DRAFT INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION

EAST LAS PALMAS AVENUE BRIDGE MAINTENANCE PROJECT

STANISLAUS COUNTY, CALIFORNIA

Prepared for:

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Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

PROJECT DESCRIPTION

The County of Stanislaus, in coordination with the California Department of Transportation (Caltrans), proposes to perform maintenance on the East Las Palmas Avenue Bridge (No. 38C-0033) over the San Joaquin River). The primary goal of maintenance is to clean the existing steel casings that surround the concrete bridge columns between piers 4 and 8. The cleaning will remove the sections of corrosion on those piers and then install new supplemental grouted steel column/pile encasements around the existing steel casings. These new encasements would both strengthen the piles and protect them from further corrosion. The proposed new encasements would be installed to cover a minimum of three feet beyond the limits of the existing corrosion for both the normal high and low water conditions. Rehabilitation of these piles would not substantially reduce the area between the piles which would ensure channel flow is not obstructed.

Construction access will be predominantly from the east side of the river where there are existing levee maintenance roads that connect down to the floodplain. Additional access may be necessary for some construction activities on the west side of the river. Access to the bridge columns would be gained by construction of a temporary trestle or work platform over the river. Construction of the trestle would start on the east side of the river and progress to the west bank.

Temporary construction easements may be necessary to ensure the contractor can access the bridge and perform the necessary maintenance work; however, no permanent right-of-way acquisition is anticipated. No utility relocations are planned.

DETERMINATION

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

The County has prepared an Initial Study for this Project, and pending public review, has determined from this study that the Project would not have a significant effect on the environment for the following reasons:

The Project would have no impact on agriculture and forest resources; energy; land use and planning; mineral resources; population and housing; public services; recreation; transportation and traffic; and wildfire.

The Project would have a less than significant impact on aesthetics; geology and soils; greenhouse gas emissions; noise; and utilities and service systems.

The Project would have less than significant impact with mitigation incorporated on air quality; biological resources; cultural resources; hazards and hazardous materials; hydrology and water quality; tribal cultural resources; and mandatory findings of significance.

_____ _____

Sarah Collins
Project Manager
Department of Public Works
Stanislaus County

Date

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EXECUTIVE SUMMARY

The County of Stanislaus, in coordination with Caltrans, proposes to perform maintenance on the East Las Palmas Avenue Bridge (No. 38C-0033) over the San Joaquin River. The primary goal of maintenance is to clean the existing steel casings that surround the concrete bridge columns between piers 4 and 8. The cleaning will remove the sections of corrosion on those piers and then install new supplemental grouted steel column/pile encasements around the existing steel casings. These new encasements would both strengthen the piles and protect them from further corrosion. The proposed new encasements would be installed to cover a minimum of three feet beyond the limits of the existing corrosion for both the normal high and low water conditions. Rehabilitation of these piles would not substantially reduce the area between the piles which would ensure channel flow is not obstructed.

The table below provides a summary of potential impacts to environmental resources from the Project.

This environmental document is prepared in conformance with the requirements of the California Environmental Quality Act (CEQA) Public Resources Code 21000-21178. Stanislaus County is the Lead Agency for CEQA implementation.

Table i: Summary of Potential Impacts

Resource	Project Impacts	Summary of Avoidance, Minimization, and/or Mitigation Measures
Aesthetics	Less than significant	Hydroseed and erosion control.
Agriculture and Forest Resources	No impact	N/A
Air Quality	Less than significant with mitigation incorporated	Dust and erosion control during construction.
Biological Resources	Less than significant with mitigation incorporated	Environmentally Sensitive Area Fencing; pre-construction nesting bird surveys; Swainson's hawk protocol surveys, and measures to reduce impacts to steelhead.
Cultural Resources	Less than significant with mitigation incorporated	Compliance with regulations relating to discovered human and/or Native American remains.
Energy	No impact	N/A
Geology and Soils	Less than significant	Standard BMPs incorporated.
Greenhouse Gas Emissions	Less than significant	Comply with all local Air Quality Management District rules, ordinances, and regulations for air quality restrictions.
Hazards and Hazardous Materials	Less than significant with mitigation incorporated	Proper handling of potential hazardous materials.
Hydrology and Water Quality	Less than significant with mitigation incorporated	Standard BMPs and Storm Water Management Plan.
Land Use and Planning	No impact	N/A
Mineral Resources	No impact	N/A
Noise	Less than significant	Minimize construction-generated noise.
Population and Housing	No impact	N/A
Public Services	No impact	N/A
Recreation	No impact	N/A

Resource	Project Impacts	Summary of Avoidance, Minimization, and/or Mitigation Measures
Transportation/ Traffic	No impact	N/A
Tribal Cultural Resources	Less than significant with mitigation incorporated	Compliance with regulations relating to discovered human and/or Native American remains.
Utilities and Service Systems	Less than significant	N/A
Wildfire	No impact	N/A
Mandatory Findings of Significance	Less than significant with mitigation incorporated	With mitigation measures in place, all impacts will be reduced to less than significant. Cumulative impacts to loggerhead shrike and Swainson's hawk will also be reduced to less than significant impacts with mitigation incorporated.

The detailed CEQA checklist summarizing specific Project impacts is included within each of the following sections.

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LIST OF ABBREVIATIONS

AB	Assembly Bill
ADL	Aerially deposited lead
ADT	Average Daily Traffic
APE	Area of Potential Effects
AUL	Activity and Use Limitation
BMPs	Best Management Practices
BSA	Biological Study Area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulation
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CWA	Clean Water Act
dBA	Decibel A-weighted
DWR	Department of Water Resources
EDR	Environmental Data Resources Inc.
E.O.	Executive Order
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GHG	greenhouse gases
IPac	USFWS Information for Planning and Conservation
ISA	Initial Site Assessment
Ldn	Day-night Average Sound Level
Leq	Equivalent Continuous Sound Level

Lmax	Maximum Sound Level
LOS	Level of Service
MACIP	McHenry Avenue Corridor Improvement Project
MBTA	Migratory Bird Treaty Act
MND	Mitigated Negative Declaration
Mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEPA	National Environmental Protection Act
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
O_3	Ozone
OHP	Office of Historic Preservation
PCEs	primary constituent elements
PM	Particulate Matter
POAQC	Project of Localized Air Quality Concern
ppb	Parts per Billion
ppm	Parts per Million
PRC	Public Resources Code
REC	Recognized Environmental Condition
ROG	Reactive organic compounds
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
RSRB Project	Replacement of the Stanislaus River Bridge on McHenry Avenue
SCS	Sustainable Communities Strategy
sec	second
SHPO	State Historic Preservation Office
SHTAC	Swainson’s Hawk Technical Advisory Committee
SIP	State Implementation Plan

SJVAPCD	San Joaquin Valley Air Pollution Control District
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	Sulfur Dioxide
SPCCP	Spill Prevention, Control, and Countermeasure Program
SSC	Species of Special Concern (SSC).
SSJID	South San Joaquin Irrigation District
StanCOG	Stanislaus Council of Governments
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VELB	Valley elderberry longhorn beetle
VHD	vehicle hours of delay
VOC	Volatile organic compounds

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1.0 PROJECT

1.1 INTRODUCTION

Stanislaus County, in coordination with the California Department of Transportation (Caltrans), proposes to perform maintenance on the East Las Palmas Avenue Bridge (No. 38C-0033) over the San Joaquin River (see **Figures 1-3**) as part of the East Las Palmas Avenue Bridge Maintenance Project (Project). The primary goal of maintenance is to clean the existing steel casings that surround the concrete bridge columns between piers 4 and 8. The cleaning will remove the sections of corrosion on those piers and then install new supplemental grouted steel column/pile encasements around the existing steel casings. These new encasements would both strengthen the piles and protect them from further corrosion. The proposed new encasements would be installed to cover a minimum of three feet beyond the limits of the existing corrosion for both the normal high and low water conditions. Rehabilitation of these piles would not substantially reduce the area between the piles which would ensure channel flow is not obstructed. A preliminary design detail of these casings is included in **Figure 4**.

1.2 PURPOSE

The purpose of the Project is to repair corroded and deteriorated steel casings around the piles located in or adjacent to the San Joaquin River. The Project would improve structural deficiencies, increase the expected life of the existing bridge and enhance safety on one of the County of Stanislaus' main east-west corridors over the San Joaquin River.

1.3 NEED

Maintenance on the East Las Palmas Avenue Bridge columns within and adjacent to the San Joaquin River is needed due to corrosion and deterioration of the existing steel pile casings. If this deterioration continues without corrective action, the structural supports for the bridge superstructure could become compromised and the bridge would be at risk for major failure.

1.4 ALTERNATIVES

Two alternatives are being considered for this Project—the Build Alternative (see **Figures 3** and **4**) and the No-Build Alternative.

1.4.1 BUILD ALTERNATIVE

The County of Stanislaus proposes to perform maintenance on the East Las Palmas Road Bridge. Maintenance will remove corroded sections of existing steel casings and install new supplemental grouted steel column/pile encasements around existing steel casings. Construction access will be predominantly from the east side of the river where there are existing levee maintenance roads that connect down to the floodplain. Additional access may be necessary for some construction activities on the west side of the river. Access to the bridge columns would be gained by construction of a temporary trestle or work platform over the river. Construction of trestle would start on the east side of the river and progress to the west bank.

Temporary construction easements may be necessary to ensure the contractor can access the bridge and perform the necessary maintenance work; however, no permanent right-of-way acquisition is anticipated. No utility relocations are planned.

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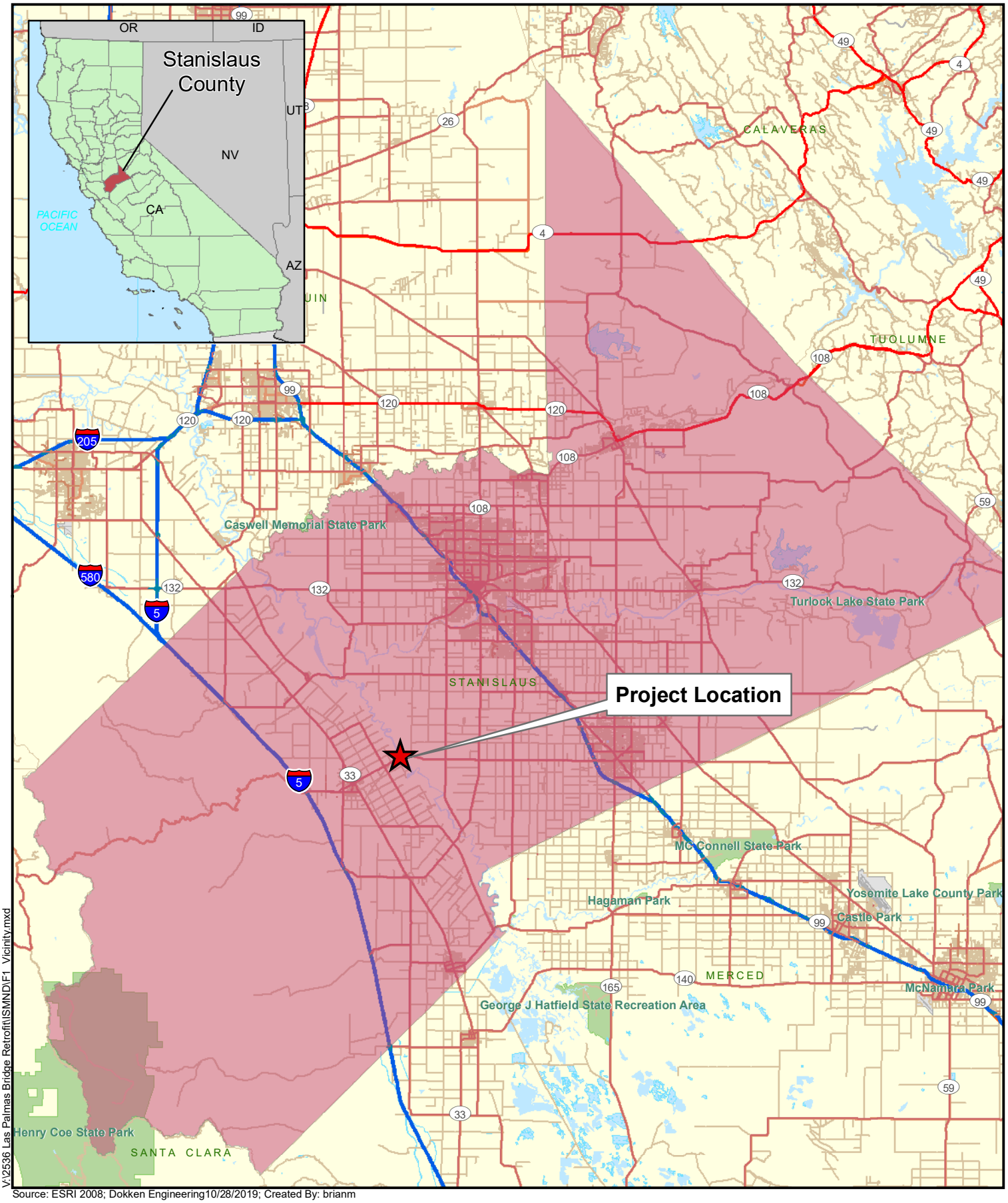


V:\2536 Las Palmas Bridge Retrofit\SMND\F1 Vicinity.mxd

Source: ESRI 2008; Dokken Engineering10/28/2019; Created By: brianm

0 5 10 15 Miles

FIGURE 1
Project Vicinity
BRLS-5938(200)
Las Palmas Avenue over San Joaquin River
Bridge Preventative Maintenance Project
Stanislaus County, California

v:\1836_11thStBridge\Cultural\F2_Loc_10-12-10.mxd

Source: ESRI World Street Maps Online; Dokken Engineering 10/28/2019; Created By: brianm

0 0.25 0.5 0.75 1 Miles

FIGURE 2
Project Location
BRLS-5938(200)
Las Palmas Avenue over San Joaquin River
Bridge Preventative Maintenance Project
Stanislaus County, California

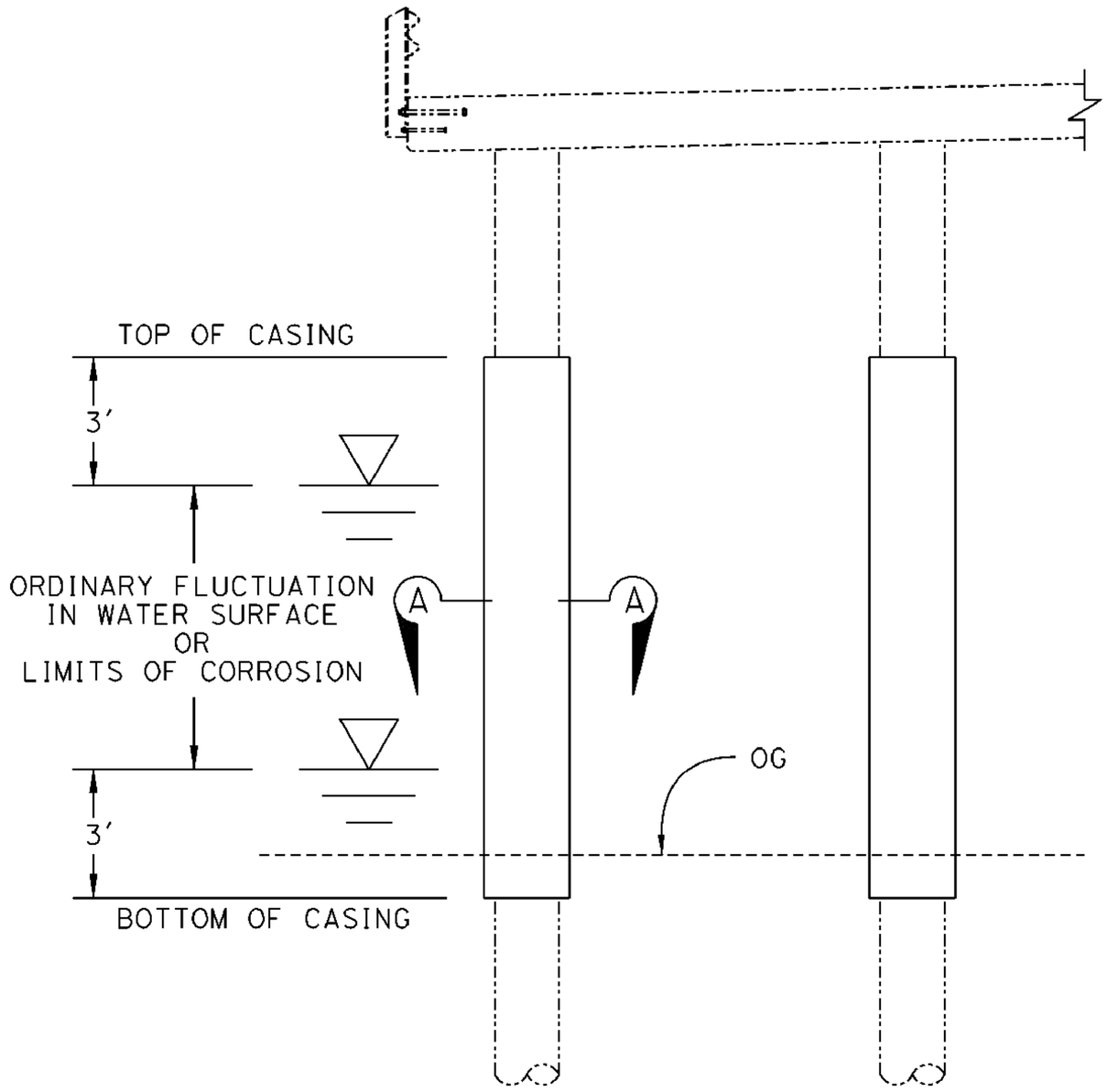
V:\2536 Las Palmas Bridge Retrofit\SMND\F3 Project Features.mxd

Source: ESRI Maps Online; Dokken Engineering 10/28/2019; Created By: brianm

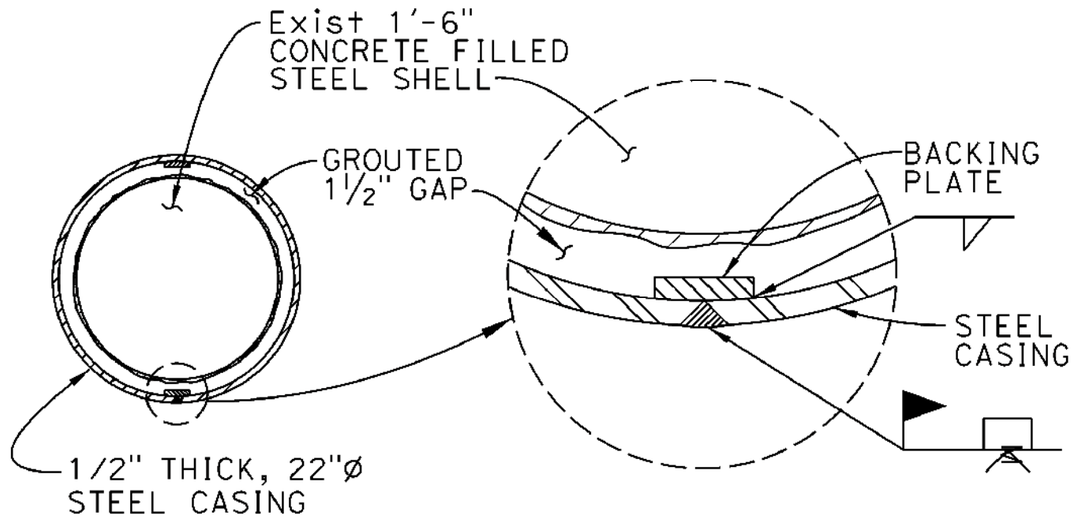
1 inch = 200 feet

0 100 200 300 400 500 Feet

Figure 3
Project Features
BRLS-5938(200)
Las Palmas Avenue over San Joaquin River
Bridge Preventative Maintenance Project
Stanislaus County, California



PIER ELEVATION



SECTION A-A

V:\2536 Las Palmas Bridge Retrofit\F4 Cross sections.mxd

Source: ESRI Maps Online; Dokken Engineering 12/30/2019; Created By: brianm

Not to Scale

Figure 4
Existing and Proposed Cross Sections
BRLS-5938(200)
Las Palmas Avenue over San Joaquin River
Bridge Preventative Maintenance Project
Stanislaus County, California

1.4.2 NO-PROJECT ALTERNATIVE

The State CEQA Guidelines (Section 15126[e]) require consideration of a No-Project alternative that represents the existing conditions, as well as what would reasonably be expected to occur in the foreseeable future if the Project were not approved. Under the No-Build, or "Do Nothing" Alternative, maintenance of the East Las Palmas Avenue Bridge would not be performed. The bridge would continue to deteriorate and no longer meet the sufficiency ratings, thereby placing the public at risk.

1.5 PERMITS AND APPROVALS NEEDED

Environmental findings within the Project include impacts to water quality, waters of the U.S. and State, special status species, and the floodway. The following consultations and environmental permits will be obtained prior to the start of construction.

Table 1: Permit and Approvals Needed

Agency	Permit/Approval	Status
State Water Resources Control Board	Section 401 Certification	Will be Obtained Prior to Construction
California Department of Fish and Wildlife	1602 Streambed Alteration Agreement	Will be Obtained Prior to Construction
U.S. Fish and Wildlife Service	Section 7 Biological Opinion	Will be Obtained Prior to Construction
U.S. Army Corps of Engineers	Section 404 Nationwide Permit 14	Will be Obtained Prior to Construction
Regional Water Quality Control Board	National Pollutant Discharge Elimination System 402 General Permit for Storm Water Discharges Associated with Construction Activity	Will be Obtained Prior to Construction.
Central Valley Flood Protection Board	Encroachment Permit	Will be Obtained Prior to Construction
US Coast Guard	Coast Guard Permit	Will be Obtained Prior to Construction

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2.0 Initial Study

This chapter explains the impacts that the Project would have on the human, physical, and biological environments in the Project area. It describes the existing environment that could be affected by the Project, potential impacts from the alternatives, and avoidance, minimization, and/or mitigation measures. Any indirect impacts are included in the general impacts analysis and discussions that follow.

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?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

REGULATORY SETTING

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])."

DISCUSSION

a) Have a substantial adverse effect on a scenic vista?

No impact. No designated scenic vistas are at or near the Project site. East Las Palmas Avenue is not a designated Scenic Highway in the National Scenic Byways Program nor is it a State Scenic Highway (Caltrans 2017). There are no Wild and Scenic Rivers within the Project corridor. Therefore, **No Impact** to a scenic vista would result from the Project.

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

No impact. The Project Site is not located within a State Scenic Highway nor is the site visible from a State highway, including any State highways designated as scenic highways. Therefore, **No Impact** to scenic resources within a State Scenic Highway would result from development of the Project, and no mitigation is required.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?

Less than Significant Impact. The Project is a maintenance project and will be encasing the existing columns in steel casings. The new casings will not be visible from the bridge, and as the new casings would only increase the diameter of the existing casings by less than three inches, so there would be no noticeable difference from underneath the bridge.

The vegetation clearing during construction would result in a temporary change in aesthetics, but those changes would be negligible and nearly unnoticeable from the bridge deck. These changes would be **Less than Significant**. However, with the implementation of measures **VIS-1** through **VIS-3** as well as measures **BIO-13** and **BIO-14** in **Section 2.4** the impacts would be further minimized.

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

No Impact. The Project would not substantially affect light and glare. No new lighting is proposed. Construction activities would temporarily introduce equipment and vehicles to the Project site; however, work would take place during daylight hours and no construction lighting is anticipated. The Project would not result in substantial additional light or glare that would adversely affect day or nighttime views in the Project area; therefore, there will be **No Impact** from the Project.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Avoidance or minimization measures have been identified and can lessen visual impacts caused by the project. Also, the inclusion of aesthetic features in the Project design previously discussed can help generate public acceptance of a project. This section describes additional avoidance and/or minimization measures to address specific visual impacts. These will be designed and implemented with concurrence of the District Landscape Architect.

The following measures to avoid or minimize visual impacts will be incorporated into the Project:

VIS-1: Caltrans Standard Specifications (2018) “Erosion Control” will be followed during construction. At the conclusion of construction, areas of bare soil shall be hydroseeded with native seed mix to prevent or at least minimize erosion.

VIS-2: Vegetation clearing would only occur within the delineated Project boundaries in an effort to minimize the impacts. Trees located in areas along the edge of the construction zone would be trimmed whenever possible and only those trees that lie within the active construction areas would be removed.

VIS-3: All disturbed areas including staging of vehicles and equipment will be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native species.

FINDINGS

The Project would have **Less than Significant Impacts** relating to aesthetics, and measures **VIS-1** through **VIS-3** would reduce impacts even further.

2.2 AGRICULTURE AND FOREST RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES:				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

DISCUSSION

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?

