



MERCED FALLS ROAD SHOULDERS PROJECT

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

PREPARED FOR:

Merced County
Department of Public Works
715 Martin Luther King Jr. Way
Merced, CA 95341
Contact: Joe Giulian, P.E.
(209) 385-7601, jgiulian@co.merced.ca.us

PREPARED BY:

GPA Consulting
2600 Capital Avenue, Suite 100
Sacramento, CA 95816

APRIL 2019

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Table of Contents

1. Introduction	1
1.1 Legal Authority and Findings.....	1
1.2 Document Purpose	1
1.3 Document Organization	2
1.4 Terminology	2
2. Environmental Checklist	3
2.1 Environmental Factors Potentially Affected	11
2.2 Determination.....	12
2.3 Evaluation of Environmental Impacts	13
3. Evaluation of Environmental Impacts	14
I. Aesthetics	14
II. Agricultural and Forestry Resources	17
III. Air Quality	20
IV. Biological Resources	27
V. Cultural Resources	44
VI. Energy	49
VII. Geology and Soils.....	50
VIII. Greenhouse Gas Emissions	56
IX. Hazards and Hazardous Materials	59
X. Hydrology and Water Quality	65
XI. Land Use and Planning	72
XII. Mineral Resources.....	74
XIII. Noise	76
XIV. Population and Housing.....	82
XV. Public Services	83
XVI. Recreation.....	86
XVII. Transportation/Traffic	87
XVIII. Tribal and Cultural Resources	90
XIX. Utilities and Service Systems	93
XX. Wildfire.....	96
XXI. Mandatory Findings of Significance	98
4. References	101
5. Preparers and Contributors.....	104
6. Mitigation Monitoring or Reporting Plan (MMRP)	105

Tables

Table 1: Construction Equipment Noise	78
Table 2: Summary of Groundborne Vibration Levels and Potential Effects	79
Table 3: Representative Vibration Levels for Construction Equipment	80

Figures

Figure 1: Regional Location.....	7
Figure 2: Project Location	8
Figure 3: Project Footprint.....	9
Figure 4: Engineering Drawings	10
Figure 5: Biological Study Area	30
Figure 6: Area of Potential Effects	46

Acronyms and Abbreviations

AB	Aggregate Base
AB 32	Assembly Bill 32
AB 52	Assembly Bill 52
ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
ASR	Archaeological Survey Report
bgs	Below Ground Surface
BMP	Best Management Practices
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CBC	California Building Standards Code
CCAA	California Clean Air Act
CCIC	Central California Information Center
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
CNDDDB	California Natural Diversity Database
CO	Carbon Monoxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dba	A-weighted Decibels
DOT	Department of Transportation
DPS	Distinct Population Segment
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
FCAA	Federal Clean Air Act
FESA	Federal Endangered Species Act
FFRMS	Federal Flood Risk Management Standard
FHWA	Federal Highway Administration
GHG	Greenhouse Gases
HCP	Habitat Conservation Plan
HMA	Hot Mix Asphalt
HPSR	Historic Property Survey Report
HSIP	Highway Safety Improvement Program
HWCL	Hazardous Waste Control Law

IS	Initial Study
ISA	Initial Site Assessment
ISMND	Initial Study with Mitigated Negative Declaration
L _{max}	Maximum Sound Level
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MCAG	Merced County Association of Governments
MLD	Most Likely Descendent
MMRP	Mitigation Monitoring or Reporting Plan
MND	Mitigated Negative Declaration
MSWG	Merced Storm Water Group
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
NES	Natural Environment Study
NHPA	National Historic Preservation Act
NO ₂	Nitrogen Dioxide
NO _x	Nitrous Oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	Ozone
PA	Programmatic Agreement
PG&E	Pacific Gas and Electric
PM _{2.5}	Fine Particulate Matter
PM ₁₀	Coarse Particulate Matter
ppv	peak particle velocity
PRC	Public Resources Code
RACT	Reasonably Available Control Technology
RCRA	Resource Conservation and Recovery Act
ROW	Right of Way
RWQCB	Regional Water Quality Control Board
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO ₂	Sulfur Dioxide
SSP	Standard Specifications
SWMP	Storm Water Management Program
SWRCB	State Water Resources Control Board
TCE	Temporary Construction Easement
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
U.S. EPA	United States Environmental Protection Agency

