MERCED AVENUE AT LATERAL #6 CANAL BRIDGE REPLACEMENT PROJECT

DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

PREPARED FOR:

Merced County Department of Public Works
715 Martin Luther King Jr. Way
Merced, CA 95341

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January 2026

TABLE OF CONTENTS

1. Introduction 1

1.1 Legal Authority and Findings 1

1.2 Document Purpose 1

1.3 Document Organization 1

1.4 Terminology 2

2. Project Description 3

3. Determination 11

4. Evaluation of Environmental Impacts 12

4.1 Aesthetics 13

4.2 Agricultural and Forestry Resources 17

4.3 Air Quality 20

4.4 Biological Resources 25

4.5 Cultural Resources 43

4.6 Energy 48

4.7 Geology and Soils 50

4.8 Greenhouse Gas Emissions 55

4.9 Hazards and Hazardous Materials 59

4.10 Hydrology and Water Quality 65

4.11 Land Use and Planning 73

4.12 Mineral Resources 75

4.13 Noise 77

4.14 Population and Housing 84

4.15 Public Services 85

4.16 Recreation 88
4.17 Transportation 90
4.18 Tribal and Cultural Resources 93
4.19 Utilities and Service Systems 96
4.20 Wildfire 100
4.21 Mandatory Findings of Significance 102
5. References 105
6. Preparers and Contributors 108

TABLE OF FIGURES

FIGURE 1 REGIONAL LOCATION 5

FIGURE 2 PROJECT LOCATION 6

FIGURE 3 PROJECT FOOTPRINT 7

FIGURE 4 BIOLOGICAL STUDY AREA 30

TABLE OF TABLES

TABLE 1. SPECIAL-STATUS PLANTS AND WILDLIFE WITH POTENTIAL TO BE IN THE BIOLOGICAL STUDY AREA 32

TABLE 2. JURISDICTIONAL WETLANDS AND WATERS DELINEATED IN THE BSA 37

TABLE 3. JURISDICTIONAL IMPACTS (TEMPORARY) 38

TABLE 4. JURISDICTIONAL IMPACTS (PERMANENT) 38

TABLE 5. NOISE STANDARDS FOR NEW USES AFFECTED BY TRAFFIC, RAILROAD, AND AIRPORT NOISE 78

TABLE 6. NON-TRANSPORTATION NOISE STANDARDS MEDIAN (L50) / MAXIMUM (LMAX) 78

TABLE 7. CONSTRUCTION EQUIPMENT NOISE LEVELS 81

TABLE 8. HUMAN RESPONSE TO LEVELS OF GROUND-BORNE VIBRATION 82

TABLE 9. GROUND-BORNE VIBRATION DAMAGE POTENTIAL CRITERIA 82

TABLE 10. VIBRATION LEVELS OF CONSTRUCTION EQUIPMENT 82

TABLE 11. PROJECTS WITHIN THE REGION 104

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACM	Asbestos containing material
ADL	Aerially Deposited Lead
ADT	Average daily traffic
APE	Area of potential effects
APN	Assessor Parcel Number
ARB	Air Resources Board
BIOS	Biogeographic Information and Observation System
BMP	Best Management Practice
BSA	Biological Study Area
BSC	Building Standards Commission
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
canal	Lateral #6 Canal
CARB	California Air Resources Board
CBC	California Building Standards Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	Methane

CNDDB	California Natural Diversity Database
CO	Carbon monoxide
CO_2	Carbon dioxide
Cortese	Hazardous Waste and Substances Sites
County	County of Merced
CWA	Clean Water Act
dBA	A weighted decibels
DPM	Diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
FCAA	Federal Clean Air Act
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
General Plan	2030 Merced County General Plan
GHG	Greenhouse gas
HFC	Hydrofluorocarbons
HSC	Health and Safety Code
I-5	Interstate 5
ISA	Initial Site Assessment
IS/MND	Initial Study/Mitigated Negative Declaration
JD	Jurisdictional Delineation
LCFS	Low carbon fuel standard
L_{eq}	Equivalent continuous sound level

L_{max}	Maximum sound level
MBTA	Migratory Bird Treaty Act
MCFD	Merced County Fire Department
mg/L	milligrams per liter
MLD	Most Likely Descendant
mph	Miles per hour
MPO	Metropolitan Planning Organization
MSWG	Merced Stormwater Group
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NMFS	National Marine Fisheries Service
N_2O	Nitrous oxide
NO_2	Nitrogen dioxide
NO_x	Oxides of nitrogen
NRHP	National Register of Historic Places
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NTU	Nephelometric Turbidity Unit
O_3	Ozone
OHWM	Ordinary high water mark
PB	Lead
PFC	Perfluorocarbons
$PM_{2.5}$	Particulate matter 2.5 microns or less in diameter
PM_{10}	Particulate matter 10 microns or less in diameter

ppv	Peak particle velocity
PRC	Public Resources Code
RCRA	Resource Conservation and Recovery Act
ROW	Right of way
RSP	Rock slope protection
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
Scoping Plan	AB 32 Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	Sulfur dioxide
SWMP	Stormwater Management Program
SWRCB	State Water Resources Control Board
TCE	Temporary construction easement
TMP	Transportation management plan
TDS	Total dissolved solids
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
UST	underground storage tanks

VDE	Visual dust emission
VOC	Volatile organic compound
WRMP	Merced Irrigation District Water Resources Management Plan

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1. Introduction

The County of Merced (County) in cooperation with the California Department of Transportation (Caltrans), proposes to replace the Merced Avenue Bridge (Bridge No. 39C-0310) over Lateral #6 Canal, located near the community of Delhi, approximately 1.35 miles south of State Route 99 in Merced County, California (project). The purpose of the project is to provide a new structure that would be wider, satisfy current design standards, and can carry current legal and permit vehicular loads. As required by the California Environmental Quality Act (CEQA) (California Public Resources Code (CA PRC) Sections 21000 et seq.), the County has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) to determine whether the project may have a significant effect on the environment.

1.1 Legal Authority and Findings

The County has prepared this Initial Study in accordance with the *Guidelines for the Implementation of CEQA* (CEQA Guidelines) (California Code of Regulations (CCR), Title 14, Chapter 3, Sections 15000 et seq.). Although consultants assisted in the preparation of this IS, all analysis, conclusions, findings, and determinations presented in the IS represent the County, acting as the Lead Agency under CEQA. In accordance with the provisions of CEQA and the state and local CEQA Guidelines, as the Lead Agency, the County would be responsible for reviewing the potential environmental effects, and after consideration, approving or denying the project.

1.2 Document Purpose

Section 15063I of the CEQA Guidelines defines an IS as the proper preliminary method of analyzing the potential environmental consequences of a project. The purposes of an IS are:

- To provide the Lead Agency with the necessary information to decide whether to prepare an Environmental Impact Report (EIR), a MND, or a Negative Declaration;
- To enable the Lead Agency to modify a project and mitigate adverse impacts, thus avoiding the need to prepare an EIR; and
- To provide sufficient technical analysis of the environmental effects of a project to permit a judgment based on the record as a whole, that the environmental effects of a project have been adequately mitigated.

1.3 Document Organization

This IS/MND contains seven sections:

- **Chapter 1. Introduction.** This section provides an overview of the proposed project and the CEQA environmental documentation process.
- **Chapter 2. Project Description.** This section provides a detailed description of the proposed project objectives and components.

- **Chapter 3. Evaluation of Environmental Impacts.** This section presents the CEQA checklist for all impact areas and mandatory findings of significance.
- **Chapter 4. References.** This section provides a list of reference materials used during the preparation of the IS/MND.
- **Chapter 5. Preparers and Contributors.** This section provides a list of key personnel involved in the preparation of the IS/MND.

1.4 Terminology

A "significant effect" is defined by Section 15382 of the CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by a project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." According to Section 15358 of the CEQA Guidelines, "an economic or social change by itself shall considered a significant effect on the environment but may be considered in determining whether the physical change is significant."

2. Project Description

1. Project Title

Merced Avenue at Lateral #6 Canal Bridge Replacement Project

2. Lead Agency Name and Address

Merced County
Department of Public Works
715 Martin Luther King Jr. Way
Merced, CA 95341

3. Contact Person and Phone Number

Al Buenrostro, Supervising Engineer
(209) 385-7601
alvaro.buenrostro@countyofmerced.com

4. Project Location

Merced Avenue between Jeffrey Drive and Songbird Drive=
Merced County, California

5. Project Proponent's Name and Address

Merced County
Department of Public Works
715 Martin Luther King Jr. Way
Merced, CA 95341

6. General Plan Designation

A (Agricultural) (County of Merced, n.d.)

7. Zoning

Agricultural, Agricultural-Residential (A-R), and Low Density Residential (LD (County of Merced, 2012).

8. Project Description

Project Purpose

The purpose of the project is to improve public safety by providing a safe, permanent crossing over the Lateral #6 Canal (canal) on Merced Avenue.

The existing bridge was built in 1948 and is too narrow for the current ADT. The existing bridge has wooden railings that do not meet current standards, and the bridge does not provide guardrail transition, approaches, or ends resulting in unsafe driving conditions. The County has also identified this roadway as a Class II Bikeway, and a Class I Bikeway is planned along the canal, which will terminate at the east side of the bridge.

The purpose of the project is to:

- Remove the existing structure and reconstruct a bridge that will provide adequate and safe vehicle access; and
- Provide a new structure that will be wider and meet current design standards for the multimodal transport traffic utilizing this roadway.

Project Need

The existing bridge has reached the end of its lifespan, a repair/rehabilitation would represent a questionable investment of limited long-term value to the County. The Caltrans Office of Structures Local Assistance has already concurred with the recommended replacement of this structure.

Existing Bridge and Setting

The existing bridge was built in 1948 and is too narrow for the current average daily traffic (ADT) of 2,249 vehicles per day and projected ADT of 3,218 vehicles per day by the year 2036. According to a Caltrans Bridge Inspection Report prepared on March 04, 2016, the existing reinforced concrete slab bridge was rated as Functionally Obsolete with an overall Sufficiency Rating of 54.2. The existing bridge has wooden railings that do not meet current standards, and the bridge does not provide guardrail transition, approaches, or ends. The County has also identified this roadway as a Class II Bikeway, and a Class I Bikeway is planned along the canal, which will terminate at the east side of the bridge.

The project is listed in the Merced County Association of Governments (MCAG) 2017 Federal Statewide Transportation Improvement Program (FSTIP), Administrative Modification No. 3, as Project ID 4127 on the 2014/15 – 2019/20 HBP project listing (MCAG, 2017). The project would utilize federal Highway Bridge Program (HBP) funding and a toll credit match. The County is the Lead Agency pursuant to the California Environmental Quality Act (CEQA). The California Department of Transportation (Caltrans), under authority delegated by the Federal Highway Administration (FHWA), is the Lead Agency pursuant to the National Environmental Policy Act (NEPA) (see **Figure 1**, Regional Location, **Figure 2**, Project Location, and **Figure 3**, Project Footprint).

Proposed Replacement

The County proposes to replace and widen the existing bridge by approximately 27 feet along the existing horizontal and vertical alignment to provide two 12-foot lanes, an 8-foot shoulder on the east side and a 12-foot shoulder on the west side of the roadway, a 5-foot sidewalk on the eastern side of the roadway, and new concrete barrier bridge rails with a bicycle railing. Possible improvements to the canal access roads may be needed to accommodate the widened bridge. The preferred design is a single span precast/prestressed concrete slab bridge.

The bridge would be supported by reinforced concrete abutments placed on spread footings. In order to construct the new abutments, a temporary canal diversion system may need to be installed.

The bridge approaches would be raised approximately six inches to meet the hydraulic requirements of the Turlock Irrigation District (TID). The TID requires that the new bridge soffit elevation matches the existing soffit elevation. The roadway approaches would be widened to match the new bridge width. Access to the levee roads must be preserved for maintenance of the canal and access for the TID.

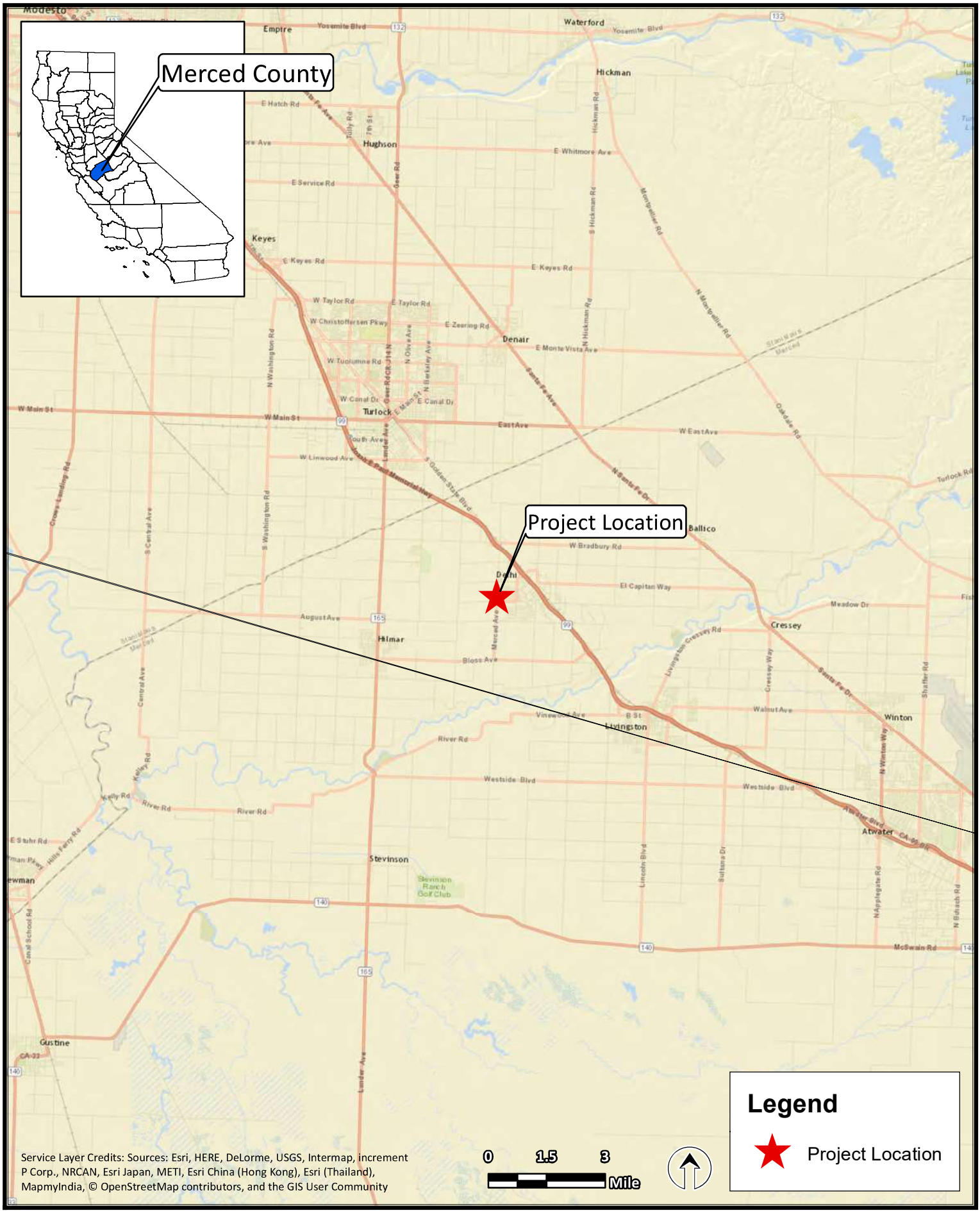
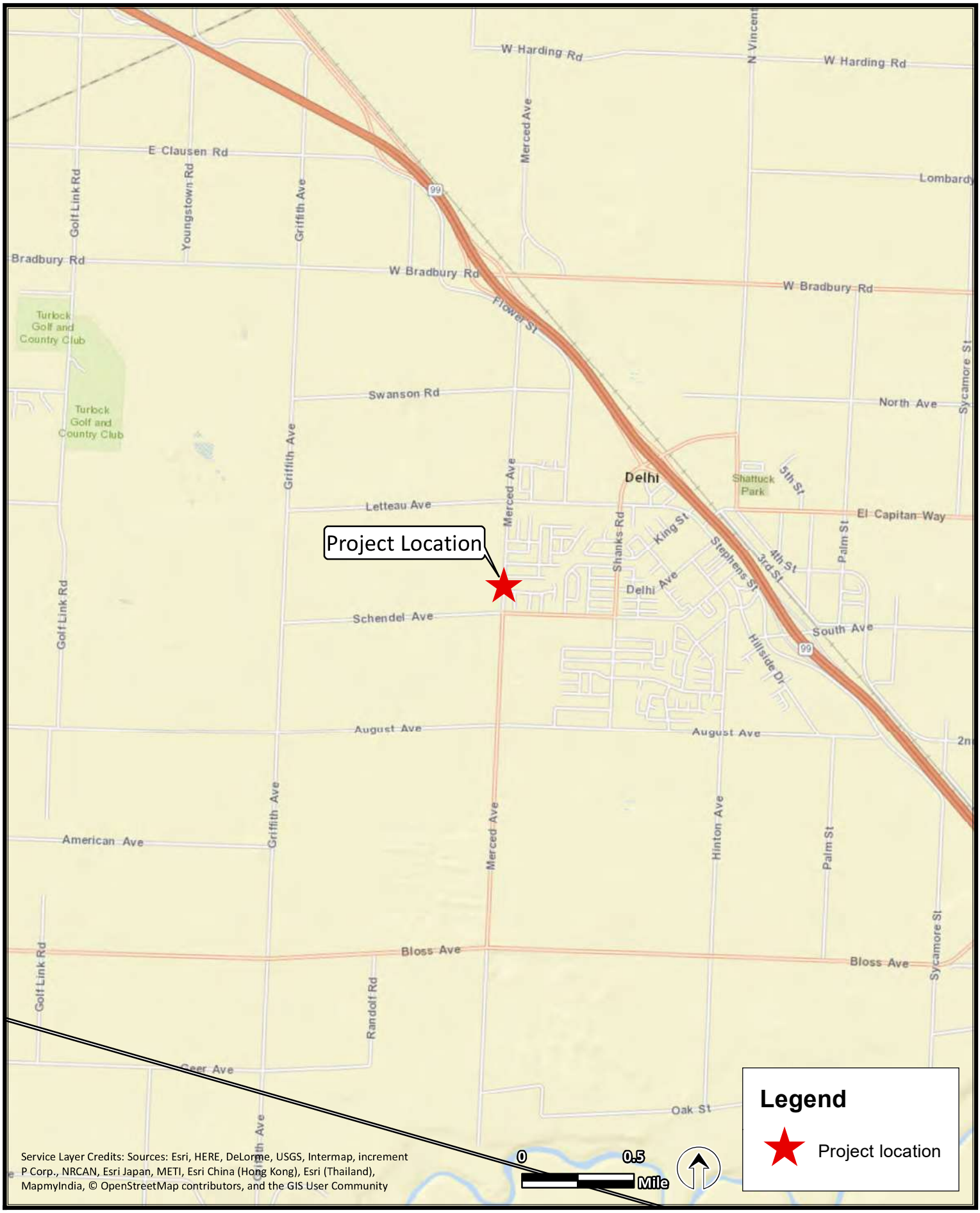


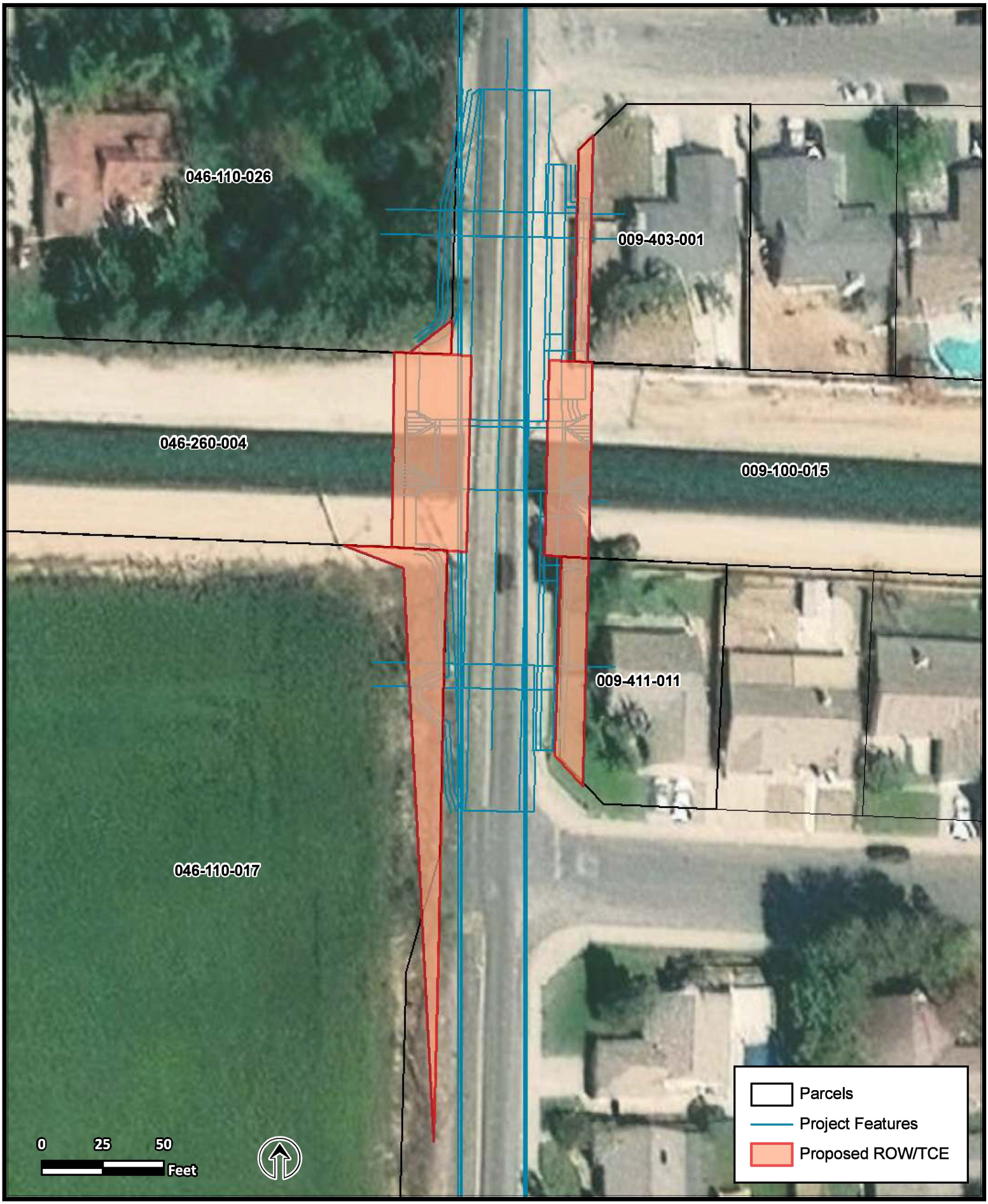
FIGURE 1. REGIONAL LOCATION
Merced Avenue at Lateral #6 Canal Bridge Replacement Project



Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

MERCED COUNTY

FIGURE 2. PROJECT LOCATION
Merced Avenue at Lateral #6 Canal Bridge Replacement Project



Source: ESRI 2025.