No Impact. To identify Prime and Unique Farmland within the Project area, an examination of the soils on the Natural Resource Conservation Service (NRCS) website. While Farmland of Statewide importance was identified within the flood plain of the San Joaquin River, there will only be temporary impacts to this area. Additionally, there is no active agriculture within the Project area to be impacted. Once construction is completed, the area will be returned to existing conditions. Therefore, the Project would have **No Impacts** to farmland soils.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The Project would not conflict with existing zoning for agriculture use, and there is no Williamson Act contract land within the Project area. Based on the fact that the Project only has temporary impacts and is consistent with state and local farmland protection programs and policies, the Project would have **No Impacts** on farmland or agriculture in the Project vicinity.

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

No Impact. There are no forests or forest resources located within the Project area; therefore, the Project will have **No Impacts** with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

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

No Impact. There are no forests or forest resources located within the Project area; therefore, the Project will not result in the loss of forest land or conversion of forest land to non-forest use and there will be **No Impacts** on forest land.

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

No Impact. The Project would have **No Impacts** due to the location or nature of the Project that would result in the additional conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

FINDINGS

The Project would have **No Impacts** relating to agriculture and forest resources.

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?	☐	☐	☐	☒
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non- attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

REGULATORY SETTING

The Clean Air Act (CAA) 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 (NO_2), ozone (O_3), particulate matter (PM), lead (Pb), and sulfur dioxide (SO_2).

Regional level conformity in California is concerned with how well the region is meeting the standards set for CO, NO_2, O_3, and PM. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP[s]) 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 the San Joaquin Valley Air Pollution Control District for Stanislaus County and the appropriate federal agencies, such as the Federal Highway Administration, make 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 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.

Federal and State Ambient Air Quality Standards

California and the federal government have established standards for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). The pollutants of greatest concern in the Project area are ozone, particulate matter-2.5 microns ($PM_{2.5}$) and particulate matter-10 microns (PM_{10}).

State Regulations

Responsibility for achieving California's air quality standards, which are more stringent than federal standards, is placed on the California Air Resources Board (CARB) and local air districts, and is to be achieved through district-level air quality management plans that will be incorporated into the SIP. In California, the EPA has delegated authority to prepare SIPs to the CARB, which, in turn, has delegated that authority to individual air districts.

The CARB has traditionally established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving state implementation plans.

Responsibilities of air districts include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by CEQA.

The California CAA of 1988 substantially added to the authority and responsibilities of air districts. The California CAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The California CAA focuses on attainment of the state ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards.

The California CAA requires designation of attainment and non-attainment areas with respect to state ambient air quality standards. The California CAA also requires that local and regional air districts expeditiously adopt and prepare an air quality attainment plan if the district violates state air quality standards for CO, SO_2, NO_2, or ozone. These Clean Air Plans are specifically designed to attain these standards and must be designed to achieve an annual 5% reduction in district-wide emissions of each non-attainment pollutant or its precursors. Where an air district is unable to achieve a 5% annual reduction, the adoption of “all feasible measures” on an expeditious schedule is acceptable as an alternative strategy (Health and Safety Code Section 40914(b)(2)). No locally prepared attainment plans are required for areas that violate the state PM_{10} standards.

The California CAA requires that the state air quality standards be met as expeditiously as practicable but, unlike the federal CAA, does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.

CARB’s *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides ARB recommendations for the siting of new sensitive land uses (including residences) near freeways, distribution centers, ports, refineries, chrome plating facilities, dry cleaners, and gasoline stations. The handbook recommends that new development be placed at distances from such facilities.

AFFECTED ENVIRONMENT

The proposed Project is located within the San Joaquin Valley Air Basin and is under the auspices of the San Joaquin Valley Air Pollution Control District (SJVAPCD). No additional capacity is proposed (no new lanes) and the Project would not result in any new trips, vehicle miles traveled, or vehicle hours traveled in the permanent condition. Table 1 of the Caltrans Transportation Project-Level Carbon Monoxide Protocol lists specific types of projects that are exempt from all emissions

analyses for determining air quality conformity. Included in the list is “Widening narrow pavements or reconstructing bridges (no additional travel lanes)”. Additionally, since the Project is consistent with these requirements, the Project will not be increasing operational traffic and it is assumed to be consistent with SJVAPCD and is exempt from local conformity review.

DISCUSSION

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

No Impact. The Project is consistent with the site land use and zoning; construction of the Project would not conflict with or obstruct implementation of any air quality plan.

Regional Conformity

The Project is listed in the Stanislaus Council of Governments (StanCOG) financially constrained 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (StanCOG 2018) (Appendix A). The Project is also included in the StanCOG final conformity analysis for the 2019 Federal Transportation Improvement Program (FTIP) (StanCOG 2019) as an exempt project under code 4.12 as “Transportation enhancement activities”. Therefore, the Project would have **No Impacts** with any applicable air quality plan

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact. The California Air Resources Board (CARB) is required to designate areas of the state as attainment, non-attainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “non-attainment” designation indicates that a pollutant concentration violated the standard at least once within a calendar year. The area air quality attainment status of Stanislaus County is shown on **Table 2**.

All construction impacts to air quality would be short-term and intermittent; therefore, impacts are anticipated to be less than significant. The emission of pollutants during construction would not contribute significantly to a net increase of any criteria pollutant. No long-term, operational impacts are anticipated.

Table 2: NAAQS and CAAQS Attainment Status for Stanislaus County

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – 8-Hour	No Federal Standard	Non-attainment/Severe
Ozone – 1-Hour	Non-attainment/Extreme	Non-attainment
PM_{10}	Attainment	Non-attainment
$PM_{2.5}$	Non-attainment	Non-attainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Sulfates	No Federal Standard	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment
Sources: CARB 2016, EPA 2016a		

Operational Emissions

The proposed Project is not a capacity increasing project and would not cause a change in the traffic patterns. Since there would be no change in operating conditions or lane configuration and traffic would not increase after construction, there would be no additional regional or local air emissions and no impact on air quality. Accordingly, the proposed Project would not exceed the applicable thresholds of significance for air pollutant emissions during operation. Therefore, operation of the Project would not result in a cumulatively considerable net increase in any criteria pollutant for which the Project region is in non-attainment.

Construction Emissions

Construction activities associated with the maintenance and rehabilitation of East Las Palmas Avenue Bridge may result in some temporary incremental increases in air pollutants, such as ozone precursors and particulate matter due to operation of gas powered equipment and minor land disturbance. However, the proposed construction activities would be temporary in nature and are not anticipated to generate large amounts of dust or particulates because the Project will have limited operations on bare ground. Additionally, the Project will be implementing best available control measures, as required by **AQ-1** through **AQ-3**, to reduce dust and particulate spreading.

The Project's construction is anticipated to take 5 months. The Project's construction emissions were estimated using the Roadway Construction Emissions Model by the Sacramento Metropolitan Air Quality Management District (SMAQMD 2014), which is the accepted model for all CEQA roadway projects throughout California. The Roadway Construction Emissions Model results are compared with the SJVAPCD Air Quality Significance Thresholds in **Table 3**. As summarized in **Table 3**, construction activities from the Project would not exceed emission thresholds established by the SJVAPCD.

Table 3: SJVAPCD Air Quality Thresholds of Significance – Criteria Pollutants

Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
CO	100 tons per year (~540 lbs per day)	100 tons per year (~540 lbs per day)	100 tons per year (~540 lbs per day)
NO_x	10 tons per year (~54 lbs per day)	10 tons per year (~54 lbs per day)	10 tons per year (~54 lbs per day)
ROG	10 tons per year (~54 lbs per day)	10 tons per year (~54 lbs per day)	10 tons per year (~54 lbs per day)
SO_x	27 tons per year (~145 lbs per day)	27 tons per year (~145 lbs per day)	27 tons per year (~145 lbs per day)
PM_{10}	15 tons per year (~81 lbs per day)	15 tons per year (~81 lbs per day)	15 tons per year (~81 lbs per day)
$PM_{2.5}$	15 tons per year (~81 lbs per day)	15 tons per year (~81 lbs per day)	15 tons per year (~81 lbs per day)

Source: SJVAPCD (2015)

All construction activities would follow the SJVAPCD rules and would implement all appropriate air quality BMPs, including minimizing equipment idling time and use of water or similar chemical palliative to control fugitive dust. The implementation of **AQ-1** through **AQ-3** would also be used to minimize effects of impacts on air quality due to construction. These measures provide compliance guidelines for minimizing fugitive dust to protect sensitive receptors in the vicinity. With adherence to **AQ-1** through **AQ-3** construction emissions would result in a **Less Than Significant Impact.** No mitigation is required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant with Mitigation. During construction, short-term degradation of air quality is expected from the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment powered by gasoline and diesel engines are also anticipated and would include CO, NO_X, VOCs, directly emitted PM_{10} and $PM_{2.5}$, and toxic air contaminants (TACs) such as diesel exhaust particulate matter. Construction activities are not expected to result in any changes to traffic congestion as the bridge will remain open during construction.

Localized Construction Analysis

The nearest sensitive receptors are within 400 feet from the western limits of construction area within the Project boundaries. The SJVAPCD Air Quality Significance thresholds for construction (see **Table 2**), represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, distance to the sensitive receptor, and other applicable criteria.

Construction emissions were estimated using the latest Sacramento Metropolitan Air Quality Management District's Road Construction Model (http://www.airquality.org/ceqa/, Version 8.1.0, SMAQMD 2016). Construction-related emissions for the proposed project are presented in **Table 4**. The emissions presented are based on the best information available at the time of calculations. The emissions represent the peak daily construction emissions that would be generated by construction of the proposed project.

Table 4. Construction Emissions from Construction Activity.

	CO (lbs/day)	NOx (lbs/day)	ROG (lbs/day)	SOx (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)
Grubbing/Land Clearing	0.0	0.0	0.0	0.0	10.0	2.1
Grading/Excavation	14.9	18.4	1.7	<0.1	10.8	2.9
Drainage/Utilities/ Sub-Grade	9.7	13.9	1.2	<0.1	10.6	2.6
Paving	4.2	4.2	0.4	<0.1	0.3	0.2
Maximum daily (lbs/day)	14.9	18.4	1.7	<0.1	10.8	2.9
Project Total (tons/construction project)	0.6	0.7	0.1	<0.1	0.5	0.1

Emissions from construction activities associated with the rehabilitation of the East Las Palmas Avenue Bridge would not exceed the SJVAPCD significance thresholds for criteria pollutants.

Toxic Air Contaminants

The greatest potential for toxic air contaminant (TAC) emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. In addition, incidental amounts of toxic substances such as oils, solvents, and paints would be used during construction. These substances would comply with all applicable SJVAPCD rules for their manufacture and use. The proposed bridge rehabilitation and maintenance project would have no permanent impact on sensitive receptors. Given the above analysis, the impact is considered to be a **Less Than Significant Impact**. No mitigation is required.

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

Less than Significant Impact. The Project site is located within an agricultural area and would not produce sufficient quantities of other emissions that could lead to odors during construction that would affect the surrounding rural residents; therefore, the Project would have **Less than Significant Impacts** on air quality and other emissions.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following measures would be implemented as part of the Project to minimize short term construction related air quality emissions:

AQ-1: The construction contractor shall comply with Caltrans' Standard Specifications Section 14-11.04 Dust Control of Caltrans' Standard Specifications (2018).

AQ-2: The construction contractor shall comply with Section 7-1.02C Emissions Reduction and Section 18 Dust Palliative of Caltrans' Standard Specifications (2018).

AQ-3: The Wind Erosion Control BMP (WE-1) from Caltrans' Construction Site *Best Management Practices Manual* will be implemented as follows:

- Water shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.
- All distribution equipment shall be equipped with a positive means of shutoff.
- Unless water is applied by means of pipelines, at least one mobile unit shall be available at all times to apply water or dust palliative to the Project.
- If reclaimed water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board requirements. Non-potable water shall not be conveyed in tanks or drain pipes that will be used to convey potable water and there shall be no connection between potable and non-potable supplies. Non-potable tanks, pipes and other conveyances shall be marked "NON-POTABLE WATER – DO NOT DRINK."
- Materials applied as temporary soil stabilizers and soil binders will also provide wind erosion control benefits.

FINDINGS

The Project would have **Less than Significant Impacts** relating to 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 U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☒	☐	☐
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?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

REGULATORY SETTING

This section describes the Federal, State, and local plans, policies, and laws that are relevant to biological resources within the Biological Study Area (BSA). Applicable Federal permits and approvals that will be required before construction of the Project are provided in Section 1.5.

Federal Regulations

National Environmental Policy Act

NEPA provides an interdisciplinary framework for environmental planning by Federal agencies and contains action-forcing procedures to ensure that Federal agency decision makers take environmental factors into account. NEPA applies whenever a Federal agency proposes an action, grants a permit, or agrees to fund or otherwise authorize any other entity to undertake an action that could possibly affect environmental resources. Caltrans, under delegation from the FHWA, is the NEPA lead agency for this project.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 (16 U.S.C. section 1531 et seq.) provides for the conservation of endangered and threatened species listed pursuant to Section 4 of the Act (16 U.S.C. section 1533) and the ecosystems upon which they depend. These species and resources have been identified by United States Fish and Wildlife Services (USFWS) or National Marine Fisheries Service (NMFS).

Clean Water Act

The Clean Water Act (CWA) was enacted as an amendment to the Federal Water Pollutant Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the U.S. CWA serves as the primary Federal law protecting the quality of the nation's

surface waters, including lakes, rivers, and coastal wetlands. CWA empowers the U.S. Environmental Protection Agency (EPA) to set national water quality standards and effluent limitations, and includes programs addressing both point-source and non-point-source pollution. Point-source pollution originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or construction site. Non-point-source pollution originates over a broader area and includes urban contaminants in storm water runoff and sediment loading from upstream areas. CWA operates on the principle that all discharges into the nation's waters are unlawful unless they are specifically authorized by a permit; permit review is CWA's primary regulatory tool. This project will require a CWA Section 402 National Pollutant Discharge Elimination System (NPDES) Permit regulated by the EPA.

The United States Army Corps of Engineers (USACE) regulates discharges of dredged or fill material into waters of the U. S. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations).

The Regional Water Quality Control Board (RWQCB) has jurisdiction under Section 401 of the CWA and regulates any activity which may result in a discharge to surface waters. Typically, the areas subject to jurisdiction of the RWQCB coincide with those of USACE (i.e., waters of the U.S. including any wetlands). The RWQCB also asserts authority over "waters of the State" under waste discharge requirements pursuant to the Porter-Cologne Water Quality Control Act.

Executive Order 13112: Prevention and Control of Invasive Species
Executive Order (EO) 13112 (signed February 3, 1999) directs all Federal agencies to prevent and control introductions of invasive species in a cost-effective and environmentally sound manner. The EO and directives from the FHWA require consideration of invasive species in NEPA analyses, including their identification and distribution, their potential impacts, and measures to prevent or eradicate them.

Executive Order 13186: Migratory Bird Treaty Act
EO 13186 (signed January 10, 2001) directs each Federal agency taking actions that could adversely affect migratory bird populations to work with USFWS to develop a Memorandum of Understanding that will promote the conservation of migratory bird populations. Protocols developed under the Memorandum of Understanding will include the following agency responsibilities:

- Avoid and minimize, to the maximum extent practicable, adverse impacts on migratory bird resources when conducting agency actions;
- Restore and enhance habitat of migratory birds, as practicable; and
- Prevent or abate the pollution or detrimental alteration of the environment for the benefit of migratory birds, as practicable.

The EO is designed to assist Federal agencies in their efforts to comply with the Migratory Bird Treaty Act (MBTA) (50 Code of Federal Regulations [CFR] 10 and 21) and does not constitute any legal authorization to take migratory birds. Take is defined under the MBTA as "the action of or attempt to pursue, hunt, shoot, capture, collect, or kill" (50 CFR 10.12) and includes intentional take (i.e., take that is the purpose of the activity in question) and unintentional take (i.e., take that results from, but is not the purpose of, the activity in question).

State Regulations

California Environmental Quality Act
California State law created to inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities and to work to reduce these negative environmental impacts. The County of Stanislaus is the CEQA lead agency for this project.

California Endangered Species Act
The California Endangered Species Act (CESA) (California Fish and Game (CFG) Code Section 2050 et seq.) requires the CDFW to establish a list of endangered and threatened species (Section 2070) and to prohibit the incidental taking of any such listed species except as allowed by the Act (Sections 2080-2089). In addition, CESA prohibits take of candidate species (under consideration for listing).

CESA also requires the CDFW to comply with CEQA (Pub. Resources Code Section 21000 et seq.) when evaluating incidental take permit applications (CFG Code Section 2081(b) and California Code Regulations, Title 14, section 783.0 et seq.), and the potential impacts the Project or activity for which the application was submitted may have on the environment. CDFW's CEQA obligations include consultation with other public agencies which have jurisdiction over the Project or activity [California Code Regulations, Title 14, Section 783.5(d)(3)]. CDFW cannot issue an incidental take permit if issuance would jeopardize the continued existence of the species [CFG Code Section 2081(c); California Code Regulations, Title 14, Section 783.4(b)].

Section 1602: Streambed Alteration Agreement
Under CFG Code 1602, public agencies are required to notify CDFW before undertaking any project that will divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occurs during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resources. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project.

Section 3503 and 3503.5: Bird and Raptors
CFG Code Section 3503 prohibits the destruction of bird nests and Section 3503.5 prohibits the killing of raptor species and destruction of raptor nests. Trees and shrubs are present in and adjacent to the study area and could contain nesting sites.

Section 3513: Migratory Birds
CFG Code Section 3513 prohibits the take or possession of any migratory non-game bird as designated in the MBTA or any part of such migratory non-game bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

AFFECTED ENVIRONMENT

Online databases from the USFWS, NMFS, California Natural Diversity Database (CNDDB), and the California Rare Plant Society (CNPS) were used to generate a list of special status species with potential off occurring in the vicinity of the Project area.

The BSA was used to generate an official species list through the Information for Planning and Consultation operated by USFWS. The NMFS official species list was through the Information for Planning and Conservation operated by USFWS. The following six USGS 7.5-minute quadrangles were used to generate the CNDDB and CNPS search results: Crows Landing, Patterson, Westley, Brush Lake, Ceres, and Hatch.

On April 30, 2019, general biological surveys, habitat assessments, and a delineation of jurisdictional waters was conducted by Dokken Engineering biologist Scott Salembier. General biological surveys included walking meandering transects, observing vegetation communities, compiling notes on observed flora and fauna, and assessing the potential for existing habitat within the BSA to support sensitive plants and wildlife.

The BSA was defined by using a 100-foot buffer around all anticipated work areas, staging areas, and access routes for construction. The BSA roughly follows East Las Palmas Avenue and is approximately 1,850 feet long east-west, approximately 450 feet wide, and approximately 17.57 acres in total size (**Figure 5**).

Physical Conditions

Topography
The BSA is within the Crows Landing 7 ½ minute quadrangle at elevations between 37 and 60 feet above mean sea level. It is set within the San Joaquin Valley and the topography is generally flat with the exception of a man-made levee on the east side of the river and roadway fill slopes. The foothills of the San Benito Mountains begin approximately 6 miles west of the Project area.

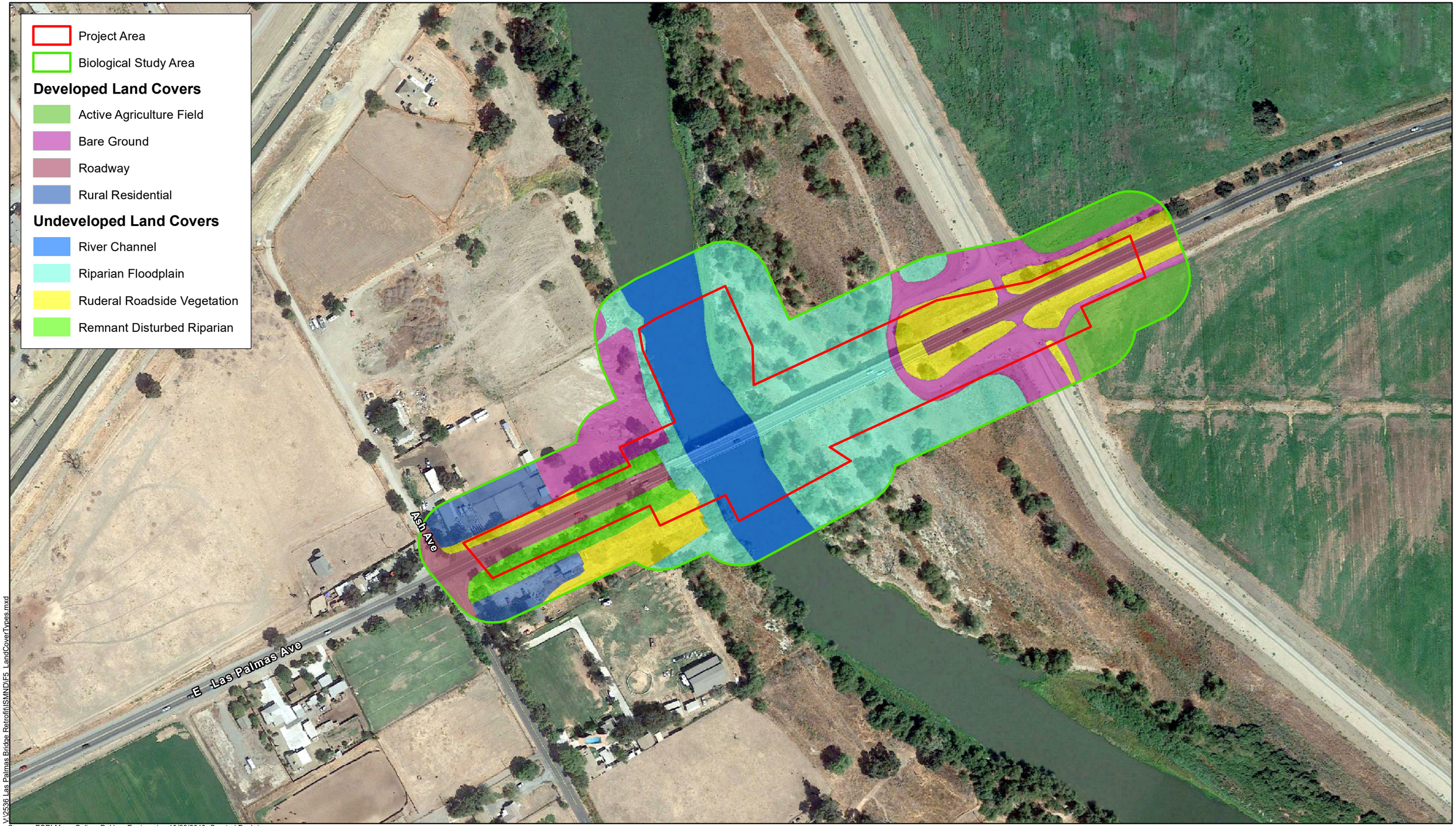
Soils
Soils west of the San Joaquin River consist of Veritas Sandy Loam, 0 to 2 percent slopes, rarely flooded. This soil type is moderately well drained and is derived from the mixed alluvium found in the foothills of the San Benito Mountains (NRCS 2019). Soils east of the San Joaquin River within the levees consist of Columbia soils, channeled, 0 to 8 percent slopes. Soils outside of the levees consist of Columbia soils, 0 to 1 percent slopes. Both of these soil types are somewhat poorly drained and commonly associated with flood plains of larger river systems (NRCS 2019).

Hydrological Resources
The BSA is located entirely within the San Joaquin River Watershed which encompasses the entire southern half of California's central valley. The BSA is bisected by the San Joaquin River which flows generally from the south to the north, eventually combining with the Sacramento River in the Suisun Bay. The main channel of the river under the Las Palmas Avenue Bridge is typically 165 feet wide, but varies with flow rates and water surface elevation of the river. Within the BSA, the river has a moderate floodplain east of the channel which is constrained by a levee. The west bank of the river has considerably steeper cut bank at the ordinary high water mark (OHWM); however, west of the cut bank to approximately Ash Avenue is within the FEMA 100 year special flood hazard area (FEMA 2008).

Land Cover Types
Land use within the BSA consists of rural mixed residential and small-scale agriculture west of the San Joaquin River and large-scale agriculture east of the river. The BSA has been highly disturbed by flood control projects and ongoing agriculture and natural vegetative communities have been invaded by introduced exotic species. The BSA consists of four developed land cover types and four undeveloped land cover types (**Figure 5**).

Developed Land Covers

Active Agricultural Field
Active agricultural fields consist of land that is currently being used to grow an agricultural commodity. This land cover is highly disturbed by farming activity including planting, fertilizing, weed control, irrigation, and harvest and provides little habitat value. This land cover is predominantly found in the eastern part of the BSA and makes up 1.20 acres (7%) of the BSA.