VDE Visible Dust Emissions
VELB Valley Elderberry Longhorn Beetle

1. Introduction

The County of Merced (County) proposes to widen the shoulders of an approximately 1-mile segment of Merced Falls Road just east of Henderson Park, in Merced County, California. As required by the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Sections 21000, et seq.), the County has prepared this Initial Study with proposed Mitigated Negative Declaration (ISMND) to determine whether the Merced Falls Road Shoulders Project (Project) may have a significant effect on the environment.

1.1 Legal Authority and Findings

The County has prepared this ISMND 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 Initial Study (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 15063(c) 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 Mitigated Negative Declaration (MND), or a Negative Declaration (ND);
- 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.
- Section 15070 of the CEQA Guidelines states that a public agency must prepare an ND or an MND for a project subject to CEQA when:
 - The IS shows that there is no substantial evidence, considering the whole record before the agency, that the project may have a significant effect on the environment; or
 - The IS identifies potentially significant effects but:
 - Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed MND and IS are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and

- There is no substantial evidence, considering the whole record before the agency, that the project as revised may have a significant effect on the environment.

An ISMND may be used to satisfy the requirements of CEQA when a proposed project would have no significant unmitigable effects on the environment. As discussed further in subsequent sections of this document, implementation of the proposed project would not result in any significant effects on the environment that cannot be reduced to a level below significance with the mitigation measures included herein.

1.3 Document Organization

This ISMND contains seven sections:

- **Chapter 1. Introduction.** This section provides an overview of the proposed project and the CEQA environmental documentation process.
- **Chapter 2. Environmental Checklist.** This section provides a summary of the project impacts and the CEQA determination.
- **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 ISMND.
- **Chapter 5. Preparers and Contributors.** This section provides a list of key personnel involved in the preparation of the ISMND.
- **Chapter 6. Mitigation Monitoring or Reporting Plan (MMRP).** This section incorporates any avoidance, minimization, or mitigation measures throughout the ISMND.

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 not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.”

2. Environmental Checklist

1. Project Title:

Merced Falls Road Shoulders 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:

Joe Giulian, P.E. Deputy Public Works Director
(209) 385-7601
jgiulian@co.merced.ca.us

4. Project Location:

1-mile segment of Merced Falls Road just east of Henderson Park, 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:

County right of way (ROW) (County of Merced, 2017)

7. Zoning:

County ROW (County of Merced, 2017)

8. Project Description:

The County proposes to widen the shoulders of an approximately 1-mile segment of Merced Falls Road just east of Henderson Park, in Merced County, California (project area) (see **Figure 1**, Regional Location, and **Figure 2**, Project Location). The segment of Merced Falls Road in the project area connects the communities of Snelling and Merced Falls, and provides access to Henderson Park, as well as recreational access points to the Merced River to the south of the road (e.g., Cuneo Fishing Access).

According to the Circulation Element of the County's General Plan, Merced Falls Road is classified as a major collector road (Merced County, 2013). The current roadway consists of two vehicle lanes, one in the eastbound direction and one in the westbound direction, which vary in width

from 12 to 13 feet per lane along the roadway corridor (see **Figure 3**, Project Footprint). The existing roadway has no center median and no paved shoulders.

The project is included in the Merced County Association of Governments (MCAG) 2017 Federal Transportation Improvement Program Back-Up List (Project ID HSIP7-10-003) as part of the Highway Safety Improvement Program (HSIP). The County is the Lead Agency pursuant to CEQA.

The objective of the project is to improve long-term roadway safety. Currently, the roadway has no center median and no paved shoulders. Several accidents involving vehicles drifting off the roadway, as well as fatal crashes, have been recorded on Merced Falls Road. The addition of paved shoulders and centerline and edgeline rumble strips is anticipated to reduce the potential for this type of accident.