FIGURE 3. PROJECT FOOTPRINT
Merced Avenue at Lateral #6 Canal
Bridge Replacement Project

Utilities

There are overhead utilities within the project site that potentially require pole relocation. It appears no underground utilities are within the project site. The project would require the relocation of an existing outlet pipe, which currently is within the anticipated bridge and approach alignment.

Right-of-Way

The existing roadway and bridge are within existing County right of way (ROW) or easements; however, additional ROW and temporary construction easements (TCE) from surrounding properties may be required to complete the project. Any ROW acquisition and/or TCE's will be included in the project impact analysis.

Demolition, Construction and Staging

The existing bridge would be demolished as the first item of work, including the partial removal of the existing abutments at each side of the canal.

The new bridge is anticipated to be a single span and would not restrict the ordinary flow of the canal.

Construction of the project is anticipated to take approximately six months, and would be completed in the following order and durations. All days are in work days with an assumed 20 work days per month:

- Mobilization (5 days);
- Bridge removal (10 days);
- Abutment construction (15 to 20 days);
- Superstructure construction (30 to 40 days); and
- Roadway approaches construction (10 days).

Construction staging would occur within the existing and proposed right-of-way. Temporary construction easements would be required.

Detour Route

The County has indicated that Merced Avenue can be closed during all construction activities, and a temporary crossing would not be required. The detour routes around the project would be a maximum of one mile long, and include Schendel Avenue, Shanks Road, and Letteau Avenue.

9. Surrounding Land Uses and Setting

The project area is located in Merced County, located near the community of Delhi approximately 1.35 miles south of State Route 99, in the Central Valley area of California, which dominates the central portion of the state. The Central Valley is a major agricultural region.

The project area is surrounded by a combination of agricultural and agricultural/residential land uses. According to the 2030 Merced County General Plan General Plan (General Plan) Land Policy Diagram, the project area is located within agricultural land uses, and identified as an "Isolated Urban Area". These areas include isolated urban areas in unincorporated Merced County which were designated for urban land uses prior to adoption of the "urban centered concept" in the 1978 General Plan Land Use Element. These areas typically contain a cluster of homes on limited public infrastructure, or an individual

commercial or industrial land use. No new isolated urban areas can be established under the General Plan. Land in all directions is designated as Agricultural while portions are developed with residential uses. The canal conveys water underneath the bridge, which is primarily used for agricultural purposes.

10. Other Public Agencies whose Approval is Required

- Various County construction, grading, and encroachment permits.
- United States Army Corps of Engineers (USACE): Section 404 Nationwide Permit
- Central Valley Regional Water Quality Control Board (RWQCB): Section 401 Water Quality Certification
- California Department of Fish and Wildlife (CDFW): Section 1602 Streambed Alteration Agreement

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) section 21080.3.1?

☐ **Yes** ☒ **No**

If yes, ensure that consultation and heritage resource confidentiality follow PRC sections 21080.3.1 and 21080.3.2 and California Government Code 65352.4

A Native American Tribes contact list was provided and the listed tribes were notified of the project via email on March 22, 2023. Follow-up emails were sent on April 4, 2023, and on April 7, 2023, three additional follow-up emails were sent. On April 11, 2023, a phone call was made to the Wuksache Indian Tribe because their email had still not been delivered. A phone message was left summarizing the project and requesting a return phone call. No responses to this second series of letters and outreach calls were received. The tribes contacted include:

- Amah Matsun Tribal Band
- Dumnah Wo-Wah Tribal Government
- North Valley Yokuts Tribe
- Southern Sierra Miwuk Nation
- Tule River Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band

Therefore, no Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to PRC section 21080.3.1.

12. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 14 for additional information.

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

3. Determination

On the basis of this initial evaluation (choose one):

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

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

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

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Alvaro Buenrostro, Supervising Engineer		01/15/2026
Print Name	Signature	Date

4. Evaluation of Environmental Impacts

Potential environmental effects of the project are classified and described within the *CEQA Environmental Checklist* under the following general headings:

"No Impact" applies where the impact simply does not apply to projects like the one involved. For example, if the project area is not located in a fault rupture zone, then the item asking whether the project would result in or expose people to potential impacts involving fault rupture should be marked as "No Impact."

"Less Than Significant Impact" applies where the impact would occur, but the magnitude of the impact is considered insignificant or negligible. For example, a development which would only slightly increase the amount of surface water runoff generated at a project area would be considered to have a less than significant impact on surface water runoff.

"Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." Incorporated mitigation measures should be outlined within the checklist and a discussion should be provided which explains how the measures reduce the impact to a less than significant level. This designation is appropriate for a Mitigated Negative Declaration, where all potentially significant issues have been analyzed and mitigation measures have been recommended that reduces all impacts to levels that are less than significant.

"Potentially Significant Impact" applies where the project has the potential to cause a significant and unmitigable environmental impact. If there are one or more items marked as "Potentially Significant Impact," an EIR is required.

4.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

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

REGULATORY SETTING:

Local Regulations

2030 Merced County General Plan

The Natural Resources Element of the General Plan identifies the following policies as they relate to aesthetics for the project (County of Merced, 2012).

- Policy NR-4.1: Scenic Resource Preservation. Promote the preservation of agricultural land, ranch land, and other open space areas as a means of protecting the county's scenic resources.

- Policy NR-4.4: New Roads. Consider the surrounding landscape, topography, and existing scenic values when determining the location and construction of new roads.

AFFECTED ENVIRONMENT:

The project is located in the central portion of the Manteca/Merced Alluvium of the Central California Valley Ecoregion (Ecoregion 7n) as defined by the United States Environmental Protection Agency (EPA).

Ecoregion 7n, the Manteca/Merced Alluvium ecoregion, is very gently to gently sloping floodplains and alluvial fans that slope from the higher terraces and foothills in regions to the east toward the San Joaquin River to the west. The soil temperature regime is thermic and soil moisture regimes are xeric and aquic. Natural vegetation historically included perennial and annual grasslands, valley oak savannas, cottonwoods, and willow. Cropland, pasture, and urban uses now dominate (Griffith, et al., 2016).

The landscape in the project area is characterized primarily by suburban/urban development and related infrastructure including the Lateral #6 drainage channel and major transportation facilities including Merced Avenue. Limited ornamental landscaping is present along Merced Avenue, while no vegetation is

present on the Merced Avenue Bridge and no natural and ornamental vegetation is present along the top of the channel banks on the east and west sides of the channel.

The project area is located in a relatively flat area and surrounded by residences to the west and rural residential and agricultural land to the west. Vegetation in around the area includes row crops in the adjacent agricultural areas, as well as tress and weedy roadside vegetation surrounding the project area. A canal runs directly through the project area.

DISCUSSION OF CHECKLIST RESPONSES:

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

No Impact. The project area is surrounded by agricultural and rural residential land uses (California Department of Conservation, 2016). Residential structures are located northeast and southeast of the project area, an agricultural field is located southwest, and a rural residence is located northwest of the project area. For purposes of determining significance under CEQA, a scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. According to the General Plan, designated scenic vistas include the Coastal and Sierra Nevada Mountain ranges, and the Los Banos Creek, Merced, San Joaquin, and Bear Creek River corridors. The project area is not designated as a scenic vista. The closest scenic vista is the Merced River which is located approximately 2.6 miles south and is not visible from the project area. The project is not visible from any scenic vistas. While the agricultural landscape in the project area may provide an attractive landscape for motorists passing through the project area, the project area does not meet the definition of a scenic vista; therefore, the project would result in no impact on a scenic vista.

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

No Impact. According to the California Scenic Highway Mapping System, I-5 is a Caltrans designated State Scenic Highway (California Department of Transportation, 2018a). However, I-5 is located approximately 18.7 miles northwest of the AVE and is not anticipated to be impacted by the project. In addition, the project would not result in any adverse effects to scenic resources including but not limited to trees, rock outcroppings, or historic buildings. No significant trees would require removal as part of the project, no outcroppings exist within the project area, and the existing bridge, while historic in age, is not considered eligible for listing as a historic resource in the NRHP. As such, the project would not adversely affect scenic resources. Therefore, there would be no adverse visual impacts to state scenic highways. During project construction, there could be temporary visual impacts associated with minor vegetation removal and onsite storage of construction materials and debris. The presence of construction activities and equipment is expected to affect views of and from the project corridor during the construction period. Detours and delays have the potential to occur during project construction and would be short-term. Nighttime construction is not anticipated but could occur. If nighttime construction occurs, high intensity lighting used to illuminate construction activities has the potential to negatively affect roadway travelers. However, the proposed avoidance and minimization commitments would ensure that fugitive light from portable sources used during construction would be minimized. However, the project area is not located within a state scenic highway, and there are no state scenic highways in the immediate project vicinity. Therefore, the project would result in no impact on scenic resources within a state scenic highway.

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

Less Than Significant Impact. The project area is located in a rural area of Merced County. The project would include replacing the existing Merced Avenue Bridge over Lateral #6 Canal which would widen the existing bridge by approximately 27 feet. The project would not include any vertical elements that would block or otherwise distort views of the surrounding areas. Visual changes along the affected portions of Merced Avenue are expected to be minor because the proposed bridge would look very similar to the existing bridge. The proposed improvements are expected to result in very minor visual changes that are not expected to alter the visual character or quality of the landscape because they are very compatible with existing views along the project corridor. Vegetation removal associated with the project is not expected to greatly alter the visual landscape or views of and from the roadway corridor because the area of impact is small and would be expected to naturally recolonize in a short period of time. Vegetation removal will generally consist of general clearing and grubbing. In addition, with implementation of avoidance and minimization measures **VIS-1** through **VIS-3** the contractor would protect native tree and plant species to the extent feasible.. Therefore, the project would result in less than significant impact on visual character.

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

Less Than Significant Impact: Light and glare generated by the project would be consistent with that of the northern and southern bridge approaches, as well as with other two-lane roadways in the project vicinity. The project is not anticipated to add new street lighting. Nighttime construction is not anticipated to occur; however, if it is needed high intensity lighting use to eliminate construction activities has the potential to negatively affect roadway travelers. In the event that street lighting is added, the project would comply with avoidance and minimization measure **VIS-4** and the applicable illumination requirements of Caltrans and/or the affected local jurisdictions to shield lighting in a manner that would prevent spillover from impacting adjacent residential development or other light-sensitive uses. Additionally, project curbs and gutters, sidewalks, bridge parapet, and other intervening features would prevent car headlights from measurably impacting adjacent residential development compared to existing conditions. Additionally, the project would not include a change in the materials, alignment, or capacity of the bridge in a way that would result in increased glare at surrounding land uses. Therefore, there would be no impact.

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES:

To avoid and/or minimize impacts on cultural resources, the following measures would be implemented:

VIS-1 During construction, the project contractor shall minimize tree and vegetation removals to the extent practicable.

VIS-2 During construction, the project contractor shall ensure contour grading that integrates with natural terrain to the extent feasible.

VIS-3 Post-construction, the project contractor shall hydroseed staging areas, with a seed mix consisting of plant species native to the immediate area. Under no circumstances shall invasive plant species be used in any erosion control measures.

VIS-4 During construction the project contractor shall minimize fugitive light from portable sources used during construction.

4.2 AGRICULTURAL AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

Question	CEQA Determination
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?	Less Than Significant Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Less Than Significant Impact
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
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
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?	Less Than Significant Impact

REGULATORY SETTING:

State Regulations

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value (California Department of Conservation, 2015a). The intent of the Williamson Act is to encourage voluntary land conservation, particularly conservation of agricultural land in California.

Local Regulations

2030 Merced County General Plan

The Agricultural Element of the General Plan identifies the following policies as they relate to agriculture and forestry resources for the project (County of Merced, 2012).

- Policy AG-2.4: Preservation Programs. Encourage property owner participation in programs that preserve farmland, including the Williamson Act, conservation easements, and United States Department of Agriculture (USDA) funded conservation practices.

- Policy AG-2.9: Infrastructure Extension. Oppose the extension of urban services, such as sewer lines, water lines, or other urban infrastructure, into areas designated for agricultural use, unless necessary to protect public health, safety, and welfare.

AFFECTED ENVIRONMENT:

The area surrounding the project is zoned as Urban and Built-Up Land, Rural Residential Land and Farmland of Statewide Importance (California Department of Conservation, 2016). Within the project area, the canal is a channelized, concrete-lined waterway with gravel/dirt canal access roads at the tops of the banks. Flows in the canal are controlled artificially to meet the agricultural needs of adjacent properties. The areas adjacent to the canal consist primarily of disturbed vegetation, and the project area and area adjacent is limited to urban landscaping in the residential areas, or row crops in the agricultural areas.

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact. According to the California Department of Conservation Important Farmland Finder the area within in surrounding the project area is zoned as Urban and Built-Up Land, Rural Residential Land, and Farmland of Statewide Importance (California Department of Conservation, 2016). Temporary construction easements (TCE) would be required from adjacent parcels APN 009-100-015, APN 009-403-001, APN 046-110-026, APN 046-260-004, and APN 009-411-011. However, the take would be temporary and once project construction is complete the land would continue to be available for agricultural purposes. The existing roadway and bridge are within County ROW; however, ROW would be required from APN 046-110-017 which is designated as Farmland of Statewide Importance. The project would require the acquisition of approximately 0.008 acre of Farmland of Statewide Importance. However, the permanent take from the parcel would be less than 0.1 acre and all remaining land on the property would remain available for agricultural uses. Therefore, there would be a less than significant impact.

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

Less Than Significant Impact. There are parcels of land zoned under the Williamson Act within or surrounding the project area (Conservation Biology Institute, 2010). As stated in response a) above, ROW would be required from APN 046-110-017, however the amount of land that would be converted from agricultural use would be limited to approximately 0.008 acre. Therefore, there would be a less than significant impact.

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

No Impact. The project area is zoned as Urban and Built-Up Land, Rural Residential Land, and Farmland of Statewide Importance. There are no forest or timber resources within or surrounding the project area. Therefore, there would be no impact.

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

No Impact: As stated in discussion (c) above, there are no forest resources within or surrounding the project area. Therefore, there would be no impact.

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

Less Than Significant Impact: As stated in discussion (c) above, a portion of the project area is partially zoned Farmland of Statewide Importance, thus, the project area is not zoned for forest land or timberland and there is no forest land within or surrounding the project area (County of Merced, n.d.). In addition, as stated in discussion (a) above, the project would result in less than 0.1 acre of unfarmable land after completion of the project. The remaining agricultural land would remain farmable following project completion. Therefore, there would be less than significant impacts.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Agricultural and Forestry Resources. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Agricultural and Forestry Resources.

4.3 AIR QUALITY

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

Question	CEQA Determination
a) Conflict with or obstruct implementation of the applicable air quality plan?	No Impact
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
c) Expose sensitive receptors to substantial pollutant concentrations?	Less Than Significant Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant Impact

REGULATORY SETTING:

Federal Regulations

Federal Clean Air Act

The National Ambient Air Quality Standards (NAAQS) were established by the Federal Clean Air Act of 1970 (FCAA), as amended in 1977 and 1990. The FCAA requires the United States (U.S.) Environmental Protection Agency (EPA) to establish NAAQS for six criteria pollutants including, carbon monoxide (CO), ozone (O_3), particulate matter equal to or smaller than 10 microns (PM_{10}) or 2.5 microns ($PM_{2.5}$) in diameter, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead (Pb).

State Regulations

California Clean Air Act

The California Air Resources Board (CARB) administers air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards are generally more stringent and apply to more pollutants than NAAQS (i.e., visibility reducing particulates, hydrogen sulfide, vinyl chloride, and sulfates (SO_4)).

Under the California Clean Air Act (CCAA), the CARB requires that each local air district prepare and maintain an air quality management plan to achieve compliance with CAAQS. These standards are generally more stringent and apply to more pollutants than the NAAQS. The CCAA requires that each local air district prepare and maintain an air quality management plan (AQMP) to achieve compliance with CAAQS.

These AQMPs also serve as the basis for preparation of the State Implementation Plan (SIP) for the State of California. CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as Assembly Bill (AB) 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987.

California Air Resource Board Rules and Regulations

The following CARB Rules and Regulations are applicable to the project:

In-Use Off-Road Diesel Vehicle Regulations

This regulation limits vehicle idling to no more than five consecutive minutes and requires equipment to be reported to CARB and labeled.

Local Regulations

San Joaquin Valley Air Pollution Control District Air Quality Plans

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the local air quality agency with jurisdiction in the eight counties of California's Central Valley, including Merced County where the project area is located. To work towards attainment of O_3, $PM_{2.5}$, and PM_{10} standards, the SJVAPCD has adopted the following air quality plans:

- 2004 Extreme Ozone Attainment Demonstration Plan
- 2007 Ozone Plan
- 2009 Reasonably Available Control Technology SIP
- 2012 $PM_{2.5}$ Plan
- 2008 $PM_{2.5}$ Plan
- 2007 PM_{10} Maintenance Plan

San Joaquin Valley Air Pollution Control District Rules

The following SJVAPCD Rules are applicable to the project:

Rule 8021 Construction, Demolition, Excavation, Extraction, And Other Earthmoving Activities

This rule requires fugitive dust emissions to be controlled through the application of water or chemical/organic stabilizers/suppressants to the area prior to demolition, extraction and earth moving activities. In addition, speed limit signs shall also be posted at least every 500 feet on uncontrolled unpaved access/haul roads and the speed of vehicles traveling within these areas would be limited to a maximum of 15 miles per hour.

2030 Merced County General Plan

The Air Quality Element of the General Plan identifies the following policies that are applicable to the project (County of Merced, 2012).

- Policy AQ-2.1: Air Quality Plan Compliance. Require all development projects to comply with applicable regional air quality plans and policies.

- Policy AQ-2.2: Development Review Process. Use the development review process to achieve measurable reductions in criteria pollutant, toxic air contaminants, and greenhouse gas (GHG) emissions.

- Policy AQ-2.4: Mitigation. Require that local and regional air quality impacts identified during CEQA review for projects reviewed and approved by the county are consistently and fairly mitigated.

AFFECTED ENVIRONMENT:

Local Climate and Meteorological Conditions

The San Joaquin Valley Air Basin (SJVAB), which occupies the southern half of California's Central Valley is located within both the Sacramento and San Joaquin Valley and foothills and the Sacramento and San Joaquin Valley watersheds. Approximately 250 miles long and 35 miles wide on average, the SJVAB is a well-defined climatic region with distinct topographic features on three sides. The Coast Ranges, which have an average elevation of 3,000 feet, are located on the western border of the SJVAB. The San Emigdio Mountains, which are part of the Coast Ranges, and the Transverse Ranges, which are part of the Sierra Nevada, are both located on the south side of the SJVAB. The Sierra Nevada forms the eastern border of the SJVAB. No topographic feature delineates the northern edge of the basin. The SJVAB can be considered a "bowl" open only to the north. The SJVAB is basically flat with a downward gradient in terrain to the northwest. Air flows into the SJVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Delta from the San Francisco Bay Area. The mountains surrounding the SJVAB create a barrier to airflow, which leads to entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. Temperature and precipitation in the SJVAB are similar to meteorological conditions in the Sacramento Valley, but with somewhat less precipitation.

Ambient Air Quality Attainment Status

The project is within the San Joaquin Valley Air Pollution Control District (SJVAPCD). According to the U.S. EPA, Merced County is in an extreme non-attainment area for O_3 and a non-attainment area for $PM_{2.5}$ (EPA, 2014). According to the Caltrans Division of Environmental Analysis, Merced County is in a maintenance zone for PM_{10} (County of Merced, 2012).Therefore, the project area is in a NAAQS non-attainment and maintenance area, and the project is subject to the transportation conformity requirements in California.

DISCUSSION OF CHECKLIST RESPONSES:

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

No Impact. Operation of the project would not generate new stationary or mobile sources of emissions because the project would maintain the same number of through lanes (one in each direction) and would not increase the capacity or result in additional vehicles on the roadway. Therefore, no long-term air quality impacts would result from the project. Project construction would also comply with CARB and SJVAPCD Rules and regulations such as, In-Use Off-Road Diesel Vehicle Regulation and Rule 8021. With compliance of applicable regulations, such as applying water or dust suppressants to unpaved surface areas in compliance with applicable regulations listed above, the project would be consistent with the goals of applicable air quality plans. Therefore, the project would result in no impact related to air quality plans.

