will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges from the State of California, Department of Transportation Properties, Facilities and Activities Order No. 99-06-DWQ, NPDES No. CAS00003 and the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-0009-DWQ, NPDES No. CAS000002 and any subsequent permits in effect at the time of construction.	NO	PE RE	DESIGN CONSTRUCTION		Water Quality Assessment Report (WQAR)/IS	WQ-1	
3	The project will comply with the Construction General Permit by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) to address all construction-related activities, equipment, and materials that have the potential impact water quality for the appropriate Risk Level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include BMPs to control the pollutants, such as sediment control, catch basin inlet protection, construction materials management and non-storm water BMPs. All work must conform to the Construction Site BMP requirements specified in the latest edition of the Storm Water Quality Handbooks: Construction Site Best Management Practices Manual to control and minimize the impacts of construction and construction related activities, material and pollutants on the watershed. These include, but are not limited to temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling and other non-storm water BMPs.	NO	PE RE	DESIGN CONSTRUCTION		WQAR/IS	WQ-2	
4	Design Pollution Prevention Best Management Practices (BMPs) shall be implemented such as preservation of existing vegetation, slope/ surface protection systems (permanent soil stabilization), concentrated flow conveyance systems such as ditches, berms, dikes and swales, overside drains, flared end sections, and outlet protection/ velocity dissipation devices.	NO	PE RE	DESIGN CONSTRUCTION		WQAR/IS	WQ-3	
5	Caltrans approved treatment Best Management Practices (BMPs) will be implemented the Maximum Extent Practicable (MEP) consistent with the requirements of the NPDES Permit for Storm Water Discharges from the State of California, Department of Transportation (CALTRANS) Properties, Facilities and Activities (Order No. 99-06-DWQ, NPDES No. CAS000003) and any subsequent permits in effect at the time of construction. Treatment BMPs may include biofiltration strips, biofiltration swales, infiltration basins, detention devices, dry weather flow diversion, Gross Solids Removal Devices (GSRDs), media filters and wet basins.	NO	PE RE	DESIGN CONSTRUCTION		WQAR/IS	WQ-4	
6	Construction site dewatering must comply with the General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region Except for San Diego Bay (Order No. R9-2008-0002, NPDES No. CAG919002) and any subsequent updates to the permit at the time of construction. These permits address temporary dewatering operations during construction. Dewatering BMPs must be used to control sediment and pollutants, and the discharges must comply with the WDRs issued by the San Diego RWQCB.	NO	PE RE	DESIGN CONSTRUCTION		WQAR/IS	WQ-5	
7	Comply with Section 13 - Water Pollution Control, Storm Water Pollution Prevention Plan (SWPP), 2010 State Standard Specifications	NO	PE RE	DESIGN CONSTRUCTION		WQAR/IS	WQ-6	
8	SSP # 14-11.07, Remove Yellow Traffic Stripe and Pavement Marking (Hazardous Waste).	NO	PE RE	DESIGN CONSTRUCTION		ISA Checklist/IS	HM-2	
9	SSP # 15- 301, Remove Traffic Stripe and Pavement Markings	NO	PE RE	DESIGN CONSTRUCTION		ISA Checklist/IS	HM-3	