Alternative 1: No Build Alternative

Under this alternative, the existing roadway would continue to have no center median and no paved shoulders. This alternative would not achieve the desired safety improvements and would therefore not meet the project objectives.

Alternative 2: Build Alternative

The project includes widening the paved roadway shoulders on both sides of the roadway by approximately four feet and adding centerline and edgeline rumble strips.

The following improvements are proposed (see **Figure 4**, Engineering Drawings):

- The existing painted traffic stripes would be removed and replaced with a sprayable thermoplastic traffic stripe to improve durability.
- The roadway would be repaved and resurfaced with a Class 2 Aggregate Base (AB) and Hot Mix Asphalt (HMA).
- Shoulders would be graded to a 4:1 slope or flatter.
- 6-inch rumble strips would be installed on the roadway shoulders and 12-inch rumble strips would be installed on the roadway centerline.

The project area is within existing County right of way (ROW), and no ROW acquisitions or temporary construction easements (TCE) would be required to accommodate the project.

Anticipated Construction Methods and Schedule

During construction, the roadway would be excavated to a depth of about 1.2 feet. The roadway would be graded, the AB would be compacted with road rollers, and the road surface would be paved. Finally, striping would be applied, and rumble strips would be ground into the surface.

Project construction is anticipated to take approximately two months, and would be completed in the order and durations listed below. All days are in work days with an assumed 20 work days per month. The following estimated time durations are approximate, and some of these tasks may be completed concurrently with each other:

- Place construction area signs and install best management practices (BMP) for erosion and

- sediment control (5 days);
- Remove painted traffic stripes and apply sprayable thermoplastic traffic stripes (5 days);
- Excavate roadway (10 days);
- Apply Class 2 AB (10 days);
- Apply HMA (5 days);
- Install 6-inch rumble strip on roadway shoulders (3 days); and
- Install 12-inch rumble strip on roadway centerline (3 days).

The closure of one lane on the roadway would be required to remove existing pavement, apply new pavement, stripe roadway surfaces, and grind in the rumble strips. The need for detour routes is not anticipated because one lane of the roadway would remain open to two-way traffic, with stationary construction area signs mounted at each end of the project area. Temporary lane closures would be required during normal working hours for approximately two months.

To accommodate construction activities, ruderal (i.e., weedy) ground cover vegetation removal may be required. However, trees and shrubs within County ROW have not been recommended for trimming or removal.

Overhead utilities along the roadway corridor are not anticipated to require relocation. The project would not require the reconfiguration of drainage ditches or culverts.

During construction, BMPs for preventing material, equipment, and debris from entering adjacent tributaries south of the roadway would be implemented. BMPs may include, but would not be limited to, silt fencing, fiber rolls, sandbag barriers, drainage inlet protections, and berms at the top of all grade slopes.

9. Surrounding Land Uses and Setting:

The project area is surrounded by rural residential land uses. The project area corridor is lined with sparse trees of various sizes, including oaks, pines, and large eucalyptus, as well as shrubby vegetation. Vegetation through the project area corridor consists primarily of grassy and ruderal areas adjacent to the roadway, with limited ornamental landscaping on some residential properties. Tributaries that convey water to the Merced River are adjacent to the project area south of the roadway. The project area is also surrounded by extensive mine tailings from previous mining activities in the Merced River.