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

Less Than Significant Impact. Construction of the project would generate temporary, short-term emissions of various air pollutants. Pollutant emissions would vary from day to day depending on the intensity and type of construction activity. The types of construction emissions that would most likely result from the project are fugitive dust emissions and mobile source emissions. Fugitive dust emissions include any solid PM that is lifted into the ambient air. Construction activities with the potential to result in fugitive dust emissions include excavation and other earth-moving activities. Mobile source emissions include primarily oxides of nitrogen (NO_x), CO, volatile organic compounds, PM_{10}, $PM_{2.5}$, and diesel particulate matter (DPM). Emissions could also lead to the formation of O_3, which is a regional pollutant that is derived from NO_x and VOCs in the presence of sunlight and heat. Construction activities that have the potential to result in mobile source emissions include the use of construction equipment (bulldozers, trucks, and scrapers), truck delivery of construction materials, hauling of construction debris, and workers commuting to and from the project area. Mobile source emissions from construction equipment are highest during use of heavy-duty, diesel-fueled equipment. As discussed in response (a) above, construction would also comply with CARB and SJVAPCD Rules and regulations such as, In-Use Off-Road Diesel Vehicle Regulation and Rule 8021. Compliance with In-Use Off-Road Diesel Vehicle Regulation would limit equipment idling to no more than five consecutive minutes. Compliance with Rule 8021 would minimize fugitive dust emissions through dust suppressant applications prior to construction. Compliance with these rules and regulations would reduce fugitive dust and mobile source emissions during construction.

Operation of the project would not generate new stationary or mobile sources of emissions because the project would maintain the same number of through lanes and would not increase capacity or result in additional vehicles on the roadway. Therefore, no long-term air quality impacts would result from the project. Therefore, the project would result in less than significant impacts related to air quality standards.

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

Less Than Significant Impact. Sensitive receptors are land uses where persons who are more susceptible to air pollution than the general population, including children, athletes, the elderly, and the chronically ill. Typical land uses where substantial numbers of sensitive receptors are often found are schools, daycare centers, parks, recreation areas, medical facilities, nursing homes, and convalescent care facilities. Residential areas are also considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to pollutants. The nearest sensitive receptors to the project area are residences located 70 feet away from the project area.

Construction activities would result in short-term, project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment used for grading and paving activities. However, there would be relatively few pieces of off-road, heavy-duty diesel equipment in operation, and the construction period would be relatively short (approximately six months total). In addition, DPM is highly dispersive, and construction-related emissions of DPM would not be expected to result in substantial pollutant concentrations. Construction would be limited to the daytime hours of 7:00 a.m. to 6:00 p.m., in

accordance with County ordinances. In addition, construction would comply with rules and regulations discussed in responses (a) and (b) above, to minimize construction emissions.

The project is not expected to increase criteria pollutant emissions during operation since the project would maintain the same number of through lanes and would not increase capacity or result in additional cars on the roadway. No long-term air quality impacts would result from the project. Therefore, the project would result in less than significant impacts related to sensitive receptors.

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

Less Than Significant Impact. Operation of construction equipment (diesel exhaust) and paving operations could result in the generation of odors; however, these odorous emissions would be temporary in nature, would be completed during daytime hours only, and would be isolated within the immediate vicinity of construction activities. The project area is not in a densely populated location. Therefore, the project would result in less than significant impacts related to emissions affecting a substantial number of people.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Air Quality. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Air Quality.

4.4 BIOLOGICAL RESOURCES

Would the project:

Question	CEQA Determination
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 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
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
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less Than Significant Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less Than Significant with Mitigation Incorporated
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

The following discussion incorporates the results of the Natural Environment Study (Minimal Impacts) (NES(MI)) that was prepared for the project (GPA Consulting, 2022a).

REGULATORY SETTING:

Federal Regulations

Clean Water Act

Activities within inland streams, wetlands, and riparian areas in California are regulated by agencies at the federal, state, and regional levels. At the federal level, the USACE Regulatory Program regulates activities within federal wetlands and waters of the U.S. pursuant to Section 404 of the federal Clean Water Act (CWA).

Waters of the United States

The USACE Regulatory Program regulates activities within federal wetlands and waters of the U.S. pursuant to Section 404 of the CWA.

The U.S. EPA and the Department of the Army issued a revised definition of waters of the U.S. in January 2023. However, the U.S. Supreme Court ruled in Sackett v. Environmental Protection Agency on May 25,

2023 that only wetlands and permanent bodies of water with a "continuous surface connection" to "traditional interstate navigable waters" are covered by the Clean Water Act, thus revoking the "significant nexus" standard and invalidating portions of the January 2023 rule. To conform with the Sackett decision, the EPA and Department of the Army issued a final revised rule on August 29, 2023 amending the January 2023 definition of waters of the U.S. The conforming rule, "Revised Definition of 'Waters of the United States,' Conforming," became effective on September 8, 2023 (88 FR 61964).

Under the conforming rule, waters of the U.S. include: 1) traditional navigable waters (i.e. waters that are subject to the ebb and flow of the tide and/or are presently used, have been used in the past, or may be susceptible for use for interstate or foreign commerce), the territorial seas, and interstate waters (collectively "qualifying waters"); 2) impoundments (e.g. reservoirs, retention ponds) of qualifying waters 3) tributaries to qualifying waters that are relatively permanent, standing, or continuously flowing bodies of water ("qualifying tributaries"); 4) wetlands with a continuous surface connection to qualifying waters, impoundments of qualifying waters, or qualifying tributaries ("qualifying wetlands"); and 5) intrastate lakes and ponds that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to qualifying waters, impoundments, qualifying tributaries, or qualifying wetlands (33 CFR 328.3 and 40 CFR 120.2).

In streams and rivers where adjacent wetlands are absent, the USACE jurisdiction extends to the ordinary high water mark (OHWM). The OHWM is defined as "the line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas." {33 CFR 328.3[c(3)]}. If the OHWM is not readily distinguishable, the USACE jurisdiction within streams extends to the "bankfull discharge" elevation, which is the level at which water begins to leave the channel and move into the floodplain (Rosgen D. L., 1996). This level is reached at a discharge which generally has a recurrence interval of approximately 1.5 to two years on the annual flood series (Leopold, 1994).

Federal wetlands are transitional areas between well-drained upland habitats and permanently flooded (deepwater) aquatic habitats and are defined differently by different resource agencies. The USACE and the U.S. EPA define wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" {33 CFR 328.3[c(1)]}.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) was established in 1973 to provide a framework to conserve and protect endangered and threatened species and their habitat. Section 10 of the FESA allows for the "incidental take" of endangered and threatened wildlife species by non-federal entities. Incidental take is defined by the FESA as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Section 10(a)(1)(B) of the FESA authorizes the taking of federally listed wildlife or fish through an incidental take permit. Section 10(a)(2)(A) of the FESA requires an applicant for an incidental take permit to submit a conservation plan that specifies, among other things, the impacts likely to result from the taking of the species, and the measures the permit applicant will take to minimize and mitigate impacts on the species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (50 CFR Part 10 and Part 21) protects migratory birds, their occupied nests, and their eggs from disturbance and/or destruction. "Migratory birds" include all nongame, wild birds found in the U.S. except for the house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), and rock pigeon (*Columba livia*).

Executive Order 13112

Executive Order 13112 directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. This order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. MRCA, as the project proponent, would be responsible for complying with Executive Order 13112 and ensuring that the project would not contribute to the spread of invasive species

State Regulations

Porter Cologne Act

The RWQCB also asserts authority over waters of the state under the Porter-Cologne Act, which establishes a regulatory program to protect water quality and to protect beneficial uses of state waters. The Porter-Cologne Act empowers the RWQCB to formulate and adopt a Water Quality Control Plan that designates beneficial uses and establishes such water quality objectives that in its judgment will ensure reasonable protection of beneficial uses. Each RWQCB establishes water quality objectives that will ensure the reasonable protection of beneficial uses and the prevention of water quality degradation. Dredge or fill activities with the potential to affect water quality in these waters must comply with Waste Discharge Requirements issued by the RWQCB. Waters of the state are defined by the Porter-Cologne Act as any surface or subsurface water or groundwater, including saline waters, within the boundaries of the state

Clean Water Act

Waters of the State

The term "waters of the state," under jurisdiction of the RWQCB, is defined by California Water Code as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050(e)).

The State Water Resources Control Board defines wetlands in the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Water Resources Constrol Board, 2021). The Water Boards define an area as wetland as follows: "an area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation." This report uses the current definition of wetlands.

The CDFW also has jurisdictional authority over waters of the state, including wetlands. In practice, CDFW follows the United States Fish and Wildlife Service (USFWS) definition of wetlands in Cowardin's Classification of Wetlands and Deepwater Habitats of the U.S: "Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is

covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: 1) at least periodically, the land supports hydrophytes; 2) the substrate is predominantly undrained hydric soil; and 3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year" (Cowardin, Carter, Golet, & LaRoe, 1979).

California Fish and Game Code

Section 1602 of the California Fish and Game Code governs construction activities that substantially divert or obstruct natural stream flow or substantially change the bed, channel, or bank of any river, stream, or lake under the jurisdiction of the CDFW. Under the California Fish and Game Code, the limits of CDFW's jurisdiction within streams and other drainages extends from the top of the stream bank to the top of the opposite bank, to the outer drip line in areas containing riparian vegetation, and/or within the 100-year floodplain of a stream or river system containing fish or wildlife resources. Streams are defined in the CCR (14 CCR Section 1.72) as "a body of water that follows at least periodically or intermittently through a bed or channel having banks and that support fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." Under Section 1602, a Streambed Alteration Agreement must be issued by the CDFW prior to the initiation of construction activities that may substantially divert or obstruct the natural flow of any river, stream, or lake; substantially change or use any material from the bed, channel, or bank, of any river, stream, or lake; or deposit debris, waste, or other materials that could pass into any river, stream, or lake under CDFW's jurisdiction.

Section 2126 of the California Fish and Game Code states that it is unlawful for any person to take any mammal that are identified within Section 2118, including all species of bats.

Sections 3503, 3513, and 3800 of the California Fish and Game Code prohibit the take of birds protected under the MBTA and protects their occupied nests. In addition, Section 3503.5 of the California Fish and Game Code prohibits the take of any birds in the order Falconiformes or Strigiformes (birds-of-prey) and protects their occupied nests. State-listed species and those petitioned for listing by the CDFW are fully protected under the California Endangered Species Act. Under Section 2080.1 of the California Fish and Game Code, if a project would result in take of a species that is both federally and state listed, a consistency determination with the findings of the FESA determination is required. Under Section 2081, if a project would result in take of a species that is state-only listed as threatened or endangered, then an incidental take permit from the CDFW is required.

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code prohibit the take or possession of 37 fully protected bird, mammal, reptile, amphibian, and fish species. Each of the statutes states that no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to "take" the species, and states that no previously issued permit or licenses for take of the species "shall have any force or effect" for authorizing take or possession. The CDFW will not authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species.

Local Regulations

2030 Merced County General Plan

The General Plan contains the County's goals and desires concerning land use and is designed to serve as the basis for development decisions (County of Merced, 2012).The Natural Resources Element of the

General Plan includes goals and policies to protect biological resources through coordination with the public and private sectors and protection of habitat from urban and agricultural encroachment.

The Natural Resources Element of the General Plan identifies the following policies related to biological resources that are applicable to the project (County of Merced, 2012).

- Policy NR-1.1: Habitat Protection. Identify areas that have significant long-term habitat and wetland values including riparian corridors, wetlands, grasslands, rivers and waterways, oak woodlands, vernal pools, and wildlife movement and migration corridors, and provide information to landowners.

- Policy NR-1.4: Important Vegetative Resource Protection. Minimize the removal of vegetative resources which stabilize slopes, reduce surface water runoff, erosion, and sedimentation.

- Policy NR-1.5: Wetland and Riparian Habitat Buffer. Identify wetlands and riparian habitat areas and designate a buffer zone around each area sufficient to protect them from degradation, encroachment, or loss.

- Policy NR-1.12: Wetland Avoidance. Avoid or minimize loss of existing wetland resources by careful placement and construction of any necessary new public utilities and facilities, including roads, railroads, high speed rail, sewage disposal ponds, gas lines, electrical lines, and water/wastewater systems.

AFFECTED ENVIRONMENT:

Biological Study Area

The Biological Study Area (BSA) includes the project area and an approximately 25-foot buffer around the project area (see **Figure 4**, Biological Study Area). The BSA includes areas that could be directly impacted by the project, either temporarily or permanently. The limits of the BSA were determined by reviewing aerial photography, project plans, and evaluating potential jurisdictional areas during field visits.

The BSA encompasses approximately 1.16 acres and includes Merced Avenue between Jeffrey Drive and Songbird Drive and approximately 135 feet east and west of the Merced Avenue Bridge and Lateral #6 approximately 100 feet upstream and downstream of the bridge. The BSA is in a rural, agricultural area of Merced County. There are orchards to the northwest of the project area and agricultural fields are to the northeast and south. There is a residence/farm to the southwest of the project area.

Special Status Species

A California Natural Diversity Database (CNDDB) species list was obtained on May 2, 2016, January 23, 2019, December 27, 2021, June 23, 2022, February 5, 2024, and updated June 24, 2024 to identify federally and state listed species, as well as sensitive species, with the potential to be in the BSA based on their recorded geographical distribution.



MERCED COUNTY

FIGURE 4. BIOLOGICAL STUDY AREA
Merced Avenue at Lateral #6 Canal Bridge Replacement Project

In addition, a USFWS species list was obtained on March 2, 2016, February 11, 2019, January 3, 2022, June 23, 2022, and updated on June 24, 2024, and a National Marine Fisheries Service (NMFS) list was obtained on December 21, 2018, January 10, 2022, February 5, 2024, and updated on June 24, 2024, for the same purpose.

Natural Communities

According to the CNDDB search, six special-status natural communities, including Cismontane Alkali Marsh, Coastal and Valley Freshwater Marsh, Northern Claypan Vernal Pool, Northern Hardpan Vernal Pool, Valley Sacaton Grassland, and Valley Sink Scrub. have the potential to be in the BSA, based on recorded distribution. No special-status natural communities were identified within the BSA.

Special-Status Plants

According to the CNDDB, USFWS, and CNPS searches, 28 special-status plant species have the potential to be in the BSA based on recorded geographical distribution; however, based on additional research regarding existing populations and required habitat, and the results of project level surveys, one special-status plant species has potential to be within the BSA Sanford's arrowhead (*Sagittaria sanfordii*), although it was not observed during project surveys (see **Table 1**). No other special-status plant species are expected to be within the BSA.

Special-Status Animals

According to the CNDDB, NMFS, and USFWS searches, 40 special-status wildlife species have the potential to be in the BSA based on recorded geographical distribution. However, based on species habitat requirements and the results of the biological surveys, there are seven special status wildlife species with potential to be in the BSA including the white-tailed kite (*Elanus leucurus*), Swainson's hawk (*Buteo swainsoni*), loggerhead shrike (*Lanius ludovicianus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), hoary bat (*Lasiurus cinereus*), and western red bat (*Lasiurus frantzii*) (see **Table 1**). There is no suitable habitat for other special-status species within the BSA, and additional special-status species are not expected to be within the BSA.

Habitat Connectivity

A migration or wildlife corridor is an area of habitat that connects two or more patches of habitat that would otherwise be isolated from each other. Wildlife corridors are typically adjacent to urban areas. A functional wildlife corridor allows for ease of movement between habitat patches and is important in preventing habitat fragmentation. Habitat fragmentation is typically caused by human development and can lead to a decrease in biodiversity and ecosystem functionality. The land surrounding the BSA consists of residences or is used for agricultural practices and there are no areas designated as open space near the BSA. According to the CDFW BIOS Habitat Connectivity Viewer, there are no essential wildlife connectivity areas or natural landscape blocks in the BSA. The closest recorded wildlife corridor is approximately 10 miles to the west of the BSA. The BSA is not likely to be used as a migration or travel corridor but may be used for local wildlife movement and foraging in the area. In addition, the canal in the BSA is hydrologically managed; however, there may be some localized movement of fish species in the area.

Table 1. Special-Status Plants and Wildlife with Potential to be in the Biological Study Area

Common and Scientific Names	Status			General Habitat Description*	Habitat Present/ Absent	Rationale for Species Presence/Absence
	Federal USFWS	State CDFW	CNPS			
Plants						
Sagittaria sanfordii Sanford's arrowhead	--	--	1B.2	The Sanford's arrowhead is a perennial rhizomatous herb found in standing or slow-moving freshwater ponds, marshes, and ditches and mostly under natural conditions in wetlands. This species is found in association with the water plantain (*Alisma plantago-aquatica*), water primrose (*Ludwiga peploides*), and various species of cattail (*Typha* spp.) Typical blooming period: May to November Typical elevation range: Zero to 2,133 feet	HP	There are areas of slow moving freshwater habitat in the BSA. Therefore, although this species was not observed during the biological surveys, which were conducted during the typical blooming period for this species, there is potential for this species to be in the BSA.
Birds						
Buteo swainsoni Swainson's hawk	--		ST	The Swainson's hawk forages in prairies, grasslands, and agricultural fields that support rodent populations. This species nests in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	HP (Nesting) HP (Foraging)	There is an agricultural field and large trees adjacent to the BSA which could provide suitable habitat. Therefore, there is potential for this species to nest and forage in the BSA.

Common and Scientific Names	Status			General Habitat Description*	Habitat Present/ Absent	Rationale for Species Presence/Absence
	Federal USFWS	State CDFW	CNPS			
Elanus leucurus white-tailed kite	--		FP	The white-tailed kite is found in rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodlands. White-tailed kites can also be found in urban neighborhoods. This species forages while hovering over grasslands, meadows, or marshes or perching in densely topped trees. in search of small mammals, birds, lizards, and occasionally insects.	A (Nesting) HP (Foraging)	There is foraging habitat within the agricultural field in the BSA, but there is no suitable nesting habitat. Therefore, there is potential for this species to forage in the BSA, but this species is not expected to nest in the BSA.
Lanius ludovicianus loggerhead shrike	--		SSC	The loggerhead shrike is found in semi-open country with lookout posts, such as wires, trees, and scrub. The loggerhead shrike frequents agricultural fields, pastures, riparian areas, prairies, and golf courses. This species builds nests in thorny vegetation in semi-open terrain, from large clearings in wooded regions to open grassland or desert with a few scattered trees or large shrubs, with perches for scanning, and fairly dense shrubs and brush for nesting.	A (Nesting) HP (Foraging)	There are agriculture fields adjacent to the BSA for foraging, but there is no suitable nesting habitat. Therefore, there is potential for this species to forage in the BSA, but this species is not expected to nest in the BSA.
Mammals						
Antrozous pallidus	--		SSC	The pallid bat is found year around in a variety of low-elevation habitats in most parts of California, including grasslands,	HP	The bridge structure, swallow nests, and adjacent trees could provide suitable roosting habitat for this

Common and Scientific Names	Status			General Habitat Description*	Habitat Present/ Absent	Rationale for Species Presence/Absence
	Federal USFWS	State CDFW	CNPS			
pallid bat				shrublands, woodlands, and forests. This species is thought to prefer open, dry habitats with rocky areas for roosting. The pallid bat day roosts in caves, crevices, mines, and hollow trees, buildings, and bridges, and night roosts in more open sites, such as porches, open buildings, and bridges. Roosts must protect bats from high temperatures, and this species will move deeper into cover if temperatures rise. The pallid bat is highly sensitive to disturbance.		species; therefore, there is potential for this species to be in the BSA.
Corynorhinus townsendii Townsend's big-eared bat	--		SSC	The Townsend's big-eared bat is found in a variety of habitat types, including coniferous forests, deserts, native prairies, riparian communities, agricultural areas, and coastal habitats. It is thought to be most abundant in mesic habitats. This species roosts in caves and cave-like structures, such as exposed cavity-forming rock and mines. This species will also roost in human structures such as attics and barns and has been found on occasion in bridges. Townsend's big-eared bats prefer to roost in large rooms and do not use crevices. The Townsend's big-eared bat is extremely sensitive to human	HP	The bridge and other structures in the BSA could provide suitable roosting habitat for this species; therefore, there is potential for this species to be in the BSA.

Common and Scientific Names	Status			General Habitat Description*	Habitat Present/ Absent	Rationale for Species Presence/Absence
	Federal USFWS	State CDFW	CNPS			
				disturbance and is thought to be uncommon in California.		
Lasiurus cinereus hoary bat	--		S4	The hoary bat is found in a wide variety of habitats and elevations in California. This species generally roosts in dense foliage of medium to large trees, and prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding.	HP	Trees in the BSA could provide suitable roosting habitat; therefore, there is potential for this species to be in the BSA.
Lasiurus frantzii western red bat	--		SSC	The western red bat roosts in forests and woodlands from sea level up through mixed conifer forests. This species roosts primarily in trees, sometimes shrubs; roost sites often are in edge habitats adjacent to streams, fields, or urban areas. This species forages over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands.	HP	Trees in the BSA could provide suitable roosting habitat for this species; therefore, there is potential for this species to be in the BSA.

Table Key: Habitat Present [HP] -habitat is or may be present. The species may be present. Status: State Threatened (ST); Fully Protected (FP); State Species of Special Concern (SSC); California Native Plant Society (CNPS) 1B= Plant species that are rare, threatened, or endangered in California and elsewhere; 0.2 = moderately threatened in California.