10	If signs of potential impact (odors, discolored soil, etc.) are observed during construction activity, construction shall cease and the California Department of Transportation's Unknown Procedures for Construction should be followed. Should groundwater be encountered during construction activities, or if construction dewatering is necessary, then sampling and analysis of groundwater shall be conducted to identify the appropriate management and disposal of the groundwater (Caltrans Standard Specifications for Construction (Section 14-11- [Hazardous Waste and Contamination])).	NO	PE RE	DESIGN CONSTRUCTION		ISA Checklist/IS	HM-4	
11	If removal of native vegetation, including oak trees occurs, replanting of vegetation is required.	NO	PE RE	DESIGN CONSTRUCTION		Visual Impact Assessment Report (VIA)/IS	A-1	
12	Retaining walls and concrete barriers will be stained to blend in with surrounding area.	NO	PE RE	DESIGN CONSTRUCTION		VIA/IS	A-2	
13	A copper sulfate stain will be applied to the Metal Beam Guard Rail to give an aged appearance.	NO	PE RE	DESIGN CONSTRUCTION		VIA/IS	A-3	
14	All trucks that are to haul excavated or graded material on site shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.	NO	PE RE	DESIGN CONSTRUCTION		Air Quality/IS	AQ-1	
15	The Contractor shall adhere to Caltrans Standard Specifications for Construction (section 14-9 [Air Quality]).	NO	PE RE	DESIGN CONSTRUCTION		Air Quality/IS	AQ-2	
16	Proper stabilization methods based on analysis and design will be implemented in order to mitigate potentially unstable conditions of the slopes.	NO	PE RE	DESIGN CONSTRUCTION		Geology/IS	GS-1	
17	Appropriate erosion control BMP's will be determined during the design phase. The contractor shall adhere to the Caltrans 2010 Standard Specifications for Construction (Section 21- Erosion Control).	NO	PE RE	DESIGN CONSTRUCTION		Geology/IS	GS-2	
18	Staging location of construction equipment/materials must be approved by Caltrans Environmental Planner prior to beginning any construction related activities.	NO	PE RE	DESIGN CONSTRUCTION		Historical Property Survey Report (HPSR)/IS	CUL-1	
19	The Department will ensure that the ESAs for archaeological sites 30-000026, 30-000656, and 30-001102, are clearly described and illustrated in the Plans, Specifications, and Estimates (PS&E) prepared for this project.	NO	PE RE	DESIGN CONSTRUCTION		HPSR/IS	CUL-2	
20	The ESA Action Plan will be part of the Resident Engineer (RE) Pending File and the project's Environmental Commitment Record (EOR).	NO	PE RE	DESIGN CONSTRUCTION		HPSR/IS	CUL-3	
21	The ESA's will be discussed during the pre-construction meeting and it will be explained that no construction activity, including storage or staging of equipment and materials, is allowed within the ESA. No entry into the ESA is permitted.	NO	PE RE	DESIGN CONSTRUCTION		HPSR/IS	CUL-4	
22	The RE will notify the Department's Archeologist at least 2 weeks in advance of construction activities within the ESA vicinities to ensure that Archaeological and Native American Monitors are available as needed to monitor all ground disturbing construction activities within these areas.	NO	PE RE	DESIGN CONSTRUCTION		HPSR/IS	CUL-5	
23	ESA fencing will be installed as delineated in the ESA Action Plan before initiating any construction work for the project.	NO	PE RE	DESIGN CONSTRUCTION		HPSR/IS	CUL-6	
24	Archaeological and Native American Monitoring will be performed during all ground disturbing activities within the ESA areas identified within the ESA Action Plan.	NO	PE RE	DESIGN CONSTRUCTION		HPSR/IS	CUL-7	
25	The Department Archaeologist will inspect the construction area on a weekly basis, or as needed, to ensure that the ESA is not inadvertently breached.	NO	PE RE	DESIGN CONSTRUCTION		HPSR/IS	CUL-8	
26	Should any anticipated finds be made within the APE, construction will be diverted away from the finds and sufficient time allowed to make a determination as to the nature and significance of the finds.	NO	PE RE	DESIGN CONSTRUCTION		HPSR/IS	CUL-9	
27	If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbance shall cease in any area or nearby area suspected to overlie the remains, and the County Coroner shall be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner shall notify the NAHC, which shall then notify the Most Likely Descendant (MLD). Further provisions of PRC 5097.98 are to be followed as applicable.	NO	PE RE	DESIGN CONSTRUCTION		HPSR/IS	CUL-10	
28	Prior to construction activities, the California Department of Transportation shall ensure that a Paleontological Mitigation Plan (PMP) is prepared and adhered to during construction of the project. The PMP shall include, but not be limited to, the following measures:	NO	PE RE	DESIGN CONSTRUCTION		Paleontological Identification & Evaluation Report (PIR/PER)/IS	PAL-1	
29	Recommendations for a qualified paleontologist or representative to attend the pregrade conference. At this meeting, the paleontologist will explain the likelihood for encountering paleontological resources, what resources may be discovered, and the methods of recovery that will be employed.	NO	PE RE	DESIGN CONSTRUCTION		PIR/PER/IS	PAL-2	
30	Recommendations for a preconstruction field survey in areas identified as having High paleontological sensitivity after vegetation and paving have been removed, followed by salvage of any observed surface paleontological resources prior to the beginning of additional grading	NO	PE RE	DESIGN CONSTRUCTION		PIR/PER/IS	PAL-3	