10. Other Public Agencies Whose Approval is Required:

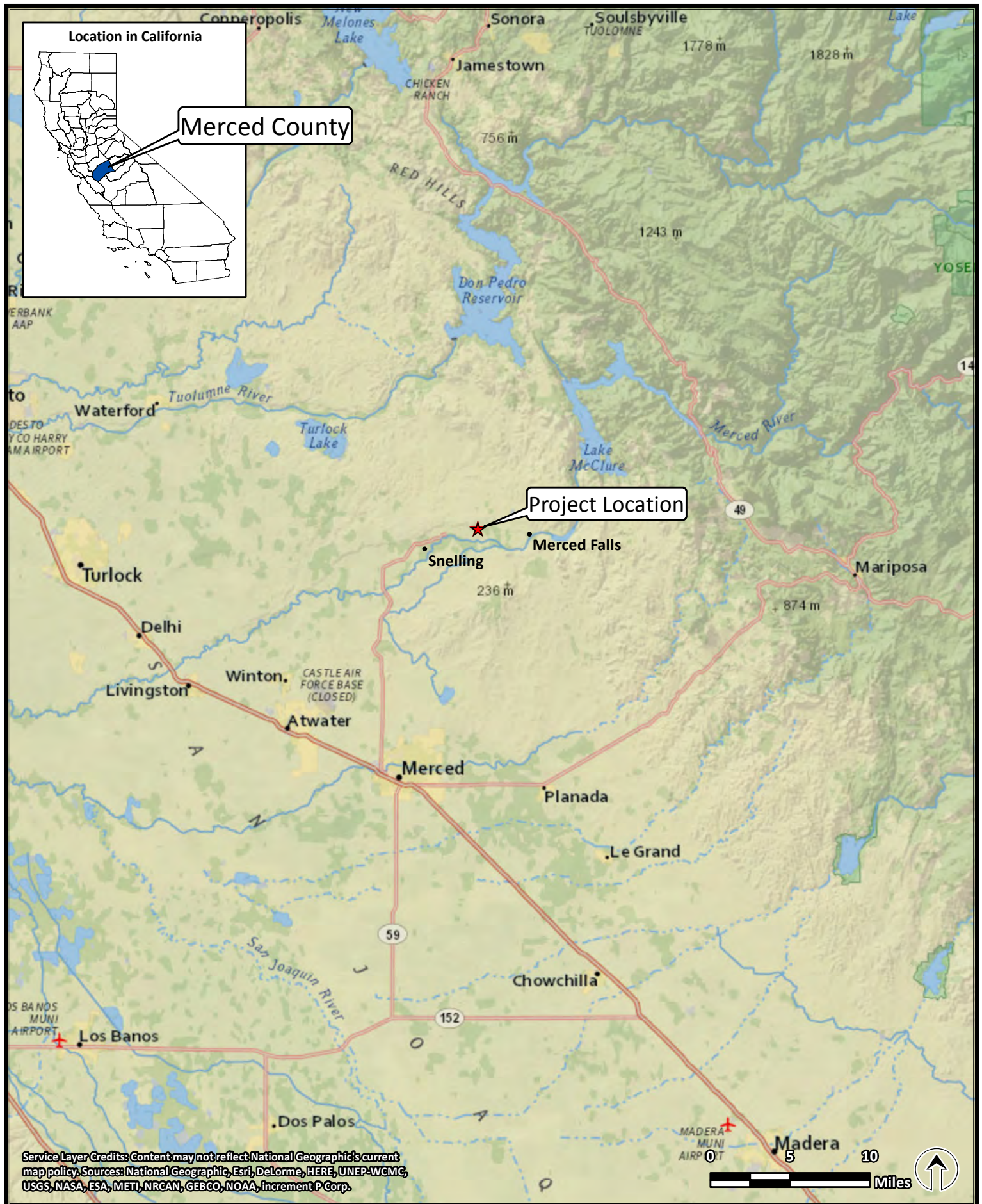
Various County construction, grading, and encroachment permits.

California Department of Transportation (Caltrans): National Environmental Policy Act Categorical Exclusion and authorization for HSIP funding.