**Information for the habitat requirements was obtained from CNPS Rare and Endangered Plant Inventory, developed and maintained by the CNPS Rare Plant Program; the California Natural Diversity Database species habitat descriptions, updated and maintained by the CDFW; California Herps online database; Cornell Lab of Ornithology All About Birds; Audubon Guide to North American Birds; iNaturalist.org, and Preliminary Descriptions of the Terrestrial Natural Communities of California by Robert F. Holland (1986) were consulted during preparation of the species table and area listed in the references.*

DISCUSSION OF CHECKLIST RESPONSES:

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 With Mitigation Incorporated: According to the CNDDB, NMFS, and USFWS searches, 40 special-status wildlife species have the potential to be in the BSA based on recorded geographical distribution. Based on the results of research and field surveys, seven special-status wildlife species have potential to be in the BSA including the Swainson's hawk, white-tailed kite, loggerhead shrike, pallid bat, Townsend's big-eared bat, hoary bat, and western red bat. There is no suitable habitat for other special-status wildlife species within the BSA, and additional special-status wildlife species are not expected to be within the BSA.

Plants

According to the CNDDB and USFWS search, 28 special-status plant species have the potential to be in the BSA based on recorded geographical distribution. Based on research regarding habitat requirements and the results of the biological surveys, there is a low potential for Sanford's arrowhead to be in the BSA. This species was not observed during the biological surveys which were conducted during the typical bloom period for these species; however, because there is suitable habitat, the potential for this species to be within the BSA cannot be ruled out. No other special-status plant species are anticipated to be in the BSA. Construction would require vegetation removal that could directly impact special-status plant species if individuals were to be removed or trampled during construction. In addition, special-status plants could be indirectly impacted from dust and/or pesticide use. However, with the implementation of measures **BIO-1** and **BIO-2**, the project would result in less than significant impacts with mitigation incorporated on special-status plant species.

Birds

There is a moderate potential for foraging within the BSA for the loggerhead shrike, Swainson's hawk, and white-tailed kite. There is moderate potential for nesting within the BSA for the Swainson's hawk. There is no potential for nesting within the BSA for loggerhead shrike and white-tailed kite.

Construction would require vegetation removal and work on the bridge structure, including structure demolition, that could directly impact migratory birds and raptors if these activities are conducted while birds are nesting within or adjacent to the affected areas.

Temporary noise generating activities, such as pile driving and demolition, could also result in temporary indirect impacts on nesting birds and raptors if loud enough to result in disturbance. In addition, construction activities could temporarily disrupt foraging in the project area but would not result in the loss of foraging habitat. However, with the implementation of measures **BIO-3** through **BIO-10**, the project would result in less than significant impacts on nesting migratory birds.

Mammals

There is potential roosting habitat for pallid bat, Townsend's big-eared bat, hoary bat, and western red bat in the BSA. In addition, there is potential foraging habitat for these species in areas adjacent to the

BSA. Bats could be directly impacted if individuals were to roost within the bridge during construction. In addition, noise, vibration, and disturbance from adjacent construction activities could result in indirect impacts on bats roosting in trees immediately adjacent to the construction area, causing roost abandonment.

The project could result in direct or indirect impacts on special-status mammal species; however, with implementation of the measures **BIO-11** through **BIO-16**, impacts would be less than significant.

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?

No Impact: According to the CNDDB search, six special-status natural communities, including Cismontane Alkali Marsh, Coastal and Valley Freshwater Marsh, Northern Claypan Vernal Pool, Northern Hardpan Vernal Pool, Valley Sacaton Grassland, and Valley Sink Scrub. have the potential to be in the BSA, based on recorded distribution. No special-status natural communities or habitat of concern were identified within the BSA, and none are expected to be in the BSA. Therefore, there would be no impact to sensitive natural communities.

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 Impact: The BSA is in the Middle San Joaquin-Lower Chowchilla watershed. Hydrological features in the BSA include the canal, which originates from Turlock Lake. The canal flows into the San Joaquin River downstream of the project area. Flows in the canal are controlled by TID to meet the agricultural needs of the adjacent properties. USFWS Wetlands Mapper does not show any wetlands within the BSA, and no wetlands were observed in the biological surveys. Because of its downstream connectivity to the San Joaquin River, this canal appears to fall under the jurisdiction of USACE. The USACE would have final authority and discretion as to whether this area meets the "significant nexus" criteria required to establish USACE jurisdiction over the canal. Approximately 0.18 acre of jurisdictional non-wetland waters of the U.S. was delineated in the canal (see **Table 2**).

Table 2. Jurisdictional Wetlands and Waters Delineated in the BSA

Regulatory Agency	Total Jurisdiction within BSA (acres)
United States Army Corps of Engineers Wetlands	--
United States Army Corps of Engineers Non-wetland Waters of the U.S.	0.18
Regional Water Quality Control Board Wetlands	--
Regional Water Quality Control Board Non-wetland Waters of the U.S.	0.18
California Department of Fish and Wildlife	0.23

Because the canal had surface waters during the time of the surveys, they are expected to fall under RWQCB jurisdiction. Approximately 0.18 acre of jurisdictional non-wetland waters of the state were delineated the canal (see **Table 2**). No wetlands were delineated in the BSA

There was no riparian vegetation outside of the canal or drainage basin banks. The canal had a defined bed and bank, and supported vegetation at the time of the surveys; therefore, all of the features are expected to fall under CDFW jurisdiction. Approximately 0.23 acre of CDFW jurisdiction was delineated in the canal (see **Table 2**). Because construction activities would be required within these areas, a Section 1602 Streambed Alteration Agreement from the CDFW is anticipated.

The project would include removing the existing bridge and constructing a new, wider bridge across the canal. In addition, grading would be required along the road edges and within the northeastern edge of the drainage basin.

Demolition of the existing bridge and construction of the widened bridge would result in temporary impacts on approximately 0.14 acre of potential USACE/RWQCB non-wetland waters of the U.S. and 0.23 acre of waters under CDFW jurisdiction (see **Table 3**). There would be no temporary impacts on jurisdictional wetlands outside of the permanent impact area.

Table 3. Jurisdictional Impacts (Temporary)

Regulatory Agency and Jurisdiction	Jurisdictional Impacts (acres)
United States Army Corps of Engineers Wetlands	N/A
United States Army Corps of Engineers Non-wetland Waters	0.14
Regional Water Quality Control Board Wetlands	N/A
Regional Water Quality Control Board Non-wetland Waters	0.14
California Department of Fish and Wildlife	0.23

Construction of the spread footings for the new abutments of the widened bridge would result in 0.014 acre of permanent impacts on waters under jurisdiction of the USACE, RWQCB, and the CDFW (see **Table 4**). In addition, installation of the new abutments and shading of the widened bridge deck would result in approximately 0.025 acre of permanent impacts on CDFW jurisdiction. However, with measures **BIO-17** through **BIO-23**, impacts would be less than significant.

Table 4. Jurisdictional Impacts (Permanent)

Regulatory Agency and Jurisdiction	Jurisdictional Impacts (acres)
United States Army Corps of Engineers Wetlands	--
United States Army Corps of Engineers Non-wetland Waters	0.014
Regional Water Quality Control Board Wetlands	--
Regional Water Quality Control Board Non-wetland Waters	0.014

Regulatory Agency and Jurisdiction	Jurisdictional Impacts (acres)
California Department of Fish and Wildlife	0.025

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

Less Than Significant Impact: The BSA is likely used for local wildlife movement and foraging for wildlife species in the area. As discussed in response (a) above, there is a moderate potential for foraging within the BSA for the loggerhead shrike, Swainson's hawk, and white-tailed kite. There is moderate potential for nesting within the BSA for the Swainson's hawk. There is no potential for nesting within the BSA for loggerhead shrike and white-tailed kite. Construction would require vegetation removal and work on the bridge structure, including structure demolition, that could directly impact migratory birds and raptors if these activities are conducted while birds are nesting within or adjacent to the affected areas.

Temporary noise generating activities, such as pile driving and demolition, could also result in temporary indirect impacts on nesting birds and raptors if loud enough to result in disturbance. In addition, construction activities could temporarily disrupt foraging in the project area but would not result in the loss of foraging habitat. However, with the implementation of avoidance and minimization measures **BIO-3** through **BIO-10**, the project would not result in adverse impacts on nesting migratory bird species. Therefore, the project would result in less than significant impact on migratory wildlife or wildlife nursery sites.

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

Less Than Significant Impact: The General Plan includes several policies that were put in place to protect biological resources. The General Plan offers forest protection under Policy NR-1.3. The policy preserves forest, particularly oak woodlands, to protect them from degradation, encroachment or loss. No forest resources were identified in the area, and the project would not conflict with any local policies or ordinances protecting biological resources; therefore, there would be no impact.

General Plan Policy NR-1.4 protects important vegetative resources that stabilize slopes, reduce runoff, erosion, and sedimentation of waterways. Project construction and implementation would require removal of vegetation in the project area. However, temporarily disturbed areas would be re-contoured and re-vegetated using native species. Therefore, impacts would be less than significant.

General Plan Policy NR-1.5 protects Wetland and Riparian Habitat Buffer from degradation, encroachment or loss. General Plan Policy NR-1.12 requires the avoidance or minimization of wetland resource loss. The project would not result in permanent loss of wetland and riparian resources through fill and shading, as discussed in response (c). With measures **BIO-17** through **BIO-23**, the project would result in a less than significant impact.

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

No Impact: The project area is not located within the limits of a regional conservation plan such as a Habitat Conservation Plan or Natural Community Conservation Plan; therefore, there would be no impact.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

To avoid and/or minimize potential impacts on special-status plants, the following measures would be implemented:

BIO-1 Prior to construction, a qualified botanist would conduct rare plant surveys during the appropriate blooming period (May to October) throughout potentially suitable habitat within the BSA. If surveys cannot be conducted within the appropriate blooming period, or if presence for any species cannot be ruled out for any reason, avoidance measures would be implemented based on recommendations of a qualified botanist. In the event that the Sanford's arrowhead, or another special-status species, is found during surveys, the plants would be avoided if feasible. If the plants are within or near the active construction zone, they would be protected in place and monitored by a qualified biologist during construction activities to ensure they are not directly or indirectly impacted. If the plants cannot be avoided, or if monitoring determines that the plants are being adversely affected by construction activities, these activities would be suspended.

BIO-2 If it is determined that the Sanford's arrowhead, or another special-status plant, will be impacted as a result of the project, a plan will be developed by a qualified biologist to relocate the plants to a suitable location, and monitor their survival. The plan will include, at a minimum, details on the relocation site, the methods for relocation, methods for monitoring, and survival criteria. The relocated plants will be monitored for a period of time sufficient to confirm they have survived the transplanting, as identified by the qualified biologist. The relocation plan will be implemented prior to the completion of the project.

To avoid and minimize impacts on nesting birds and raptors, the following measures would be implemented:

BIO-3 Construction during bird nesting season (typically February 1 to September 15) would be avoided to the extent feasible.

BIO-4 If construction is required during the nesting season, vegetation removal required for the project would be conducted during the nonbreeding season, wherever feasible.

BIO-5 For construction scheduled to begin during bird nesting season, nesting bird surveys would be completed no more than 48 hours prior to construction to determine if nesting birds or active nests are within 300 feet (500 feet for potential raptor nests) of the construction area. Surveys would be repeated if construction activities are suspended for five days or more.

BIO-6 If nesting birds are found in the construction zone, measures to ensure that the birds and/or their nests are not harmed would be implemented, including but not limited to, installation and maintenance of appropriate buffers (typically 300 feet for song birds and 500 feet for raptors) until nesting activity has ended.

To avoid and/or minimize impacts on foraging birds and raptors, the following measure would be implemented:

BIO-7 In the event that a bird is observed foraging within the construction site, it shall be allowed to move away from the site prior to initiating any construction activities that could result in direct injury to or disturbance of the individual.

To avoid and/or minimize impacts on Swainson's hawk, the following measures would be implemented:

BIO-8 If construction is scheduled to begin during Swainson's hawk nesting season (March 1 to September 15), surveys for Swainson's hawk would be conducted according to the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* for two survey periods prior to project initiation (California Department of Fish and Wildlife, 2000). Three surveys would be conducted during each survey period to determine if Swainson's hawks are nesting within 0.5 mile of the BSA.

BIO-9 If the project would be conducted during the Swainson's hawk nesting season (i.e., March 1 through September 15), and active Swainson's hawk nests are present, a minimum ½-mile no-disturbance buffer would be delineated and maintained around each nest. These buffers would remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.

BIO-10 In the event an active Swainson's hawk nest is detected and a 0.5-mile no-disturbance buffer is not feasible, coordination with CDFW would be conducted to discuss how to avoid take of Swainson's hawk. A qualified biologist will have authority to reduce the no-disturbance buffer in coordination with CDFW, if monitoring determines that the birds are not being disturbed by construction activities. If take cannot be avoided, take authorization through the acquisition of an Incidental Take Permit (ITP), pursuant to Fish and Game Code section 2081 subdivision (b) would be required.

To avoid and/or minimize impacts on bats, the following measures would be implemented:

BIO-11 Where feasible, tree and structure removal would be conducted outside of the maternal and non-active seasons for bats (October).

BIO-12 During the summer months (June to August) prior to construction, a thorough bat roosting habitat assessment would be conducted of all trees and structures to be removed or otherwise impacted during construction. Visual and acoustic surveys would be conducted for at least two nights at all identified roosting habitat to assess the presence of roosting bats. If presence is detected, a count and species analysis would be completed to help assess the type of colony and usage.

BIO-13 If bats do not relocate to the newly installed roosts, then no fewer than 30 days prior to construction, and during the non-breeding and active season (typically October) prior to the maternity season, bats would be safely evicted from roosts impacted by the project under the direction of a qualified biologist. Once bats have been safely evicted, exclusionary devices would be installed prior to the maternity season to prevent bats from returning and roosting in these areas prior to removal. Exclusionary devices would be installed in all areas that could be inhabited by bats within the BSA. Roosts that would not be impacted by the project would be left undisturbed.

BIO-14 No fewer than two weeks prior to construction, all of the excluded areas would be surveyed to determine whether the exclusion measures were successful and to identify any outstanding concerns.

BIO-15 If the presence or absence of bats cannot be confirmed in potential roosting habitat, a qualified biologist would be onsite during removal or disturbance of this area. If the biologist determines that bats are being disturbed during this work, work would be suspended until bats have left the vicinity on their own or can be safely excluded under direction of the biologist. Work would resume only once all bats have left the site and/or approval to resume work is given by a qualified biologist.

BIO-16 In the event that a maternal colony of bats is found, no work would be conducted within 100 feet of the maternal roosting site until the maternal season is finished or the bats have left the site, or as otherwise directed by a qualified biologist. The site would be designated as a sensitive area and protected as such until the bats have left the site. No activities would be authorized adjacent to the roosting site. Combustion equipment, such as generators, pumps and vehicles, would not to be parked nor operated under or adjacent to the roosting site. Construction personnel would not be authorized to enter areas beneath the colony, especially during the evening exodus (typically between 15 minutes prior to sunset and one hour following sunset).

To avoid and/or minimize potential impacts on jurisdictional features, the following measures would be implemented:

BIO-17 Work areas would be reduced to the maximum extent feasible, and staging areas would be located away from the canal to avoid any impacts from equipment and material staging.

BIO-18 Best management practices (BMP), such as silt fencing, fiber rolls, straw bales, or other measures would be implemented during construction to minimize dust, dirt, and construction debris from entering the canal and/or leaving the project area.

BIO-19 Appropriate hazardous material BMPs would be implemented to reduce the potential for chemical spills or contaminant releases into the canal, including any non-stormwater discharge.

BIO-20 All equipment refueling and maintenance would be conducted in the staging area away from the canal per standard specifications. In addition, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans would be placed under all equipment that is parked and not in operation.

BIO-21 Following project construction, all temporarily disturbed areas adjacent to the canal would be restored to pre-project conditions or better, and any re-vegetation or erosion control implemented would be completed using non-invasive species.

BIO-22 Vegetation removed from the BSA would be treated and disposed of in a manner that would prevent the spread of invasive species onsite or offsite.

BIO-23 Plants listed by the USDA in the Pest Ratings of Noxious Weed Species and Noxious Weed Seed would not be used as part of the project (United States Department of Food and Agriculture , 2017).

4.5 CULTURAL RESOURCES

Would the project:

Question	CEQA Determination
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	Less Than Significant Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Less Than Significant Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Less Than Significant Impact

REGULATORY SETTING:

State Regulations

CEQA Section 15064.5

Under CEQA, Title 14, CCR Section 15064.5(a)(3), a resource is considered historically significant if it meets one of the following four criteria:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- It is associated with the lives of persons important in our past
- It embodies the distinctive characteristics of a type, period, region, or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or
- It has yielded, or may be likely to yield, information important in prehistory or history.

CEQA requires public agencies and private interests to identify the potential adverse impacts or environmental consequences of their project to any object or site of significance with respect to history. CEQA also provides protection for paleontological remains.

California Public Resources Code (PRC)

PRC 21083.2, 5097.5, 30244, and 21084.1

According to PRC 21083.2 (a), if archaeological resources are determined to be significant, then the impacts on that resource should be addressed. PRC 5097.5 prohibits the excavation and/or the removal of a "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands." PRC 30244 requires reasonable mitigation of adverse impacts on paleontological resources resulting from development on public land.

PRC 21084.1 gives the lead agency power to determine that a resource is a historical resource, even if the resource is not listed or eligible for listing in the California Register of Historical Resources or a

local register of historical places. In addition, the lead agency can also determine that a resource is a historical resource, even if it is not deemed significant in a historical resource survey.

Native American Heritage Act (PRC 5097.9)

The Native American Heritage Act, passed by California in 1976, established the Native American Heritage Commission (NAHC) for protecting Native American religious values on state property. The NAHC not only protects the heritage of Native Americans, but also ensures their participation in matters concerning heritage sites. The commission's duty is to assist both federal and state agencies in protecting Native American sacred places and provide recommendations concerning Native American heritage in accordance with environmental law and policy. The act protects burials from disturbance, vandalism, and accidental destruction. It also stipulates which specific procedures laid out in the California Health and Safety Code (HSC) must be implemented if a Native American burial is uncovered during project construction or archaeological data recovery.

Assembly Bill 52 (PRC 21080.1, 21080.3.1, and 21080.3.2)

As of July 1, 2015, Assembly Bill (AB) 52 requires public agencies to consult with California Native American tribes identified by the NAHC for the purpose of mitigating impacts on tribal cultural resources. The specific directives of the bill are as follows:

"Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section (PRC Section 21080.1(d))."

California Health and Safety Code Section 7050.5

The State of California HSC Section 7050.5 requires that if human remains are discovered during ground disturbing activities, the County Coroner must be notified, and no further disturbance is authorized to occur until the County Coroner has made a determination of origin and disposition of the remains. If the human remains are determined to be prehistoric, the coroner must notify the NAHC, who would determine and notify a Most Likely Descendant (MLD). The MLD then inspects the site and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Local Regulations

2030 Merced County General Plan

The Recreation and Cultural Resources Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2012).

Policy RCR-2.1: Archeological Site and Artifact Protection. Require development projects that affect archeological sites and artifacts to avoid disturbance or damage to these sites.

- Policy RCR-2.5: Human Remains Discovery. Require that, in the event of the discovery of human remains on any project construction site, all work in the vicinity of the find would cease and the County Coroner and Native American Heritage Commission would be notified.

- Policy RCR-2.10: Tribal Consultation. Consult with Native American tribes regarding proposed development projects and land use policy changes consistent with Planning and Zoning Law at Government Code Section 65351, and the OPR Tribal Consultation Guidelines (2005).

AFFECTED ENVIRONMENT:

Area of Potential Effect

An Area of Potential Effect (APE) was established for the project in consultation with Benjamin Elliott, Caltrans PQS Principal Investigator – Prehistoric Archaeology, and Parminder Singh, Local Assistance Engineer, on April 18, 2023 and April 23, 2024, respectively. The APE was established to ensure the identification of known or potential historic properties that may be affected by the project. The proposed project site is located on Merced Avenue within the community of Delhi in Merced County. The area immediately adjacent to the project site is developed with suburban residential development to the east of Merced Avenue and agricultural uses to the west.

The existing roadway and bridge are within existing County ROW or easements; however, additional ROW and TCE from surrounding properties may be required to complete the proposed bridge replacement. Therefore, the Area of Direct Impact (ADI) was delineated to include the maximum footprint necessary for construction of the project, including erosion control fence, temporary stream diversion, new footings and bridge, and areas that may be subject to permanent ROW easement and TCE.

The APE includes the ADI plus two abutting residential properties to the east of Merced Avenue, where construction is proposed immediately adjacent to and within the side yards of the respective properties. The southerly parcel (APN 009-411-011) will have minor grading behind the new sidewalk and the northerly parcel (APN 009-403-001) will have the existing wood fence replaced. This indirect APE boundary is intended to capture any noise, visual, or atmospheric effects to the nearby structures. On the west side of Merced Avenue, the ADI and APE are coterminous, as potential effects on the whole of the very large-sized agricultural parcels would clearly be negligible.

The horizontal extent of the APE encompasses all ground disturbance associated with the project, including areas of physical work and staging areas for construction vehicles, equipment, and materials, plus areas subject to indirect effects. The vertical extent of the APE ranges from the maximum structural height to the maximum depth of ground disturbance associated with the proposed project. Bridge barriers are the tallest proposed features, with a maximum height of approximately 4.5 feet above the existing ground surface. The maximum depth of excavation would be approximately 12 feet below the existing ground surface in areas where abutment footings are proposed. Other areas of disturbance include: a new canal invert and abutment wingwalls (InContext, 2023).

Historic Resources

The Central California Information Center (CCIC) of the California Historic Resources Information System (CHRIS), located at California State University, Stanislaus, conducted a record search on April 13, 2018. An updated record search was conducted by CCIC staff on March 29, 2022. Both searches included a review of all recorded historic and prehistoric cultural resources situated within a one mile radius of the APE, as

well as a review of known cultural resource surveys and excavation reports. Additional sources, listed above, were also reviewed to identify cultural resources within the APE.