31	During construction excavation, a qualified vertebrate paleontological monitor shall initially be present on a full-time basis whenever excavation will occur within the sediments that have a High paleontological sensitivity rating and on a spot-check basis for excavation in sediments that have a Low sensitivity rating. Monitoring may be reduced to a part-time basis if no resources are being discovered in sediments with a High sensitivity rating (monitoring reductions, when they occur, will be determined by the qualified Principal Paleontologist). The monitor shall inspect fresh cuts and/or spoils piles to recover paleontological resources. The monitor shall be empowered to temporarily divert construction equipment away from the immediate area of the discovery. The monitor shall be equipped to rapidly stabilize and remove fossils to avoid prolonged delays to construction schedules. If large mammal fossils or large concentrations of fossils are encountered, Caltrans will consider using heavy equipment on site to assist in the removal and collection of large materials.	NO	PE RE	DESIGN CONSTRUCTION		PIR/PER/IS	PAL-4	
32	Localized concentrations of small (or micro-) vertebrates may be found in all native sediments. Therefore, it is recommended that these sediments occasionally be spot-screened on site through 1/8- to 1/20-inch mesh screens to determine whether microfossils are present. If microfossils are encountered, sediment samples (up to 3 cu. yd. or 6,000 pounds) shall be collected and processed through 1/20-inch mesh screens to recover additional fossils.	NO	PE RE	DESIGN CONSTRUCTION		PIR/PER/IS	PAL-5	
33	Recovered specimens shall be prepared to the point of identification and permanent preservation. This includes the sorting of any washed mass samples to recover small invertebrate and vertebrate fossils, the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and storage cost, and the addition of approved chemical hardeners/stabilizers to fragile specimens.	NO	PE RE	DESIGN CONSTRUCTION		PIR/PER/IS	PAL-6	
34	Specimens shall be identified to the lowest taxonomic level possible and curated into an institutional repository with retrievable storage. The repository institutions usually charge a one-time fee based on volume, so removing surplus sediment is important. The repository institution may be a local museum or university with a curator who can retrieve the specimens on request. Caltrans requires that a draft curation agreement be in place with an approved curation facility prior to the initiation of any paleontological monitoring mitigation activities.	NO	PE RE	DESIGN CONSTRUCTION		PIR/PER/IS	PAL-7	
35	Preparation and submittal of the PMR documenting completion of the PMP for the Lead Agency (Caltrans).	NO	PE RE	DESIGN CONSTRUCTION		PIR/PER/IS	PAL-8	
36	Noise levels should not exceed 86 dBA at 50 feet from the job site activities from 9PM to 6AM. An alternative warning method should be used, instead of a sound signal unless required by safety laws (Caltrans 2010 Standard Specifications for Construction (Section 14-8 [Noise and Vibration])).	NO	PE RE	DESIGN CONSTRUCTION		Noise/IS	N-1	
37	Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without a muffler (Caltrans 2010 Standard Specifications for Construction (Section 14-8- [Noise and Vibration])).	NO	PE RE	DESIGN CONSTRUCTION		Noise/IS	N-2	
38	Prior to clearing or construction, highly visible barriers (such as orange construction fencing) and, as needed, silt fencing will be installed around the protected zone of any oak tree, oak habitat, riparian/riverine vegetation, and CSS and designated as ESAs to be preserved. The protected zone will extend 5 ft (1.52 m) outside of the dripline or 15 ft (4.57 m) from the trunk of the tree, whichever is greater, unless the area includes a road shoulder or existing asphalt. In these instances, the road shoulder or existing asphalt will not be included in the ESA. No grading or fill activity of any type will be permitted within the ESA. In addition, heavy equipment, including motor vehicles, will not be allowed to operate within the ESAs. All construction equipment shall be operated in a manner so as to prevent accidental damage to nearby oaks. No structure of any kind, or incidental storage of equipment or supplies, shall be allowed within the ESA. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of fill material in areas where trees are immediately adjacent to planned construction activities.	NO	PE RE	DESIGN CONSTRUCTION		Natural Environmental Study (NES)/IS	BIO-1	
39	In order to avoid impacts to nesting birds, any native vegetation removal or tree (native exotic) trimming activities will occur outside of the nesting bird season (February 15–August 31). In the event that vegetation clearing is necessary during the nesting season, a qualified biologist will conduct a preconstruction survey to identify the location of nests. Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist. This buffer will be clearly marked in the field by construction personnel under guidance of the qualified biologist, and construction or clearing shall not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active.	NO	PE RE	DESIGN CONSTRUCTION		NES/IS	BIO-2	
40	Inspection and cleaning of construction equipment will be performed to minimize the importation of nonnative plant material, and eradication strategies (i.e., weed abatement programs) will be employed should an invasion occur.	NO	PE RE	DESIGN CONSTRUCTION		NES/IS	BIO-3	