V:\2536 Las Palmas Bridge Retrofit\SMND\F5_LandCoverTypes.mxd

Source: ESRI Maps Online; Dokken Engineering 10/28/2019; Created By: brianm

1 inch = 200 feet

0 100 200 300 400 500 Feet

Figure 5
Land Cover Types within the BSA
BRLS-5938(200)
Las Palmas Avenue over San Joaquin River
Bridge Preventative Maintenance Project
Stanislaus County, California

Bare Ground
Bare ground consists of highly disturbed areas of ground that are nearly (<2% cover) devoid of vegetation. Within the BSA, the bare ground land cover includes the levees east of the San Joaquin River, dirt access roads, a storage yard, and a livestock paddock. This land cover provides little to no habitat value and makes up 2.73 acres (16%) of the BSA.

Roadway
Within the BSA, the roadway land cover type consists of East Las Palmas Avenue and Ash Avenue. This land cover consists of asphalt pavement and provides no habitat value. The roadway land cover type makes up 1.32 acres (8%) of the BSA.

Rural Residential
The rural residential land cover type typically consists of single-family residences and associated out buildings, and landscaping. There are two rural residences within the western portion of the BSA. Both are located at the corner of East Palmas Avenue and Ash Avenue. This land cover provides marginal habitat value for some species of wildlife that have adapted to living close to humans including song birds, raccoons, skunks, and opossums. This land cover makes up approximately 0.96 acres (5%) of the BSA.

Undeveloped Land Covers

River Channel
The river channel land cover type consists of the San Joaquin River channel. The channel supports very little emergent vegetation but water hyacinth (*Eichhornia crassipes*) and floating vegetation is present. Water Quality is impaired by excessive sediment and agricultural runoff (Water Board 2019) and provides marginal aquatic habitat. This land cover makes up approximately 2.39 acres (14%) of the BSA.

Riparian Floodplain
Within the BSA, the riparian floodplain land cover is found along both sides of the San Joaquin River. Along the west bank, a narrow band of dense tree dominated riparian vegetation is present on the steep stream bank. Along the east bank, a 500-foot-wide floodplain is vegetated by a riparian woodland with large treeless patches. Dominant tree species include Fremont cottonwood (*Populus fremontii*) and Goodding's black willow (*Salix gooddingii*). The USFWS National Wetlands Inventory has designated parts of this land cover within the BSA as Freshwater Forested/Shrub Wetland (USFWS 2019). This classification indicates that habitat adjacent to the San Joaquin River may temporarily experience surface water flooding during the wet season; however, the water table usually lies well below the ground surface. Biological surveys conducted on April 30, 2019 by Dokken Engineering biologist Scott Salembier, did not identify any wetlands, consistent with the USACE wetland delineation manual, within or adjacent to the Project area. This land cover makes up 5.84 acres (33%) of the BSA.

Ruderal Roadside Vegetation
Ruderal roadside vegetation consists of primarily non-native early successional species and is commonly found in highly disturbed areas along roadsides and other transportation corridors. Dominant species within the BSA include wild radish (*Raphanus raphanistrum*), milk thistle (*Silybum marianum*), ripgut brome (*Bromus diandrus*), and Himalayan blackberry (*Rubus armeniacus*). This land cover makes up approximately 2.27 acres (%13) of the BSA.

Remnant Disturbed Riparian
This land type consists of scattered remnant mature riparian trees interspersed with land scaping trees along East Las Palmas Avenue West of the San Joaquin River. The herb layer consists of ruderal grasses and forbs. The dominant tree species are Fremont cottonwood, valley oak

(*Quercus lobata*), and Peruvian pepper tree (*Schinus mole*). This land cover makes up approximately 0.86 acres (5%) of the BSA.

DISCUSSION

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

Less Than Significant Impact with Mitigation Incorporated. The following is a discussion on special status plant and animal species that were determined have potential of occurring with the Project area, potential impacts, and avoidance, minimization, and mitigation measures that when incorporated will reduce impacts to a less than significant impact.

Special-Status Plants

The Natural Environmental Study (NES) (Dokken Engineering 2019a) serves as basis for much of this section. Prior to field surveys, a review of CNDDB, CNPS and online databases found that there was no potential for special status plant species to occur in the Project vicinity. Additionally, surveys conducted April 30, 2019 did not observe any special status plant species within the BSA. No impacts to special status plant species are anticipated; therefore, no compensatory mitigation or minimization measures are will be necessary. All special status plant species are presumed absent from the BSA. The Project would have no impacts to special status plant species.

Special-Status Animals

Prior to field surveys, online database searches returned 25 special status animal species that have been documented within the search parameters. Based on an assessment of available habitats within the BSA, the habitat requirements of each species, and an assessment of each species current distribution, it was determined that five listed species: burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus)*, Swainson's hawk (*Buteo swainsoni*), Central Valley distinct population segment (DPS) of steelhead (CV Steelhead) (*Oncorhynchus mykiss irideus*), and Western pond turtle (*Emys marmorta*) have the potential to occur within the BSA.

Burrowing Owl

The burrowing owl is not a State or Federally listed species but is a CDFW Species of Special Concern and a USFWS Migratory Nongame Bird of Management Concern. Burrowing owls were historically common throughout much of California; however, due to habitat degradation and urbanization, populations have been drastically reduced. The owl is a migrant or yearlong resident occupying disturbed open, arid habitats, particularly grasslands, deserts, and abandoned agricultural areas. The species requires friable soils for burrow construction and an adequate prey base (Zeiner et al. 1988-1990). Burrowing owls rely on California ground squirrels and other burrowing mammals for burrow construction. Although active throughout the day, burrowing owls mainly forage nocturnally for small vertebrate and invertebrate prey including mammals, lizards, birds, and beetles (Shuford and Gardali 2008).

Burrowing Owl Survey Results

Burrowing owl are known to avoid areas near tall trees which provide habitat for larger raptors that prey upon them but the eastern side of the BSA may provide potentially suitable nesting and foraging habitat for the species. In addition, there are several recorded observations of the species within 10 miles of the BSA on the citizen science website eBird (eBird 2019). Burrowing owls or potential burrowing owl burrows were not observed during general biological surveys

completed spring 2019 indicating that the species was absent from the BSA at the time of the survey; however, due to presence of potentially suitable habitat and documented occurrences in the Project vicinity, the species is still considered to have a low to moderate potential of colonizing the BSA between the time of the general biological surveys and the start of construction.

Project Impacts to Burrowing Owl
With the inclusion of proposed avoidance and minimization measures, the Project will not have any direct impact to the species and will not result in permanent loss of habitat. Potential Project impacts would be limited to temporary disturbance of already disturbed areas dominated by ruderal vegetation that could provide marginal foraging habitat.

Burrowing Owl Avoidance and Minimization Efforts
Measures **BIO-10** and **BIO-11** shall be implemented to avoid and minimize the potential for impacting burrowing owl:

Compensatory Mitigation for Burrowing Owl
With the inclusion of avoidance and minimization measures, direct impacts to burrowing owl are not anticipated. In addition, the Project will not result in permanent loss of burrowing owl habitat. No compensatory mitigation is required.

Loggerhead Shrike
The loggerhead shrike is a medium size carnivorous songbird. The species is listed as a Species of Special Concern by CDFW. Historically, shrikes were found throughout most of California in a variety of open habitats with sparse shrubs or trees for perching, territorial advertisement, and nest construction. The species preys on a variety of small insects, amphibians, reptiles, small mammals and other song birds. The species is unusual in that it will store larger prey by impaling it on sharp objects (i.e. cactus thorns, barbed wire) for later consumption. According to the North American Breeding Bird Survey, the species has declined on average by 3.2 percent per year between 1966 and 2010, which is a cumulative loss of more than 75 percent. Much of this decline has been attributed to the widespread use of pesticides and habitat loss as suitable open woodland and scrub habitats are converted to agricultural or urban areas.

Loggerhead Shrike Survey Results
Within the BSA, the Riparian Floodplain and Remnant Disturbed Riparian land cover types provide potentially suitable tree nesting habitat for loggerhead shrike and all land cover types except for the San Joaquin River, Bare Ground, and Existing Pavement types provide potentially suitable foraging habitat for the species. Loggerhead shrike were not observed during the general biological survey completed in Spring of 2019, but there are dozens of recently documented observations of the species within 1 mile of the BSA on eBird (eBird 2019). The species is considered to have a high potential of being present based on suitable habitat and numerous observations of the species close to the BSA.

Project Impacts to Loggerhead Shrike
With the inclusion of avoidance and minimization measures, any active loggerhead shrike nests in the Project vicinity will be identified before the start of construction and impacts to those nests will be avoided. Direct impacts to individual loggerhead shrike are not anticipated.

The Project will result in the removal of approximately 25 riparian trees that may provide potentially suitable nesting habitat for the species and the temporary disturbance of approximately 3.63 acres of potentially suitable foraging habitat including riparian floodplain, remnant disturbed riparian, ruderal roadside vegetation, and active agriculture fields.

Loggerhead Shrike Avoidance and Minimization Efforts
In order to protect any loggerhead shrike nests near the Project Area, the minimization measure **BIO-12** shall be implemented.

Compensatory Mitigation for Loggerhead Shrike
With the inclusion of avoidance and minimization measures, direct impacts to loggerhead shrike are not anticipated. Indirect effects from the loss of approximately 25 potential nesting trees will be mitigated as described in **BIO-13** and **BIO-14**. No additional compensatory mitigation is required.

Swainson's Hawk
The Swainson's hawk is state-listed as a threatened species. Swainson's hawk migrates annually from wintering areas in South America to breeding locations in northwestern Canada, the western U.S., and Mexico. In California, Swainson's hawks nest throughout the Sacramento and San Joaquin Valley in large trees in riparian habitats and in isolated trees in or adjacent to agricultural fields. The breeding season extends from late March through late August, with peak activity from late May through July (England et al. 1997). Swainson's hawks forage in large, open agricultural habitats, including alfalfa and hay fields. The breeding population in California has declined by an estimated 91% since 1900; this decline is attributed to the loss of riparian nesting habitats and the conversion of native grassland and woodland habitats to agriculture and urban development (DFG 1994).

Swainson's Hawk Survey Results
Tall cottonwood and Goodding's black willow trees within the BSA provide potentially suitable riparian nesting habitat and is surrounded by hay, alfalfa, and other low growing agriculture fields that may provide potentially suitable foraging habitat for the species. There are numerous recently documented occurrences of the species within 5 miles of the BSA along the San Joaquin River on CNDDB and eBird indicating that the species is actively using the area. In addition, during the general biological surveys completed in the spring of 2019, a single Swainson's hawk was observed soaring above the BSA. The hawk was not observed nesting within or adjacent to the BSA; however, the species is considered to have a high potential of utilizing the BSA or adjacent riparian habitat for nesting in the future.

Project Impacts to Swainson's Hawk
With the inclusion of avoidance and minimization measures, direct impacts to Swainson's hawk are not anticipated. Project impacts will be limited to the temporary loss of 25 potential nest trees and temporary disturbance of foraging habitat.

Swainson's Hawk Avoidance and Minimization Efforts
To avoid and minimize potential Project impacts to Swainson's hawk, measure **BIO 15** shall be implemented:

Compensatory Mitigation for Swainson's Hawk
With the inclusion of avoidance and minimization measures, direct impacts to Swainson's hawk are not anticipated. Indirect effects from the loss of approximately 25 potential nesting trees will be mitigated as described in measure **BIO-13** and **BIO-14**. No additional compensatory mitigation is required.

Central Valley Steelhead
Central Valley Steelhead is listed as threatened under FESA (63 FR 13347, March 19, 1998) and is under the jurisdiction of NMFS. This distinct population segment consists of steelhead in the Sacramento and San Joaquin River basins in the Central Valley. Steelhead are anadromous fish

that spend part of their life cycle in freshwater and part in salt water. The species was once abundant in California coastal and central valley drainages. However, population numbers have declined significantly, especially in the tributaries of the Sacramento River (NMFS 2009). The species spawns in small, freshwater streams where the young remain from one to several years before migrating to the ocean to feed and grow. Adults return to their natal streams to spawn and complete their life cycle (NMFS 2014). Juvenile steelhead typically migrate to marine waters after spending two years in cool, clear, fast-flowing permanent streams and rivers where they reside for two or three years prior to returning to their natal stream to spawn as four- or five-year-olds. Upon entering freshwater, they hold until flows are high enough in tributaries to enter for spawning. Unlike Pacific salmon, steelhead are capable of spawning more than once before they die (NMFS 2009 and NMFS 2014). Steelhead may survive a wide temperature gradient, but optimal immigration and holding temperatures are 46°F to 52°F and optimal growing temperatures for juveniles are 59°F to 64.4°F (NMFS 2014 and NMFS 2009).

Steelhead Survey Results

Within the Project Area the slow moving, turbid, and warm water conditions of the lower San Joaquin River do not provide suitable spawning habitat for steelhead; however, upstream tributaries are known to support small populations of spawning steelhead (SJRRP 2015). In addition, the San Joaquin River downstream of the Merced River confluence has been designated as critical habitat for the species. Even though the BSA does not contain suitable spawning habitat, migrating adult steelhead may be present during the winter migration season and juvenile steelhead may be present year-round.

Project Impacts to Steelhead

All in-water work is anticipated to take place over one construction season.

Critical Habitat Impacts

The San Joaquin River channel is final designated critical habitat for Steelhead downstream of the Merced River confluence. During construction, the only disturbance to Critical Habitat will be the installation and removal of temporary steel piles to support the temporary work trestle and installation of the 22-inch diameter metal sleeves around the existing bridge piers. The 22-inch diameter metal sleeves will be slowly pushed to design depth (anticipated 1-3 feet below river bed) using hydraulic jacks. Installation of these sleeves will widen the in-water footprint of existing bridge piers from 18 to 22 inches which will result in approximately 24 square feet (0.0005 acres) of permanent impacts to final designated steelhead critical habitat.

Acoustic Impacts

In water work will be limited to the installation and removal of steel piles to support the temporary work trestle, and installation of the 22-inch diameter metal sleeves that will be permanently installed around the in-water bridge piers. The 22-inch diameter metal sleeves will be slowly pushed to depth with hydraulic jacks and their installation is not anticipated to result in acoustic impacts to fish.

Installation and removal of steel piles for the temporary work trestle may result in acoustic impacts to fish. In order to minimize potential acoustic impacts, a vibratory pile driver will be used to install and remove the temporary trestle piles. Vibratory pile driving produces less sound than impact pile driving and there are no established injury criteria for vibratory pile driving (Caltrans 2015); however, after the temporary trestle piles are vibrated to design depth, each pile will need to be tested with approximately 10 strikes from an impact hammer to verify the pile's load bearing capacity. The acoustic impact from pile testing determined using the NMFS Excel Calculator for determining acoustic fish impacts (NMFS 2009) with inputs from the table of unmitigated sound pressure levels published by the Washington Department of Transportation (WSDOT 2016).

Table 5 below shows the distance at which pile testing is anticipated to result in physical harm to fish.

Table 5: **Acoustic Fish Impacts**

Installation Method	Acoustic Metric (Decibels (dB) measured @ 33 ft)			Assumed # of Impacts	Distance to Physical Injury (ft)		Distance to Avoidance Behavior (ft)
	Peak	RMS	SEL		Fish ≥ 2 grams	Fish < 2 grams	
Pile Testing 14-Inch Steel Pipe Pile	200	184	174	10	96	178	1,306

With the inclusion of avoidance and minimization measures, the Project will avoid acoustic impacts to adult migrating steelhead and impacts will be limited to resident juvenile fish that happen to be within 178 feet of pile testing.

Steelhead Avoidance and Minimization Efforts
In order to avoid and minimize potential impacts to steelhead and its habitat, **BIO-1** through **BIO-9** as well as **BIO-16** through **BIO-18** shall be implemented:

Compensatory Mitigation for Steelhead
The proposed Project will result in approximately 24 square feet (0.0005 acres) of permanent habitat impact. Compensatory mitigation is not proposed.

Chinook Salmon Essential Fish Habitat
The National Marine Fisheries Service (NMFS) has identified and mapped essential fish habitat (EFH) for each life stage of nearly 1,000 federally managed fish species. Within the BSA, the San Joaquin River has been identified as EFH for Chinook salmon because it provides connectivity to suitable spawning habitat upstream within the San Joaquin River Watershed.

The proposed Project will have both temporary and permanent impacts to Chinook salmon EFH. Installation of new metal casing around each of the existing bridge's 28 in-water columns will widen the footprint of each column from an 18-inch diameter to a 22-inch diameter. This will result in permanent impacts to 24 square feet (0.0005 acres) of river channel habitat.

Construction of the proposed Project will require construction of a temporary trestle. Trestle design will be determined by the bridge contractor that is selected to complete the work but is anticipated to consist of a timber platform supported by temporary steel piles. The trestle will extend approximately 20 feet beyond the existing bridge and will extend under the bridge to provide equipment access to the columns. The trestle is anticipated to be supported by 14-inch temporary steel pipe piles (or similar) spaced approximately 10 feet apart. An estimated 100 temporary piles will be required to support the trestle resulting in a temporary impact of approximately 110 square feet (0.0025 acres). Temporary piles will be driven and removed with an excavator mounted vibratory pile driver. No in water work other than installation of the new 22-inch diameter casing around the existing bridge columns and installation and removal of the temporary trestle piles is anticipated.

Avoidance and minimization measures **BIO-1** through **BIO-9** shall be implemented to reduce potential impacts to Chinook Salmon EFH.

Western Pond Turtle
The western pond turtle is not a State or Federally listed species but is a CDFW Species of Special Concern. The western pond turtle is a fully aquatic turtle, inhabiting ponds, marshes, rivers,

streams and irrigation ditches with aquatic vegetation. The species requires suitable basking sites such as logs, rocks and exposed banks and associated upland habitat consisting of sandy banks or grassy open fields for reproduction. Nesting occurs mid-June through mid-July and egg incubation takes approximately 5-8 months before young emerge from the nest (Reese 1997). The species is omnivorous, consuming aquatic wildlife and vegetation. The western pond turtle is known to hibernate underwater beneath a muddy bottom in colder climates and reproduce from March to August (Zeiner et al. 1990).

Western Pond Turtle Survey Results
A portion of the San Joaquin River within the Project BSA may provide suitable aquatic habitat for western pond turtle and both banks of the river may provide basking and nesting habitat. The species was not observed during general biological surveys and the closest CNDDB occurrence is located approximately 7 miles east of the BSA and was recorded in 1999. The species is considered to have a low to moderate potential of occurring within the BSA based on presence of potentially suitable habitat and limited regional occurrences of the species.

Project Impacts to Western Pond Turtle
With the inclusion of proposed avoidance and minimization measures, direct impacts to the species are not anticipated. The Project will result in temporary disturbance of both aquatic and streambank habitat that may be utilized by the turtle. While the species predominantly stays within a few feet of water, during the spring and summer, females may travel up to 325 feet overland to find a suitable nesting site to lay eggs (DFG 2000) and the Project will temporary impact upland areas that could be utilized by turtles attempting to nest. With the inclusion of avoidance and minimization measures **BIO-2**, **BIO-16**, and **BIO-19**, direct impacts to the species are not anticipated.

Migratory Birds
Birds protected by the Migratory Bird Treaty Act of 1918 (MBTA) and CFG Code Section 3513 are known to utilize the BSA as nesting habitat. In particular, the underside of the bridge is known to support a large colony of nesting cliff swallows (*Petrochelidon pyrrhonota*). In order to minimize potential impacts to cliff swallows and other migratory birds, the County shall implement measures **BIO-1**, **BIO-10** through **BIO-13**, **BIO-16**, and **BIO-20**. By implementing these measures, the County anticipates no take of migratory birds.

With regards to the Project's effects on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW, USFWS, or NOAA Fisheries, the implementation of Measures **BIO-1** through **BIO-22** will result in the Project having **Less than Significant Impacts with Mitigation Incorporated.**

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

Less Than Significant with Mitigation Incorporated. The following is a discussion on riparian habitat and other sensitive natural communities within Project area, potential impacts, and avoidance, minimization, and mitigation measures that when incorporated will reduce impacts to a less than significant impact.

San Joaquin River Riparian Corridor
North of Highway 140, the River is mostly consolidated into a single highly sinuous channel constrained by levees. Patches of riparian vegetation are found along much of channel but the lateral extent of riparian vegetation is constrained by an extensive levee system and active

agriculture fields. Approximately 95% of historic riparian vegetation in the Central Valley has been lost over the last 150 years (CRP 2003), predominantly to agriculture and urban development.

Survey Results
Within the BSA, the west bank of the San Joaquin River supports a dense but narrow (approximately 30 feet wide) band of riparian vegetation. The east bank contains a narrow floodplain approximately 500 feet wide that is constrained by a levee. The floodplain supports an open canopy riparian woodland. Dominant riparian tree species include Fremont cottonwood and Goodding's black willow.

Project Impacts
Construction access and staging is anticipated to temporarily disturb 1.84 acres of the San Joaquin River Riparian Corridor and require the removal of approximately 25 riparian trees. The anticipated extent of habitat impacts are shown on **Figure 6**.

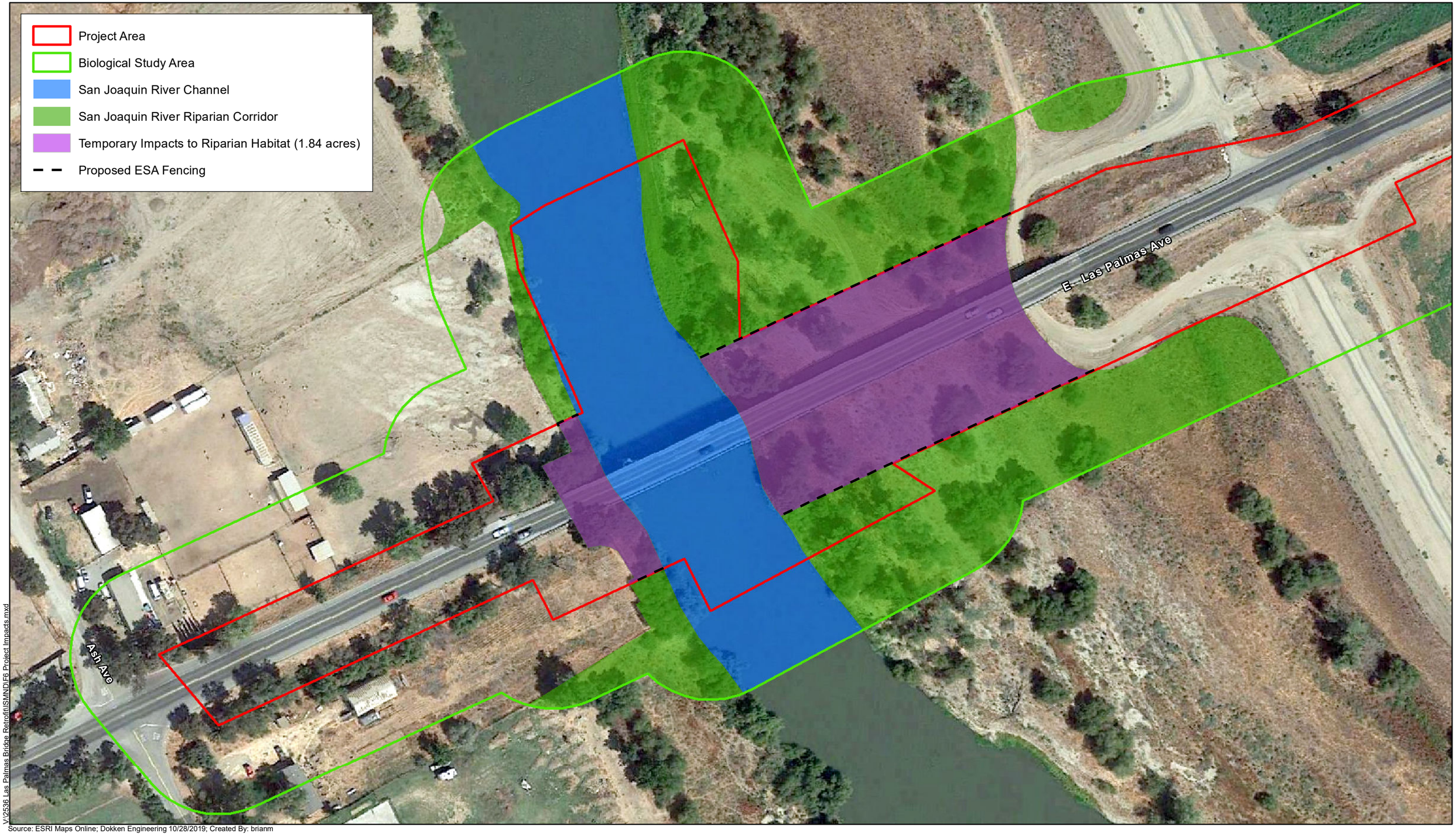
To offset temporary disturbance of 1.84 acres of riparian vegetation and the removal of 25 riparian trees, the mitigation measures **BIO-14** and **BIO-22** shall be implemented. These measures will restore the construction area to pre-construction or better conditions through re-grading, hydroseeding and replanting of riparian species. An alternative to replanting would be funding a riparian restoration project to be completed by the non-profit River Partners at their Dos Rios Ranch property. Additionally, avoidance and minimization measures **BIO-13** and **BIO-16** shall be implemented, to further reduce impacts. With the implementation of the measures listed above, the Project will have a **Less Than Significant with Mitigation Incorporated.**

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

Less than Significant with Mitigation Incorporated. San Joaquin River was the only surface waterbody identified within the BSA. All parts of the main channel below the OHWM are under the jurisdiction of USACE under §10 of the Rivers and Harbors Act and §404 of the CWA and under the jurisdiction of the Central Valley RWQCB under §401 of the CWA. In addition, the main channel and associated floodplain are under the jurisdiction of the California Department of Fish and Wildlife under CFG Code §1600.