The CCIC identified 13 previously conducted cultural resource surveys within one mile of the APE. None of these prior surveys occurred within the APE limits. The CCIC also identified a total of five previously recorded cultural resources within one mile of the APE, including five historic-era built environment resources and no archaeological resources. Of the five total resources, only one, the TID Lateral #6, is located within the APE limits.

In 1993, JRP Historical Consulting Services recorded three segments of Lateral #6 located at crossings with Harding Road, SR 99, and Merced Avenue which concluded that Lateral #6 no longer retained sufficient integrity to convey any potential significance under criterion A and was not significant under criterion C. In 1995, Caltrans recorded 5,961 feet of Lateral #6 near SR 99 for the Delhi Freeway, Stage II Project (CCIC Report # ME-02870). Similar to JRP, Caltrans also concluded that Lateral #6 no longer retained sufficient integrity to convey any potential significance under criterion A, and also was not significant under criterion B or C. SHPO concurred with Caltrans' finding on December 26, 1995 (Evaluation ID FHWA951009A).

The Caltrans Historic Bridge Inventory was also reviewed and includes Bridge # 39C0310, Merced Avenue over Lateral #6, within the APE. Bridge # 39C0310 is listed as a Category 5 in the Caltrans Historical Bridge Inventory, indicating Caltrans previously determined it was not eligible for the NRHP (InContext, 2023).

DISCUSSION OF CHECKLIST RESPONSES:

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Less Than Significant Impact. As stated above, the CCIC identified 13 previously conducted cultural resource surveys within one mile of the APE; none of which occurred within the APE. One built environment resource, the TID Lateral #6, is located within the APE limits however, the bridge was not determined eligibile for the NHRP. The records search indicated that no cultural or archaeological resources have been identified within the APE. Avoidance and minimization measure **CUL-1** would be implemented as a part of the project if previously unidentified resources are uncovered. Therefore, the project would result in a less than significant impact related to the significance of a historic or archeological resource.

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

Less Than Significant Impact. See discussion in response a) above.

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

Less Than Significant Impact. The project is in a portion of Merced not near or within a formal cemetery. The land surrounding and within the project area has already been disturbed. However, construction of the project would include ground disturbing activities that could unearth previously undiscovered human remains interred outside of a formal cemetery, should they be present in the project limits. Avoidance and minimization measure **CUL-2** would be implemented in accordance with 14 CCR Section 15064.5(e)

and PRC Section 5097.98. With implementation of proposed measures, the project would result in a less than significant impact related to disturbance of any human remains, including those interred outside of formal cemeteries.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

To avoid and/or minimize impacts on cultural resources, the following measures would be implemented:

CUL-1 It is Caltrans' policy to avoid cultural resources whenever possible. If buried cultural materials are encountered during construction, it is Caltrans' policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find. In the event that human remains or associated funerary objects are encountered during construction, all work will cease within the vicinity of the discovery. In accordance with the California Environmental Quality Act (CEQA) (Section 1064.5) and the California Health and Safety Code (Section 7050.5), the appropriate county coroner will be contacted immediately. If the human remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, who will notify and appoint a Most Likely Descendent (MLD). The MLD will work with a qualified archaeologist to decide the proper treatment of the human remains and any associated funerary objects.

CUL-2 In the event of an accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, steps would be taken in compliance with the CCR Section 15064.5. All construction activities would cease, and the City Coroner would be contacted if any human remains are discovered, in accordance with 14 CCR Section 15064.5(e). If the coroner determines that the human remains are of Native American origin, the NAHC would be notified to determine the MLD for the area. The MLD would make recommendations for the arrangements for the human remains per PRC Section 5097.98.

4.6 ENERGY

Would the project:

Question	CEQA Determination
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less Than Significant Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact

REGULATORY SETTING:

State Regulations

Executive Order S-01-07 (January 18, 2007)

This order sets forth the low carbon fuel standard (LCFS) for California. Under this Executive Order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection

This bill requires the Air Resource Board (ARB) to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a Sustainable Communities Strategy (SCS) that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region.

Energy Efficiency Strategic Plan

The California Public Utilities Commission adopted an Energy Efficiency Strategic Plan in September of 2008 outlining a roadmap to maximum energy savings for California's groups and sectors (California Public Utilities Commission, 2011).

AFFECTED ENVIRONMENT:

The project area includes an existing transportation facility. The project area does not currently require energy resources to operate.

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact: During construction, the project would require for gasoline or diesel for worker vehicles, small pieces of maintenance equipment, and generators used to power equipment. Equipment and vehicles would primarily be powered by diesel fuel and would likely require minimal electricity. Fuel consumption from construction vehicles and equipment would be temporary and would represent a negligible increase in regional energy consumption. Following construction, energy consumption would be consistent with existing activities in the project area. As such, the project would not result in significant impacts of wasteful or inefficient energy consumption. Therefore, there would be less than significant impacts.

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

No Impact: There are no known state or local plans for renewable energy or energy efficiency that would apply to the project. Therefore, there would be no impact.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Energy. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Energy.

4.7 GEOLOGY AND SOILS

Would the project:

Question	CEQA Determination
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	Less Than Significant Impact
ii) Strong seismic ground shaking?	Less Than Significant Impact
iii) Seismic-related ground failure, including liquefaction?	No Impact
iv) Landslides?	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	Less Than Significant Impact
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
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less Than Significant Impact
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
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less Than Significant Impact

REGULATORY SETTING:

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (PRC Sections 2621 to 2630) was passed in 1972 to provide a statewide mechanism for reducing the hazard of surface fault rupture to structures used for human occupancy. The main purpose of the Act is to prevent the siting of buildings used for human occupancy across the traces of active faults. It should be noted that the Act addresses the potential hazard of surface fault rupture and is not directed toward other earthquake hazards, such as seismically induced ground shaking or landslides.

The law requires the State Geologist to identify regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around the surface traces of active faults, and to depict these zones on topographic base maps, typically at a scale of one inch to 2,000 feet. Earthquake Fault Zones vary in width, although they are often 0.75 mile wide. Once published, the maps are distributed to the affected cities, counties, and State agencies for their use in planning and controlling new or renewed construction. With the

exception of single-family wood-frame and steel-frame dwellings that are not part of a larger development (i.e. four units or more), local agencies are required to regulate development within the mapped zones. In general, construction within 50 feet of an active fault zone is prohibited.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (PRC Sections 2690 to 2699.6), which was passed in 1990, addresses earthquake hazards other than surface fault rupture. These hazards include strong ground shaking, earthquake-induced landslides, liquefaction, or other ground failures. Much like the Alquist-Priolo Earthquake Fault Zoning Act discussed above, these seismic hazard zones are mapped by the State Geologist to assist local government in the land use planning process. The Act states, "It is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety." The Act also states, "Cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard."

California Building Standards Code (CCR, Title 24)

The State of California provides minimum standards for building design through the California Building Standards Code (CCR, Title 24) (CBC). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with more detailed and/or more stringent regulations.

The State earthquake protection law (California HSC Section 19100, et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction. The CBC is updated every three years. The current 2019 CBC will be updated with the 2022 CBC, effective January 1, 2023.

Local Regulations

2030 Merced County General Plan

The Health and Safety Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2012).

- Goal HS-1: Minimize the loss of life, injury, and property damage of county residents due to seismic and geologic hazards.

- Policy HS-1.1: Structure Location and Compliance. Require that all new habitable structures be located and designed in compliance with the Alquist-Priolo Special Studies Zone Act and related State earthquake legislation.

- Policy HS-1.4: Ensure Earthquake Resistant Design. Require earthquake resistant design for proposed critical structures such as hospitals, fire stations, emergency communication centers, private schools, high occupancy buildings, bridges and freeway overpasses, and dams that are subject to county permitting requirements.

- Policy HS-1.9: Unstable Soils. Require and enforce all standards contained in the International Building Code related to construction on unstable soils.

AFFECTED ENVIRONMENT:

The project is located on the western side of the San Joaquin Valley portion of California's Central Valley. The San Joaquin Valley is bounded by the Coast Ranges to the west, the Sierra Nevada to the east, the Sacramento-San Joaquin River Delta in the north, and the Tehachapi Mountains to the south. Surficial geology in the San Joaquin Valley is generally characterized by flat-lying deposits of predominantly Quaternary age, comprising unconsolidated to semi-consolidated, non-marine sedimentary deposits of fluvial, lacustrine and alluvial terrace origin. Published geologic mapping from 1991 shows the project area is underlain by Pleistocene age non-marine sedimentary deposits identified as the San Luis Ranch Alluvium, described as fine to coarse-grained fan, mudflow, terrace, and floodplain deposits..

DISCUSSION OF CHECKLIST RESPONSES:

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

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

Less Than Significant Impact. The area is outside the Alquist-Priolo Fault Zone. The closest known active earthquake fault in the San Joaquin Fault, located approximately 20 miles west of the project area (California Department of Conservation, 2015b). The risk of substantial adverse effects resulting from earthquake fault activity and related to replacing Merced Avenue Bridge is moderate. The project consists of replacing the existing bridge and would not include new structures or substantial earthwork that could be damaged or fail during a seismic event. Additionally, project design would be consistent with standard engineering practices and would adhere to applicable standards related to seismic safety; therefore, it would not result in exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture.

ii. Strong seismic ground shaking?

Less Than Significant Impact: See response a(i) above. The project would be limited to replacing an existing bridge and would not include new structures. The potential for exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking is considered moderate. Therefore, there would be less than significant impacts.

iii. Seismic-related ground failure, including liquefaction?

No Impact: Liquefaction in soils and sediments occurs during earthquake events when soil material is transformed from a solid state to a liquid state generated by an increase in pressure between pore space and soil particles. No liquefaction hazard areas have been identified in the county; however, according to the General Plan there is potential for liquefaction throughout the San Joaquin Valley where unconsolidated sediments and a high water table coincide (County of Merced, 2012). Because the project would be limited to replacing an existing bridge and would not include new structures, the potential for exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving liquefaction is considered low. Therefore, there would be no impact.

iv. Landslides?

No Impact: Factors that contribute to landslide potential are steep slopes, unstable terrain, and proximity to earthquake faults. There are currently no landslide inventory maps that cover the county; however, landslide risks are considered low because the majority of the county is within the low-lying areas of the Central Valley basin (County of Merced, 2012).The project area is in a relatively flat area. The project area does not contain steep slopes or unstable terrain; therefore, there is no risk of substantial effects from landslides. Therefore, there would be no impact.

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

Less Than Significant Impact. According to the Natural Resources Conservation Service Web Soils Survey conducted for the project, there is one soil mapped in the project area, Delhi sand, 0 to 3 percent slopes, MLRA 17 (Natural Resources Conservation Service, 2021). Based on their soil textures, these soils have low potential for erosion (Michigan State University, 2002). Project construction would require the removal of some existing vegetation which would expose soil and make it more susceptible to erosion. However, following construction, exposed soils would either be paved or be stabilized through compaction and/or new vegetation. With implementation of standard BMPs the project would not be expected to result in soil erosion or loss of topsoil; therefore, there would be less than significant impacts.

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

No Impact: There have been no problems related to on-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse in the project area since the existing bridge was constructed. The project would replace a structurally deficient bridge to improve public safety and would be consistent with standard engineering practices and standards; therefore, the project would not increase risks from soil instability. Therefore, there would be no impact.

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

No Impact: USDA Web Soil Survey, soils in the project area have a low linear extensibility, meaning it has low shrink swell potential. Because the project would be limited to replacing an existing bridge and would not include new structures or substantial earthwork, the project would not result in substantial risks to life or property resulting from expansive soils. In addition, the project would the General Plan's Policy HS-1.9; therefore, there would be no impact.

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

No Impact: The project would replace an existing bridge and would not require the installation of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. The project area is underlain by Pleistocene Holocene aged rocks. Pleistocene Holocene aged rocks are geologically too young to contain fossils and have a low paleontological sensitivity (California Department of Conservation, 2015c). The potential for discovery of cultural resources during construction, including paleontological resources or unique geologic features, is considered low because the project area has been previously disturbed by construction of the existing roadway and residences, and agricultural activities. Additionally, there are no unique geological features listed in the General Plan. Therefore, the project would result in a less than significant impact on unique paleontological resources or unique geologic features.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Geology and Soils. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Geology and Soils.

4.8 GREENHOUSE GAS EMISSIONS

Would the project:

Question	CEQA Determination
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less Than Significant Impact

REGULATORY SETTING:

Federal Regulations

Greenhouse Gas Endangerment

On December 7, 2009, the U.S. EPA signed two distinct findings regarding GHGs under Section 202(a) of the federal CAA:

- The U.S. EPA finds that the current and projected concentrations of the mix of six key GHGs—CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the endangerment finding.

- The U.S. EPA finds that the combined emissions of CO_2, CH_4, N_2O, and HFCs from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of these key GHGs and hence to the threat of climate change. This is referred to as the cause or contribute finding.

The findings do not include any proposed regulations.

State Regulations

Assembly Bill 1493

AB 1493 (Pavley I) of 2002 (HSC Sections 42823 and 43018.5) requires the ARB to develop and adopt the nation's first GHG emission standards for automobiles. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. In 2004, the State of California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the federal CAA, to allow the state to require reduced tailpipe emissions of CO_2. In June 2009, the US EPA granted California's waiver request, enabling the state to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

A national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the US. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. CARB extended this ruling with a goal of an annual rate of improvement between three and six percent for the years 2017-2025.

Assembly Bill 32 - California Global Warming Solutions Act of 2006

The Global Warming Solutions Act of 2006 sets the same overall GHG emissions reduction goals outlined in Executive Order S-3-05 while further mandating that the ARB create a plan that includes market mechanisms and implements rules to achieve "real, quantifiable, cost-effective reductions of GHG." The AB 32 Climate Change Scoping Plan (Scoping Plan) was adopted by the ARB December 12, 2008. In August 2011, the initial Scoping Plan was re-approved by the ARB in order to satisfy environmental review requirements. Governor's 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.

Executive Order S-3-05 (June 1, 2005)

The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010; 2) 1990 levels by 2020; and 3) 80 percent below 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of AB 32. The Executive Order also intended that that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (HSC Section 38551(b)). The law requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Senate Bill 391 -Chapter 585, 2009 California Transportation Plan

SB 391 bill requires the state's long-range transportation plan to meet California's climate change goals under AB 32.

Executive Order S-6-06

Executive Order S-6-06 (State of California), signed on April 25, 2006, established two primary goals related to the use of biofuels within California, including: (1) by 2010, 20 percent of its biofuels need to be produced within California; increasing to 40 percent by 2020 and 75 percent by 2050; and (2) by 2010, 20 percent of the renewable electricity should be generated from biomass resources within the state, maintaining this level through 2020.

Senate Bill 97

SB 97 required the Governor's Office of Planning and Research (OPR) to develop amendments to the State CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010. AB 1493—Pavley Rules (2002, amendments 2009)/Advanced Clean Cars (2011): Known as Pavley I, the standards set forth in AB 1493 were the nation's first GHG standards for automobiles. AB 1493 required the ARB to adopt vehicle standards that would lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009 model year. In June 2009, the US EPA administrator granted a Federal CAA waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. Additional strengthening of the Pavley standards (referred to previously as Pavley II, now referred to as the Advanced Clean Cars measure) has been proposed for vehicles built during model years 2017 through 2020. Together, the two standards were expected to increase average fuel economy to roughly 43 miles per gallon by 2020 and reduce GHG emissions from the transportation sector in California by approximately 14 percent.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection

SB 375 requires the CARB to set regional emissions reduction targets from passenger vehicles. The MPO for each region must then develop a SCS that integrates transportation, land use, and housing policies to plan for the achievement of the emissions target for their region.

Climate Change Scoping Plan

In October 2008, ARB published its Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve reduction of GHG emissions. The initial Scoping Plan was first approved by ARB on December 11, 2008 and is updated every five years. The first update of the Scoping Plan was approved by the ARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reaching the 2050 goals. Currently, the goal of the Scoping Plan to reduce GHG emissions 40 percent below 1990 levels by 2030, and carbon neutrality by 2045.

California Building Standards Code

The State of California provides minimum standards for building design through the CBC. Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with more detailed and/or more stringent regulations.

The State earthquake protection law (California HSC Section 19100, et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction. The CBC is updated every three years. The current 2019 CBC will be updated with the 2022 CBC, effective January 1, 2023.

Green Building Standards

Green buildings standards are contained in the CBC and regulate the construction of new buildings and improvements. The focus of green building standards is to improve environmental performance. AB 32 increased the urgency around the adoption of green building standards. In the Scoping Plan for the implementation of AB 32, ARB identified energy use as the second largest contributor to California's GHG emissions, constituting roughly 25 percent of all such emissions. The green building standards were most recently updated in 2019.

AFFECTED ENVIRONMENT:

GHGs are gases that trap heat in the atmosphere. The transportation sector (i.e., the movement of people and goods by cars, trucks, trains, ships, airplanes, and other vehicles) accounts for 41 percent of total GHG emissions in California (California Air Resources Board, 2019). The majority of GHG from transportation are CO_2 emissions resulting from the combustion of petroleum-based products, like gasoline, in internal combustion engines (United States Environmental Protection Agency, 2017). The largest sources of transportation-related GHG emissions include passenger cars and light-duty trucks, which account for

over half of the emissions from the sector. The sources of GHG emissions within the project area are limited to the internal combustion engine vehicles that use the bridge. The most commonly recognized GHGs include CO_2, CH_4, N_2O, water vapor, O_3, aerosols, HFCs, Chlorofluorocarbon, PFCs, and SF_6.

Local Regulations

2030 Merced County General Plan

The Air Quality Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2012).

- Policy AQ-1.11: Truck-Related Development. Discourage development that causes significant increases in truck traffic on roads that are not capable of accommodating truck traffic due to pavement section deficiency or other capacity limitations, unless adequate mitigation through fees or improvements in required as part of the permit approval.

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact: During construction, the use of construction equipment, delivery of construction materials and waste, and worker commutes would contribute to the generation of GHGs. Because construction would be temporary and short term, the contribution of construction GHG emissions to climate change would be minimal. Operation of the project is not expected to increase GHG emissions because it would maintain the same number of through lanes (one in each direction) and would not increase capacity or result in additional cars on the bridge. Therefore, there would be less than significant impacts.

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

Less Than Significant Impact: Currently, statewide GHG emissions are regulated through AB 32, which requires the state's GHG emissions to be reduced to 1990 levels by 2020. To implement AB 32, the SJVAPCD has adopted emission reduction targets and BMPs that must be met by each jurisdiction in the district, including the County. The Air Quality Element of General Plan also includes GHG reduction and climate change adaptation policies, with the goal of reducing air pollutants and GHG emissions and facilitating adaptation in anticipation of consequences from future global and local climate change.

Because construction would be temporary and short term, the project's contribution to GHG emissions would be minimal and would not conflict with any local or state targets for GHG emissions reduction. The project would not conflict with plans to meet the goals of AB 32 or the General Plan; therefore, there would be less than significant impacts.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Greenhouse Gas Emissions. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Greenhouse Gas Emissions.

4.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:

Question	CEQA Determination
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant Impact
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 Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact
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?	Less Than Significant Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No Impact

The following discussion incorporates the results of the Initial Site Assessment (ISA) that was prepared for the project.

REGULATORY SETTING:

Federal Regulations

United States Environmental Protection Agency (EPA)

The EPA's purpose is to protect human health and the environment by writing and enforcing regulations based on laws passed by Congress. The EPA relies on the National Priorities List (NPL), which is a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the U.S. and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.

CERCLIS is a database used by the U.S. Environmental Protection Agency (EPA) to track activities conducted under its Superfund program. Specific information is tracked for each individual site. WasteLAN is the name of the regional version of this database.

Resource Conservation and Recovery Act (RCRA)

The RCRA Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. RCRA establishes a system that uses hazardous waste manifests to track the movement of

hazardous waste from generation to disposal (cradle-to-grave). The 1984 amendments to RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires States to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks (UST) that hold hazardous materials. Owners of USTs must demonstrate financial assurance for the cleanup of a potential leaking tank.

State Regulations

Hazardous Waste and Substances Site List - Site Cleanup

The Hazardous Waste and Substances Site List- Site Cleanup (Cortese List) is a planning document used by the State, local agencies and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. Government Code section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Cortese List. California Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

The California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the State of California. HWCL implements RCRA as a "cradle-to-grave" waste management system in the State. The law states that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. HWCL also establishes criteria for the reuse and recycling of hazardous wastes. The law exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of wastes and waste management activities that are not covered by RCRA.

California Code of Regulations

Most state and federal regulations and requirements that apply to generators of hazardous waste are spelled out in the CCR, Title 22, Division 4.5. Title 22 contains detailed compliance requirements for hazardous waste generators and transporters, and treatment, storage, and disposal facilities. Because California is a fully authorized State according to RCRA, most RCRA regulations (those contained in 40 CFR 260, et seq.) have been duplicated and integrated into Title 22. However, because the DTSC regulates hazardous waste more stringently than the EPA, Title 22 contains fewer exemptions and exclusions than 40 CFR 260. Title 22 also regulates a wider range of waste types and waste management activities than RCRA regulations in 40 CFR 260. To make regulatory requirements more accessible and easier to follow, California compiled the hazardous materials, waste, and toxics-related regulations contained in CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27 into one consolidated CCR Title 26 "Toxics." However, California hazardous waste regulations are still commonly referred to as Title 22.

Local Regulations

2030 Merced County General Plan

The Health and Safety Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2012).

- Policy HS-5.1: Compliance with Safety Standards. Require that hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards.