41	Construction activities should occur outside the rainy season (October–May) to ensure that sedimentation within the drainage does not occur during construction activities. If construction must occur during the rainy season, then protective measures include the preparation and implementation of a SWPPP and BMPs. The SWPPP and BMPs must include measures to keep sediment out of the creek during and after storm events (for example, excavation spoils being stored outside the creek). In addition, for the protection of sensitive resources, including sensitive species, conditions regarding dust, noise, lighting, and other construction monitoring activities shall be outlined in the SWPPP and BMPs.	NO	PE	DESIGN		NES/IS	BIO-4	
			RE	CONSTRUCTION				
42	Immediately prior to construction, the qualified biologist shall provide an employee education program for listed species that may be affected by project work activities for all personnel who will be working on site during construction.	NO	PE	DESIGN		NES/IS	BIO-5	
			RE	CONSTRUCTION				
43	No fueling, lubrication, storage, or maintenance of construction equipment within 150 ft (46 m) of the CDFW or USACE jurisdictional areas is permitted. Spoil sites shall not be located within the CDFW or USACE jurisdictional areas, or in areas where it could be washed into San Juan Creek or its tributaries.	NO	PE	DESIGN		NES/IS	BIO-6	
			RE	CONSTRUCTION				
44	To reduce impacts to ARTO, all construction-related activities shall be confined to the proposed impact boundaries by installing silt fencing along the boundary to prevent any construction activities from encroaching into adjacent areas and to prevent ARTO from moving into the construction area. Fencing shall be approximately 2 ft (0.61 m) in height, 1 ft (0.31 m) of which shall be buried below the ground surface. Fencing shall be installed at least 14 days prior to the initiation of construction activities and shall be of appropriate material to exclude ARTO from the construction site. A qualified biologist shall survey the area inside the enclosure for a minimum of 10 nights prior to construction to relocate any toads observed within the construction impact area. ARTO found by the qualified biologist within the construction area shall be removed and relocated in suitable habitat either upstream or downstream of the project area. The qualified biologist will prepare temporary storage prior to the capture of toads. Any biologists handling ARTO must be authorized to do so by the appropriate agencies. In addition, construction access points shall be limited in proximity of this habitat type to the maximum extent feasible. During all construction activities, the construction contractor will take the appropriate measures to ensure that no waste material is discharged into the perennial watercourse. Trash and debris deposits adjacent to this sensitive habitat type will be disposed of daily. All silt fences shall be removed as a last order of work.	NO	PE	DESIGN		NES/IS	BIO-7	
			RE	CONSTRUCTION				
45	A qualified biologist will monitor all construction activities within and adjacent to ARTO sensitive habitat areas, as well as sensitive habitat for bat roosting, to ensure that the construction does not encroach into adjacent areas. In addition, the biological monitor should be present during vegetation clearing and grading activities to relocate any sensitive wildlife species. The qualified biologist shall provide quarterly monitoring reports documenting compliance with the avoidance and minimization measures. The report shall be submitted to the Department and the applicable resource agencies.	NO	PE	DESIGN		NES/IS	BIO-8	
			RE	CONSTRUCTION				
46	The construction contractor shall cover grubbing spoils and other grading debris with plastic sheeting to prevent ARTO and other toad species from opportunistically burrowing in these exposed and friable soils. The sheeting shall be placed on the soils prior to sunset and shall remain in place during nighttime hours. The areas where this measure will be implemented shall be determined by a qualified biologist in coordination with the USFWS.	NO	PE	DESIGN		NES/IS	BIO-9	
			RE	CONSTRUCTION				
47	No equipment or vehicles shall be driven on access roads adjacent to occupied ARTO habitat after sunset or prior to dawn. If the site must be accessed during these hours, a qualified biologist permitted by the appropriate resource agencies to handle ARTO must survey in front of the vehicle to identify and relocate individuals found on the road.	NO	PE	DESIGN		NES/IS	BIO-10	
			RE	CONSTRUCTION				
48	ARTO are nocturnal and can be particularly affected by nighttime artificial lighting. In order to minimize and avoid the effects of lighting on wildlife, construction lighting during nighttime construction activities shall be shielded away from natural areas, as feasible.	NO	PE	DESIGN		NES/IS	BIO-11	
			RE	CONSTRUCTION				
49	The District Biologist, in coordination with the engineer, will examine and approve all staging and storage areas.	NO	PE	DESIGN		NES/IS	BIO-12	
			RE	CONSTRUCTION				
50	In the event that vegetation clearing is necessary during the ringtail's denning season, a qualified biologist will conduct a preconstruction survey to identify potential locations of dens. Should nesting ringtails be found, an exclusionary buffer will be established by the qualified biologist. This buffer will be clearly marked in the field by construction personnel under guidance of the qualified biologist, and construction or clearing shall not be conducted within this zone until the qualified biologist determines that the den is no longer active.	NO	PE	DESIGN		NES/IS	BIO-13	
			RE	CONSTRUCTION				
51	A qualified bat biologist will survey the project area in June, prior to construction, to assess the potential for its use as a maternity roost, since maternity roosts are generally formed in late spring. If a June survey is not feasible due to contract award and/or the timing of construction, a qualified bat biologist will determine an appropriate alternative time of year for the survey. Project ground-disturbing activities shall not be initiated until this survey is complete. The qualified bat biologist shall also perform preconstruction surveys, since bat roosts can change seasonally. The surveys shall include a combination of structure inspection, sampling, exit counts, and acoustic surveys. If a roost is found, the animals shall be excluded and the roosting materials removed immediately so that the bats cannot return, forcing the bats to find alternative roost sites.	NO	PE	DESIGN		NES/IS	BIO-14	
			RE	CONSTRUCTION				