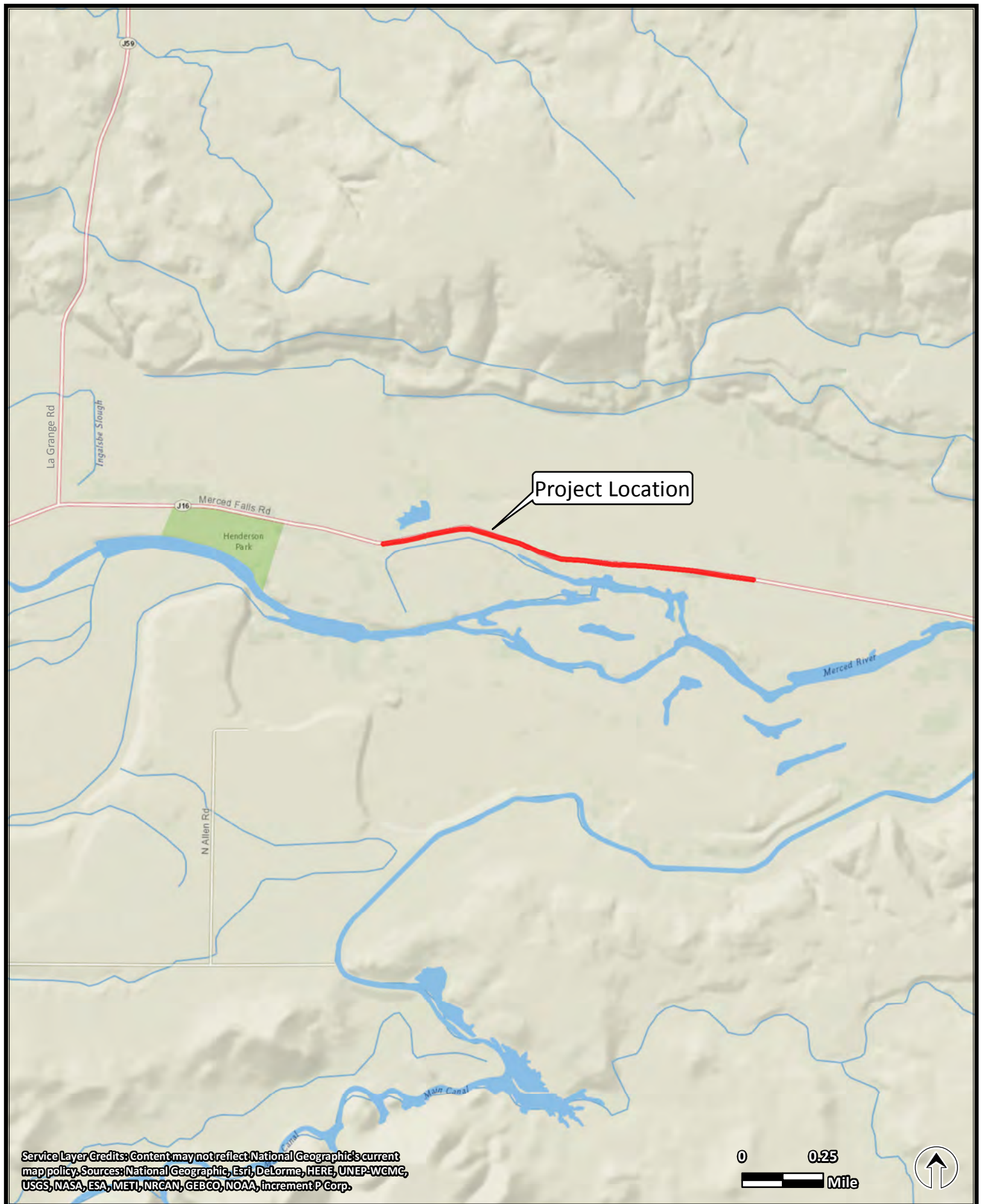
11. Public Resources Code Section 21080.3.1

On December 6, 2017, the tribes on the consultation list provided by the Native American Heritage Commission (NAHC) were contacted via mail. Follow-up phone calls and/or emails were made on December 13, 2017. Representatives of the North Valley Yokuts Tribe indicated that the project

area, due to its proximity to water, has a high potential for burial discoveries. However, the records search and pedestrian survey findings failed to identify surface archaeological resources. A follow-up email summarizing the findings was sent to the tribe and no response has been received to date.