- Policy HS-5.4: Contamination Prevention. Require new development and redevelopment proposals that have suspected or historic contamination to address hazards concerns and protect soils, surface water, and groundwater from hazardous materials contamination by conducting Phase I Environmental Site Assessments according to the American Society for Testing and Materials standards and applicable DTSC remediation guidelines. Also, complete additional Phase II Environmental Site Assessments and soil investigations, and any identified or needed remediation when preliminary studies determine such studies are recommended.

AFFECTED ENVIRONMENT

Merced County does not operate solid or hazardous waste hauling operations. Within the County there are two active solid waste disposal/landfill facilities owned and operated by the Merced County Regional Waste Management.

The ISA included site reconnaissance performed on March 13, 2018, and February 17, 2022, a review of available public records, historical aerial photographs and topographic maps, analysis of soil and paint samples collected from the project site, and an inspection of the bridge for the presence of asbestos. After a review of database records, four hazardous waste sites were recorded within 1,000 feet of the project area. However, no reported hazardous materials spills or releases were within the project area or immediately adjacent properties. During site reconnaissance, no direct evidence of spills or releases of oil or motor vehicle fuel within the APE were observed. Oil-impacted soil is unlikely to be encountered while excavating for bridge abutments. Properties surrounding the project area are predominantly agriculture. However, no evidence of pesticide or herbicide mixing, storage or use within the APE was observed during site reconnaissance.

The bridge was inspected for the presence of asbestos and asbestos containing materials (ACM) by the National Analytical Laboratory, Inc. (NAL) on February 22, 2022. The asbestos inspection was performed by a certified asbestos consultant (CAC), in compliance with the EPA's Asbestos Containing Building Materials In-School Rule; CFR 763.85. ACM was not found in any of the four bridge samples analyzed. Although no ACM was not found in the samples analyzed, concrete bridge components (piers, footings, abutments, deck) and concrete pipes (storm drain) could potentially contain asbestos. ACM can also be present in construction materials such as bridge joint seals, bearing pads, shims, deck drains or other less obvious materials such as pipe conduits for utilities.

Soil samples were collected by Crawford & Associates Inc. on February 17, 2022. Samples were tested for lead, cadmium, DDT, DDD, DDE, and arsenic. DDD and DDE reported above detectible levels in the soil. Concentrations of soluble lead and DDT measured 24 milligrams (mg)/liter (l) and 1.6 mg/ killigram (kg) with California hazardous waste limits of 5.0 mg/l and 1.0 mg/kg, respectively.

Paint samples were collected by Crawford & Associates Inc. on February 17, 2022, concurrently with the soil samples. Lead was reported in the yellow traffic striping paint and bridge guardrail paint. Cadmium

was also recorded in the yellow traffic striping paint. However, all contaminants were found at levels below California and Federal hazardous waste limits. Thermoplastic traffic striping may contain heavy metals, including lead and cadmium, at concentrations in excess of the hazardous waste thresholds established by the California Code of Regulations, and may produce toxic fumes when heated.

Airports

The Turlock Municipal Airport is the nearest airport to the project, located approximately 6.5 miles northeast of the project area.

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact: The ISA determined that lead based paint and thermoplastic striping concentrations in samples taken were below hazardous limits. In addition, asbestos and asbestos containing materials were not found within the project area. Merced Road was used for motor vehicle traffic throughout the period of leaded gasoline usage. Therefore, measure **HAZ-1** would be implemented to assess the presence of ADL in the soil within the project area.

Chemically treated wood was not observed at the project site. However, if chemically-treated wood is encountered during demolition or construction activities, measure **HAZ-2** would be implemented which outlines the procedures of disposal.

Contiguous properties surrounding the project area and APE are predominantly agriculture. Samples taken in the project area indicated the presence of agricultural chemicals exceeding Caltrans Hazardous waste limit. However, measure **HAZ-3** would be implemented to evaluate if persistent agricultural chemicals are present within the APE at concentrations sufficient to present an exposure hazard, or a handling or disposal hazard.

Thermoplastic traffic striping may contain heavy metals, including lead and cadmium, at concentrations in excess of the hazardous waste thresholds established by the California Code of Regulations, and may produce toxic fumes when heated. The lead concentration of traffic striping in the project area was below hazardous levels. However, measure **HAZ-5** would be implemented. Therefore, there would be less than significant impacts.

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

Less Than Significant Impact: See discussion in response (a) above. Hazardous materials used or generated during construction would be transported, used, stored, and disposed of according to County, state, and federal regulations. In addition, with implementation of **HAZ-1** through **HAZ-5** impacts would be further minimized or avoided. Therefore**,** there would be less than significant impacts.

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

No Impact. No schools are located within 0.25 mile of the project area. The nearest school is Delhi High School, located approximately 0.30 mile southeast of the project area. The project would not emit hazardous emissions or handle hazardous materials within one-quarter mile of a school; therefore, there would be no impact.

d. Would the project 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. According to the State Water Resources Control Board (SWRCB) Geotracker and the Department of Toxic Substances and Chemicals (DTSC) EnviroStor the nearest hazardous waste site is located at Delhi Education Park Elementary on 16881 West Schendel Avenue approximately 0.26 mile southeast of the project area (DTSC, 2022) (State Water Resources Control Board, 2022). The status is listed as No Further Action. According to the Initial Site Assessment "no hazardous materials or hazardous waste issues were identified in the project site vicinity" (Crawford & Associates, Inc., 2022). Therefore, there would be no impact.

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 for people residing or working in the project area?

No Impact. The project area is approximately 6.5 miles northeast of the nearest airport, the Turlock Municipal Airport. The project area is not within the Turlock Municipal Airport influence area or within two miles of a public airport or public use airport. In addition, the project would not include tall vertical structures or create new sources of light or flare that could result in airport safety or noise hazards. Therefore, there would be no impact.

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

Less Than Significant Impact: Merced Road is a Rural Minor Collector, therefore, it is unlikely that it would be used as a primary evacuation route for Merced County residents. While Cottonwood Road would be closed for the duration of construction, a detour of approximately six miles in length would be available during that time. Therefore, there would be less than significant impacts.

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

No Impact: According to the Fire Hazard Severity Zones Map, the project area is in a Local Responsibility Area. There are no Very High Fire Hazard Zones in the Local Responsibility Areas of Merced County (The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program, 2007). The project area is surrounded by orchards and residential development. The project would include the removal and replacement of an existing bridge, which would be constructed to fire safety standards prescribed in the Building Code and the County Fire Prevention Ordinance (County of Merced, 2012). The project would not expose people or structures to risks involving wildland fires, Therefore, there would be no impact.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following measures would be implemented to avoid or minimize impacts related to hazards and hazardous materials

HAZ-1 Soil in the APE would be evaluated for the presence of lead at concentrations above the hazardous waste threshold.

HAZ-2 Should treated wood be encountered during construction, it would need be properly handled and disposed of as treated wood waste per Section 66261.9.5 of DTSC regulations and Caltrans Special Standard Provision (SSP) 14-11.09. SSP 14-11.09 requires that the Contractor provide training to all personnel that may come in contact with treated wood waste. Training would include, at a minimum, safe handling; sorting and segregating; storage; labeling (including date); and proper disposal methods.

HAZ-4 Soil within the APE would be evaluated for the presence of persistent agricultural chemicals.

HAZ-5 A lead compliance plan would be prepared and implemented.

4.10 HYDROLOGY AND WATER QUALITY

Would the project:

Question	CEQA Determination
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less Than Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	Less Than Significant Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;	Less Than Significant Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Less Than Significant Impact
(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	Less Than Significant Impact
(iv) impede or redirect flood flows?	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less Than Significant Impact

REGULATORY SETTING:

The following discussion incorporates the results of the Water Quality Assessment Report that was conducted for the project (GPA Consulting, 2022a). The following regulations are applicable to water resources in the project area.

Federal Regulations

U.S. Army Corps of Engineers

The USACE is responsible for issuing permits for discharge of dredged or fill material into waters of the U.S. These permits are required under Sections 401 and 404 of the CWA. Water supply projects that involve instream construction, such as dams or other types of diversion structures, trigger the need for these permits and related environmental reviews by USACE. USACE also is responsible for flood control planning and assisting state and local agencies with the design and funding of local flood control projects.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969 is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water

quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of its residents. The Porter Cologne Act requires the State Water Resources Control Board (SWRCB) and its RWQCB to adopt and periodically update water quality control plans (Basin Plans). Basin Plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act, in which beneficial uses, water quality objectives, and implementation programs are established for each of the RWQCBs. The Porter Cologne Act also requires waste dischargers to notify the RWQCBs of their activities through the preparing of Reports of Waste Discharge and authorizes the SWRCB and its RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, and other approval actions.

State Water Resources Control Board

In California, the SWRCB has broad authority over water quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the CWA.

Regional authority for planning, permitting, and enforcement is delegated to the RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in those plans. Merced County is within the jurisdiction of the Central Valley RWQCB.

National Pollution Discharge Elimination System Permit System and Waste Discharge Requirements for Construction

The 1972 amendment to the CWA established the NPDES permit program. The NPDES permit program outlined in the CWA contains effluent limitation guidelines, water quality requirements, and permit program requirements for discharges to waters of the U.S. The EPA has overall responsibility for the NPDES program, but administration of the program in California has been delegated to the SWRCB and the nine RWQCBs.

California Fish and Game Code, Section 1602

Section 1602 of the California Fish and Game Code governs construction activities that substantially divert or obstruct natural stream flow or substantially change the bed, channel, or bank of any river, stream, or lake under the jurisdiction of CDFW. Under Section 1602, a Streambed Alteration Agreement must be issued by the CDFW prior to the initiation of construction activities that may substantially modify a river, stream, or lake under CDFW's jurisdiction. Under the California Fish and Game Code, the limits of CDFW's jurisdiction within streams and other drainages extends from the top of the stream bank to the top of the opposite bank, to the outer drip line in areas containing riparian vegetation, and/or within the 100-year floodplain of a stream or river system containing fish or wildlife resources.

Local Regulations

Central Valley RWQCB Water Quality Objectives

The Central Valley RWQCB has established water quality objectives for the San Joaquin River Basin (Central Valley Regional Water Quality Control Board, 2016). These objectives designate allowable limits of water quality constituents or characteristics that allow for the reasonable protection of the resource's beneficial uses. The beneficial uses of a water body generally apply to its tributary streams. The canal in the project area is an irrigation channel where water is used for agricultural supply. Water quality

objectives for inland surface waters include toxicity objectives such as keeping the waters maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. In addition, objectives include keeping waters free of changes in turbidity that cause nuisance or adversely affect beneficial uses. The goal is to maintain levels of turbidity attributable to controllable water quality factors within the following limits:

- Where natural turbidity is less than one Nephelometric Turbidity Unit (NTU), controllable factors shall not cause downstream turbidity to exceed two.
- Where natural turbidity is between one and five NTUs, increases shall not exceed one NTU.
- Where natural turbidity is between five and 50 NTUs, increases shall not exceed 20 percent.
- Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.
- Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent

Merced County Stormwater Management Program

The Merced County Stormwater Management Program (SWMP) was developed to limit the discharge of pollutants from the Merced Stormwater Group (MSWG) storm sewer system. The MSWG is a coalition of municipalities acting as co-permittees consisting of the City of Atwater, City of Merced, the County, and the Merced Irrigation District. For the County, the SWMP includes a public outreach program, an illicit discharge detection and elimination program, a construction site stormwater runoff control program, a post-construction stormwater management in new development and redevelopment program, and a pollution prevention/good housekeeping for municipal operations program.

Merced County Stormwater Ordinance

The County adopted Stormwater Ordinance No. 1923 in August 2014 that regulates stormwater in Merced County. The purpose of the ordinance is to ensure the health, safety, and general welfare of citizens, and protect and enhance the water quality of watercourses and water bodies pursuant to and consist with the CWA. The ordinance aims to ensure the reduction of pollutants in stormwater discharges to the maximum extent practicable and to prohibit non-stormwater discharges to the storm drain system.

2030 Merced County General Plan

The Public Facilities and Services Element of the General Plan identifies the following policies related to hydrology and water quality that are applicable to the project (County of Merced, 2012).

- Goal W-2: Protect the quality of surface and groundwater resources to meet the needs of all users.
- Policy W-2-2: Prepare updated development regulations, such as BMPs, that prevent adverse effects on water resources from construction and development activities.
- Policy W-2-7: Monitor and enforce provisions of the U.S. Environmental Protection Agency NPDES program to control non-point source water pollution.
- Policy W-2-8: Coordinate with the State Water Resources Control Board, RWQCB, and other responsible agencies to ensure that sources of water contamination (including boron, salt,

selenium and other trace element concentrations) do not enter agricultural or domestic water supplies, and will be reduced where water quality is already affected.

AFFECTED ENVIRONMENT:

The project is located in the San Joaquin Valley in the Central Valley of California. The Central Valley is a flat alluvial plain that extends from the Tehachapi Mountains in the south to the Klamath Mountains in the north, and from the Sierra Nevada Mountains on the east to the Coast Ranges on the west (County of Merced, 2012).The Sierra Nevada foothills are to the east of the project area, and the flat San Joaquin Valley floor is to the west. The elevation in the project area is approximately 120 feet above mean sea level (msl) (California Department of Transportation, 2018b).

Within the project area, the canal is a channelized, concrete-lined waterway with gravel/dirt canal access roads at the tops of the banks. Flows in the canal are controlled artificially to meet the agricultural needs of adjacent properties. The areas adjacent to the canal are disturbed and consist of either suburban-residential or agricultural use. Vegetation in and around the project area is limited to urban landscaping in the residential areas, or row crops in the agricultural areas. There is no vegetation within and along the banks of the canal.

Hydrology

The project area is in the Pear Slough-San Joaquin River Watershed in the Middle San Joaquin-Lower Merced-Lower Stanislaus Subbasin. Within the project area, Lateral #6 Canal is a channelized, concrete-lined waterway with gravel/dirt canal access roads at the tops of the banks. Flows in the canal are controlled artificially to meet the agricultural needs of adjacent properties.

Surface Waters

The County of Merced is within four surface water catchments and groundwater basins. The Turlock, Merced, and Chowchilla Groundwater Basins are located east of the San Joaquin River. The Delta-Mendota Groundwater Basin is located west of the San Joaquin River. The project area is in the Pear Slough-San Joaquin River Watershed in the Middle San Joaquin-Lower Merced-Lower Stanislaus Subbasin. Within the project area, Lateral #6 Canal is a channelized, concrete-lined waterway with gravel/dirt canal access roads at the tops of the banks. Flows in the canal are controlled artificially to meet the agricultural needs of adjacent properties.

The Merced River flows east to west through the northern portion of Merced County and joins the San Joaquin River. The Merced River and Tuolumne River are tributaries to the San Joaquin River and carry runoff from the Sierra Nevada Mountains. Surface water from the Tuolumne River and the Merced River supply a large portion of the agricultural demands within the Turlock Groundwater Subbasin.

Floodplains

According to the Federal Emergency Management Agency (FEMA), the project area is within FEMA Flood Insurance Rate Map (FIRM) panel 06047C0175G (effective 12/02/2008). The FIRM panel indicates that the project area is within Zone X, which is determined to be outside the 0.2 percent annual chance floodplain.

Groundwater

The project area is located within the Turlock Groundwater Basin. The groundwater system is bounded by the Tuolumne River on the north, the Merced River on the south, the San Joaquin River on the west, and the Sierra Nevada foothills on the east. The County of Merced uses groundwater as its source of drinking and irrigation water. Most of the drinking water in Merced County is obtained from groundwater resources and is utilized by public and private water systems. Agricultural irrigation, surface water seepage, and infiltration from precipitation are primary sources of groundwater recharge for Merced County.

The well depths in the Turlock Groundwater Basin vary from 50 to 350 feet and yield 1,000 to 2,000 gallons per minute. Total dissolved solids (TDS) values range from 200 to 500 milligrams per liter (mg/L). The annual urban extraction is approximately 65,000 acre-feet per year (afy) and the annual agricultural extraction is approximately 387,000 afy.

DISCUSSION OF CHECKLIST RESPONSES:

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact. The project area is a roadway and no wastewater is discharged from the area. Therefore, there are no applicable waste discharge requirements applicable to the project. Construction activities associated with the project would include replacement and widening the existing bridge over Lateral #6 Canal. During replacement and widening of the bridge, there is potential for construction debris and materials to fall into the canal below the bridge, resulting in water quality impacts. In addition, demolition of the existing bridge and installation of the piles for the new bridge would require work within the canal.

Construction of the widened bridge abutments would require work at the edges of the dirt banks. There is potential for erosion of the banks, and dust/soil to fall into the canal, resulting in water quality impacts. Additionally, oil, fuel, and other petroleum products used to maintain and operate construction equipment could be accidentally released. The project would not require any excavation that would have the potential to reach groundwater, and the project would not interfere with groundwater recharge.

Implementation of the project would result in an increase of approximately 0.02 acre of impervious surface area from widening the bridge. Although the project would result in a minor increase in storm water runoff, the project would be designed to accommodate existing and anticipated runoff levels, and the project would not result in substantial increases in polluted runoff. The bridge piers would result in a new permanent impact on waters of the U.S. and state; however, the area of the bridge piers is minimal (11 square feet), and impacts would not be substantial. The new bridge would not increase the volume of traffic on the bridge and would not result in an increase in pollutant runoff from vehicles. The project would also comply with regulatory requirements.

Standard BMPs outlined below would be included in the project to avoid or minimize the release sediment and pollutants, including bridge materials and chemical toxins, into the canal during construction. The project would be conducted in accordance with applicable water quality regulations and regulatory permits.

With implementation of standard BMPs **WQ-1** through **WQ-6** and compliance with the permit requirements, the project would not be expected to violate water quality standards. The existing drainage patterns would remain largely unchanged from existing conditions.

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

Less than Significant Impact. See discussion in response (a) above.

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

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

Less Than Significant Impact. The County proposes to replace the bridge on existing alignment that is approximately 27 feet wider than the existing bridge to accommodate wider shoulders on either side of the roadway, a sidewalk on the eastern side of the roadway, and new concrete barrier bridge rails with a bicycle railing. There is potential for erosion of the banks, and dust/soil to fall into the canal resulting in water quality impacts however, impacts would be minimized through minimization measures **WQ-1** through **WQ-6**. The widening of the bridge would result in an increase of approximately 0.02 acre of impervious surfaces within the project area, however the project would be designed to accommodate existing and anticipated runoff levels and the project would not result in substantial increases in polluted runoff. Therefore, there would be less than significant impacts.

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

Less Than Significant Impact. See response c. i) above.

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?

Less Than Significant Impact: While the project would increase the impervious surface in the area by approximately four-feet (0.02 acres), which could result in increased stormwater runoff, the project would be designed to accommodate existing and anticipated runoff levels as required by standard design guidelines used by the county. Therefore, there would be less than significant impacts.

iv. impede or redirect flood flows?

No Impact: The project would not include structures that would impede or redirect flows. In addition, according to the FEMA, the project area is located in Zone X, an area that is outside the Special Flood Hazard Area subject to inundation by the 100-year flood (FEMA, 2008). Therefore, there would be no impact.

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

No Impact: The project would not increase risk of flooding from levee or dam failure, because there are no dams or levees in proximity to the project area. The nearest dam to the project area is the El Nido Reservoir Dam, approximately 26 miles south of the project area. The existing canal is a channelized, concrete-lined waterway with gravel/dirt canal access roads at the tops of the banks. Flows in the canal are controlled artificially to meet the agricultural needs of adjacent properties, however, the canal would not be modified as part of the project. The project would also result in a slight increase in impervious surfaces within the project area by approximately 0.02 acres, which could result in increased stormwater runoff. The project would be designed to accommodate anticipated runoff levels as required by standard design guidelines used by the county. Therefore, no flood hazard would result.

A tsunami is a large ocean wave associated with a seismic event; and a mudflow is the rapid, downhill movement of a large mass of mud formed from loose soil and water. The project area is not in proximity to the ocean and would therefore not be impacted by tsunamis. In addition, the project area and vicinity are relatively flat and would not be impacted by mudflows.

A seiche is an oscillation of a land-locked water body, such as a lake or dam, typically caused by strong winds and rapid changes in atmospheric pressure. There are no land-locked waterways located in or adjacent to the project area. El Nido Reservoir is located approximately 28 miles south of the project area. Flows in the canal are controlled artificially to meet the agricultural needs of adjacent properties, therefore would not pose a risk for inundation. Therefore, there would be no impact.

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

Less Than Significant Impact. See discussion a) above. The project design, as well as compliance with all federal, state, and local regulations regarding water quality standards, would ensure that the project would not substantially degrade water quality and would support existing water quality and management plans. Therefore, there would be less than significant impacts.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Standard BMPs would be incorporated into the project to comply with the County's NPDES Permit. In addition to standard BMPs, the following avoidance and minimization measures would be implemented during construction to avoid or minimize adverse effects on water quality within Outside Canal during construction:

WQ-1 Work areas would be minimized to the smallest area feasible.

WQ-2 Staging areas would be sited away from the edges of the canal to reduce potential for disturbance of, or non-stormwater discharge to, Lateral #6 Canal.

WQ-3 BMPs would be implemented to minimize dust, dirt, and debris resulting from construction activities, and to protect the water quality of Lateral #6 Canal pursuant to the requirements of the RWQCB and project permits.

WQ-4 Appropriate hazardous material BMPs would be implemented to minimize the potential for chemical spills or containment releases into Lateral #6 Canal, including any non-stormwater discharge.

WQ-5 All equipment refueling and maintenance would be conducted in the upland staging area away from the canal, per standard specifications and regulatory permits. In addition, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans would be placed under all equipment that is parked and not in operation.

WQ-6 Following completion of construction activities, appropriate erosion control measures would be implemented to ensure that soils disturbed by construction are stabilized, to minimize non-stormwater discharges into Lateral #6 Canal, and to meet the requirements of the RWQCB and project permits.