52	Tree removal shall be completed between September and November to avoid hibernating bats (December–February) and maternity season (May–August) if feasible. If this is not feasible, bat exclusion devices will need to be installed under the supervision of a qualified biologist. Such exclusion efforts must be continued to keep the structures free of bats until the completion of construction. All bat exclusion techniques shall be coordinated between the District Biologist and the resource agencies.	NO	PE	DESIGN		NES/IS	BIO-15	
			RE	CONSTRUCTION				
53	Prior to the initiation of construction/excavation activities along the road cut slopes, a qualified bat biologist will inspect accessible crevices during the day using a fiber-optic scope or similar instrument and confirm that no bats are present within those crevices. If the absence of bats is confirmed in the crevices, they will be sealed that same day using a method approved by the bat biologist; methods may include (but are not limited to) sealing of individual crevices using exclusionary materials or the use of fine-weave mesh netting along relevant sections of the road cut slope. Crevices inspection and sealing activities shall occur outside of the maternity season (May–August) in order to avoid project delays.	NO	PE	DESIGN		NES/IS	BIO-16	
			RE	CONSTRUCTION				
54	Any removal of oaks, snags, or large tree limbs containing cavities or crevices shall be removed in two stages: on Day 1, branches identified by a qualified bat biologist will be removed; on Day 2, the remainder of the tree or tree limb will be removed.	NO	PE	DESIGN		NES/IS	BIO-17	
			RE	CONSTRUCTION				
55	Any removal of rock slopes identified as having suitable roost crevices shall be removed in two stages: on Day 1, rock slopes up to within 50 ft (15.24 m) of crevices will be cut or excavated; on Day 2, the remainder of the rock slope can be removed.	NO	PE	DESIGN		NES/IS	BIO-18	
			RE	CONSTRUCTION				
56	In order to ensure that any burrowing owls or American badgers that may occupy the site in the future are not affected by construction activities, preconstruction surveys will be required prior to any phase of construction. Burrowing owl preconstruction surveys are also required in order to comply with the federal MBTA and the California Fish and Game Code.	NO	PE	DESIGN		NES/IS	BIO-19	
			RE	CONSTRUCTION				
57	The American badger survey can be conducted simultaneously. If any of the preconstruction surveys determine that burrowing owls are present, one or more of the following mitigation measures may be required: (1) avoidance of active nests and surrounding buffer area during construction activities; (2) passive relocation of individual owls; (3) active relocation of individual owls; and (4) preservation of on-site habitat with long-term conservation value for the owl. The specifics of the required measures shall be coordinated between the District Biologist and the resource agencies.	NO	PE	DESIGN		NES/IS	BIO-20	
			RE	CONSTRUCTION				
58	Equipment maintenance, lighting, and staging must be in areas designated by a qualified wildlife biologist, away from wildlife corridor entrances.	NO	PE	DESIGN		NES/IS	BIO-21	
			RE	CONSTRUCTION				
59	Hours of construction will be limited to daylight hours to ensure utilization of wildlife corridors, except when nighttime work is necessary (i.e., for worker safety). If work must be done at night, noise and direct lighting would be directed away from the culvert to the best extent feasible.	NO	PE	DESIGN		NES/IS	BIO-22	