Discussion of San Joaquin River Channel
The San Joaquin River drains 15,600 square miles of Central California and is bounded by the Sierra Nevada Mountains to the east, the Coast Ranges to the west, and the Transverse Ranges to the south. The river flows generally north, draining into the Sacramento River Delta and eventually the San Francisco Bay. North of Highway 140, the San Joaquin River is generally consolidated into a single channel, exhibiting very high sinuosity (Rosgen 1996).

Survey Results
Within the BSA, the San Joaquin River channel is approximately 165 feet wide and flows from south to north. Flow is moderated by several dams and reservoirs throughout the watershed which are operated primarily for winter flood control and summer irrigation water. The channel has perennial flow and does not support emergent vegetation. The OHWM of the channel was delineated in the field based on observed OHWM indicators and mapped in GIS software using a combination of aerial photography and topographic mapping. The floodplain is constrained on the east side of the river by a federal levee. The San Joaquin River channel makes up approximately 2.39 acres (14%) of the BSA and is depicted on **Figure 6**.



V:\2536 Las Palmas Bridge Retrofit\SMND\F6 Project Impacts.mxd

Source: ESRI Maps Online; Dokken Engineering 10/28/2019; Created By: brianm

1 inch = 100 feet

0 50 100 150 200 250 Feet

Figure 6
Project Impacts
BRLS-5938(200)
Las Palmas Avenue over San Joaquin River
Bridge Preventative Maintenance Project
Stanislaus County, California

Project Impacts
The proposed Project will have both temporary and permanent impacts to the San Joaquin River. Installation of new metal casing around each of the existing bridge's 28 in-water columns will widen the footprint of each column from an 18-inch diameter to a 22-inch diameter. This will result in permanent impacts to 24 square feet (0.0005 acres) of river channel habitat.

Construction of the proposed Project will require construction of a temporary trestle. Trestle design will be determined by the bridge contractor that is selected to complete the work but is anticipated to consist of a timber platform supported by temporary steel piles. The trestle will extend approximately 20 feet beyond the existing bridge and will extend under the bridge to provide equipment access to the columns. The trestle is anticipated to be supported by 14-inch temporary steel pipe piles (or similar) spaced approximately 10 feet apart. An estimated 100 temporary piles will be required to support the trestle, resulting in approximately 110 square feet (0.0025 acres) of temporary impacts. Temporary piles will be driven and removed with an excavator mounted vibratory pile driver. No in water work other than installation of the new 22-inch diameter casing around the existing bridge columns and installation and removal of the temporary trestle piles is anticipated.

Avoidance and minimization measures and Best Management Practices (BMPs) **BIO-1** through **BIO-9** have been incorporated into the Project design to minimize and mitigate impacts to jurisdictional waters to the greatest extent practicable, therefore this impact is **Less Than Significant with Mitigation Incorporated**.

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

Less than Significant. The San Joaquin River corridor serves as an north-south movement corridor for terrestrial wildlife through an otherwise developed portion of the San Joaquin Valley. Under existing conditions, East Las Palmas Avenue runs east-west over the river corridor bisecting habitat with an elevated 2-lane roadway. The San Juaquin River Bridge provides an undercrossing approximately 600 feet wide for terrestrial wildlife.

The Project is not anticipated to have any effects to the habitat connectivity for birds, fish, or small and medium terrestrial wildlife. The Project will not reduce habitat connectivity for large terrestrial wildlife, such as black-tailed deer, moving along the San Joaquin River corridor. No loss of habitat connectivity is anticipated; therefore, there is **No Impact**.

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

No Impact. There are no local policies or ordinances that protect biological resources in Stanislaus County; therefore, the Project will have **No Impact** with regards to conflict with any local policies or ordinances.

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?

No Impact. There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans within the Project area; therefore, the Project will have no impact or conflict with any habitat conservation plan.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following avoidance, minimization, and mitigation measures along with Best Management Practices have been incorporated into the Project design to minimize impacts to Special Status Species and natural communities to the greatest extent practicable:

BIO-1: Best Management Practices:

- Existing vegetation would be protected where feasible to reduce erosion and sedimentation. Vegetation would be preserved by installing temporary fencing, or other protection devices, around sensitive biological resources.
- Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities.
- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.
- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of the stream channel as feasible. All stockpiles would be covered, as feasible.
- All erosion control measures and storm water control measures would be properly maintained until the site has returned to a pre-construction state.
- All disturbed areas would be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native or approved non-invasive exotic species.
- All construction materials would be hauled off-site after completion of construction.

BIO-2: All construction personnel shall be provided with environmental awareness training prior to being allowed to work on the job site. The training shall include an overview of sensitive habitats and special status species that are present within or adjacent to the Project area and Project specific protective measures that must be adhered to. The training will also include a description of the legal penalties for violating protective measures.

BIO-3: In water work shall be limited to the summer low flow period between July 15th and October 31st.

BIO-4: A turbidity curtain shall be installed downstream prior to installation of temporary trestle piles and shall remain in place for the duration of pile driving. The turbidity curtain shall be re-installed prior to removal of temporary trestle piles and shall remain in place for the duration of pile removal. Placement of the turbidity curtain shall be at the discretion of the contractor as long as the Project meets water quality objectives for turbidity.

BIO-5: Refueling or maintenance of equipment shall not be permitted to occur on the temporary trestle and must occur at least 100 feet from the San Joaquin River. All onsite refueling and maintenance must occur over plastic sheeting or other secondary containment measures to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).

BIO-6: Equipment will be checked daily for leaks and will be well maintained to prevent lubricants and any other deleterious materials from entering San Joaquin River and the associated riparian area.

BIO-7: A chemical spill kit must be kept onsite and available for use in the event of a spill.

BIO-8: Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil or from spilling directly into the San Joaquin River. Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).

BIO-9: Once the new casing is installed but prior to grouting, plastic sheeting shall be installed around the casing and secured to the side of the casing with a ratchet strap or similar device to prevent spilled concrete from entering the San Joaquin River.

BIO-10: No less than 14 days prior to the start of ground disturbance, a 1 day "Take Avoidance Survey" shall be conducted in accordance with the recommendations of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If burrowing owls are not detected, no further measures will be required. If burrowing owls are detected during the take avoidance survey, the County must notify CDFW and implement measure **BIO-11**.

BIO-11: In accordance with the CDFW avoidance and mitigation protocols, during the breeding season (February 1 through August 31), occupied burrows must not be disturbed and shall be provided with a minimum 250 foot protective buffer until a qualified biologist approved by CDFW verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the birds may be passively evicted and the burrow collapsed.

BIO-12: Prior to vegetation removal or initial ground disturbance during the nesting bird season (March 1st – August 31st) a pre-construction nesting bird survey must be conducted by a Project biologist prior to the start of work. The nesting bird survey must include the Project Area plus a 300-foot buffer. Within 2 weeks of the nesting bird survey, all areas surveyed by the biologist must be cleared by the contractor or a supplemental nesting bird survey is required.

A minimum 300-foot no work buffer will be established around any active nests of raptor species. A 100-foot no work buffer will be established around any active nests for other migratory birds. If an active nest is discovered during construction, the contractor must immediately stop work in the nesting area until the appropriate buffer is established. The contractor is prohibited from conducting work that could disturb the birds (as determined by a Project biologist and in coordination with wildlife agencies) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by a Project biologist and approved by CDFW.

BIO-13: Native tree removal shall be limited to the minimum amount necessary for equipment access through the Project area. Trees shall be preferentially trimmed rather than removed and trimming should not exceed 30% of the total canopy of each tree.

BIO-14: To mitigate for the loss of native riparian trees, the County will replant riparian species within temporarily disturbed riparian floodplain habitat in the Project area or will fund a riparian restoration project to be completed by the non-profit River Partners at their Dos Rios Ranch property. The mitigation strategy will be determined after coordination with the relevant regulatory agencies.

BIO-15: In accordance with the Swainson's Hawk Technical Advisory Committee Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (TAC 2000), protocol level surveys will be conducted during the appropriate survey periods immediately prior to construction to determine presence/absence of the species. If Swainson's hawk nests are discovered within 1/2 mile of the Project Area, the County will coordinate with CDFW to determine appropriate protective buffers at the discretion of an experienced biologist.

BIO-16: The San Joaquin River Riparian Corridor shall be established as an Environmentally Sensitive Area (ESA). Prior to ground disturbance, the Project limits adjacent to riparian vegetation shall be marked off with high visibility orange fencing (ESA Fencing) to prevent further encroachment into the ESA. Construction equipment, materials, and personnel shall not be permitted beyond the ESA fencing.

BIO-17: In-water temporary trestle piles must be installed using a vibratory pile driver or drilled into place. Use of an impact pile driver will only be permitted to test the strength of each pile.

BIO-18: In-water pile driving and pile extraction for the temporary trestle piles must not be conducted during the steelhead winter spawning migration season (December – May).

BIO-19: Within 3 days prior to the start of initial ground disturbance, a Project biologist will search the ground disturbance area for evidence of potential turtle nests. Any nests that are discovered will be protected in place with a minimum 20-foot no work buffer and CDFW will be contacted to determine appropriate protection or relocation measures. No work may occur within the no work buffer until approved by a Project biologist.

BIO-20: If construction on the existing bridge is planned to occur during the swallow nesting season, measures will be taken to avoid impacts to migratory swallows. To protect migratory swallows, unoccupied nests must be removed from the existing bridge structure prior to the nesting season (February 15th – September 15th).

BIO-21: Plastic monofilament netting shall not be used in straw wattles or other erosion control materials.

BIO-22: Following construction, the Project area shall be re-graded to pre-construction or better conditions and hydroseeded with a mix of regionally appropriate native species.

FINDINGS

The Project would have **Less Than Significant Impacts with Mitigation Incorporated** relating to biological resources.

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?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

REGULATORY SETTING

CEQA established statutory requirements for establishing the significance of historical resources in Public Resources Code (PRC) Section 21084.1. The CEQA Guidelines (Section 10564.5[c]) also require consideration of potential Project impacts to "unique" archaeological sites that do not qualify as historical resources. The statutory requirements for unique archaeological sites that do not qualify as historical resources are established in PRC Section 21083.2. These two PRC sections operate independently to ensure that significant potential effects on historical and archaeological resources are considered as part of a Project's environmental analysis. Historical resources, as defined in Section 15064.5 as defined in the CEQA regulations, include 1) cultural resources listed in or eligible for listing in the California Register of Historical Resources (California Register); 2) cultural resources included in a local register of historical resources; 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in one of several historic themes important to California history and development.

Under CEQA, a Project may have a significant effect on the environment if the Project could result in a substantial adverse change in the significance of a historical resource, meaning the physical demolition, destruction, relocation, or alteration of the resource would be materially impaired. This would include any action that would demolish or adversely alter the physical characteristics of an historical resource that convey its historic significance and qualify it for inclusion in the California Register or in a local register or survey that meets the requirements of PRC Section 5020.1(l) and 5024.1(g). PRC Section 5024 also requires state agencies to identify and protect sate-owned resources that meet National Register of Historic Place (National Register) listing criteria. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocation, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

CEQA and the CEQA Guidelines also recommend provisions be made for the accidental discovery of archaeological sites, historical resources, or Native American human remains during construction (PRC Section 21083.2(i) CCR Section 15064.5[d and f]).

AFFECTED ENVIRONMENT

An Area of Potential Effects (APE) was established as the area of direct and indirect effects which encompasses an approximately 7.5 acre area. The APE includes the East Las Palmas Avenue Bridge as well as the areas on either side of the bridge to allow for construction access to the columns, and is identical to the Project Area (**See Figure 3**) Efforts to identify potential cultural resources in the APE included background research, a search of previously recorded

archaeological site records and cultural resource identification reports on file at the California Historical Resources Information System Central California Information Center (CCIC), consultation with the Native American Heritage Commission (NAHC), and a pedestrian ground surface survey.

Archaeologist Dr. Brian S. Marks conducted an archaeological field survey of the APE on April 30, 2019. The APE was surveyed using transect intervals no greater than 15 meters wide, oriented roughly parallel with East Las Palmas Avenue. Periodic boot scrapes were used in areas of dense vegetation to expose the ground surface. All Project area conditions and cultural resources were fully recorded in the field notes. Exposed subsurface cuts, such as ditches, roadway cuts, and bank cuts were visually examined for the presence of archaeological resources, soil color change, and/or staining that could indicate past human activity or buried deposits. The pedestrian survey conducted on April 30, 2019 did not reveal any archaeological resources within the APE.

The pedestrian survey confirmed that the terrain has been subjected to intense modification, mostly through recent discing of the areas by the levee and high energy flooding events within the flood plain of the San Joaquin River. Due to the minimal ground disturbance associated with this project and the previously disturbed nature of the APE, Caltrans, per the Section 106 Programmatic Agreement under Stipulation VII and Attachment 2, has determined that the Project is a screened undertaking (Restoration or Rehabilitation of deteriorated structure) and is exempt from Section 106 review, as the Project has no potential to affect historic properties.

DISCUSSION

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact. Dokken Engineering obtained a record search (File #10989N) for the Project area and a one-mile radius surrounding the Project area from the Central California Information Center (CCIC), California State University, Stanislaus, on February 26, 2019. The record search was conducted by Robin Hards from the Information Center. The search examined the Office of Historic Preservation (OHP) Historic Properties Directory, OHP Determinations of Eligibility, and California Inventory of Historical Resources. Dokken Engineering staff reviewed historical literature and maps, Caltrans Bridge Inventory listings, General Land Office (GLO), a search of the Sacred Land File at the NAHC, and soil survey maps. No cultural resources have been documented within the APE.

As there are no cultural resources documented or encountered within the Project area, the Project would have **No Impact** on historical resources as defined in §15064.5.

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

Less than Significant with Mitigation Incorporated. In an effort to identify archaeological resources that might be affected by the undertaking, a pedestrian survey, background research, and consultation with individuals and organizations were conducted. A record search conducted at the CCIC identified seven cultural resources within a one-mile radius of the APE and no resources within the APE. The pedestrian survey did not observe any cultural resources within the APE.

On February 22, 2019, Dokken Engineering sent a letter and a map depicting the Project vicinity to the NAHC in West Sacramento, asking the commission to review the sacred land files for any

Native American cultural resources that might be affected by the Project. The request to the NAHC seeks to identify any Native American cultural resources within or adjacent to the Project area. On March 11, 2019, Katy Sanchez, Associate Governmental Program Analyst, informed Dokken Engineering that a review of the sacred lands was completed and returned negative results.

Caltrans, per the Section 106 Programmatic Agreement under Stipulation VII and Attachment 2, has determined that the Project is a screened undertaking (Restoration or Rehabilitation of deteriorated structure) and is exempt from Section 106 review, as the Project has no potential to affect historic properties. Additionally, no Native American tribe or individuals have requested to be notified by the County for AB 52 consultation.

At this time no further archaeological study is recommended unless Project plans change to include areas not previously included in the APE or a greater amount of ground disturbance. With the findings of the visual survey, record search, no impacts are anticipated for the Project related to archaeological resources. With any project, there is always the possibility that unknown cultural resources may be encountered during construction. With the implementation of Mitigation Measure **CR-1** potential impacts from the Project would be less than significant with mitigation incorporated.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant with Mitigation Incorporated. With any project, there is always the possibility that unmarked burials may be unearthed during construction. This impact is considered potentially significant. Implementation of Mitigation Measure **CR-2** would reduce this to a **Less than Significant Impact with Mitigation Incorporated**.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

CR-1: If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find and develop a plan for documentation and removal of resources if necessary. Additional archaeological survey will be needed if Project limits are extended beyond the present survey limits.

CR-2: Section 5097.94 of the Public Resources Code and Section 7050.5 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the county coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within twenty-four hours of such identification. CEQA details steps to be taken if human burials are of Native American origin.

FINDINGS

The Project would have **Less Than Significant Impacts with Mitigation Incorporated** relating to cultural resources.

2.6 ENERGY

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

DISCUSSION

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

No Impact. The Project would comply with standard BMPs and the Stanislaus County General Plan to ensure that no potentially significant environmental impact will occur due to wasteful, inefficient, or unnecessary consumption of energy resources.

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

No Impact. The Project will not conflict with or obstruct any state or local plans for renewable energy or energy efficiency.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No Impacts to energy are anticipated; therefore, no avoidance, minimization, and/or mitigation measures will be required.

2.7 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?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

REGULATORY SETTING

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 CEQA.

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.

DISCUSSION

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

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

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

No Impact. The Project would not expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving rupture of a known fault, strong seismic ground shaking, seismic-related ground failure, or landslides. The Project is not located within an Alquist Priolo Earthquake Fault Zone. The nearest seismic sources are the Ortigalia Fault approximately 20 miles west of the Project site, and the Stockton Fault approximately 15 miles north of the Project site.

Landslides usually occur in locations with steep slopes and unstable soils. Stanislaus County has not yet been mapped by the Seismic Hazards Zonation Program to determine landslide potential. The majority of the Project area is situated on flat or very gently sloping topography where the potential for slope failure is minimal to low. Seismic-related failure, including liquefaction, is also a less than significant impact because the potential is believed to be slight at this predominantly flat, low-seismicity site. The Project area is located on a flat area. **No Impact** from landslides would occur with the Project. Design and construction in accordance with Caltrans' seismic design criteria will ensure that substantial impacts due to seismic forces and displacements are avoided or minimized to the extent feasible. The Project is not on a geologic unit or soil that is unstable or that would become unstable as a result of the Project. On-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse is not anticipated.

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

Less than Significant. The Natural Resource Conservation Service Web Soil Survey was used to identify soils within the Project area. Specific soil units within the Project area include: Columbia soils, 0 to 1 percent slopes, Columbia soils, channeled, 0 to 8 percent slopes; Veritas sandy loam, 0 to 2 percent slopes, rarely flooded, and Water (San Joaquin River). Soils within the Project area are generally sandy and somewhat poorly to moderately well drained (NRCS 2019). The Project does involve maintenance on the bridge columns and will involve minimal ground disturbance with vegetation removal within the flood plain of the San Joaquin River and associated riparian areas.

The maintenance of the columns for the East Las Palmas Avenue Bridge over the San Joaquin River and associated ground disturbance would cause **Less Than Significant Impacts** of soil erosion or loss of top soil as the soil is already disturbed from flooding events and the highly dynamic nature of the floodplain during high water years. Potential impacts to soils would be further minimized through soil stabilization measures covered within the required General Construction MS4 Permit and implementation of the Storm Water Pollution Prevention Plan (SWPPP) as discussed in Section 1.5 and Section 2.10. Erosion control practices outlined in a SWPPP. In addition, measures **WQ-1** through **WQ-4** in section 2.10 of this document would further reduce impacts to erosion of soil.

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?

No Impact. As stated in discussion a). The Project will not be located on soil that is known to be unstable, or would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. **No Impact** would occur due to the Project, and no mitigation is required.

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?

No Impact. Refer to discussion a). The Project will not be located on expansive soils creating substantial risks to life or property. **No Impact** would occur due to the Project, and no mitigation is required.

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?

No Impact. The Project will not utilize septic tanks or an alternative waste water disposal system on the site. Therefore, the Project would have **No Impact** due to soils incapable of adequately supporting septic systems, and no mitigation is required.

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

No Impact. No findings of unique paleontological resources or sites or unique geological features were identified during the record search and cursory pedestrian survey within the Project area; therefore, **No Impacts** are anticipated for the Project related to paleontological resources.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Please refer to Section 2.10 Hydrology and Water Quality for measures **WQ-1** through **WQ-4**.

FINDINGS

The Project would have **Less Than Significant Impacts** relating to geology and soils.

2.8 GREENHOUSE GAS EMISSIONS

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

REGULATORY SETTING

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include CO_2, CH_4, NO_X, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level. AB 1493 requires the CARB to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the EPA. The waiver was denied by the EPA in December 2007 and efforts to overturn the decision had been unsuccessful. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011. On January 26, 2009, it was announced that EPA would reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009 EPA granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 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. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions

reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the EPA to regulate GHG as a pollutant under the Clean Air Act (Massachusetts vs. [EPA] et al., 549 U.S. 497 (2007). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions. [1]

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

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), 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 finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the EPA's greenhouse gas emission standards for light-duty vehicles, which were jointly by EPA and the Department of Transportation's National Highway Safety Administration on September 15, 2009.

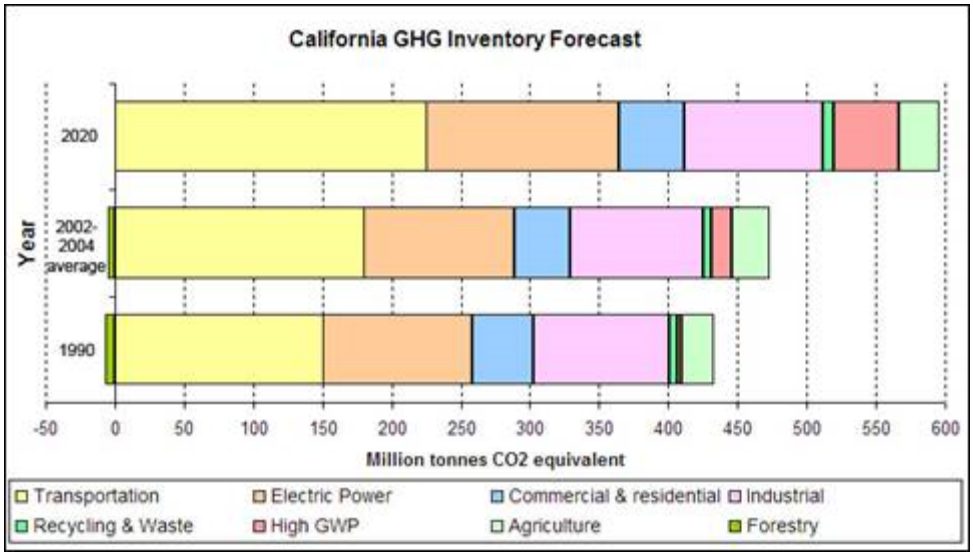


Figure 7: California Greenhouse Gas Inventory

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), 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 participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections

[1] http://www.epa.gov/climatechange/endangerment.html

15064(i)(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.

As part of its supporting documentation for the Draft *Climate Change Scoping Plan*, CARB recently released an updated version of the GHG inventory for California (June 26, 2008). Figure 16 is a graph from that update that shows the total GHG emissions for California for 1990, 2002-2004 average, and 2020 projected if no action is taken.

As the Project is a maintenance project and will not be increasing traffic capacity along East Las Palmas Avenue. The only additional greenhouse gases that would be created as part of this Project would only be during construction.

DISCUSSION

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

Less Than Significant. Greenhouse gas (GHG) emissions 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 on-site construction equipment, and emissions arising from traffic delays due to construction. GHG emissions produced during operations are those that result from potentially increased traffic volumes or changes in automobile speeds. The project would not result in an increase in the number of automobiles in the traffic system; therefore, operational emissions are not anticipated. The project would result in a temporary increase of 99.3 tons of GHG emissions during construction activities (maximum emissions of 2,550 lbs/day during grading/excavation). However, work would be short-term in duration and is not anticipated to result in significant adverse construction GHG emissions. The emission of GHGs during construction of the proposed Project would be negligible and therefore **Less Than Significant**.

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

Less than Significant. The project involves maintenance on the East Las Palmas Avenue Bridge. Due to the small-scale, temporary construction methods proposed for the project, it would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emission. Impacts would be **Less Than Significant**.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

In addition to the Air Quality measures **AQ-1** through **AQ-3**, the following measures will also be included in the Project to further minimize the GHG emissions and potential climate change impacts from the Project:

CC-1: According to the Caltrans' Standard Specification Section 14-9.02, the contractor must comply with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including air pollution control rules, regulations, ordinances, and statutes provided in Govt Code § 11017 (Pub Cont Code § 10231).