4.11 LAND USE AND PLANNING

Would the project:

Question	CEQA Determination
a) Physically divide an established community?	No Impact
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 following discussion incorporates the results of the Land Use and Community Impacts Memorandum that was prepared for the project (GPA Consulting, 2022b).

REGULATORY SETTING:

State Regulations

California Government Code Section 65300, et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including at a minimum land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area.

The State Zoning Law (California Government Code Section 65800, et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific zone district, are required to be consistent with the general plan.Local Regulations

2030 Merced County General Plan

The Land Use and Community Character Element of the General Plan identifies policies as they relate to land use and planning (County of Merced, 2012).

- Policy LU-10.12: Consultation with State and Federal Agencies. Continue to consult with applicable State and Federal regulatory agencies during project review and permitting activities.

AFFECTED ENVIRONMENT

Land surrounding the project area is designated as Agricultural and Low Density Residential, with a rural residence located adjacent to and southwest of the project area. According to the County's General Plan Land Policy Diagram, the project area is located within agricultural land uses and is identified as an "Isolated Urban Area" (County of Merced, n.d.).These areas include isolated urban areas in unincorporated Merced County which were designated for urban land uses prior to the adoption of the "urban centered concept" in the 1978 General Plan Land Use Element. These areas typically contain a cluster of homes on limited public infrastructure, or individual commercial or industrial land use. The canal conveys water underneath the bridge, which is primarily used for irrigation.

DISCUSSION OF CHECKLIST RESPONSES:

a. Would the project physically divide an established community?

No Impact: The project would include replacing the existing Merced Avenue Bridge over the canal. The project would not result in substantial changes to alignment or an increased number of through lanes. Traffic flow along Merced Avenue could be temporarily affected during project construction. However, traffic over the canal would be directed to an alternate route, a detour of approximately one mile. Following construction, the roadway would be restored to existing conditions, and emergency access would not be affected during project operation. Therefore, there would be no impact.

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?

Less Than Significant Impact. The project area is zoned as agricultural and rural residential land uses (California Department of Conservation, 2016). The existing roadway and bridge are within existing County ROW or easements; however additional ROW and TCE from surrounding properties may be required to complete the project. TCE would be required from APN 009-411-011, APN 009-100-015, APN 009-403-001, APN 046-110-026 and APN 046-260-004. However, TCE would not change the existing land use and would be removed following project construction. It is anticipated that permanent ROW acquisition would be needed to accommodate increased width of the new bridge from one adjacent parcel: APN 046-110-017. Only 0.008 acre would be unfarmable after completion of the project due to permanent impacts. The remaining farmland would continue to be used for agricultural purposes and would not be impacted by the project. Therefore, there would be less than significant impact.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Land Use and Planning. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Land Use and Planning.

4.12 MINERAL RESOURCES

Would the project:

Question	CEQA Determination
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
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

REGULATORY SETTING:

Local Regulations

2030 Merced County General Plan

The Natural Resources Element of the General Plan identifies to the following goal and policies that area applicable to the project (County of Merced, 2012).

- Goal NR-3: Facilitate orderly development and extraction of mineral resources while preserving open space, natural resources, and soil resources and avoiding or mitigating significant adverse impacts.

- Policy NR-3.1: Soil Protection. Protect soil resources from erosion, contamination, and other effects that substantially reduce their value or lead to the creation of hazards.

- Policy NR-3.2: Soil Erosion and Contamination. Require minimal disturbance of vegetation during construction to improve soil stability, reduce erosion, and improve stormwater quality.

- Policy NR-3.12: Sand and Gravel Extraction Control. Ensure that strict control is maintained on sand and gravel extractions in streambed channels and within areas designated as having sensitive habitat and open space resources.

AFFECTED ENVIRONMENT:

Merced County is rich in nonfuel mineral and soil resources; however, there are very few traditional hard rock mines in operation today. The county's mineral resources are primarily sand and gravel, which are ample in the county. Currently, there is very little mineral in the county and only one gold mining company operating (circa 1914). The mineral indications are found in the Coast Range Mountains in the southwestern part of the county adjoining Santa Clara County and in the northeastern part adjoining Mariposa County (County of Merced, 2012).

DISCUSSION OF CHECKLIST RESPONSES:

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

No Impact: According to the General Plan, Open Space/Conservation Element, there is sand and gravel extraction within the county; however, most mineral resources are found in the southwestern portion of the county in the Coast Mountain range (County of Merced, 2012).For this reason, the project would not result in a loss of a known mineral resource. Therefore, there would be no impact on mineral resources.

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

No Impact: See discussion in response (a) above.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in no impact on Mineral Resources. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Mineral Resources.

4.13 NOISE

Would the project result in:

Question	CEQA Determination
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 Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	Less Than Significant Impact
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

REGULATORY SETTING:

The following construction noise standards are applicable to the project.

Caltrans Standard Specifications Section 14-8.02

Caltrans Standard Specifications Section 14-8.02, Noise Control, requires the following mandatory noise abatement measures:

- Per Section 14-8.02, Noise Control, do not exceed 86 A-weighted decibels (dBA) at 50 feet from the job site activities from 9 p.m. to 6 a.m.

- Each internal combustion engine, used for any purpose on the job, or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the job site without an appropriate muffler.

Local Regulations

2030 Merced County General Plan

The following noise level standards have been developed in order to quantify noise impacts in the county. **Table 5** shows the noise level standards for noise-sensitive areas affected by traffic, railroad, or airport noise sources in the county. **Table 6** shows the interior and exterior noise level standards for noise-sensitive areas affected by existing non-transportation noise sources in the county. In addition to these standards, the policies in this section address ways to reduce or eliminate existing and future conflicts between land uses and noise.

Table 5. Noise Standards for New Uses Affected by Traffic, Railroad, and Airport Noise

New Land Use	Sensitive[1] Outdoor Area - Ldn	Sensitive Interior[2] Area - Ldn	Notes
All Residential	65	45	3
Transient Lodging	65	45	3,4
Hospitals & Nursing Homes	65	45	3, 4, 5
Theaters & Auditoriums	---	35	4
Churches, Meeting Halls, Schools, Libraries, etc.	65	40	4
Office Buildings	65	45	4
Commercial Buildings	---	50	4
Playgrounds, Parks, etc.	70	---	
Industry	65	50	4

Notes:

1. *Sensitive Outdoor Areas include primary outdoor activity areas associated with any given land use at which noise-sensitivity exists and the location at which the county's exterior noise level standards are applied.*
2. *Sensitive Interior Areas includes any interior area associated with any given land use at which noise-sensitivity exists and the location at which the county's interior noise level standards are applied. Examples of sensitive interior spaces include, but are not limited to, all habitable rooms of residential and transient lodging facilities, hospital rooms, classrooms, library interiors, offices, worship spaces, theaters. Interior noise level standards are applied within noise-sensitive areas of the various land uses with windows and doors in the closed positions.*
3. *Railroad warning horn usage shall not be included in the computation of Ldn.*
4. *Only the interior noise level standard shall apply if there are no sensitive exterior spaces proposed for these uses.*
5. *Since hospitals are often noise-generating uses, the exterior noise level standards are applicable only to clearly identified areas designated for outdoor relaxation by either hospital staff or patients.*

Table 6. Non-Transportation Noise Standards Median (L50) / Maximum (Lmax)

Receiving Land Use	Outdoor Area[2]		Interior[3]	Notes
	Daytime	Nighttime	Day or Night	
All Residential	55 / 75	50 / 70	35 / 55	
Transient Lodging	55 / 75	---	35 / 55	4
Hospitals & Nursing Homes	55 / 75	---	35 / 55	5, 6
Theaters & Auditoriums	---	---	30 / 50	6
Churches, Meeting Halls, Schools, Libraries, etc.	55 / 75	---	35 / 60	6
Office Buildings	60 / 75	---	45 / 65	6

Commercial Buildings	55 / 75	---	45 / 65	6
Playgrounds, Parks, etc.	65 / 75	---	---	6
Industry	60 / 80	---	50 / 70	6

Notes:

1. *These standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards in this table, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.*
2. *Sensitive Outdoor Areas include primary outdoor activity areas associated with any given land use at which noise-sensitivity exists and the location at which the county's exterior noise level standards are applied.*
3. *Sensitive Interior Areas includes any interior area associated with any given land use at which noise sensitivity exists and the location at which the county's interior noise level standards are applied. Examples of sensitive interior spaces include, but are not limited to, all habitable rooms of residential and transient lodging facilities, hospital rooms, classrooms, library interiors, offices, worship spaces, theaters. Interior noise level standards are applied within noise-sensitive areas of the various land uses with windows and doors in the closed positions.*
4. *Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.*
5. *Since hospitals are often noise-generating uses, the exterior noise level standards are applicable only to clearly identified areas designated for outdoor relaxation by either hospital staff or patients.*
6. *The outdoor activity areas of these uses (if any) are not typically used during nighttime hours.*
7. *Where median (L50) noise level data is not available for a particular noise source, average (L_{eq}) values may be substituted for the standards of this table provided the noise source operates for at least 30 minutes. If the source operates less than 30 minutes the maximum noise level standards shown shall apply.*

The Health and Safety Element of the General Plan identifies the following goal and policies in regard to the noise environment in the project area (County of Merced, 2012).

- Goal HS-7: Protect residents, employees, and visitors from the harmful and annoying effects of exposure to excessive noise.

- Policy HS-7.2: Acoustical and Groundborne Vibration Analysis Requirements. Require development project applicants to prepare an acoustical analysis as part of the environmental review process when noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels shown in Tables HS-1 and HS-2. Require an analysis of groundborne vibration for proposed residential and other sensitive projects (including but not limited to hospitals and schools) located within 1,000 feet of a rail line with at least 30 operations per day or an existing industrial groundborne vibration source. The acoustical and groundborne vibration analyses shall:
    a) Be the responsibility of the applicant;
    b) Be prepared by qualified persons experienced in the fields of environmental noise and groundborne vibration assessment and architectural acoustics;
    c) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;
    d) Estimate projected future (20 year) noise levels relative to the standards shown in Tables HS-1 and HS-2 at the property line of the proposed use, and, as applicable, estimate project future groundborne vibration levels using a maximum vibration standard of 70 VdB;
    e) Recommend appropriate mitigation to achieve compliance with the adopted policies and standards in this element, including setbacks from groundborne vibration sources causing adverse levels of vibration; and

f) Estimate interior and exterior noise, and groundborne vibration exposure after the prescribed mitigation measures have been implemented at the property line.

- Policy HS-7.5: Noise Generating Activities. Limit noise generating activities, such as construction, to hours of normal business operation.

- Policy HS-7.9: Transportation Project Construction/Improvements. Require transportation project proponents to prepare all acoustical analysis for all roadway and railway construction projects in accordance with Policy HS-7.2; additionally, rail projects shall require the preparation of a groundborne vibration analysis in accordance with Policy HS-7.2. Consider noise mitigation measures to reduce traffic and/or rail noise levels to comply with Table HS-1 standards if pre-project noise levels already exceed the noise standards of Table HS-1 and the increase is significant. The County defines a significant increase as follows:

Pre-Project Noise Environment (Ldn)	Significant Increase
Less than 60 dB	5+ dB
60 - 65 dB	3+ dB
Greater than 65 dB	1.5+ dB

The County does not have a noise ordinance that regulates construction noise. Caltrans Standard Specifications Section 14-8.02 requires that noise levels from construction between the hours of 9:00 p.m. and 6:00 a.m. not exceed 86 dBA at a distance of 50 feet from the construction area.

AFFECTED ENVIRONMENT:

Existing noise sources in the project area and vicinity are predominantly from vehicle traffic along Merced Avenue Road, agricultural activities (e.g., orchard operations,) nearby residential uses, and natural noise sources. (e.g., animals, wind, etc.). Traffic levels in the project area are relatively low, with an estimated ADT count of the current ADT of 2,249 vehicles per day. Because traffic is the dominant noise source, ambient noise levels are assumed to be the highest during the peak traffic hours, generally between 7:00 a.m. to 9 a.m. The only sensitive noise receptor near the project area is a residence 70 feet from the project area.

DISCUSSION OF CHECKLIST RESPONSES:

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 Impact: The project would include replacing the existing bridge. Although the bridge would be widened by approximately four feet, the project would maintain the same number of through lanes (one lane in each direction) and would not increase capacity, result in additional vehicles on the roadway, or move traffic closer to sensitive noise receptors. Therefore, operation of the project would not change the existing noise environment in the project vicinity.

Construction activities for the project could result in short-term and intermittent increases in noise levels in the project area. Sensitive noise receptors (residential structure) are located 70 feet from the project area. Noise levels would vary depending on construction activity, equipment type, duration of use, and the distance between noise source and receiver. Typical sound emission characteristics of construction

equipment that may be used during project construction are provided in **Table 7** below (Construction Equipment Noise Levels). The noise levels are described in terms of L_{max}, which is the maximum sound level of a particular noise event.

Table 7. Construction Equipment Noise Levels

Equipment	Noise Level (dBA at 50 feet)	
	L_{max}	L_{eq}
Backhoes	78	74
Bulldozers	82	78
Compressors	78	74
Cranes	81	73
Concrete Pump Truck	81	74
Drill Rigs	79	72
Dump Trucks	77	73
Hydraulic Break Rams	90	80
Front End Loaders	79	75
Impact Pile Drivers	101	94
Pneumatic Tools	85	82
Pumps	81	78
Rollers	80	73
Scrapers	84	80

Notes: Based on measured instantaneous noise levels (L_{max}), average equipment usage rates, and calculated average-hourly (L_{eq}) noise levels derived from the FHWA Road Construction Noise Model.

In accordance with the County's Noise Control Ordinance (Merced County Code, Title 10, Public Peace, Morals and Welfare), noise from construction activities between the daytime hours of 7:00 a.m. and 6:00 p.m. are typically exempt from the noise control restrictions. Construction equipment is also required by the noise ordinance to be properly muffled and maintained. In addition, Caltrans Standard Specifications Section 14-8.02 requires that noise levels from construction between the hours of 9:00 p.m. and 6:00 a.m. not exceed 86 dBA at a distance of 50 feet from the construction area. In addition, all internal combustion engines are required by Caltrans Standard Specifications Section 14-8.02 to be equipped with the manufacturer-recommended muffler and must be operated in the construction area with the appropriate muffler. Construction activities would be short-term and intermittent, and project construction would be conducted in compliance with measures **NOI-1** through **NOI-5**, which would minimize potential impacts. Therefore, there would be less than significant impacts.

b. Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact: Vibration is sound radiated through the ground. Vibration can result from a source (e.g., train operations, motor vehicles, machinery equipment, etc.) causing the adjacent ground to move, thereby, creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as ground-borne vibration. Ground-borne vibration is measured as peak particle velocity (ppv) in inches per second. The nearest residential land uses are located approximately 70 feet from the project area. The general human response to different levels of ground-

borne vibration velocity levels is described below in **Table 8** while ground-borne vibration levels that could induce potential damage to buildings are identified in **Table 9**. Examples of typical construction equipment related to roadway projects and their associated vibration levels are identified in **Table 10**.

Table 8. Human Response to Levels of Ground-Borne Vibration

Human Response	Maximum PPV in Inches per Second	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely Perceptible	0.035	0.01
Distinctly Perceptible	0.24	0.04
Strongly Perceptible	0.9	0.1
Severe	2	0.4

Source: (California Department of Transportation, 2013)

Table 9. Ground-Borne Vibration Damage Potential Criteria

Structure and Condition	Maximum PPV in Inches per Second	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely Fragile Historic Buildings, Ruins, Ancient Monuments	0.12	0.08
Fragile Buildings	0.2	0.1
Historic and Some Old Buildings	0.5	0.25
Older Residential Structures	0.5	0.3
New Residential Structures	1	0.5
Modern Industrial/Commercial Buildings	2	0.5

Source: (California Department of Transportation, 2013)

Table 10. Vibration Levels of Construction Equipment

Equipment	Peak Particle Velocity at 70 Feet (in/sec)
Caisson Drilling	0.0189
Vibratory Roller	0.0448
Hoe Ram	0.0189
Large Bulldozers	0.0189
Loaded Trucks	0.0162
Jackhammer	0.0075
Small Bulldozers	0.0006

Source: FTA 2006b, Caltrans 2013

It is expected that groundborne vibration and noise from project construction would be intermittent and would be localized near the project area. As shown in **Table 9**, the groundborne vibration level of construction equipment at 70 feet ranges from 0.0006 ppv to 0.0448 ppv; therefore, buildings near the project area be damaged by construction-generated groundborne vibration. In addition, according to **Table 7**, the human response for the vibration level would be between distinctly perceptible. Construction activities would be short-term and intermittent, and project construction would be conducted in compliance with measures **NOI-1** through **NOI-5**, which would minimize potential impacts. Therefore, there would be less than significant 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 area is more than seven miles southeast of the nearest airport, Gustine Municipal Airport (301) (Google, Inc., 2015). The project area is not within the airport influence area or within two miles of a public airport or public use airport. Therefore, there would be no impact.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The following measures should be implemented to minimize short-term construction noise impacts:

NOI-1 Construction activities, excluding activities that would pose a significant safety risk to workers or citizens, should be limited to between the daytime hours of 7:00 a.m. and 6:00 p.m.

NOI-2 Locate stationary construction equipment and equipment staging areas at the furthest distance from nearby residential dwellings.

NOI-3 Turn off construction vehicles and equipment when not in use.

NOI-4 Schedule construction activities and deliveries to avoid noise-sensitive days (i.e., holidays).

NOI-5 Select lower noise-generating construction methods and equipment to the extent possible, such as non-impact pile drivers (i.e., vibratory, static load piling system).

4.14 POPULATION AND HOUSING

Would the project:

Question	CEQA Determination
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact

REGULATORY SETTING:

No federal, state or local plans, policies, regulations, or laws related to population and housing are applicable to the project.

AFFECTED ENVIRONMENT:

The project area is surrounded mostly by agricultural land uses, and a residence adjacent and southwest of project area.

DISCUSSION OF CHECKLIST RESPONSES

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

No Impact. The project would include replacing Merced Avenue Bridge. No new residential uses are proposed as part of the project and the infrastructure improvements would not increase the capacity along Merced Avenue. The project would not induce population growth in the area. Therefore, there would be no impact on substantial population growth in the area.

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

No Impact. The project would not result in the demolition of any existing residential units or the displacement of any residents. Therefore, there would be no impact related to the displacement of existing housing.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in no impact on Population and Housing. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Population and Housing.

4.15 PUBLIC SERVICES

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 following public services:

Question	CEQA Determination
a) Fire protection?	Less Than Significant Impact
b) Police protection?	Less Than Significant Impact
c) Schools?	No Impact
d) Parks?	No Impact
e) Other public facilities?	Less Than Significant Impact

REGULATORY SETTING:

No federal, state or local plans, policies, regulations, or laws related to public services are applicable to the project.

AFFECTED ENVIRONMENT:

The Merced County Fire Department (MCFD) is responsible for providing emergency medical services in the project area. The MCFD's station response areas vary from 16 miles to 325 square miles. The service area for the department is over 2,000 square miles.

Emergency response time standards vary by area; the response time guideline established by the California Emergency Medical Services Agency is five minutes in urban areas, 15 minutes in suburban or rural areas, and as quickly as possible in wilderness areas. Response times for the MCFD are not available. The nearest fire station to the project area are the Gustine Fire Department, approximately 7.6 miles northeast to the project area.

The Merced County Sheriff's Department is the primary agency responsible for law enforcement in unincorporated Merced County, including the project area. The Sheriff's Department is staffed with 72 full-time and 25 part-time sworn officers. The department offices are located at 700 W 22nd Street in Merced.

The Merced County Office of Education oversees public primary education for the Merced County District and Schools. Merced County District provides Kindergarten through 12th grade education to students living in Merced County. The district has a total of 20 school districts within the county. The nearest school is Delhi High School located approximately 0.3-mile southeast to the project area.

The nearest park to the project area is Taylor Park located approximately 0.6 mile northeast of the project area.

DISCUSSION OF CHECKLIST RESPONSES:

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:

i. Fire protection?

Less Than Significant Impact. The project would not result in an increase in population and would not increase the capacity of traffic along the roadway. Therefore, the project would not be expected to increase the demand for public services and would not require the development of new public facilities that would cause significant environmental impacts. The construction of the project would temporarily impact services due to the closure of the roadway during construction. However, a transportation management plan (TMP) would be implemented to manage construction and traffic during construction. It would include a detour it would include a detour (approximately one mile) to allow traffic access around the project site. Roads anticipated to be used for the detour include Schendel Avenue, Shanks Road, and Letteau Avenue. Following construction, the roadway would be restored to existing conditions, and emergency access would not be affected during project operation. The project would improve public safety and maintain access across the bridge. Therefore, there would be less than significant impacts.

ii. Police protection?

Less Than Significant Impact: See discussion in response a(i) above.

iii. Schools?

No Impact. The nearest school is Delhi High School, located approximately 0.3 mile southeast of the project area. The project would not include residential development, would not result in an increase in population, and would not increase the potential number of students within the service area of the Delhi High School. Therefore, there would be no impact on schools.

iv. Parks?

No Impact. The nearest park is Taylor Park, located approximately 0.6 mile northeast of the project area. The project would not include residential development and would not increase the potential number of residents using Taylor Park. In addition, the project would not increase the need for recreational facilities. Access would be maintained during construction and the project would not create access issues to recreational facilities. Therefore, the project would result in no impact on parks.

v. Other public facilities?