**FIGURE 1. REGIONAL LOCATION
Merced Falls Road Shoulder Widening**



Service Layer Credits: Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

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INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS
3-5	LAYOUT
6-9	CONSTRUCTION DETAILS
10	CONSTRUCTION AREA SIGNS
11-13	PAVEMENT DELINEATION & SIGN PLAN
14	SUMMARY OF QUANTITIES

PLANS FOR CONSTUCTION OF
MERCED FALLS ROAD WIDENING PROJECT
LOCATED NORTH EAST OF THE CITY OF SNELLING
FEDERAL PROJECT No. ----
TO BE SUPPLEMENTED BY
CALTRANS STANDARD PLANS DATED 2016

DIST	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
10	MER	MERCED FALLS SHOULDER WIDENING PROJECT	1	17
REGISTERED CIVIL ENGINEER		DATE		
PLANS APPROVAL DATE				
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GOLDEN VALLEY

ENGINEERING & SURVEYING

REVISIONS

BY	DATE
R. MARQUEZ	
R. MARQUEZ	
J. XU	

DESIGN

DRAWN

CHECKED

SCALE:

BY

R. MARQUEZ

R. MARQUEZ

J. XU

DATE

DATE

BY

R. MARQUEZ

R. MARQUEZ

J. XU

DATE

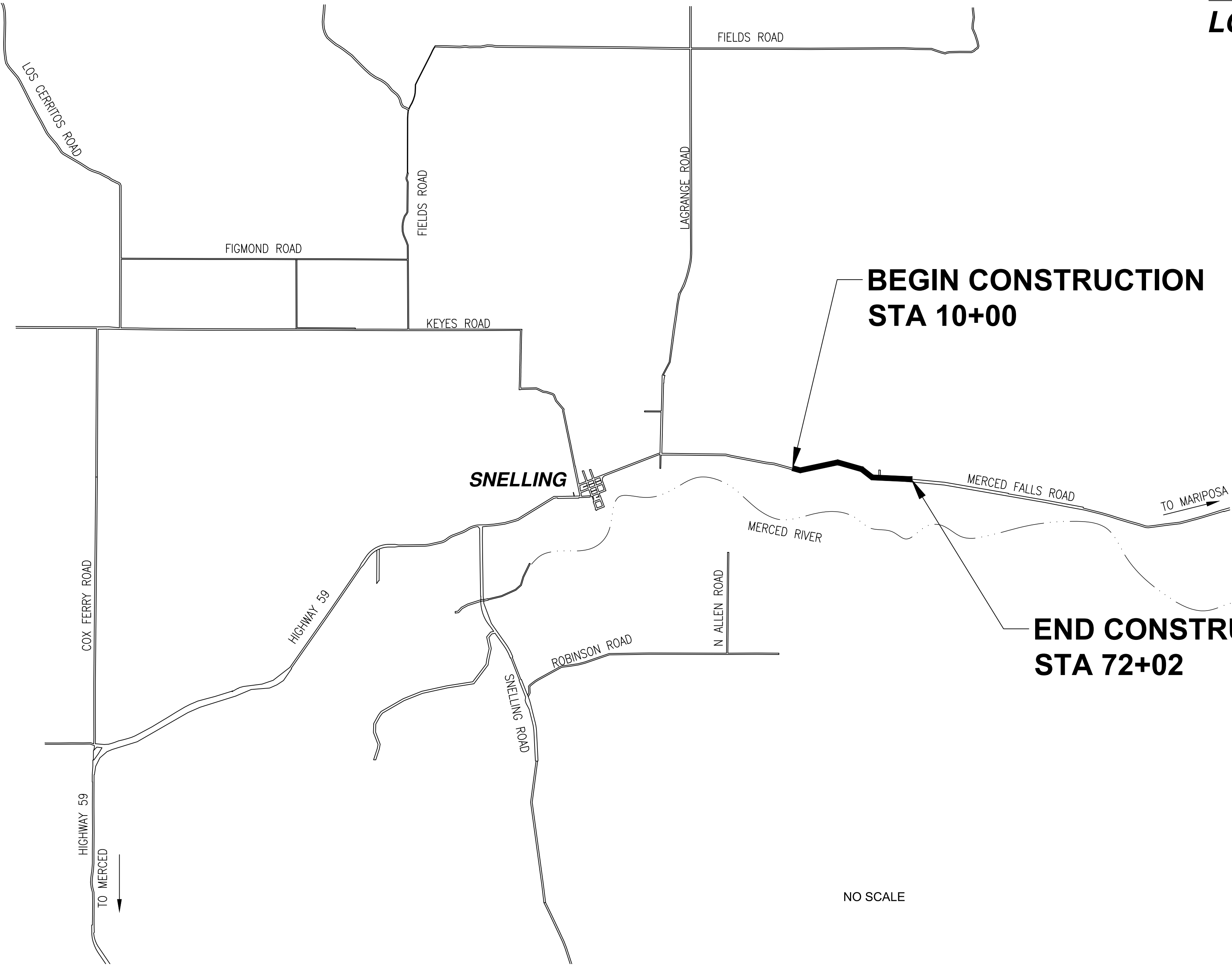
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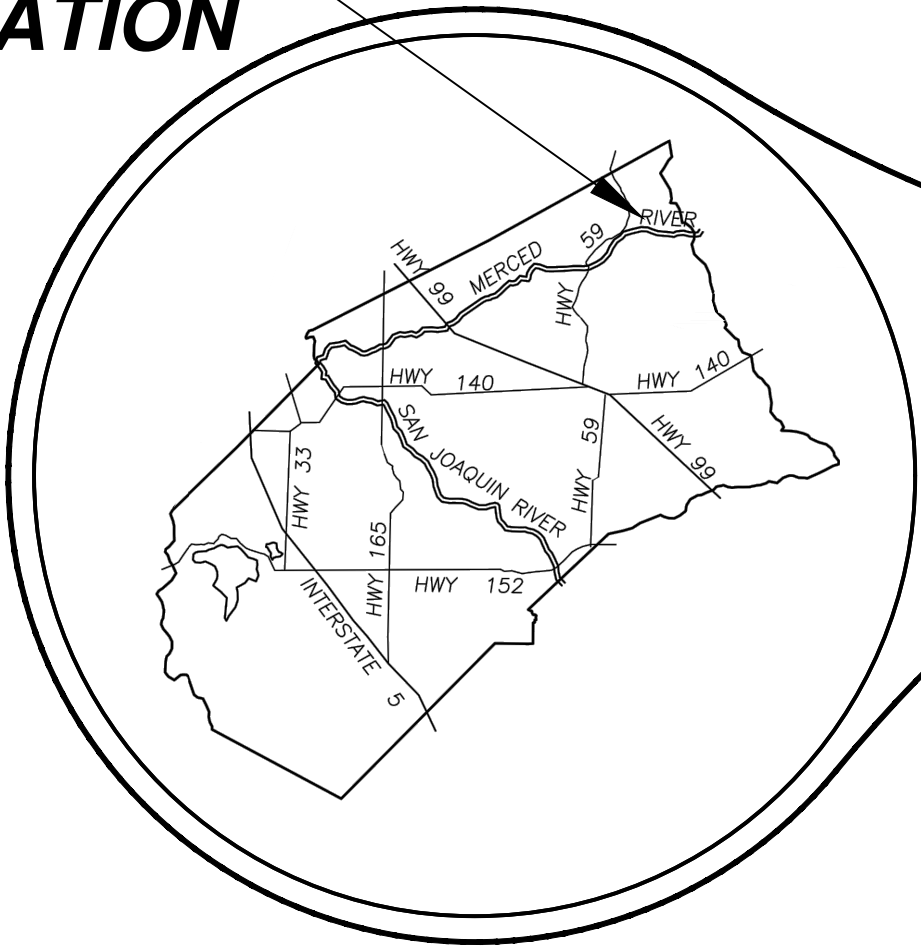
MERCED FALLS ROAD