FINDINGS

The Project would have **Less Than Significant Impacts** relating to greenhouse gas emissions.

2.9 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?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures 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?	☐	☐	☐	☒

REGULATORY SETTING

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

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 and 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.

AFFECTED ENVIRONMENT

This section presents results of an Initial Site Assessment (ISA) for property associated with the Project. The purpose of the ISA is to evaluate the Subject Properties for the presence of Recognized Environmental Conditions (RECs) and/or Activity and Use Limitations (AULs), which are:

REC: "…the presence or the likely presence of any hazardous substances or petroleum hydrocarbons on the (Subject Property) that indicate an existing release, a past release, or a

material threat of a release of any hazardous substances or petroleum hydrocarbons into structures or into the ground, groundwater, or surface water of the subject property."

AUL: "…an explicit recognition by a federal, tribal, state, or local agency that residual levels of hazardous substances or petroleum hydrocarbons may be present on the property, and that unrestricted use of the property may not be acceptable."

The properties assessed for this ISA (Subject Properties) includes existing Stanislaus County right-of-way, and existing adjacent parcels throughout the length of the Project. This ISA was prepared in general accordance with the Caltrans ISA Guidance Document.

A summary of the published lists of known hazardous substance sites was provided by Environmental Data Resources (EDR). EDR reviewed standard federal, state, and local listings of known sites within a one-mile radius. A total of 11 RECs were identified within a one-mile radius of the Project area. The 11 RECs are presented on **Table 6** and **Figure 8**.

Table 6: REC or AUL Evidence

See Figure 8 for General Location	Location	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
1,2, 3, 4,5	Arthur Silva and Son Dairy 12636 West Main Street Crows Landing, CA 95313	HIST UST	Underground Storage Tank	Not Reported	N/A
		CIWQS	Animal Feeding Facility	Not Reported	N/A
		FINDS	Dairy	Not Reported	N/A
		HIST UST SWEEPS UST	Storage of Diesel	Not Reported	N/A
		CERS	Animal Waste Water Discharge	Inspection	Closed
6	12626 West Main Street Crows Landing, CA 95313	CHMIRS	Dairy Waste Water	Not Reported	N/A
7	15472 Ash Avenue Patterson, CA 95363	CDL	Illegal Drug Lab	Not Reported	Closed.
8	Dark Farms 15743 Ash Avenue Patterson, CA 95363	HIST UST SWEEPS UST	Underground Diesel Storage	Not Reported	N/A
9,10	Patterson Irrigation District Fish Screen	CERS	Wetlands Fill and Dredge Material	Not Reported	N/A
		CIWQS	Historic Dredge/Fill Site	Not Reported	N/A
11	Milburn Parker 15826 Ash Avenue Patterson, CA 95363	HIST UST SWEEPS UST	Waste Storage Leak	Not Reported	N/A

V:\2536 Las Palmas Bridge Retrofit\SMND\F8_RECs.mxd

Source: ESRI Maps Online; Dokken Engineering 10/29/2019; Created By: brianm

1 inch = 1,250 feet

0 1,000 2,000 3,000 4,000 Feet

Figure 8
Potential RECs within 1 Mile of the Project Area
BRLS-5938(200)
Las Palmas Avenue over San Joaquin River
Bridge Preventative Maintenance Project
Stanislaus County, California

DISCUSSION

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

Less than Significant with Mitigation Incorporated. The Project would involve the use of heavy equipment for grading, hauling, and materials handling. Use of this equipment may require the use of fuels and other common materials that have hazardous properties (e.g., fuels are flammable). These materials would be used in accordance with all applicable laws and regulations and, if used properly, would not pose a hazard to people, animals, or plants. All refueling of construction vehicles and equipment would occur within the designated staging area for the Project as defined in Section 2.4 of this document in biological measures **BIO-5** through **BIO-8**. The use of hazardous materials would be temporary, and the Project would not include a permanent use or source of hazardous materials. By complying with Mitigation Measure **HAZ-1** the Project would have **Less Than Significant Impacts with Mitigation Incorporated** from temporary construction equipment and activities.

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

Less than Significant with Mitigation Incorporated. Potential hazardous materials during construction activities can occur due to upset within the Project area. Potentially hazardous materials identified adjacent to the Project area include: heavy metals in pavement striping and transformers. Based on site observations and review of the database records search, there are no REC's within the Project area, and Project activities should not affect the pavement striping or the transformer; therefore, no additional testing is recommended.

Naturally Occurring Asbestos

Naturally Occurring Asbestos (NOA) can occur in serpentine rock. The most common forms of NOA minerals are chrysotile, actinolite, and tremolite. A review of the "General Location Guide for Ultramafic Rocks in California – Areas likely to Contain Naturally Occurring Asbestos" (DOC Open-file Report 2000-19, 2000) indicated that NOA was not mapped on, or in the near vicinity of the Project area. No impacts from asbestos containing materials are anticipated.

Aerially Deposited Lead

Aerially deposited lead (ADL) is known to be present within soils near major roadways in operation prior to 1980, when lead was discontinued as a gasoline additive in the State of California. East Las Palmas Avenue has been in place at the current location since the early 1900s. ADL might exist along the shoulder of the road; however, concentrations of ADL in excess of regulatory limits are not likely due to the lower classification of East Las Palmas Avenue and evidence of disking, grading, and other soil movement activities associated with farming near the road. Additionally, no ground disturbing activities are anticipated to occur as a result of the proposed Project; therefore, no impacts to ADL would occur. No further analysis or testing for ADL is recommended.

With any project that involves excavation, there is a possibility of encountering unknown hazardous contamination during construction. With the implementation measure **HAZ-2**, Project impacts from upset or accident conditions will be reduced to a **Less Than Significant Level with Mitigation Incorporated**.

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

No Impact. No schools are located within one-quarter mile of the Project site. **No Impact** would occur.

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?

No Impact. Envirostor and Geotracker were used to find active hazardous waste sites within the Project vicinity. A review of the Department of Toxic Substances Control EnviroStor Database indicated that there were no sites on or near the Project area that were not already included in the record search by EDR. Therefore, there would be **No Impact**s related to being a significant hazard to the public.

*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 hazar*d *or excessive noise* for *people residing or working in the Project area?*

No Impact. The Project would not result in a safety hazard for people residing or working in the Project area as the Project is not within the vicinity of an airport land use plan or within two miles of a public airport or public use airport. Therefore, there would be **No Impact** related to safety of the public in the Project area.

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

No Impact. The Project will not alter any allowable residential density in the nearby area, and changes to the existing road will not impair or alter any existing emergency response plan or emergency evacuation plan. As all Project work will occur beneath the bridge, and not on the roadway, there should be no short-term traffic impacts may impact emergency response vehicles, (see Transportation/Traffic Section 2.17); therefore, there would be **No Impacts**.

g) 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?

No Impact. The Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and no wildlands are adjacent to or within the Project area; therefore, **No Impact** is anticipated.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

HAZ-1: The contractor shall prepare a Spill Prevention, Control, and Countermeasure Program (SPCCP) prior to the commencement of construction activities. The SPCCP shall include information on the nature of all hazardous materials that shall be used on-site. The SPCCP shall also include information regarding proper handling of hazardous materials, and clean-up procedures in the event of an accidental release. The phone number of the agency overseeing hazardous materials and toxic clean-up shall be provided in the SPCCP.

HAZ-2: As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during Project construction. For any previously unknown hazardous waste/ material encountered during construction, the procedures outline in Appendix E (Caltrans Unknown Hazard Procedures) shall be followed.

FINDINGS

The Project would have **Less Than Significant Impacts with Mitigation Incorporated** relating to hazards and hazardous materials.

2.10 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 or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the Project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☐	☒
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☐	☒
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☒
(iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐

REGULATORY SETTING

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (Corps) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Caltrans activities on its highways and facilities. Caltrans construction projects are regulated under the Statewide permit, and projects performed by other entities on Caltrans right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over 1 acre require a SWPPP to be prepared and implemented during construction. Caltrans activities less than 1 acre require a Water Pollution Control Program.

Stanislaus County has a Storm Water Management Program (Program), adopted in April of 2003, to meet the terms of the General Permit, regulating storm water discharges from small MS4s. The Program has six control measures, established by the SWRCB, to regulate the discharge of storm water. The control measures include, public education and outreach, public involvement, discharge detection and elimination program, construction site storm water runoff control, post-construction storm water management and pollution prevention/good housekeeping for municipal operations. The County is currently working on developing a Storm Water Resource Plan, in accordance with Senate Bill 985, focused on identifying and prioritizing local, multi-benefit stormwater and dry weather capture projects.

AFFECTED ENVIRONMENT

Much of the information below, pertinent to the Project, is from the Water Quality Assessment Report (Dokken Engineering 2019b).

Hydrology

The Project site falls within Central Valley, Region 5, of the RWQCB. The San Joaquin River is the largest freshwater stream within the San Joaquin Valley, providing water to agricultural operations and habitat for many aquatic species. The Project is within the Middle San Joaquin-Lower Merced-Lower Stanislaus watershed (USGS 2019). The San Joaquin River is approximately 300-miles long and surface waters within the Project area are 303(d) listed for Alpha-BHC, Conductivity, DDE, DDT, Group A Pesticides, Mercury, Specific Conductivity, Temperature, Total Dissolved Solids, and Toxicity according to the most recent data from the EPA (EPA 2016b). Causes of impairments to the San Joaquin River, from the Merced River to the Tuolumne River, include pesticides, mercury, salinity, total dissolved solids, chlorides and sulfates.

Groundwater

The Project is located within the San Joaquin Valley groundwater basin and the San Joaquin Valley Delta-Mendota sub-basin. The San Joaquin Valley groundwater basin contains 9 sub-basins and lies within the San Joaquin River and Tulare Lake Hydrologic Regions covering approximately 8.88 million acres (Central Valley RWCQB 2006). Groundwater in this region is primarily used for agricultural and urban entities and accounts for approximately 48% of the groundwater used in California.

The Delta-Mendota sub-basin covers approximately 747,000 acres and the shallowest water-bearing zone is approximately 25 feet deep, located in the lower section of the Tulare Formation. Groundwater samples collected in this sub-basin from 1994 through 2000 from water supply wells indicate the presence of pesticides at concentrations greater than the applicable maximum contaminant level determined by the EPA. Furthermore, the inorganic constituents found within the Delta-Mendota sub-basin range from approximately 210 to 1,750 mg/L. In certain areas within the sub-basin these inorganic constituents, including iron, fluoride, nitrate and boron, impair the beneficial uses of the groundwater. The proposed Project does not anticipate impacting or altering any groundwater basins.

Municipal Supply

The San Joaquin River is considered a municipal and domestic water supply suitable or potentially suitable for drinking water. The Sacramento-San Joaquin Delta is one of the largest surface water delivery projects in California. The Delta provides a portion of the drinking water for 25 million Californians and provides the agricultural industry with irrigation for 4.5 million acres (Water Education Foundation 2019). The Project will not impact any water reservoirs or water recharge facilities.

Flooding

The majority of the Project area is within FEMA Zone A, designated as a high-risk area with a 1% annual chance of flooding. A FIRMette map displaying FEMA Flood Zone classifications and flood extents within the Project area is included in **Appendix C**. A federal levee on the east side of the river limits the flood prone area to a relatively narrow 1,300-foot-wide swath.

DISCUSSION

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

Less than Significant with Mitigation Incorporated. The Project will disturb greater than one acre, therefore a Construction Storm Water General Permit is required, consistent with Construction General Permit Order No. 2009-009-DWQ, issued by the SWRCB to address storm water runoff. The permit will address clearing, grading, grubbing, and disturbances to the ground, such as stockpiling, or excavation. This permit will also require the County to prepare and implement a SWPPP with the intent of keeping all products of erosion from moving off site into receiving waters. The SWPPP includes BMPs to prevent construction pollutants from entering storm water runoff. Mitigation Measure **BIO-1,** and **BIO-3** through **BIO-5** are required to ensure the Project grading will conform to SWRCB standards and in doing so will ensure the Project impacts will be **Less than Significant with Mitigation Incorporated**.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the Project may impede sustainable groundwater management of the basin?

No Impact. The Project would not directly or indirectly result in the construction of uses that would utilize groundwater supplies. Therefore, there would be **No Impact** related to depletion of groundwater supplies or interference with groundwater recharge.

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

(i) result in substantial erosion or siltation on- or off-site;

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

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

(iv) impede or redirect flood flows?

No Impact. As the Project is a maintenance project and will not be changing the amount of impermeable surfaces within the Project area. The Project will not be making any alterations to the existing drainage patterns nor will it result in erosion or siltation on or off site. As there is no change in impervious surfaces, there will be no change in the amount of surface runoff that would result in flooding or exceed capacity of stormwater system. As the added columns will only add 25 square feet in area to the river, the change will not impeded or redirect flood flows. Therefore, **No Impact** would occur.

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

No Impact. The Project would not create a potential situation for inundation by sieche, tsunami, or mudflow. The Project is located in a dominantly flat landscape, is not located in proximity to a large body of water, and is not near the coastal waters; therefore, **No Impact** would occur.

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

Less than Significant with Mitigation Incorporated. The Project may have short-term impacts associated with sediment and runoff during grading and construction. Material imported during this process will be kept in piles of staged soil, and/or re-graded and distributed within the Project site. As noted above, the Project is subject to NPDES regulations since these improvements will exceed one acre. Compliance with existing regulations and implementation of BMPs would reduce potentially significant impacts associated erosion or siltation on- or offsite to levels less than significant. Implementation of Mitigation Measure **BIO-1,** and **BIO-3** through **BIO-9** will ensure that Project impacts to water quality will be **Less than Significant with Mitigation Incorporated**.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Implementation of biological avoidance, minimization, and mitigation measures **BIO-1**, and **BIO-3** through **BIO-9** as described in Section 4 will reduce the water quality impacts to **Less Than Significant with Mitigation Incorporated**.

FINDINGS

The Project would have **Less Than Significant Impact with Mitigation Incorporated** relating to hydrology and water quality.

2.11 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?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

AFFECTED ENVIRONMENT

The Project is located in a rural part of Stanislaus County approximately 3 miles northeast of Patterson, California. On the east side of the Stanislaus River, the Project area is in between two parcels that are a non-contiguous portion of the City of Modesto. According to Stanislaus County 2015 General Plan, Land Use Element, the Project area along East Las Palmas Avenue is listed for agriculture; 20-acre lots west of the San Joaquin River and 40 acre lots east of the river. However, the City of Modesto parcels are zoned for planned development. The property within the Project Area is currently used for the existing East Las Palmas Avenue, grazing land west of the San Joaquin River and is a flood for the San Joaquin River east of the river (**Figure 9**).

DISCUSSION

a) Physically divide an established community?

No Impact. The Project would not divide an established community. The area is zoned for agriculture, and there are several single resident homes west of the San Joaquin River One at the intersection of East Las Palmas Avenue and Ash Avenue. The Project will not be changing the roadway or any of the land use, and; therefore, there will be no division of an established community. **No Impacts** would occur.

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

No Impact. The Project does not conflict with any applicable land us plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect. The Project is a maintenance project and will not change any land use. The Project is located within Coast Guard jurisdiction and will require a permit for work within the river channel. Therefore, there will be **No Impact** to land use plan, policy, or regulation.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No impact to land use and planning resources are anticipated; therefore, no avoidance, minimization, and/or mitigation measures will be required.

FINDINGS

The Project would have **No Impacts** relating to land use and planning.

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V:\2536 Las Palmas Bridge Retrofit\SMND\F9 General Plan Use.mxd

Source: ESRI Maps Online; Dokken Engineering 10/29/2019; Created By: brianm

1 inch = 200 feet

0 100 200 300 400 500 Feet

Figure 9
Stanisluas County Land Use
BRLS-5938(200)
Las Palmas Avenue over San Joaquin River
Bridge Preventative Maintenance Project
Stanislaus County, California

2.12 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

AFFECTED ENVIRONMENT

According to the *Stanislaus County General Plan* (Stanislaus County 2015), which relies upon the State Division of Mines and Geology report, *Mineral Land Classification of Stanislaus County, California* (Special Report 173), minerals found within the County include: bermentite, braunite, chromite, cinnabar, garnet, gypsum, hausmannite, hydromagnesite, inesite, magnesite, psilomelane, pyrobrsite, and rhodochrosite. Small deposits of gold, clay, and lead are also known to exist within the County. However, commercial extraction of these minerals is difficult or impossible. Currently, sand and gravel deposits constitute the only commercially significant extractive mineral resource in the region.

DISCUSSION

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?

No Impact. According to the *Stanislaus County General Plan* (Stanislaus County 2015), the Project area does not have known mineral resources that would be of value to the region and the residents of the state; therefore, the Project will have **No Impact** to known mineral resources, and no mitigation is required.

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?

No Impact. According to the *Stanislaus County General Plan* (Stanislaus County 2015), the Project area does not have any areas that are listed as a locally-important mineral resource recovery site; therefore, the Project will have **No Impact** and no mitigation is required.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures will be required.

FINDINGS

The Project would have **No Impact** relating to mineral resources.

2.13 NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 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?	☐	☐	☐	☒

AFFECTED ENVIRONMENT

The Project area is within a rural area of Stanislaus County. The noise environment near the Project is dominated by traffic sources. Background noise levels are influenced by East Las Palmas Avenue and the existing surrounding residential and agricultural areas. Traffic remains the dominant noise source at the Project site. The existing noise level ranges from 40 to 50 dB. As the Project will not be adding lanes to East Las Palmas Avenue, the Project will not be increasing the capacity of the roadway and; therefore, will not be creating additional noise. The only source of noise will be during construction.

DISCUSSION

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant. The *Stanislaus County General Plan, Noise Element (*Stanislaus County, 2015) has established Goals and Policies relating to evaluating noise impacts due to projects. The overall noise goal for the County is to limit the exposure of the community to excessive noise levels. The *Noise Element* establishes noise standards for maximum allowable noise exposure due to transportation sources and performance standards for fixed noise sources. Transportation noise standards (60 dBA L_{dn}/CNEL) are applied at the outdoor activity area of noise sensitive land use (residential) where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures.

Fixed noise sources are not to exceed 55 dBA L_{eq} and 75 dBA L_{max} during daytime hours (7:00 A.M. to 10:00 P.M.) and 45 dBA L_{eq} and 65 dBA L_{max} during nighttime hours (10:00 P.M. to 7:00 A.M.) as measured at the property line of noise sensitive land uses.

During construction of the Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction equipment is expected to generate noise levels ranging from 70 to 90 dB at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance. The nearest receptor is over 330 feet from the extent of construction. This would drop the noise levels more than 20 dB.

In addition, the County's municipal code (Chapter 10.46) states exterior noise level standards and allowances. While the Project will not exceed the County's exterior noise level standards, the Project is anticipated to comply with all local and regional regulations.

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Standard Specification 14-8.02, SSP14-8.02 and applicable local noise standards. Construction noise would be short-term, intermittent, and overshadowed by local traffic noise. In addition, the local County noise ordinance, Stanislaus County Noise Control Ordinance (Chapter 10.46) would be followed. The County's Municipal Code specifically prohibits the operation of any construction equipment that would cause a greater sound level than 75 decibels at or beyond the property line of any property between the hours of 7:00 p.m. to 7 a.m. as indicated in **NOI-1**. The Project will have **Less Than Significant Impact**, and the implementation of measure **NOI-1** will reduce impacts even further.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant. The Project area is within a rural area of Stanislaus County with a limited number of rural residences within the Project vicinity. The Project will be driving piles for the temporary trestles, which may require vibratory pile driving and limited pile driving. These temporary construction activities within the Project vicinity are anticipated to create groundborne vibration, but the nearest receptor to this activity will be more than 330 feet away and groundborne vibration effects of pile driving would be at the threshold of distinctly perceptible and well below the threshold of effects; therefore, the Project will have **Less Than Significant Impacts**. Additionally, the implementation of Mitigation Measure **NOI-1** will further reduce noise impacts.

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

No Impact. The Project is not located within or adjacent to an airport land use plan, or where such a plan has not been adopted, or within two miles of a public airport or public use airport; therefore, no impact would occur, and no mitigation is required.

AVOIDANCE, MINIMIZATION, AND/OR ABATEMENT MEASURES

NOI-1: To minimize the construction-generated noise, abatement measures from Standard Specification 14-8.02 "Noise Control" and SSP 14-8.02 must be followed:

- Do not operate construction equipment or run the equipment engines from 7:00 p.m. to 7:00 a.m. or on Sundays, with the exception that you may operate equipment within the Project limits during these hours to:
  - Service traffic control facilities
  - Service construction equipment
- Equip an internal combustion engine with the manufacturer recommended muffler.
- Do not operate an internal combustion engine on the job site without the appropriate muffler.

A variance from these requirements may be provided by request at the discretion of Stanislaus County.

FINDINGS

The Project would have **Less Than Significant Impacts** relating to noise.

2.14 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

REGULATORY SETTING

CEQA also 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…"

DISCUSSION

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)?

No Impact. The Project is located in rural Stanislaus County that supports agricultural land. There is no planned development along East Las Palmas Avenue. The Project would not induce population growth in the area, either directly or indirectly; therefore, the Project would have **No Impact** related to population growth, and no mitigation is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project will not displace any number of existing housing, or necessitate the construction of replacement housing. Additionally, there are no businesses adjacent to the Project area, and, as there will be no property acquisition, there will be no reduction in agricultural land, so there would be no impact to those properties. The Project will **No Impact** related to displacement of housing or businesses; therefore, no mitigation is required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. The Project is not a road widening project aligned with the existing facility and will not displace any number of people, or necessitate the construction of replacement housing; therefore, the Project would have **No Impact** related to displaced persons, and no mitigation is required.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The Project will have no impacts relating to population and housing; therefore, no avoidance, minimization, and/or mitigation measures will be required.

FINDINGS

The Project would have **No Impacts** relating to population and housing.

2.15 PUBLIC SERVICES

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:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

AFFECTED ENVIRONMENT

The nearest fire station, West Stanislaus Fire Station, and the nearest policed station, Patterson Police Department are located 3.25 miles southwest of the Project area within the City of Patterson. The nearest school, Walnut Grove School, is approximately 2.6 miles west of the Project area on Walnut Avenue in the City of Patterson. The nearest park, Felipe Garza Park, is approximately 2.6 miles west-south west of the Project area within the City of Patterson.

DISCUSSION

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

No Impact. There are no public services located within the Project area. The Project is located in rural Stanislaus County, which consists of agricultural lands and low-density rural residential housing. The Project is performing maintenance and rehabilitation of the East Las Palmas Avenue Bridge over the San Joaquin River and will not be closing any traffic lanes along East Las Palmas Avenue, nor will it restrict access to any park or other public facilities. Therefore, the Project will have **No Impact** to these public services.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The Project will have no impacts relating to public services; therefore, no avoidance, minimization, and/or mitigation measures will be required.

FINDINGS

The Project would have **No Impacts** relating to public services.

2.16 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

AFFECTED ENVIRONMENT

As stated in the previous section, the nearest public park, Felipe Garza Park, is approximately 2.6 miles west-south west of the Project area within the City of Patterson.

DISCUSSION

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?

No Impact. The bridge maintenance and rehabilitation would not 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. There will be no road closures associated with the Project, and access will not be impacted during construction; therefore, **No Impact** would occur.

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?

The Project does not include other recreational facilities, nor does it require the construction or expansion of other recreational facilities; therefore, **No Impact** would occur.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No impact to recreation facilities would occur; therefore, no avoidance, minimization, and/or mitigation measures will be required.

FINDINGS

The Project would have **No Impact** relating to recreation.

2.17 TRANSPORTATION/TRAFFIC

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

AFFECTED ENVIRONMENT

According to Stanislaus County General Plan (2015), when measuring levels-of-service (LOS), Stanislaus County uses the criteria established in the *Highway Capacity Manual* published and updated by the Transportation Research Board. LOS is a qualitative description of traffic flow based on factors such as speed, travel time, delay, freedom to maneuver, volume, density, and capacity. Six levels are defined, from LOS A, as the best operating conditions, to LOS F, or the worst operating conditions. LOS E represents “at-capacity” operations. When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F.

For roadways within Stanislaus County, the Stanislaus County General Plan (2015) states the level-of-service criteria as, “The County shall maintain LOS C or better for all County roadways and intersections, except, within the sphere of influence of a city that has adopted a lower level of service standard, the City standard shall apply. The County may adopt either a higher or lower level of service standard for roadways and intersections within urban areas such as Community Plan areas, but in no case shall the adopted LOS fall below LOS D.”