Less Than Significant Impact. The project would not include residential development and would not increase the potential number of residents within the project vicinity that could result in an increase demand for other public services such as public libraries. The project would potentially cause delays due to the road closure during construction. The TMP would manage delays, emergency access, and detours during the construction phase of the project. Following construction, the roadway would be restored to

existing conditions, and emergency access would not be affected during project operation. Therefore, the project would result in a less than significant impact on other public facilities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in no impact on Public Services. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Public Services.

4.16 RECREATION

Question	CEQA Determination
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
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?	No Impact

REGULATORY SETTING:

Federal and State Regulations

No federal or state plans, policies, regulations, or laws related to public services are applicable to the project.

Local Regulations

2030 Merced County General Plan

The Recreation and Cultural Resources Element of the General Plan identifies the following goal as applicable to the project (County of Merced, 2012).

- Goal RCR-1: Preserve, enhance, expand, and manage Merced County's diverse system of regional parks, trails, recreation areas, and natural resources for the enjoyment of present and future residents and park visitors.

AFFECTED ENVIRONMENT:

Merced County contains several county, state, and federal parks and recreation areas and public open space areas. There are approximately 114,000 acres of park and recreation facilities in the county that offer a variety of amenities such as picnicking, swimming, boating, hunting, bird watching, playgrounds, sports fields, and hiking. While no parks are located within 1.5 mile of the project area, the nearest park to the project area is Henry Miller Park located approximately eight miles northeast of the project area According to the USFWS, the nearest wildlife refuge is the San Luis National Wildlife Refuge, located more than 23 road miles east of the project area.

DISCUSSION OF CHECKLIST RESPONSES:

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 project is not located within or adjacent to any parks or recreational facilities (County of Merced, n.d.). The project is not expected to cause major delays in traffic that would affect any recreation center within the vicinity. The project would not include residential development. Therefore, development of the project would not increase the potential number of residents within the county that would, in turn 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. In addition, the project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Therefore, there would be no impact.

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?

No Impact: See response a) above. The project is not located within or adjacent to any parks or recreational facilities (County of Merced, n.d.). The project would not include the construction of new facilities or require the expansion of existing recreational facilities because the project would not result in population growth that would increase demand for additional recreational facilities. Therefore, there would be no impact.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in no impact on Recreation. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Recreation.

4.17 TRANSPORTATION

Would the project:

Question	CEQA Determination
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Less Than Significant Impact
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	No Impact
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
d) Result in inadequate emergency access?	Less Than Significant Impact

REGULATORY SETTING:

Federal Regulations

The Federal Highway Administration's Highway Safety Improvement Program

The goal of the program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The Highway Safety Improvement Program requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance.

Local Regulations

2030 Merced County General Plan

The Transportation and Circulation Element of the General Plan identifies the following goal and policies that are applicable to the project (County of Merced, 2012).

- Goal CIR-1: Maintain an efficient roadway system for the movement of people and goods that enhances the physical, economic, and social environment while being safe, efficient, and cost-effective.

- Policy CIR-1.9: Roadway Maintenance and Improvement. Require that roadways are maintained and improved consistent with established peak period level of service.

- Policy CIR-1.10: Road System Coordination. Cooperate with the cities within the county, adjacent counties, and State and Federal transportation agencies to coordinate the countywide roadway system, including ROW dedication and roadway improvements.

- Policy CIR-1.13: Cost-Effective Roadway Maintenance and Improvement (RDR). Support all methods to achieve cost-effective design, construction, and maintenance of existing and future roadways.

AFFECTED ENVIRONMENT:

The County maintains a variety of roadways which have differing characteristics. These roadways include everything from low-volume rural local roadways serving agricultural areas to high-volume urban expressways serving large urban areas. All of these roadways play a vital role in how people and goods are transported throughout the county. The roadway network that serves the county consists of Freeways, Principal Arterials, Minor Arterials, Major Collectors, Minor Collectors, and Local Roads. The County Arterials are all state highways, including SR-99, SR-59, SR-140, SR-165, and SR-33. I-5 traverses through the county to the south. The roadway network that serves the project area consists of Cottonwood Road, which is identified as Minor Collector. The project area is not currently served by pedestrian, bicycle or public transportation or bus systems.

DISCUSSION OF CHECKLIST RESPONSES:

a. Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less Than Significant Impact. The project would maintain the same number of through lanes (one in each direction) during operation and would not result in additional vehicles along the bridge. Traffic flow would be temporarily impacted during construction and Merced Avenue is anticipated to be closed during all construction activities. Traffic over the canal would be directed to an alternative route, a detour of approximately one mile long, and includes Schendel Avenue, Shanks Road, and Letteau Avenue. Traffic flow would be restored to existing conditions after construction is complete. Therefore, there would be less than significant impacts.

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

No Impact. The purpose of the project is to improve traffic safety along the bridge by replacing a structurally deficient bridge. The project would maintain the same number of through lanes (one in each direction) and is not anticipated to result in additional vehicles on the bridge. During construction traffic flow could be temporarily affected by slight delays or slightly increased travel time from construction vehicles and activities in the project area. As stated in response a) above traffic over the canal would be directed to an alternative route, a detour of approximately one mile long, and includes Schendel Avenue, Shanks Road, and Letteau Avenue. Traffic flow would be restored to existing conditions after construction is complete. Therefore, there would be less than significant impacts.

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

No Impact. The purpose of the project is to improve traffic safety along the bridge by replacing a structurally deficient bridge. With implementation of the project, the alignment and function of the bridge would remain the same as under existing conditions. The project would not increase hazards because of a design feature or incompatible use and would be expected to improve the safety of the roadway. Therefore, there would be no impacts.

d. Would the project result in inadequate emergency access?

Less Than Significant Impact: The project does not include any elements that would impede emergency access to or from the project area. Traffic flow along the Merced Avenue Bridge could be temporarily affected during project construction. Traffic over the canal would be directed to an alternate route, a detour of approximately one mile and includes Schendel Avenue, Shanks Road, and Letteau Avenue. Traffic flow would be restored to existing conditions after construction is complete. Therefore, there would be less than significant impacts.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Transportation. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Transportation.

4.18 TRIBAL AND 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:

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

REGULATORY SETTING:

State Regulations

Assembly Bill 52 (PRC 21080.1, 21080.3.1, and 21080.3.2)

As of July 1, 2015, AB 52 requires public agencies to consult with California Native American tribes identified by the NAHC for the purpose of mitigating impacts on tribal cultural resources. The specific directives of the bill are as follows:

"Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section (PRC Section 21080.1(d))."

California Health and Safety Code Section 7050.5

The State of California HSC Section 7050.5 requires that if human remains are discovered during ground disturbing activities, the County Coroner must be notified, and no further disturbance is authorized to occur until the County Coroner has made a determination of origin and disposition of the remains. If the human remains are determined to be prehistoric, the coroner must notify the NAHC, who will determine and notify a MLD. The MLD then inspects the site and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Local Regulations

2030 Merced County General Plan

The Recreation and Cultural Resources Element of the General Plan contains the following policies that are applicable to the project (County of Merced, 2012).

- Policy RCR-2.1: Archeological Site and Artifact Protection (RDR). Require development projects that affect archeological sites and artifacts to avoid disturbance or damage to these sites.

- Policy RCR-2.5: Human Remains Discovery (RDR). Require that, in the event of the discovery of human remains on any project construction site, all work in the vicinity of the find will cease and the County Coroner and Native American Heritage Commission will be notified.

- Policy RCR-2.10: Tribal Consultation (RDR/MPSP/IGC). Consult with Native American tribes regarding proposed development projects and land use policy changes consistent with Planning and Zoning Law at Government Code Section 65351, and the OPR Tribal Consultation Guidelines (2005).

AFFECTED ENVIRONMENT

Native American Heritage Commission

On April 11, 2018, InContext requested a sacred lands search and Section 106 consultation outreach list from the Native American Heritage Commission (NAHC). On April 27, 2018, the NAHC responded that their search of Sacred Lands File returned negative results and provided their current Native American Consultation List for Merced County.

An updated search was requested on February 8, 2022; the NAHC responded on March 22, 2022, with a notice of negative findings from the Sacred Lands File and an updated consultant list.

Native American Consultation

On March 22, 2023, letters were sent to the Tribal Consultants on the NAHC list via email with automatic delivery receipts. Delivery receipts were received by March 22, 2023. On April 4, 2023, follow-up emails were sent to confirm recipients received the email, letter, and map, and to inquire if there were any concerns regarding the project. On April 7, 2023, three follow-up emails were required as the original follow-up had not been delivered. On April 11, 2023, a phone call was made to the Wuksache Indian Tribe because their email had still not been delivered. A phone message was left summarizing the project and requesting a return phone call. No responses to this second series of letters and outreach were received.

DISCUSSION OF CHECKLIST RESPONSES:

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

Less Than Significant Impact. No archaeological resources were identified within the ADI. In addition, letters were sent to Tribal Consultants and no responses were received. However, construction of the project would include ground disturbing activities that could unearth tribal cultural resources should they

be present in the project limits. Tribal cultural resources could include, but are not limited to, Native American human remains, funerary objects, items or artifacts, sites, features, places, landscapes, or objects with cultural values to the Tribe. Avoidance and minimization measure **CUL-1** would be implemented as part of the project if previously unidentified resources are uncovered. In addition, avoidance and minimization measure **CUL-2** would be implemented if any human remains are discovered. Therefore, the project would result in less than significant impacts on tribal cultural resources.

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less Than Significant Impact. See discussion in response a) above.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

See avoidance, minimization and mitigation measures in Section 4.5 *Cultural Resources*.

4.19 UTILITIES AND SERVICE SYSTEMS

Would the project:

Question	CEQA Determination
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?	Less Than Significant Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact
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
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less Than Significant Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact

REGULATORY SETTING:

Federal and State Regulations

No federal or state plans, policies, regulations, or laws related to utilities and service systems are applicable to the project.

Local Regulations

2030 Merced County General Plan

The Public Facilities and Services Element of the 2030 General Plan identifies the following policies that are applicable to the project (County of Merced, 2012).

- Policy PFS-3.1: Stormwater Management Plans. Require stormwater management plans for all Urban Communities to reduce flood risk, protect soils from erosion, control stormwater runoff, and minimize impacts on existing drainage facilities.

- Policy PFS-3.4: Agency Coordination. Coordinate with the U.S. Army Corps of Engineers and other appropriate agencies to develop stormwater detention/retention facilities and recharge facilities that enhance flood protection and improve groundwater recharge.

- Policy PFS-3.6: Retention/Detention Facility. Encourage stormwater detention/retention project designs that minimize drainage concentrations and impervious coverage, avoid floodplain areas, are visually unobtrusive and, where feasible, provide a natural watercourse appearance and a secondary use, such as recreation.

- Policy PFS-4.6: Solid Waste Reduction. Support and promote feasible waste reduction, recycling, and composting efforts.

Merced Irrigation District Water Resources Management Plan

The Merced Irrigation District Water Resources Management Plan (WRMP) is an in-depth study of the District's water resources, delivery system, and operations. The WRMP is essentially a long-range business plan for the District. It will give practical, specific recommendations for system and operational improvements that will ensure reliable quality service to its customers and comply with CEQA.

Stormwater Management Program

The SWMP has been developed to meet the terms of the General Permit and consists of the six minimum control measures established by SWRCB for Phase II stormwater discharges. Implementation of these control measures are expected to result in significant reductions of pollutants discharged into receiving water bodies. The following control measure is applicable to the project:

- Illicit Discharge Detection and Elimination Program, which is intended to minimize illicit discharges into the storm sewer system. Illicit discharges are discharges that are not composed entirely of stormwater. Storm sewer systems are not designed to accept process or discharge such non-stormwater wastes. Minimizing these discharges can help to prevent high levels of pollutants from entering receiving waters. The BMPs in this section include:
    - Storm sewer system map
    - Stormwater ordinance
    - Dry weather screening program
    - Public information program
    - Employee training program

AFFECTED ENVIRONMENT:

The Merced Irrigation District Water and Power provides water to the county and project area from the Merced River at two locations. The Northside Canal diversion serves about 10,000 acres of farm ground north of the Merced River. The Main Canal diversion has a capacity of 2,000 cfs, and is located three miles downstream of the McSwain Dam. The diversion is from a small reservoir created by the Crocker Huffman Diversion Dam, owned and operated by the District. The Diversion Dam also provides water to salmon and trout hatcheries and rearing facilities.

The project area lies within the Merced County Regional Waste Authority (MCRWA), which provides waste disposal services to the county and project area. Wastewater services at the project area are provided by the city of Gustine Wastewater Treatment Facility.

DISCUSSION OF CHECKLIST RESPONSES:

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

Less Than Significant Impact. The project consists of the replacement of an existing bridge. The capacity of the roadway would remain the same, and the project would not induce population growth or generate

additional water or wastewater needs that would result in the construction of new or expanded water or wastewater treatment facilities. The project would include widening the existing bridge by approximately 27 feet, which would result in increased stormwater runoff. However, drainage patterns would remain similar to existing conditions, and the project would be designed to accommodate existing and anticipated runoff levels as required by standard design guidelines used by the county.

The project would require work in the Lateral #6 Canal, which could result in water quality impacts; therefore, a Section 404 Nationwide Permit from the USACE, Section 401 Water Quality Certification from the RWQCB, and Section 1602 Streambed Alteration Agreement from the CDFW would be required for the project. The project would be conducted in compliance with applicable water quality regulations and required permits, potential water quality impacts and potential impacts associated stormwater drainage facilities would be minimized.

During construction, there would be a potential for a temporary canal diversion system in order to construct new abutments, however once construction is complete the new bridge would not restrict the ordinary flow of the canal. Additionally, there are overhead utilities that would potentially require pole relocation and there would be relocation of an existing outlet pipe that is currently within the anticipated bridge and approach alignment. These relocations would be conducted in compliance with standard water quality and building code regulations. The project would not result in the expansion of utilities that could result in environmental consequences. Therefore, there would be a less than significant impact.

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

No Impact: Construction would require a small amount of water for mixing cement and for dust control, which would be provided by water trucks. The County has sufficient water supplies available to serve the project's water needs during construction. Project operation would not require potable or reclaimed water or new water connections and would therefore not impact existing water supplies. The project would not induce population growth or require any water supplies for long-term operation. Therefore, there would be no impact.

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

Less Than Significant Impact. The project would generate small amounts of solid waste during the construction phase, which could be accommodated by existing area landfills. Operation of the project would not result in an increase of solid waste. Therefore, there would be less than significant impacts.

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

Less Than Significant Impact: The project would generate small amounts of solid waste during the construction phase, which could be accommodated by existing area landfills. Operation of the project would not result in an increase of solid waste. Therefore, there would be less than significant impacts.

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

No Impact: The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impar the attainment of solid waste reduction goals. In addition, the project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, there would be no impact.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Utilities and Service Systems. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Utilities and Service Systems.

4.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Question	CEQA Determination
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact
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
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?	Less Than Significant Impact
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?	Less Than Significant Impact

AFFECTED ENVIRONMENT

Merced County contains an estimated 35% of State Responsibility area, which is defined as an area that the state has the primary responsibility for the prevention and suppression of wildland fires (California Board of Forestry and Fire Protection, 2010). The north-eastern portion of the county is identified as a moderate fire severity zone and the south-western portion of the county contains moderate and high fire severity zones (Calfire, 2007).

DISCUSSION OF CHECKLIST RESPONSES:

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact: The project area located west of SR-99, a major highway that could be designated as an evacuation route in the event of an emergency. It is expected that the project area would be closed for the duration of construction, and a detour of approximately one mile would be provided. The detour routes around the project would include Schendel Avenue, Shanks Road, and Letteau Avenue. A Traffic Control Plan would be developed to detail duration of road closures and to identify appropriate detour routes and required signage. As part of the Traffic Control Plan, emergency service providers that serve the area would be notified of the closure and detour route so that service would not be disrupted. Following construction, the roadway would be restored to existing conditions, and emergency access would not be affected during project operation. Therefore, impacts would be less than significant.

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. According to the Fire Hazard Severity Zones Map, the project area is in an unzoned Local Responsibility Area (The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program, 2007). The project area is surrounded by orchards and sparse residential development and is not in a wildland area. The project would include the removal and replacement of an existing bridge, which would be constructed to fire safety standards prescribed in the Building Code and the County Fire Prevention Ordinance (County of Merced, 2012). Therefore, there would be no impact.

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?

Less Than Significant Impact. The project would not require the installation of any associated infrastructure. The project would require the relocation of an existing outlet pipe, which currently is within the anticipated bridge and approach alignment. However, relocation of the pipe would be installed in accordance with standard practices to prevent the risk or spread of fire and would not exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, there would be a less than significant impact.

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?

Less Than Significant Impact: Implementation of the project would not result in a substantial alteration of existing drainage patterns in the project area, because drainage patterns would remain largely the same as existing drainage patterns. Implementation of the project would result in a slight increase of impervious surface area from installation of the new bridge. Although the project would result in a minor increase in stormwater runoff, the project would be designed to accommodate existing and anticipated runoff levels, and the project would not impact flood risk.

The proposed bridge approaches and roadway profile would be raised to meet the hydraulic requirements associated with the canal. Channel slopes would not result in additional risk of post-fire slope instability since proposed conditions would be similar to existing conditions. The project area is in an unzoned Local Responsibility Area (The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program, 2007). The project would include the removal and replacement of an existing bridge, which would be constructed to fire safety standards prescribed in the Building Code and the County Fire Prevention Ordinance (County of Merced, 2012).Therefore, there would be less than significant impacts.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES:

The project would result in less than significant impacts on Wildfire. Therefore, the project would not require avoidance, minimization, and/or mitigation measures for Wildfire.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

Question	CEQA Determination
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Less Than Significant with Mitigation Incorporated
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Less Than Significant Impact
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

DISCUSSION OF CHECKLIST RESPONSES:

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: As described in *Section 4.4 Biological Resources*, implementation of measures **BIO-1** through **BIO-22** would reduce impacts to less than significant. *Section 4.5 Cultural Resources* describes measures **CUL-1** and **CUL-2** which would avoid and minimize impacts on cultural and tribal resources. Therefore, the project would result in less than significant impact on the quality of the environment, fish or wildlife species habitat, fish or wildlife population, plant or animal communities, number or restricting the range of a rare or endangered plant or animal, or important examples of the major periods of California history or prehistory.

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

Less Than Significant Impact. The project may result in cumulative impacts to the following factors if the project is under construction at the same time as other projects in the regional area:

- **Traffic and transportation:** Project construction may temporarily increase the demand for nearby roads and increase traffic congestion while the bridge is closed, and the detour is in place. However, traffic patterns would be restored to current conditions following completion of the project. Therefore, cumulative impacts from traffic and transportation would be less than significant.

- **Air Quality:** Project construction may result in a cumulative impacts to air quality if the project is under construction at the same time as other projects in the regional area by contributing to emissions such as dust and particulate matter, and vehicle exhausts. Emissions as a result of construction would be temporary and cease after the completion of the project and be restored to current conditions. Therefore, cumulative impacts to air quality would be less than significant.

- **Water Quality:** Project construction may result in a cumulative impacts to water quality if the project is under construction at the same time as other projects in the regional area by increasing the cumulative amount of stormwater runoff, increased impervious cover, and erosion. While the increase of impervious cover would be permanent it is considered less than significant. Impacts related to stormwater runoff and erosion during construction are temporary and will cease once the project is completed. Therefore, cumulative impacts to water quality would be less than significant.

- **Noise:** Project construction has potential result in a cumulative impacts from noise by contributing to the construction noise in conjunction with other projects at the same time and vibration in the area potentially impacting wildlife and other sensitive receptors. However, since the project is located in a rural area, it is unlikely that other projects would be close enough in proximity to this project to increase the overall noise levels and vibration. Therefore, cumulative impacts from noise would be less than significant.

- **Biology:** Project construction may result in a cumulative impacts to biological resources if projects are constructed at the same time by reducing habitat for vegetation and wildlife, interrupting wildlife corridors. However, since the project would result in less than significant impacts to biological resources with the incorporation of measures **BIO-1** through **BIO-23.** Furthermore, the project is located in a rural area, it is unlikely that other projects would be close enough in proximity to this project to disrupt biological populations at a cumulative level. Therefore, cumulative impacts to biological resources would be less than significant.

- **Agriculture:** The project has the potential to contribute to the cumulative permanent loss of agriculture over time. However, by following state, regional, and local plans and regulations, the cumulative loss of farmland would be reduced. Therefore, cumulative impacts to agriculture would be less than significant.

- **Public Services:** The project has the potential to contribute to the cumulative impacts to public services such as emergency access. However, with implementation of TMPs cumulative impacts would be reduced. Therefore, impacts to public services would be less than significant.

Therefore, the project would not result in any significant impacts with the implementation of measures, the project's contribution to cumulative impacts would be less than cumulatively considerable. **Table 11** provides a summary of projects within the region, which would be used in the cumulative impact analysis.

Table 11. Projects Within the Region

Project Name	Project Limits	Project Description	Project Location in Relation to Project Area	Status
Hilmar Bypass Interchange Project	Bradbury Road and State Route 165	The project would involve the construction between Bradbury Road and State Route 165, which would provide an alternative route around Hilmar with connection to the new interchange.	The Hilmar Bypass Interchange Project is located approximately three miles west of the project area.	In Design

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 Initial Study analysis shows that the project would not have environmental effects causing substantial adverse effects on human beings, directly or indirectly. Impacts associated with air quality, biological resources, cultural resources, geology and soils, GHGs, hazards and hazardous materials, transportation, and utilities would all be reduced to a less than significant level with implementation of avoidance, minimization, and/or mitigation measures **VIS-1** through **VIS-4; BIO-1** through **BIO-23; CUL 1** through **CUL-2; HAZ-1** through **HAZ-6; WQ-1** through **WQ-6; NOI-1** through **NOI-5**. Therefore, with implementation of these measures, the project would result in less than significant impacts on human beings, either directly or indirectly.

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