			RE	CONSTRUCTION				
60	During non-working hours, the culverts will be kept clear of all equipment or structures that could potentially serve as barriers to wildlife passage.	NO	PE	DESIGN		NES/IS	BIO-23	
			RE	CONSTRUCTION				
61	The existing culvert structures that would be extended or modified by the proposed project would be designed so that they would be at least as compatible with wildlife usage as the existing culvert. For example, culvert entrances would have textured concrete drawdown pads.	NO	PE	DESIGN		NES/IS	BIO-24	
			RE	CONSTRUCTION				
62	To avoid direct mortality to bats roosting in areas subject to effects from construction activities, any structure with potential bat habitat will have temporary bat exclusion devices installed under the supervision of a qualified bat biologist prior to the initiation of construction activities. Exclusion should be conducted during the fall (September or October) to avoid trapping flightless young inside during the summer months or hibernating individuals during the winter. Such exclusion efforts must be continued to keep the structures free of bats until the completion of construction. Replacement roosting habitat may also be needed to minimize effects to excluded bats. All bat exclusion techniques will be coordinated between the District Biologist and the resource agencies. Any placement of exclusions outside the months of September and October will be coordinated among the District Biologist, project engineer, and resource agencies.	NO	PE	DESIGN		NES/IS	BIO-25	
			RE	CONSTRUCTION				
63	Prior to the start of construction, a qualified bat biologist will verify that the final design plans include suitable designs and specifications for bat exclusions and habitat replacement structures that appropriately reflect minimization and mitigation measures. Structural features providing existing roosting habitat cannot be permanently retained following construction, the installation of alternative roosting habitat may be required and will be done, if required to reduce the effects of the project on bats' long-term use of the structure. When feasible, on-structure replacement habitat will be conducted.	NO	PE	DESIGN		NES/IS	BIO-26	
			RE	CONSTRUCTION				
PERMITS								
	Agency		Issue Date	Type		Expiration Date		
	California Dept of Fish and Wildlife			1602 Lake and Streambed Alteration Agreement				
	State Water Resources Control Board			Section 401 Water Quality Certification	Section 402			
	United State Army Corps of Engineers			NPDES/Calttrans NPDES Permit CAS00003 nad CAS000002 (General Construction Permi				
	United State Fish and Wildlife Service			Section 404 Permit for fillinf or dredging waters of the United States				
				Section 7 Consultation for Threaten and Endangered Species				

Appendix B Title VI: Non-Discrimination Policy Statement

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY 711
www.dot.ca.gov



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March 16, 2012

**NON-DISCRIMINATION
POLICY STATEMENT**

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact Mario Solis, Manager, Title VI and Americans with Disabilities Act Program, California Department of Transportation, 1823 14th Street, MS-79, Sacramento, CA 95811. Phone: (916) 324-1353, TTY 711, fax (916) 324-1869, or via email: mario_solis@dot.ca.gov.

A handwritten signature in blue ink, appearing to read "Malcolm Dougherty".

MALCOLM DOUGHERTY
Acting Director

"Caltrans improves mobility across California"