DISCUSSION

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

No Impact. As the Project is a maintenance and rehabilitation project, there will be no change the bridge width or carrying capacity. Therefore, the Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, and **No Impacts** would occur.

b) *Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

No Impact. CEQA Guidelines section 15064.3 describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, “vehicle miles traveled” refers to the amount and distance of automobile travel attributable to a project. Subdivision (b) defines the criteria for analyzing transportation impacts. However, as the Project is a bridge maintenance and rehabilitation project, the Project will have no change on the vehicle miles traveled. Per section 15064.3 (b)(2), transportation projects that have no impact on vehicle miles traveled are

presumed to cause a less than significant transportation impact, and as there will be no changes in the roadway, the Project will have **No Impact** to vehicle miles traveled.

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

No Impact. As the Project will not be making changes to the roadway surface, the Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); therefore, **No Impact** would occur, and no mitigation is required.

d) *Result in inadequate emergency access?*

No Impact. The Project would not change the existing roadway geometry, nor would the Project require any road closures; therefore, there would be no change in emergency access.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The Project will have no impacts relating to transportation/traffic; therefore, no avoidance, minimization, and/or mitigation measures will be required.

FINDINGS

The Project would have **No Impact** relating to transportation/traffic.

2.18 TRIBAL CULTURAL RESOURCES

TRIBAL CULTURAL RESOURCES:

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

REGULATORY SETTING

Effective July 1, 2015, CEQA was revised to include early consultation with California Native American tribes and consideration of tribal cultural resources (TCRs). These changes were enacted through Assembly Bill 52 (AB 52). By including TCRs early in the CEQA process, AB 52 intends to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to TCRs. CEQA now establishes that a "project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment" (PRC § 21084.2).

To help determine whether a project may have such an adverse effect, the PRC requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. The consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project (PRC § 21080.3.1). Consultation must consist of the lead agency providing formal notification, in writing, to the tribes that have requested notification or proposed projects within their traditionally and culturally affiliated area. AB 52 stipulates that the NAHC shall assist the lead agency in identifying the California Native American tribes that are traditionally and culturally affiliated within the project area. If the tribe wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. Once the lead agency receives the tribe's request to consult, the lead agency must then begin the consultation process within 30 days. If a lead agency determines that a project may cause a substantial adverse change to TCRs, the lead agency must consider measures to mitigate that impact. Consultation concludes when either: 1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a TCR, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC § 21080.3.2). Under existing law, environmental documents must not include information about the locations of an archaeological site or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records act. TCRs are also exempt from disclosure. The term "tribal cultural resource" refers to either of the following:

Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

- Included or determined to be eligible for inclusion in the California Register of Historical Resources
- Included in a local register of historical resources as defined in subdivision (k) of California Public Resources Code (PRC) Section 5020.1
- A resource determined by a California lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of the PRC Section 5024.1.

AFFECTED ENVIRONMENT

An APE was established as the area of direct and indirect effects which encompasses an approximately 7.5-acre area. The APE includes the East Las Palmas Avenue Bridge as well as the areas on either side of the bridge to allow for construction access to the columns, and is identical to the Project Area (**see Figure 3**) Efforts to identify potential cultural resources in the APE included background research, a search of previously recorded archaeological site records and cultural resource identification reports on file at the California Historical Resources Information System CCIC, consultation with the NAHC, and a pedestrian ground surface survey.

Archaeologist Dr. Brian S. Marks conducted an archaeological field survey of the APE on April 30, 2019. The APE was surveyed using transect intervals no greater than 15 meters wide, oriented roughly parallel with East Las Palmas Avenue. Periodic boot scrapes were used in areas of dense vegetation to expose the ground surface. All project area conditions and cultural resources were fully recorded in the field notes. Exposed subsurface cuts, such as ditches, roadway cuts, and bank cuts were visually examined for the presence of archaeological resources, soil color change, and/or staining that could indicate past human activity or buried deposits. The pedestrian survey conducted on April 30, 2019 did not reveal any archaeological resources within the APE.

The pedestrian survey confirmed that the terrain has been subjected to intense modification, mostly through recent discing of the areas by the levee and high-energy flooding events within the flood plain of the San Joaquin River. Due to the minimal ground disturbance associated with this project, Caltrans determined this project to be a Screened Undertaking as this project has no potential to effect cultural resources.

Dokken Engineering obtained a record search (File #10989N) for the Project area and a one-mile radius surrounding the Project area from the CCIC, California State University, Stanislaus, on February 26, 2019. The record search was conducted by Robin Hards from the Information Center. The search examined the OHP Historic Properties Directory, OHP Determinations of Eligibility, and California Inventory of Historical Resources. Dokken Engineering staff reviewed historical literature and maps, Caltrans Bridge Inventory listings, GLO, and soil survey maps. The record search revealed that no cultural resources have been documented within the APE.

Caltrans, per the Section 106 Programmatic Agreement under Stipulation VII and Attachment 2, has determined that the Project is a screened undertaking (Restoration or Rehabilitation of deteriorated structure) and is exempt from Section 106 review, as the Project has no potential to affect historic properties. Additionally, no Native American tribe or individuals have requested to be notified by the County for AB 52 consultation.

DISCUSSION

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

Less than Significant with Mitigation Incorporated. The Project is not anticipated to cause a substantial adverse change in the significance of a TCR listed or eligible for listing in the California Register of Historical Resources, or in a local register of historic resources as defined in Public Resources Code section 5020.1(k). No cultural resources were identified during the visual survey, or the record search. No impacts are anticipated for the Project related to archaeological resource; however, with any Project requiring ground disturbance, there is always the possibility that unmarked cultural resources may be unearthed during construction. This impact would be considered potentially significant. Implementation of Mitigation Measure **CR-1** and **CR-2** would result in **Less Than Significant Impact with Mitigation Incorporated**.

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

Less than Significant with Mitigation Incorporated. The Project is not anticipated to cause a substantial adverse change to a TCR pursuant to criteria set forth in subdivision (c) of Public Resources Cod Section 5024.1. No cultural resources were identified during the visual survey and record search. No impacts are anticipated for the Project related to archaeological resource; however, with any Project requiring ground disturbance, there is always the possibility that unmarked cultural resources may be unearthed during construction. This impact would be considered potentially significant. Implementation of Mitigation Measure **CR-1** and **CR-2** would result in **Less Than Significant Impact with Mitigation Incorporated**.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Mitigation Measures **CR-1** and **CR-2** within Section 2.5 will be implemented for any impacts relating to Tribal Cultural Resources.

FINDINGS

The Project would have **Less Than Significant Impact with Mitigation Incorporated** relating to Tribal Cultural Resources.

2.19 UTILITIES AND SERVICE SYSTEMS

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

DISCUSSION

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

No Impact. The Project is a maintenance and rehabilitation project of the East Las Palmas Avenue Bridge over the San Joaquin River. The Project would not include the construction of any wastewater-generating uses, nor electric power, natural gas, or telecommunication facilities. The Project would not increase population in the Project vicinity, and there would be no additional wastewater flows as a result of project development; therefore, the Project would not result in the need for new or expanded wastewater facilities. **No Impact** would occur, and no mitigation is required.

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

No Impact. The Project would not result in the need for new or expanded water supplies. **No Impact** would result from development of the Project, and no mitigation is required.

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

No Impact. The Project is a maintenance and rehabilitation project. The Project would not include the construction of any wastewater-generating uses. The Project would not increase population in the Project vicinity, and there would be no additional wastewater flows as a result of Project development; therefore, the Project would not result in the need for new or expanded wastewater facilities. **No Impact** would occur, and no mitigation is required.

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

Less Than Significant. The Project would not generate substantial solid waste during operation. Solid waste may be generated during construction; however, the amount will not exceed landfill capacities. This would not affect landfill capacity because the amounts would not be substantial and would occur only during the construction period. Therefore, impacts associated with development of the Project would be considered **Less Than Significant** and no mitigation is required.

e) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant. The Project would comply with federal, state, and local statutes and regulations related to solid waste; therefore, impacts associated with compliance with federal, state, and local statutes and regulations related to solid waste would be considered **Less Than Significant** and no mitigation is required.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are required for utilities and service systems.

FINDINGS

The Project would have **Less Than Significant Impacts** relating to utilities and service systems.

2.20 WILDFIRE

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

AFFECTED ENVIRONMENT

The Project is located within a state responsibility area; however, it is not within a designated "very high fire hazard severity" area.

DISCUSSION

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

No Impact. The Project is a maintenance and rehabilitation project of the East Las Palmas Avenue Bridge over the San Joaquin River. The Project would not substantially impair an adopted emergency response plan or emergency evacuation plan as East Las Palmas Avenue will remain open during construction. Additionally, the Project is not located within an area designated "very high fire hazard safety. **No Impact** would occur, and no mitigation is required.

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

No Impact. The Project would not exacerbate wildfire risks as the Project would not change any of the existing slopes associated with the San Joaquin River levee system. The Project is a bridge maintenance and rehabilitation project and does not increase the number of occupants within or adjacent to the Project area; therefore, **No Impact** would occur.

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

No Impact. The Project would require the continued maintenance of the existing bridge and the installation of a temporary access road adjacent to the bridge during construction; however, neither maintenance or installation of the access road are anticipated to exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, **No Impact** would occur.

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

No Impact. The Project would not expose people or structures to downslope or downstream flooding or landslides as the Project would not change any of the existing slopes or grades adjacent to the Project or associated with the San Joaquin River levee system. As the Project is a maintenance and rehabilitation project with no increase to impervious surfaces, runoff will continue as existing. Additionally, as the Project is not located within a designated "very high fire hazard severity" area, it is anticipated there will be **No Impact**.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are required for wildfires.

FINDINGS

The Project would have **No Impacts** relating to wildfires.

2.21 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION

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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant with Mitigation Incorporated. Implementation of the Project would have the potential to degrade the quality of the existing environment. Potential impacts have been identified related to Biological Resources (2.4), Cultural Resources (Section 2.5), Hazards and Hazardous Materials (Section 2.9), and Tribal Cultural Resources (Section 2.18). Mitigation measures have been identified related to individual resource-specific impacts. The project has the potential to have impacts to several wildlife species including burrowing owl, loggerhead shrike, Swainson's Hawk, Central Valley Steelhead, Western Pond Turtle, and migratory birds; however, mitigation measures would reduce the level of all Project-related impacts to less than significant levels. Therefore, impacts are considered **Less than Significant with Mitigation Incorporated.**

b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?

No impact. The Project would not have adverse environmental impacts at a significant level. All potential significant impacts will be addressed with avoidance, minimization and mitigation. Past projects near the East Las Palmas Avenue Bridge have been cleared through the CEQA process and potentially significant impacts from those previous projects would have already been mitigated for. No cumulative effects are anticipated because no resources would be adversely affected by the Project, or the Project effects would be localized and of limited extent. **No impact** would occur in relation to cumulatively considerable effects.

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

Less than Significant with Mitigation Incorporated. The Project would not cause significant adverse effects to human beings, either directly or indirectly with mitigation incorporated. Potential impacts have been identified related to Aesthetics, Air Quality, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise. Mitigation measures have been identified related to individual resource-specific impacts. Mitigation measures would reduce the level of all Project-related impacts to less than significant levels. Therefore, impacts are considered **Less than Significant with Mitigation Incorporated.**

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No specific avoidance, minimization, and/or mitigation measures for cumulative impacts are needed for the Las Palmas Bridge Maintenance Project. The following measures discussed in other sections in this document would ensure that cumulative impacts would be less than significant should they occur.

- Measures VIS-1 through VIS-3
- Measures AQ-1 through AQ-3
- Measures BIO-1 through BIO-22
- Measures CR-1 and CR-2
- Measure CC-1
- Measure NOI-1

3.0 Comments and Coordination

This chapter summarizes the County's efforts to identify, address and resolve Project-related issues through early and continuing coordination.

3.1 CONSULTATION AND COORDINATION WITH PUBLIC AGENCIES

Coordination with the following agencies was initiated for the Las Palmas Bridge Maintenance Project:

California Department of Fish and Wildlife (CDFW)
Central Valley Flood Protection Board (CVFPB)
Native American Heritage Commission (NAHC)
Regional Water Quality Control Board (RWQCB)
United States Army Corps of Engineers (USACE)
United States Coast Guard (USCG)
United States Fish and Wildlife Service (USFWS)
National Marine Fisheries Service (NMFS)

3.2 PUBLIC PARTICIPATION

The public comment period for the Project will occur from May 28, 2020 to June 26, 2020. All written comments received by the County will be incorporated into the Final Initial Study/Mitigated Negative Declaration and added in an appendix. Any additions or corrections to the IS/MND subsequent to public comments will be addressed within the final document.

4.0 List of Preparers

4.1. DOKKEN ENGINEERING

Tim Chamberlain, Senior Environmental Planner
Brian Marks Ph.D., Associate Environmental Planner/ Archaeologist
Scott Salembier, Associate Environmental Planner / Biologist
Ken Chen, Environmental Planner / Noise and Air Specialist

4.2. STANISLAUS COUNTY

Sarah Collins P.E., Project Manager
Steven Lay, Project Engineer
Chris Brady, P.E., Deputy Director

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Appendix A:
FTIP/RTP Pages

2016/17-2021/22 Highway Bridge Program

See the appropriate FTIP/FSTIP for current funding commitments. This listing provides the backup project information to support the lump sum amounts programmed in the FTIP.

District: 10 County: Stanislaus

Responsible Agency	HBP-ID	Project Description
Stanislaus County	3883	BRIDGE NO. 38C0033, LAS PALMAS AVENUE OVER SAN JOAQUIN RIVER, 3 MI N/E STATE ROUTE 33. Preventive Maintenance project.

Project #: 5938(200)

Phase Summary:	Prior	16/17	17/18	18/19	19/20	20/21	21/22	Beyond	Total
PE	100,000			500,000					600,000
R/W									
CON								3,920,000	3,920,000
Total	100,000			500,000				3,920,000	4,520,000

Fund Source Summary:	Prior	16/17	17/18	18/19	19/20	20/21	21/22	Beyond	Total
Fed $	88,530			442,650				3,470,376	4,001,556
Local Match	11,470			57,350				449,624	518,444
LSSRP Bond									
Local AC									
Total	100,000			500,000				3,920,000	4,520,000

PE Summary:	Prior	16/17	17/18	18/19	19/20	20/21	21/22	Beyond	Total
Fed $	88,530			442,650					531,180
Local Match	11,470			57,350					68,820
LSSRP Bond									
Local AC									
Total	100,000			500,000					600,000

CON Summary:	Prior	16/17	17/18	18/19	19/20	20/21	21/22	Beyond	Total
Fed $								3,470,376	3,470,376
Local Match								449,624	449,624
LSSRP Bond									
Local AC									
Total								3,920,000	3,920,000

Exempt Project Listing

Jurisdiction/Agency	TIP/RTP Project ID	CTIPs Project ID (if available)	Facility Name/Route	Project Description	Project Limits	Estimated Cost	Exemption Code
Riverbank	R09		Santa Fe Rd	Signal improvements	Calendar at Santa Fe	$742,700	5.02
Riverbank	R10		Patterson Rd	Signal improvements	Patterson at Third	$450,300	5.02
Riverbank	R11		Claus Road	Signal improvements	Claus at California	$652,400	5.02
Riverbank	R12		Patterson Rd	Signal improvements	Patterson at Eighth	$403,200	5.02
Riverbank	R13		Patterson Rd	Signal improvements	Patterson at First	$933,500	5.02
Riverbank	R14		Claus Rd	Signal improvements	SR-108 at Claus	$1,688,300	5.02
Riverbank	R15		Patterson Rd	Railroad crossing improvements	First Street north of Patterson Road	$396,600	1.01
Riverbank	R16		Patterson Rd	Railroad crossing improvements	Third Street north of Patterson Road	$500,000	1.01
Riverbank	R17		Patterson Rd	Railroad crossing improvements	Eighth Street north of Patterson Road	$500,000	1.01
Riverbank	R18		Patterson Rd	Railroad crossing improvements	Snedigar Road north of Patterson Roa	$311,566	1.01
Riverbank	R19		Patterson Rd	Railroad crossing improvements	Patterson Road west of Terminal Avenue	$311,566	1.01
Riverbank	R21		SR-108	Install Congestion Management improvement	SR-108 at First Street	$2,512,700	4.01
Turlock	T01		SR-99	Reconstruct Interchange	SR-99 & Fulkerth Rd	$12,667,800	5.02
Turlock	T24		Various Locations	Install Traffic Signals and Various Intersection and Synchronization Improvement	Various Locations	$4,105,100	5.02
Turlock	T31		Various Locations	Roadway Rehabilitation	Various Locations	$40,502,000	1.1
Waterford	W01		Various Locations	Traffic Signals, intersection improvements and other transportation enhancemen	Various Locations	$4,769,300	5.02
Waterford	W02		Various Locations	Roadway Rehabilitation	Various Locations	$14,158,800	1.1
Stanislaus County	SC63		Cooperstown Rd	Bridge Replacement - Off System Bridge Toll Credits	Cooperstown Road at Gallup Creek	$3,249,200	2.05
Stanislaus County	SC64		Cooperstown Rd	Bridge Replacement - Off System Bridge Toll Credits	Cooperstown Road at Rydberg Creek	$3,313,000	2.05
Stanislaus County	SC65		Crabtree Rd	Bridge Replacement - Off System Bridge Toll Credits	Crabtree Road at Dry Creek	$6,646,800	2.05
Stanislaus County	SC66		Gilbert Rd	Bridge Replacement - Off System Bridge Toll Credits	Gilbert Road at Ceres Main Canal	$1,254,200	2.05
Stanislaus County	SC67		Pleasant Valley Rd	Bridge Replacement - Off System Bridge Toll Credits	Pleasant Valley Road at South San Joaquin Main Canal	$2,325,200	2.05
Stanislaus County	SC68		Shiells Rd	Bridge Replacement - Off System Bridge Toll Credits	Shiells Road over CCID Main Canal	$2,041,000	2.05
Stanislaus County	SC69		St. Francis	Bridge Replacement - Off System Bridge Toll Credits	St. Francis Ave at MID Main Canal	$1,722,400	2.05
Stanislaus County	SC70		Tegner Rd	Bridge Replacement - Off System Bridge Toll Credits	Tegner Road at Turlock Irrigation District Lateral #5	$2,586,100	2.05
Stanislaus County	SC71		Tim Bell Road	Bridge Replacement - Off System Bridge Toll Credits	Tim Bell Road at Dry Creek	$15,482,400	2.05
Stanislaus County	SC72		Las Palmas	Bridge Replacement	Las Palmas Ave over San Joaquin River	$24,221,700	4.12
Stanislaus County	SC73		Milton Road	Bridge Replacement - Off System Bridge Toll Credits	Milton Road over Rock Creek Tributary	$830,200	2.05
Stanislaus County	SC74		Sonora Road	Scour Countermeasure	Sonora Road over Martells Creek	$145,900	4.01
Stanislaus County	SC01		Various Locations	Roadway Rehabilitation	Various Locations	$65,993,400	1.1
Stanislaus County	SC04		McHenry Ave	Seismic Bridge Replacement	McHenry Ave @ Stanislaus River Bridge	$21,493,000	2.05
Stanislaus County	SC05		Crows Landing Rd	Install Traffic Signa	Crows Landing Rd. & Grayson Rd	$2,740,100	5.02
Stanislaus County	SC06		Santa Fe Ave & Terminal Ave	Upgrade Railroad Crossings	BNSF Railroad	$656,800	1.01
Stanislaus County	SC10		Geer Rd	Seismic Bridge Retrofit	Geer Rd @ Tuolumne River Bridge	$1,688,300	2.05
Stanislaus County	SC11		Hickman Rd	Seismic Bridge Replacement	Hickman Rd @ Tuolumne River	$20,563,300	2.05
Stanislaus County	SC12		Hills Ferry Rd	Seismic Bridge Retrofit - Mandatory	Hills Ferry Rd @ San Joaquin River	$7,800,500	2.05
Stanislaus County	SC13		Pete Miller Rd	Seismic Bridge Retrofit	Pete Miller Rd @ Delta Mendota Canal Bridge	$2,049,000	2.05
Stanislaus County	SC14		Santa Fe Ave	Seismic Bridge Replacement	Santa Fe Ave @ Tuolumne River Bridge	$27,057,300	2.05
Stanislaus County	SC16		Claribel Rd	Install Traffic Signa	Claribel Rd & Coffee Rd	$2,251,100	5.02
Stanislaus County	SC17		Crows Landing Rd	Install Traffic Signa	Crows Landing Rd & Keyes Rd	$2,822,300	5.02
Stanislaus County	SC18		Crows Landing Rd	Install Traffic Signa	Crows Landing Rd & W. Main St	$3,462,800	5.02
Stanislaus County	SC19		Crows Landing Rd	Install Traffic Signa	Crows Landing Rd & Fulkerth Ave	$2,851,600	5.02
Stanislaus County	SC21		Kilburn Rd	Replace Bridge (Critical)	Kilburn Rd @ Orestimba Creek Bridge	$6,292,900	2.05
Stanislaus County	SC22		Carpenter Rd	Install Traffic Signa	Crows Landing Rd & Carpenter Rd	$3,251,100	5.02
Stanislaus County	SC23		Carpenter Rd	Install Traffic Signa	Carpenter Rd & Grayson Rd	$3,305,700	5.02
Stanislaus County	SC24		Carpenter Rd	Install Traffic Signa	Carpenter Rd & Hatch Rd	$1,791,100	5.02
Stanislaus County	SC25		Carpenter Rd	Install Traffic Signa	Carpenter Rd & Keyes Rd	$3,612,300	5.02
Stanislaus County	SC26		Carpenter Rd	Install Traffic Signa	Carpenter Rd & W. Main St	$3,359,800	5.02
Stanislaus County	SC27		Carpenter Rd	Install Traffic Signa	Carpenter Rd & Whitmore Ave	$2,213,800	5.02
Stanislaus County	SC28		Central Ave	Install Traffic Signa	W. Main St & Central Ave	$6,523,900	5.02
Stanislaus County	SC29		Claribel Rd	Install Traffic Signa	Claribel Rd & Roselle Ave	$2,251,100	5.02
Stanislaus County	SC30		Geer Rd	Install Traffic Signa	Geer & Santa Fe	$3,522,900	5.02
Stanislaus County	SC31		Geer Rd	Install Traffic Signa	Geer & Whitmore	$3,262,000	5.02
Stanislaus County	SC32		Golden State Blvd	Intersection Improvements	Golden State Blvd & Golf Rd / Berkeley Ave	$2,388,200	5.02
Stanislaus County	SC33		Santa Fe Ave	Install Traffic Signal; Upgrade Railroad Crossing Equipmer	Santa Fe & Hatch Road	$3,376,600	5.02

STANCOG 2018 Regional Transportation Plan

Tier I Roadway Projects

	Project Details							Purpose / Need (P = Primary Purpose / X = Need)					
ID	Jurisdiction	Location	Project Limits	Description	Total Cost	Open to Traffic	Funding Source	System Preserv.	Capacity Enhance.	Safety	Oper.	Alt. Mode	Complete Streets
S64	Stanislaus County	Santa Fe Ave	Hatch to Tuolumne River	Widen to 3 lanes	$2,809,900	2028	L		X				
S65	Stanislaus County	W. Main St	San Joaquin River to Carpenter Rd	Widen to 3 lanes	$3,900,000	2024	L		X				
S66	Stanislaus County	W. Main St	Carpenter Rd to Crows Landing Rd	Widen to 3 lanes	$3,443,700	2020	L		X				
S67	Stanislaus County	W. Main St	Crows Landing Rd to Mitchell Rd	Widen to 3 lanes	$4,300,000	2020	L		X				
S68	Stanislaus County	W. Main St	Mitchell Rd to Washington Rd	Widen to 3 lanes	$3,783,900	2022	L		X				
S69	Stanislaus County	SR-219	SR-99 to McHenry Ave	Widen to 6-lanes	$41,527,100	2024	STIP		X				
S70	Stanislaus County	Cooperstown Rd	Cooperstown Road at Gallup Creek	Bridge Replacement - Off System Bridge Toll Credits	$2,600,000	2019	HBP	X		X			
S71	Stanislaus County	Cooperstown Rd	Cooperstown Road at Rydberg Creek	Bridge Replacement - Off System Bridge Toll Credits	$2,300,000	2021	HBP	X		X			
S72	Stanislaus County	Crabtree Rd	Crabtree Road at Dry Creek	Bridge Replacement - Off System Bridge Toll Credits	$5,322,000	2020	HBP	X		X			
S73	Stanislaus County	Gilbert Rd	Gilbert Road at Ceres Main Canal	Bridge Replacement - Off System Bridge Toll Credits	$2,423,000	2019	HBP	X		X			
S74	Stanislaus County	Pleasant Valley Rd	Pleasant Valley Road at South San Joaquin Main Canal	Bridge Replacement - Off System Bridge Toll Credits	$2,900,000	2019	HBP	X		X			
S75	Stanislaus County	Shiells Rd	Shiells Road over CCID Main Canal	Bridge Replacement - Off System Bridge Toll Credits	$2,041,000	2019	HBP	X		X			
S76	Stanislaus County	St. Francis	St. Francis Ave at MID Main Canal	Bridge Replacement - Off System Bridge Toll Credits	$1,885,000	2019	HBP	X		X			
S77	Stanislaus County	Tegner Rd	Tegner Road at Turlock Irrigation District Lateral #5	Bridge Replacement - Off System Bridge Toll Credits	$2,586,100	2019	HBP	X		X			
S78	Stanislaus County	Tim Bell Road	Tim Bell Road at Dry Creek	Bridge Replacement - Off System Bridge Toll Credits	$15,482,400	2018	HBP	X		X			
S79	Stanislaus County	Las Palmas	Las Palmas Ave over San Joaquin River	Bridge Rehabilitation	$24,221,700	2022	HBP	X		X			
S80	Stanislaus County	Milton Road	Milton Road over Rock Creek Tributary	Bridge Replacement - Off System Bridge Toll Credits	$4,530,000	2020	HBP	X		X			
S81	Stanislaus County	Sonora Road	Sonora Road over Martells Creek	Replacement	$3,200,000	2022	HBP	X		X			
S82	Stanislaus County	Albers Rd	Claribel Road to Warnerville Road	Widen to 5 lanes	$6,000,000	2022	PFF/STBGP		X				
S83	Stanislaus County	South County Corridor	Turlock City Limits to Interstate 5	Construct 2-6 Lane Expressway on new alignment	$278,000,000	2025	PFF		X		X		
S84	Stanislaus County	Oakdale-Waterford Hwy	Over Claribel Bridge Lateral	Replace Bridge	$1,928,700	2022	HBP	X	X	X			
S85	Stanislaus County	Valley Home Rd.	Over Lone Tree Creek	Bridge Rehabilitation	$2,314,300	2022	HBP	X		X			
S86	Stanislaus County	Pioneer Ave.	Over Lone Tree Creek	Replace Bridge	$1,725,250	2022	HBP	X	X	X			
S87	Stanislaus County	Milton Rd.	Over Rock Creek Tributary	Replace Bridge	$1,989,000	2022	HBP	X	X	X			
S88	Stanislaus County	Milton Rd.	Over Hood Creek	Replace Bridge	$3,714,900	2022	HBP	X	X	X			
S89	Stanislaus County	Lake Road	Over T.I.D. Main Canal	Replace Bridge	$4,295,050	2022	HBP	X	X	X			
S90	Stanislaus County	Montpelier Road	Ower Main Canal @ Dallas Rd	Replace Bridge	$2,669,050	2022	HBP	X	X	X			
S91	Stanislaus County	Claribel Rd	Claribel at Roselle	Signal improvements	$4,242,774	2019	CMAQ, STBGP			X	X		
S101	Stanislaus County	132	SR 132 Extension Dakota to Gates	Construct 4-lane divided expressway or freeway (County)	$117,000,000	2026	L, SB 1, STIP, CMAQ, STBG		X	X	X		
S102	Stanislaus County	North County Corridor	Tully Rd to SR 120/108	Construct a four-lane expressway	$680,000,000	2026	L, SB 1, STIP, CMAQ, STBG		X	X	X		
S103	Stanislaus County	SR-99	Faith Home Road	Construction of Faith Home RiverCrossing / Gap Closure (Hatch Rd to Garner Viaduct)	$71,700,000	2024	L, SB 1, STIP, CMAQ, STBG		X	X	X		
S104	Stanislaus County	McHenry	Ladd Rd to Hogue Rd	Widen to 5 Lanes	$13,025,000	2020	L, SB 1, STIP, CMAQ, STBG		X		X		
S105	Stanislaus County	Keyes Road	Over TID Ceres Main Canal	Replace Bridge	$1,500,000	2021	SB1	X		X			
S106	Stanislaus County	Quincy Road	Over TID Upper Lateral #3	Replace Bridge	$1,500,000	2021	SB2	X		X			
S107	Stanislaus County	Eastin Road	Eastin Road & Orestimba Creek	Low water crossing - bridge or culvert construction	$2,500,000	2021	HSIP, SB1			X			
S108	Stanislaus County	Crows Landing Road	Catfish Camp to 1,200' southwest	Raise Road profile	$475,000	2021	SB1			X	X		
S109	Stanislaus County	Geer Road	Geer Road and Santa Fe Avenue	Intersection Improvements - curb, gutter, SD improvements @ NW corner	$1,000,000	2020	SB1				X		

Appendix B:
CNDDB, USFWS, and CNPS Special Status Species Database Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Crows Landing (3712141) OR Patterson (3712142) OR Westley (3712152) OR Brush Lake (3712151) OR Ceres (3712058) OR Hatch (3712048))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Ambystoma californiense California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
Atriplex minuscula lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
Atriplex persistens vernal pool smallscale	PDCHE042P0	None	None	G2	S2	1B.2
Atriplex subtilis subtle orache	PDCHE042T0	None	None	G1	S1	1B.2
Blepharizonia plumosa big tarplant	PDAST1C011	None	None	G1G2	S1S2	1B.1
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branta hutchinsii leucopareia cackling (=Aleutian Canada) goose	ABNJB05035	Delisted	None	G5T3	S3	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Caulanthus lemmonii Lemmon's jewelflower	PDBRA0M0E0	None	None	G3	S3	1B.2
Ceratochrysis menkei Menke's cuckoo wasp	IIHYM71050	None	None	G1	S1	
Coastal and Valley Freshwater Marsh Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
Egretta thula snowy egret	ABNGA06030	None	None	G5	S4	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Eryngium racemosum Delta button-celery	PDAPI0Z0S0	None	Endangered	G1	S1	1B.1
Eryngium spinosepalum spiny-sepaled button-celery	PDAPI0Z0Y0	None	None	G2	S2	1B.2
Eschscholzia rhombipetala diamond-petaled California poppy	PDPAP0A0D0	None	None	G1	S1	1B.1
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Great Valley Valley Oak Riparian Forest Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	G1	S1.1	
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
Lasiurus cinereus hoary bat	AMACC05030	None	None	G5	S4	
Lytta moesta moestan blister beetle	IICOL4C020	None	None	G2	S2	
Masticophis flagellum ruddocki San Joaquin coachwhip	ARADB21021	None	None	G5T2T3	S2?	SSC
Melospiza melodia song sparrow ("Modesto" population)	ABPBXA3010	None	None	G5	S3?	SSC
Mylopharodon conocephalus hardhead	AFCJB25010	None	None	G3	S3	SSC
Navarretia nigelliformis ssp. radians shining navarretia	PDPLM0C0J2	None	None	G4T2	S2	1B.2
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Pogonichthys macrolepidotus Sacramento splittail	AFCJB34020	None	None	GNR	S3	SSC
Puccinellia simplex California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Sphenopholis obtusata prairie wedge grass	PMPOA5T030	None	None	G5	S2	2B.2
Sylvilagus bachmani riparius riparian brush rabbit	AMAEB01021	Endangered	Endangered	G5T1	S1	
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	

Record Count: 45

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

8 matches found. *Click on scientific name for details*

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B, 3], Found in Quads 3712151, 3712141, 3712152 and 3712142; Elevation is above 0 or below 200 feet

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S1	G2T1
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G3T2
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	1B.1	S2	G2
Atriplex persistens	vernal pool smallscale	Chenopodiaceae	annual herb	Jun,Aug,Sep,Oct	1B.2	S2	G2
Blepharizonia plumosa	big tarplant	Asteraceae	annual herb	Jul-Oct	1B.1	S1S2	G1G2
Eryngium racemosum	Delta button-celery	Apiaceae	annual / perennial herb	Jun-Oct	1B.1	S1	G1
Eschscholzia rhombipetala	diamond-petaled California poppy	Papaveraceae	annual herb	Mar-Apr	1B.1	S1	G1
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3

Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 15 April 2019].

From: Scott Salembier
To: "nmfswcrca.specieslist@noaa.gov"
Subject: Caltrans, East Las Palmas Bridge Maintenance Project
Date: Tuesday, June 25, 2019 1:49:02 PM

Federal Agency
Caltrans
1976 East Dr. Martin Luther King Jr. Blvd.
Stockton, CA 95205

Non-Federal Agency
Stanislaus County
1716 Morgan Rd.
Modesto, CA 95258

Point of Contact
Scott Salembier
Associate Environmental Planner
Dokken Engineering
(916) 858-0642
ssalembier@dokkenengineering.com

Quad Name **Crows Landing**

Quad Number **37121-D1**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - X
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - X
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -

MMPA Pinnipeds -

Scott Salembier
Associate Environmental Planner/ Biologist
ISA Certified Arborist
DOKKEN ENGINEERING
110 Blue Ravine Road, Suite 200, Folsom, CA 95630
Phone: (916) 858-0642

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: September 26, 2019
Consultation Code: 08ESMF00-2019-SLI-1681
Event Code: 08ESMF00-2019-E-10064
Project Name: Las Palmas Ave. over San Joaquin River Bridge Preventive Maintenance Project

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2019-SLI-1681

Event Code: 08ESMF00-2019-E-10064

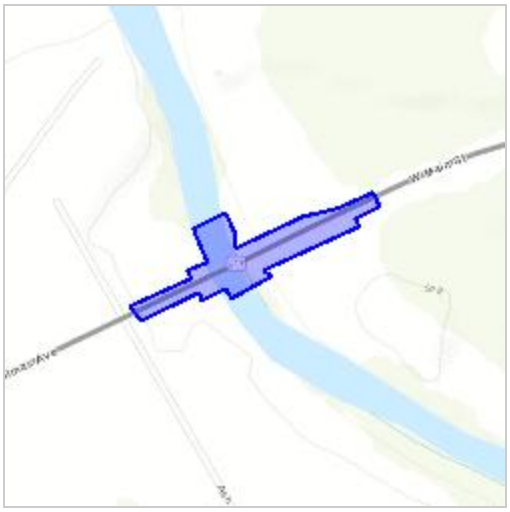
Project Name: Las Palmas Ave. over San Joaquin River Bridge Preventive Maintenance Project

Project Type: TRANSPORTATION

Project Description: The County of Stanislaus proposed to perform preventative maintenance of the Las Palmas Avenue over San Joaquin River Bridge to encase columns/piles at Pier 4 to Pier 8 with grouted steel shells that both strengthen the piles and protect them from further corrosion.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/37.49401521410118N121.08018810891647W



Counties: Stanislaus, CA

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard *Gambelia silus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/2891
Species survey guidelines:
https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf

California Tiger Salamander *Ambystoma californiense*	Threatened

Population: U.S.A. (Central CA DPS)
There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/2076

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/7850
Habitat assessment guidelines:
https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp *Lepidurus packardi*	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/2246

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Amphibian Species						
California Red-legged Frog	*Rana draytonii*	Fed: State: CDFW:	T -- --	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development and must have access to estivation habitat; estivation occurs late summer-early winter. Breeds from January-July Occurs from elevations near sea level to 5,200 feet.	A	**Presumed Absent:** The only perennial water feature within or adjacent to the BSA is the San Joaquin River. BSA does not contain potentially suitable pond or pool habitat for the species. In addition, all regional occurrences of the species are west of the BSA in the San Benito Mountains. The nearest CNDDB occurrence is approximately 16 miles southwest of the BSA and was recorded in 1993. The species is presumed absent based on a lack of suitable habitat and documented local occurrences.
California tiger salamander	*Ambystoma californiense*	Fed: State: CDFW:	T T WL	Inhabits annual grasslands and the grassy understory of Valley-Foothill Hardwood communities. Requires underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	A	**Presumed Absent:** The BSA and surrounding areas do not support vernal pools or other seasonal water features required by the species for reproduction or the grassland habitat required by the species for estivation. In addition, required by the species. The nearest CNDDB occurrence is approximately 11 miles north of the BSA and was recorded in 1992. The species is presumed absent based on a lack of suitable habitat and a lack of documented local occurrences.
Foothill yellow-legged frog	*Rana boylii*	Fed: State: CDFW:	-- CT SSC	Inhabits rocky streams/rivers with rocky substrate and open, sunny banks in chaparral and woodland forests. Occurs from elevations near sea level to 6,700 feet.	A	**Presumed Absent:** The BSA does not contain the requisite rocky stream/river habitat required by the species. All regional occurrences of the species are located west of the project area in the San Benito Mountains. The nearest CNDDB occurrence is approximately 10 miles west and was recorded in 1954. The species is presumed absent based on a lack of suitable habitat and a lack of documented local occurrences.
Western spadefoot	*Spea hammondii*	Fed: State: CDFW:	-- -- SSC	Inhabits burrows within grassland and valley foothill hardwood woodland communities. Requires vernal, shallow, temporary pools formed by heavy winter rains for reproduction. Breeds late winter-March.	A	**Presumed Absent:** The BSA does not contain vernal pool or grassland habitat required by the species. The nearest CNDDB occurrence is approximately 8 miles west of the BSA in the foothills of the San Benito Mountains. The species is presumed absent based on a lack of suitable habitat and a lack of documented local occurrences.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Bird Species						
Burrowing owl	*Athene cunicularia*	Fed: State: CDFW:	-- -- SSC	Species inhabits arid, open areas with sparse vegetation cover such as deserts, abandoned agricultural areas, grasslands, and disturbed open habitats. Requires friable soils for burrow construction (Below 5,300 feet).	HP	**Low to Moderate Potential:** The BSA does contain potentially suitable fallow agriculture field foraging habitat but only contains marginal potential nesting habitat. During biological surveys, no potentially suitable burrows were identified within the BSA. There are three sightings of the species within 10 miles of the BSA on the popular citizen science database eBird (eBird 2019). The nearest sighting is located approximately 2 miles from the BSA and was recorded in 2018. The species is considered to have a low to moderate potential of occurring onsite due to presence of potentially suitable habitat and regional occurrences of the species.
Least Bell's vireo	*Vireo bellii pusillus*	Fed: State: CDFW:	E E --	Summer resident of southern California in-habiting low riparian habitats in the vicinity of water and dry river bottoms. Prefers willows, coyote brush, mesquite and other low, dense vegetation as nesting sites (below 2000 feet).	A	**Presumed Absent:** The BSA does not contain dry river bottoms or willow dominated low dense riparian habitat preferred by the species. The nearest CNDDB occurrence is located along Del Puerto Creek approximately 7 miles from the BSA; however, this occurrence was recorded in 1928. The only recent regional CNDDB occurrence is located in the San Joaquin River National Wildlife Refuge approximately 10 miles north of the project area. An analysis of the popular citizen science database eBird corroborates the CNDDB findings that the San Joaquin River National Wildlife Refuge is the nearest observation of the species. The species is presumed absent based on a lack of suitable dense riparian habitat.
Loggerhead shrike	*Lanius ludovicianus*	Fed: State: CDFW:	-- -- SSC	Inhabits shrub lands or open woodlands with grass cover and areas of bare ground. Species require tall shrubs, trees, fences or power lines with open areas of short grasses, forbs, or bare ground. Agricultural crops such as vineyards, orchards and row crops do not meet	HP	**High Potential:** The BSA contains potentially suitable riparian woodland habitat for the species. While there is only a single CNDDB occurrence within Stanislaus County, the species has been recorded within 1 mile of the BSA dozens of times on the popular citizen science database eBird. Due to the presence of suitable habitat within the BSA, and numerous

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				species ecological requirements. Breeds from Mar-May.		documented occurrences within 1 mile of the BSA, the species is considered to have a high potential of occurring within the BSA.
Song sparrow ("Modesto" population)	*Melospiza melodia*	Fed: State: CDFW:	-- -- SSC	Strong affinity for emergent freshwater marshes dominated by tules and cattails as well as riparian willows. They also nest in riparian forests of valley oak with a blackberry understory.	A	**Presumed Absent:** The BSA does not contain emergent wetlands or dense stands of riparian willows preferred by the species. The nearest CNDDB occurrence is approximately 10 miles north of the BSA in the San Joaquin River National Wildlife Refuge. The species is presumed absent based on a lack of suitable habitat and a lack of documented local occurrences.
Swainson's hawk	*Buteo swainsoni*	Fed: State: CDFW:	-- T --	Inhabits grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, alfalfa or grain fields that support a stable rodent prey base. Breeds March to late August.	HP	**High Potential:** The BSA contains stands of riparian vegetation with tall cottonwood and valley oak trees that may provide potentially suitable nesting habitat for Swainson's hawk. In addition, the BSA is surrounded by fallow agriculture fields, alfalfa fields, and feed corn fields that may provide potentially suitable foraging habitat for the species. There are numerous CNDDB occurrences within 5 miles of the BSA, the closest of which is located within the BSA and was recorded in 1988. In addition, a Swainson's hawk was observed soaring above the BSA during biological surveys conducted in 2019. The species is considered to have a high potential of occurrence based on presence of suitable habitat and regional occurrences of the species.
Tricolored blackbird	*Agelaius tricolor*	Fed: State: CDFW:	-- E SSC	Inhabits freshwater marsh, swamp and wetland communities, but may utilize agricultural or upland habitats that can support large colonies, often in the Central Valley area. Requires dense nesting habitat that is protected from predators, is within 3-5 miles from a suitable foraging area containing insect prey and is within 0.3 miles of open water. Suitable foraging includes wetland,	A	**Presumed Absent:** The BSA does contain potentially suitable foraging habitat but not contain potentially suitable emergent wetland or dense nesting habitat required by the species. There are numerous CNDDB and eBird occurrences within 5 miles of the BSA. The species may utilize the BSA and surrounding areas as foraging habitat; however, due to a lack of suitable emergent wetlands or dense vegetation, the species is not expected to nest within the BSA.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				pastureland, rangeland, at dairy farms, and some irrigated croplands (silage, alfalfa, etc.). Nests mid-March - early August, but may extend until October/November in the Sacramento Valley region.		
Fish Species						
Delta smelt	*Hypomesus transpacificus*	Fed: State: CDFW:	T E --	Occurs within the Sacramento-San Joaquin Delta and seasonally within the Suisun Bay, Carquinez Strait and San Pablo Bay. Most often occurs in partially saline waters.	A	**Presumed Absent:** The species is confined to the brackish waters of the Sacramento River Delta and there are no CNDDB occurrences further south than the Clifton Court Forebay, approximately 37 miles north of the BSA. The species is presumed absent based on the project being located outside of the known distribution of the species.
Hardhead	*Mylopharodon conocephalus*	Fed: State: CDFW:	-- -- SSC	Resident of Sacramento-San Joaquin and Russian River drainages in California. Inhabits low to mid-elevation lakes, reservoirs and streams, with preference to pools and runs with deep (>80 cm) clear water, slow (20-40 cm/sec) velocities and sand-gravel-boulder substrates. The species prefers water temperatures at or above 68ºF and adequate flows to maintain dissolved oxygen levels. Spawning occurs in April-May in gravel or rocky substrate. Juveniles require adequate vegetative cover along stream or lake margins.	A	**Presumed Absent:** Within the BSA, the San Joaquin River typically exhibits poor water quality with suspended sediment concentrations between 50 and 100 milligrams per liter (USGS Stream Gauge Data) and does not provide the clear waters required by the species. All regional CNDDB occurrences of the species are located in tributaries to the San Joaquin River with relatively cleaner water including the Stanislaus, Tuolumne, and Merced Rivers. The species is presumed absent based on a lack of suitable habitat.
Sacramento splittail	*Pogonichthys macrolepidotus*	Fed: State: CDFW:	-- -- SSC	Historically inhabited slow moving rivers, sloughs, and alkaline lakes of the Central Valley; now restricted to the Delta, Suisun Bay and associated marshes. Species is adapted to fluctuating environments with tolerance to water salinities from 10-18 ppt., low oxygen levels (< 1.0 mg/L) and temperatures of 41-75°F. Spawns late February- early July,	A	**Presumed Absent:** The current distribution of the species is limited to the Sacramento River Delta and Suisun Bay. There are no recent CNDDB occurrences outside of this range. The species is presumed absent because the BSA is located outside of the current geographic range of the species.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				with a peak in March-April; requires flooded vegetation for spawning activity and protective cover for young.		
Steelhead - Central Valley DPS	*Oncorhynchus mykiss irideus* pop. 11	Fed: State: CDFW:	T -- --	South/central steeelhead utilize rivers and creeks from Pajaro River south to Santa Maria River. Spawning occurs in coastal watersheds while rearing occurs in freshwater or estuary habitats prior to migrating to the ocean in the winter and spring. Preferred spawning sites contain gravel substrate with sufficient water flow and riverine cover. Rearing habitat contains sufficient feeding with associated riparian forest containing willow and cottonwoods. Migration upstream for reproduction occurs from October-May with spawning occurring January - April.	CH	**Presumed Present:** The San Joaquin River is final designated critical habitat for Steelhead and there are CNDDB occurrences along the San Joaquin River and its tributaries. In addition, based on previous biological opinions issued by NMFS for projects along the San Joaquin River, the species is expected to occur in low densities within the BSA.
Invertebrate Species						
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	Fed: State: CDFW:	T -- --	Species requires elderberry shrubs as host plants. Typically occurs in moist valley oak woodlands associated with riparian corridors in the lower Sacramento River and upper San Joaquin River drainages. (Sea level-3,000 feet).	A	**Presumed Absent:** The BSA does contain riparian vegetation; however, no elderberry shrubs were observed within the BSA or in areas within 165 feet of the Project Area. A map of supplemental VELB survey areas outside of the BSA are shown in Appendix F. In addition, there are no CNDDB occurrences of the species within Stanislaus County south of the Tuolumne River. The species is presumed absent based on a lack of suitable host plants and a lack of CNDDB occurrences.
Vernal pool fairy shrimp	*Branchinecta lynchi*	Fed: State: CDFW:	T -- --	In California, species inhabits portions of Tehama county, south through the Central Valley, and scattered locations in Riverside County and the Coast Ranges. Species is associated with smaller and shallower cool-water vernal pools approximately 6 inches deep and	A	**Presumed Absent:** The BSA does not contain vernal pool habitat required by the species.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				short periods of inundation. In the southernmost extremes of the range, the species occurs in large, deep cool-water pools. Inhabited pools have low to moderate levels of alkalinity and total dissolved solids. The shrimp are temperature sensitive, requiring pools below 50 F to hatch and dying within pools reaching 75 F. Young emerge during cold-weather winter storms.		
Vernal pool tadpole shrimp	*Lepidurus packardi*	Fed: State: CDFW:	E -- --	Inhabits vernal pools and swales containing clear to highly turbid waters such as pools located in grass bottomed swales of unplowed grasslands, old alluvial soils underlain by hardpan, and mud-bottomed pools with highly turbid water.	A	**Presumed Absent:** The BSA does not contain vernal pool habitat required by the species.
Mammal Species						
American badger	*Taxidea taxus*	Fed: State: CDFW:	-- -- SSC	Prefers treeless, dry, open stages of most shrub and herbaceous habitats with friable soils and a supply of rodent prey. Species also inhabits forest glades and meadows, marshes, brushy areas, hot deserts, and mountain meadows. Species maintains burrows within home ranges estimated between 338-1,700 acres, dependent on seasonal activity. Burrows are frequently re-used, but new burrows may be created nightly. Young are born in March and April within burrows dug in relatively dry, often sandy, soil, usually in areas with sparse over story cover. Species is somewhat tolerant of human activity, but is sensitive to automobile mortality, trapping, and persistent poisons.	A	**Presumed Absent:** The BSA does not provide requisite treeless habitat for the species. In addition, American badger are highly sensitive to anthropogenic threats including agricultural pesticides and vehicle strikes. Regional CNDDB occurrences are located west in the foothills of the San Benito Mountains or south in the San Luis National Wildlife Refuge with the closest occurrence located approximately 8 miles from the BSA. The species is presumed absent based on a lack of potentially suitable habitat.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Riparian brush rabbit	*Sylvilagus bachmani riparius*	Fed: State: CDFW:	E E --	Lives in riparian oak forests with a dense understory of wild rose and native vines. Historically found along the San Joaquin River and once confined to the Caswell Memorial State Park, the species has been reintroduced to parts of its historical range including the San Joaquin River National Wildlife Refuge and portions of the Delta. Forages in grasslands and meadows close to dense brushy areas. Nest in shallow cavities in the ground. Breeding season is from December to May. Occurs from elevation near sea level to 3000ft.	A	**Presumed Absent:** The BSA does not contain the dense rose and vine dominated riparian understory required by the species. In addition, the species is limited to Caswell Memorial State Park and specific areas where it has been reintroduced. The species is presumed absent based on a lack of suitable habitat and the BSA being located outside of the current range of the species.
San-Joaquin kit fox	*Vulpes macrotis mutica*	Fed: State: CDFW:	E T --	Inhabits open, level (less than 5 percent slopes) alkali scrub/shrub and arid grassland communities with scattered shrubby vegetation and short vegetative structure. Preferred substrates are loose, relatively stone-free, sandy soils and are unlikely to utilize locations with high water tables, subject to flooding, impenetrable hardpans, close proximity to parent material (such as bedrock) or soils that are intensively irrigated. Species feeds preferentially on kangaroo rats but will consume other food sources. Habitat must have an appropriate prey base capable of sustaining a kit fox population. Utilizes subsurface dens for shelter and reproduction; young disperse in August or September.	A	**Presumed Absent:** The BSA does not contain open grassland communities required by the species. All regional occurrences of the species are located west of the BSA in the foothills of the San Benito Mountains or south of the BSA in the Kesterson National Wildlife Refuge. The nearest CNDDB occurrence of the species is approximately 6 west of the BSA. The species is presumed absent from the BSA based on a lack of suitable habitat.
Townsend's big-eared bat	*Corynorhinus townsendii*	Fed: State: CDFW:	-- -- SSC	Species occurs through-out California in all habitats except subalpine and alpine communities. Requires caves, mines tunnels, buildings or man-	A	**Presumed Absent:** The slab construction of the existing bridge does not provide crevices or cavities that may be suitable day roosting habitat for the species. The species is presumed

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				made structures for day and night roosts. Rarely roots in tree cavi-ties, limited to males and non-reproductive females. Young born May-June (0-11,000 feet elevation).		absent based on a lack of potentially suitable day roosting habitat within the BSA.
Reptile Species						
Blunt-nosed Leopard Lizard	*Gambelia silus*	Fed: State: CDFW:	E E --	Species inhabits sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief, including alkali flats, arroyos, canyons and washes with dense vegetation in the San Joaquin Valley and foothills. Uses mammal burrows, under shrubs or structures (fence posts) for cover and breeds May - August (100-2,400 feet).	A	**Presumed Absent:** The BSA does not contain alkali desert scrub habitats required by the species. All CNDDB occurrences of this species are located south of the BSA, the nearest of which is approximately 31 miles south of the BSA. The species is presumed absent based on a lack of suitable habitat and the BSA being located outside of the known distribution of the species.
Giant gartersnake	*Thamnophis gigas*	Fed: State: CDFW:	T T --	Inhabits marsh, swamp, wetland (including agricultural wetlands), sloughs, ponds, rice fields, low gradient streams and irrigation/ drainage canals adjacent to uplands. Ideal habitat contains both shallow and deep water with variations in topography. Species requires adequate water during the active season (April-November), emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat and mammal burrows estivation. Requires grassy banks and openings in waterside vegetation for basking and higher elevation uplands for cover and refuge from flood waters during winter dormant season.	A	**Presumed Absent:** The BSA does not contain the requisite wetland habitat required by the species. In addition, there are no CNDDB occurrences of the species within Stanislaus County. The nearest CNDDB occurrence is approximately 15 miles south of the project area in the San Luis National Wildlife Refuge. The species is presumed absent based on a lack of suitable habitat.
San Joaquin coachwhip	*Masticophis flagellum ruddocki*	Fed: State: CDFW:	-- -- SSC	Inhabits open, dry habitats with little or no tree cover. Found in valley grassland & saltbush scrub in the San Joaquin Valley. Requires small mammal burrows for refuge.	A	**Presumed Absent:** The BSA does not contain the dry treeless habitat required by the species. A single CNDDB occurrence is located within the County approximately 6 miles west of the

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
						project area. The species is presumed absent based on a lack of suitable habitat.
Western pond turtle	*Emys marmorata*	Fed: State: CDFW:	-- -- SSC	A fully aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat (sandy banks or grassy open field) for reproduction (sea level to 4,690 feet).	HP	**Low to Moderate Potential:** The BSA does contain potentially suitable aquatic habitat with requisite basking sites and upland refugia. The nearest CNDDB occurrence is approximately 7 miles east of the BSA and was recorded in 1999. The species is considered to have a low to moderate potential of occurring within the BSA based on presence of potentially suitable habitat and limited regional occurrences of the species.
Plant Species						
Alkali milk-vetch	*Astragalus tener var. tener*	Fed: State: CNPS:	-- -- 1B.2	An annual herb inhabiting low ground and alkaline soils of playas, alkaline flats, vernally moist meadows, vernal pools, and valley and foothill grassland of adobe clay. Flowers March – June (0 – 200 feet).	A	**Presumed Absent:** Soils within the BSA are a mix of sandy loams and fine sandy loams. The BSA lacks adobe clay soils required by the species. The nearest CNDDB occurrence is approximately 5.5 miles south of the BSA and was recorded in 1940. The species is presumed absent from the BSA based on a lack of suitable soils and local occurrences.
Big tarplant	*Blepharizonia plumosa*	Fed: State: CNPS:	-- -- 1B.1	An annual herb inhabiting dry hills and plains of valley and foothill grassland communities, often within clay soils. Flowers July – October (0 – 1,700 feet).	A	**Presumed Absent:** The BSA does not contain the dry hill and plain grassland habitat required by the species. The nearest CNDDB occurrence is approximately 7 miles west of the BSA and was recorded in 2000. The species is presumed absent based on a lack of suitable grassland habitat.
California alkali grass	*Puccinellia simplex*	Fed: State: CNPS:	-- -- 1B.2	An annual grass that is native to California. Occurs typically in wetlands but occasionally in non-wetlands. Found within in valley grassland, wetland-riparian habitats. Blooms March – May (50 – 2,900 ft.).	A	**Presumed Absent:** The BSA does not contain wetland habitat typically associated with the species. In addition, all regional documented occurrences of the species are more than 68 years old. The nearest occurrence is approximately 5 miles from the BSA and was recorded in 1935. The species is presumed absent based on a lack of potentially suitable wetland habitat and a lack of regional occurrences of the species.
Delta button-celery	*Eryngium racemosum*	Fed: State:	-- E	An annual or perennial herb inhabiting seasonally flooded clay	A	**Presumed Absent:** The BSA does not contain clay soils required by the species. The nearest

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
		CNPS:	1B.1	depressions in floodplains and riparian scrub within vernally mesic clay depressions. Flowers June – August (10 – 100 feet)		CNDDB occurrence is approximately 5.5 miles south of the BSA. The species is presumed absent based on a lack of suitable soils.
Diamond-petaled California poppy	*Eschscholzia rhombipetala*	Fed: State: CNPS:	-- -- 1B.1	An annual wildflower inhabiting fields, grasslands and oak savanna. Strong affinity for alkaline clay soils. Flowers March – April (0 – 3,000 feet).	A	**Presumed Absent:** The BSA does not contain grassland or oak savanna habitat associated with the species. In addition, the BSA does not contain alkaline clay soils that are strongly associated with the species. The nearest CNDDB occurrence is approximately 7 miles west of the BSA and was recorded in 1940. The species is presumed absent based on a lack of suitable habitat and recent regional occurrences.
Heartscale	*Atriplex cordulata var. cordulata*	Fed: State: CNPS:	-- -- 1B.2	An annual herb inhabiting saline or alkaline soils of chenopod scrub, meadows and seeps, and sandy valley and foothill grassland communities. Flowers June – July (0 – 1,800 feet).	A	**Presumed Absent:** The BSA does not contain alkaline soils associated with the species. In addition, the species was not observed during biological surveys conducted in April of 2019. The nearest CNDDB occurrence of the species is approximately 6 miles south of the BSA and was recorded in 1965. The species is presumed absent from the BSA based on a lack of suitable habitat and regional occurrences.
Lemmon's jewelflower	*Caulanthus lemmonii*	Fed: State: CNPS:	-- -- 1B.2	An annual herb found in pinyon juniper woodlands and foothill/valley grasslands. Flowers March – May (300 – 5,000 feet).	A	**Presumed Absent:** The BSA does not contain pinyon juniper woodland and is located below the known elevation range of the species. The nearest CNDDB occurrence of the species is approximately 8 miles west of the BSA. The species is presumed absent from the BSA based on a lack of suitable habitat.
Lesser saltscale	*Atriplex minuscula*	Fed: State: CNPS:	-- -- 1B.1	An annual herb inhabiting sandy, alkaline soils of chenopod scrub, valley and foothill grassland, and playas communities. Flowers May – October (0 – 650 feet).	A	**Presumed Absent:** The BSA does not contain alkaline soils associated with the species. In addition, the species was not observed during biological surveys conducted in April of 2019. The nearest CNDDB occurrence of the species is approximately 6 miles south of the BSA and was recorded in 1936. The species is presumed absent from the BSA based on a lack of suitable habitat and regional occurrences.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Prairie wedge grass	*Sphenopholis obtusata*	Fed: State: CNPS:	-- -- 2B.2	A perennial herb inhabiting wet meadows, seeps, stream banks, ponds and mesic cismontane woodland communities. Flowers April – June (800 – 9,500 feet).	A	**Presumed Absent:** The BSA is located below the known elevation range of the species and does not contain the meadow, seep, pond, or stream bank habitat associated with the species. In addition, nearly all known occurrences of the species occur in the Sierra Nevada Mountains
Shining navarretia	*Navarretia nigelliformis ssp. radians*	Fed: State: CNPS:	-- -- 1B.2	An annual herb inhabiting vernal pools, cismontane woodlands, and valley foothill grassland communities with occasionally clay soils. Flowers April – July (250 – 3,300 feet).	A	**Presumed Absent:** The BSA is located below the known elevation range of the species and does not contain the vernal pool habitat associated with the species. The nearest CNDDB occurrence of the species is approximately 9 miles southwest of the BSA. The species is presumed absent based on a lack of potentially suitable habitat.
Spiny-sepaled button-celery	*Eryngium spinosepalum*	Fed: State: CNPS:	-- -- 1B.2	An annual/perennial herb inhabiting roadside ditches, depressions, vernal pools, swales, and valley and foothill grassland communities. Flowers April – June (250 – 4,200 feet).	A	**Presumed Absent:** The BSA is located below the known elevation range of the species and does not contain the vernal pool, swale, depression, or ditch habitats associated with the species. The nearest occurrence of the species was recorded approximately 9 miles southwest of the BSA in 2015. The species is presumed absent based on lack of suitable habitat.
Subtle orache	*Atriplex subtilis*	Fed: State: CNPS:	-- -- 1B.2	An annual herb inhabiting saline depressions of valley and foothill grassland communities. Flowers June – October (130 – 330 feet).	A	**Presumed Absent:** The BSA does not contain saline depressions associated with the species, in addition, the BSA is below the known elevation range of the species. The only CNDDB occurrence of the species within 30 miles of the BSA is located approximately 11 miles east and was recorded in 1936. The species is presumed absent based on a lack of potentially suitable habitat and a lack of occurrences.
Vernal pool smallscale	*Atriplex persistens*	Fed: State: CNPS:	-- -- 1B.2	An annual herb inhabiting alkaline vernal pools. Flowers June – September (30 – 400 feet).	A	**Presumed Absent:** The BSA does not contain vernal pool habitat required by the species. The nearest occurrence of the species is approximately 2.5 miles east of the BSA and was recorded in 1965. The species is presumed absent based on a lack of potentially suitable vernal pool habitat.

Federal Designations (Fed): (FESA, USFWS) **E:** Federally listed, endangered **T:** Federally listed, threatened **D:** Delisted	**State Designations (State):** (CESA, CDFW) **E:** State-listed, endangered **T:** State-listed, threatened **D:** Delisted

Other Designations:

CDFW_SSC: CDFW Species of Special Concern
CDFW_FP: CDFW Fully Protected

California Native Plant Society (CNPS) Designations*:*

Note: according to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code. This interpretation is inconsistent with other definitions.

1A: Plants presumed extinct in California.
1B: Plants rare and endangered in California and throughout their range.
2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
3: Plants about which need more information; a review list.

Plants 1B, 2, and 4 extension meanings:

_.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
_.2 Fairly endangered in California (20-80% occurrences threatened)
_.3 Not very endangered in California (<20% of occurrences threatened, or no current threats known)

Habitat Potential

Absent [A]	- No habitat present and no further work needed.
Habitat Present [HP]	- Habitat is or may be present. The species may be present.
Critical Habitat [CH]	- Critical Habitat is present.

Potential for Occurrence Criteria:

High: Habitat (including soils and elevation factors) for the species occurs on site and a known occurrence has been recorded within 5 miles of the site.
Low-Moderate: Either low quality habitat (including soils and elevation factors) for the species occurs on site and a known occurrence exists within 5 miles of the site; or suitable habitat strongly associated with the species occurs on site, but no records were found within the database search.
Presumed Absent: Focused surveys were conducted and the species was not found, or species was found within the database search but habitat (including soils and elevation factors) do not exist on site, or the known geographic range of the species does not include the survey area.

Sources: Cal-Flora 2019, Cal-Herps 2019, CDFG 1994, CDFG 2010, CDFW 2019, CBD 2012, CNDDB 2019, CNPS 2019, Gruver 2006, Jepson 2019, Mayer 1988, Moyle et al. 1995, Shuford 2008, Sullivan 1996, Tesky 1994, UC Davis 2010, UC Davis 2012, USFS 2007, Zeiner et al. 1990.

Appendix C:
FEMA Firmette Maps

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/1/2019 at 6:11:01 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix D:
Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM FOR THE LAS PALMAS BRIDGE MAINTENANCE PROJECT

Mitigation Measure	Reporting Milestone	Reporting / Responsible Party	VERIFICATION OF COMPLIANCE	
			Initials	Date
AESTHETICS				
VIS-1: Caltrans Standard Specifications (2018) "Erosion Control" will be followed during construction. At the conclusion of construction, areas of bare soil shall be hydroseeded with native seed mix to prevent or at least minimize erosion.	During Construction	Contractor		
VIS-2: Vegetation clearing would only occur within the delineated Project boundaries in an effort to minimize the impacts. Trees located in areas along the edge of the construction zone would be trimmed whenever possible and only those trees that lie within the active construction areas would be removed.	During Construction	Contractor		
VIS-3: All disturbed areas including staging of vehicles and equipment will be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native species.	During and Post Construction	Contractor		
AIR QUALITY				
AQ-1: The construction contractor shall comply with Caltrans' Standard Specifications Section 14-11.04 Dust Control of Caltrans' Standard Specifications (2018).	During Construction	Contractor		
AQ-2: The construction contractor shall comply with Section 7-1.02C Emissions Reduction and Section 18 Dust Palliative of Caltrans' Standard Specifications (2018).	During Construction	Contractor		
AQ-3: The Wind Erosion Control BMP (WE-1) from Caltrans' Construction Site *Best Management Practices Manual* will be implemented as follows: • Water shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution. • All distribution equipment shall be equipped with a positive means of shutoff. • Unless water is applied by means of pipelines, at least one mobile unit shall be available at all times to apply water or dust palliative to the Project. • If reclaimed water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board requirements. Non-potable water shall not be conveyed in tanks or drain pipes that will be used to convey potable water and there shall be no connection between potable and non-potable supplies. Non-potable tanks, pipes and other conveyances shall be marked "NON-POTABLE WATER – DO NOT DRINK." • Materials applied as temporary soil stabilizers and soil binders will also provide wind erosion control benefits.	During Construction	Contractor		

BIOLOGICAL RESOURCES **BIO-1:** Best Management Practices: • Existing vegetation would be protected where feasible to reduce erosion and sedimentation. Vegetation would be preserved by installing temporary fencing, or other protection devices, around sensitive biological resources. • Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events. • Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities. • All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly. • All construction materials, vehicles, stockpiles, and staging areas would be situated outside of the stream channel as feasible. All stockpiles would be covered, as feasible. • All erosion control measures and storm water control measures would be properly maintained until the site has returned to a pre-construction state. • All disturbed areas would be restored to pre-construction contours and revegetated, either through hydroseeding or other means, with native or approved non-invasive exotic species. • All construction materials would be hauled off-site after completion of construction.	During Construction	Contractor		
BIO-2: All construction personnel shall be provided with environmental awareness training prior to being allowed to work on the job site. The training shall include an overview of sensitive habitats and special status species that are present within or adjacent to the Project area and Project specific protective measures that must be adhered to. The training will also include a description of the legal penalties for violating protective measures.	During Construction	Contractor		
BIO-3: In water work shall be limited to the summer low flow period between July 15th and October 31st.	During Construction	Contractor		
BIO-4: A turbidity curtain shall be installed downstream prior to installation of temporary trestle piles and shall remain in place for the duration of pile driving. The turbidity curtain shall be re-installed prior to removal of temporary trestle piles and shall remain in place for the duration of pile removal. Placement of the turbidity curtain shall be at the discretion of the contractor as long as the Project meets water quality objectives for turbidity.	During Construction	Contractor		
BIO-5: Refueling or maintenance of equipment shall not be permitted to occur on the temporary trestle and must occur at least 100 feet from the San Joaquin River. All onsite refueling and maintenance must occur over plastic sheeting or other secondary containment measures to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).	During Construction	Contractor		

BIO-6:	Equipment will be checked daily for leaks and will be well maintained to prevent lubricants and any other deleterious materials from entering San Joaquin River and the associated riparian area.	Prior to Construction	County		
BIO-7:	A chemical spill kit must be kept onsite and available for use in the event of a spill.	During Construction	Contractor		
BIO-8:	Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil or from spilling directly into the San Joaquin River. Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).	During Construction	Contractor		
BIO-9:	Once the new casing is installed but prior to grouting, plastic sheeting shall be installed around the casing and secured to the side of the casing with a ratchet strap or similar device to prevent spilled concrete from entering the San Joaquin River.	During Construction	Contractor		
BIO-10:	No less than 14 days prior to the start of ground disturbance, a 1 day "Take Avoidance Survey" shall be conducted in accordance with the recommendations of the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If burrowing owls are not detected, no further measures will be required. If burrowing owls are detected during the take avoidance survey, the County must notify CDFW and implement measure BIO-11.	Prior to Construction	County		
BIO-11:	In accordance with the CDFW avoidance and mitigation protocols, during the breeding season (February 1 through August 31), occupied burrows must not be disturbed and shall be provided with a minimum 250 foot protective buffer until a qualified biologist approved by CDFW verifies through non-invasive means that either: 1) the birds have not begun egg laying, or 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, the birds may be passively evicted and the burrow collapsed.	During Construction	Contractor		
BIO-12:	Prior to vegetation removal or initial ground disturbance during the nesting bird season (March 1st – August 31st) a pre-construction nesting bird survey must be conducted by a Project biologist prior to the start of work. The nesting bird survey must include the Project Area plus a 300-foot buffer. Within 2 weeks of the nesting bird survey, all areas surveyed by the biologist must be cleared by the contractor or a supplemental nesting bird survey is required. A minimum 300-foot no work buffer will be established around any active nests of raptor species. A 100-foot no work buffer will be established around any active nests for other migratory birds. If an active nest is discovered during construction, the contractor must immediately stop work in the nesting area until the appropriate buffer is established. The contractor is prohibited from conducting work that could disturb the birds (as determined by a Project biologist and in coordination with wildlife agencies) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by a Project biologist and approved by CDFW.	Prior to Construction	County		

BIO-13:	Native tree removal shall be limited to the minimum amount necessary for equipment access through the Project area. Trees shall be preferentially trimmed rather than removed and trimming should not exceed 30% of the total canopy of each tree.	Prior to and During Construction	Contractor		
BIO-14:	To mitigate for the loss of native riparian trees, the County will replant riparian species within temporarily disturbed riparian floodplain habitat in the Project area or will fund a riparian restoration project to be completed by the non-profit River Partners at their Dos Rios Ranch property. The mitigation strategy will be determined after coordination with the relevant regulatory agencies.	After Construction	County		
BIO-15:	In accordance with the Swainson's Hawk Technical Advisory Committee Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (TAC 2000), protocol level surveys will be conducted during the appropriate survey periods immediately prior to construction to determine presence/absence of the species. If Swainson's hawk nests are discovered within 1/2 mile of the Project Area, the County will coordinate with CDFW to determine appropriate protective buffers at the discretion of an experienced biologist.	Prior to Construction	County		
BIO-16:	The San Joaquin River Riparian Corridor shall be established as an Environmentally Sensitive Area (ESA). Prior to ground disturbance, the Project limits adjacent to riparian vegetation shall be marked off with high visibility orange fencing (ESA Fencing) to prevent further encroachment into the ESA. Construction equipment, materials, and personnel shall not be permitted beyond the ESA fencing.	Prior to Construction	Contractor		
BIO-17:	In-water temporary trestle piles must be installed using a vibratory pile driver or drilled into place. Use of an impact pile driver will only be permitted to test the strength of each pile.	During Construction	Contractor		
BIO-18:	In-water pile driving and pile extraction for the temporary trestle piles must not be conducted during the steelhead winter spawning migration season (December – May).	During Construction	Contractor		
BIO-19:	Within 3 days prior to the start of initial ground disturbance, a Project biologist will search the ground disturbance area for evidence of potential turtle nests. Any nests that are discovered will be protected in place with a minimum 20-foot no work buffer and CDFW will be contacted to determine appropriate protection or relocation measures. No work may occur within the no work buffer until approved by a Project biologist.	Prior to Construction	County		
BIO-20:	If construction on the existing bridge is planned to occur during the swallow nesting season, measures will be taken to avoid impacts to migratory swallows. To protect migratory swallows, unoccupied nests must be removed from the existing bridge structure prior to the nesting season (February 15th – September 15th).	Prior to and During Construction	Contractor		
BIO-21:	Plastic monofilament netting shall not be used in straw wattles or other erosion control materials.	During Construction	Contractor		
BIO-22:	Following construction, the Project area shall be re-graded to pre-construction or better conditions and hydroseeded with a mix of regionally appropriate native species.	After Construction	Contractor		

CULTURAL RESOURCES **CR-1:** If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find and develop a plan for documentation and removal of resources if necessary. Additional archaeological survey will be needed if Project limits are extended beyond the present survey limits.	During Construction	County and Contractor		
CR-2: Section 5097.94 of the Public Resources Code and Section 7050.5 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the county coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within twenty-four hours of such identification. CEQA details steps to be taken if human burials are of Native American origin.	Prior to and During Construction	County and Contractor		
GREENHOUSE GASES **CC-1:** According to the Caltrans' Standard Specification Section 14-9.02, the contractor must comply with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the Contract, including air pollution control rules, regulations, ordinances, and statutes provided in Govt Code § 11017 (Pub Cont Code § 10231).	During Construction	Contractor		
HAZARDS AND HAZARDOUS WASTE **HAZ-1:** The contractor shall prepare a Spill Prevention, Control, and Countermeasure Program (SPCCP) prior to the commencement of construction activities. The SPCCP shall include information on the nature of all hazardous materials that shall be used on-site. The SPCCP shall also include information regarding proper handling of hazardous materials, and clean-up procedures in the event of an accidental release. The phone number of the agency overseeing hazardous materials and toxic clean-up shall be provided in the SPCCP.	Prior to During Construction	Contractor		
HAZ-2: As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during Project construction. For any previously unknown hazardous waste/ material encountered during construction, the procedures outline in Appendix E (Caltrans Unknown Hazard Procedures) shall be followed.	During Construction	Contractor		

NOISE **NOI-1:** To minimize the construction-generated noise, abatement measures from Standard Specification 14-8.02 “Noise Control” and SSP 14-8.02 must be followed: • Do not operate construction equipment or run the equipment engines from 7:00 p.m. to 7:00 a.m. or on Sundays, with the exception that you may operate equipment within the Project limits during these hours to: o Service traffic control facilities o Service construction equipment • Equip an internal combustion engine with the manufacturer recommended muffler. • Do not operate an internal combustion engine on the job site without the appropriate muffler.	During Construction	Contractor		

Appendix E:
Distribution List

A Notice of Availability was distributed to all residences within a 0.5-mile radius of the project area and to the following agencies and interested parties (unless IS hardcopies specified).

Stanislaus County Department of Public Works
Attn: Sarah Collins, P.E
Project Manager
Stanislaus County
1716 Morgan Road
Modesto, CA 95358-5805
(IS hardcopy)

Federal Government

United States Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

National Marine Fisheries Service
5-100, 650 Capitol Mall
Sacramento, CA 95814

US Army Corps of Engineers, Sacramento District
ATTN: Regulatory Branch
1325 J Street, Room 1480
Sacramento, CA 95814-2922

United States Coast Guard
Eleventh Coast Guard District
Coast Guard Island, Bldg. 50-2
Alameda, CA 94501

State Government

California State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812-3044
(IS hardcopy)

Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

California Department of Fish and Wildlife Region 4
1234 E. Shaw Avenue
Fresno, CA 93710

Local Agencies

Stanislaus County Clerk-Recorder
1021 I Street, Suite 101
Modesto, California 95358

Stanislaus County Sheriff
250 E. Hackett Road
Modesto, CA 95358

City of Patterson
1 Plaza Circle
Patterson, CA 95363

City of Modesto
Mayor: Ted Brandvold
Charter City 1010 10th Street
Modesto, CA 95354

Patterson Fire Station
344 West Las Palmas Avenue
Patterson, CA 95363