TITLE SHEET

T-1



PROJECT LOCATION



VICINITY MAP

NO SCALE

LOCATION MAP

NO SCALE

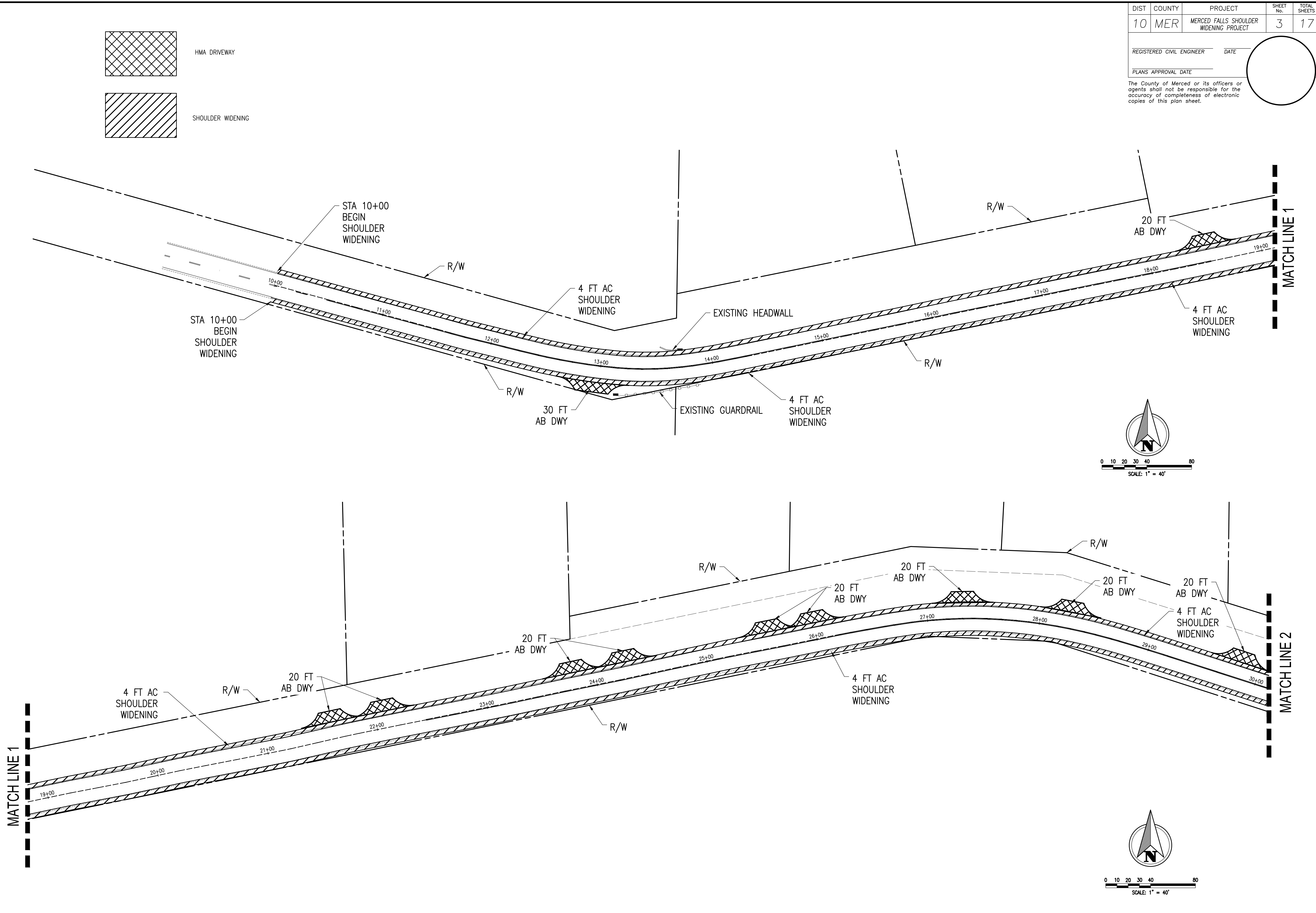
APPROVED BY MERCED COUNTY

DIRECTOR OF PUBLIC WORKS

DATE

CONTRACTOR SHALL POSSESS THE CLASS, (OR CLASSES) OF
LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS"

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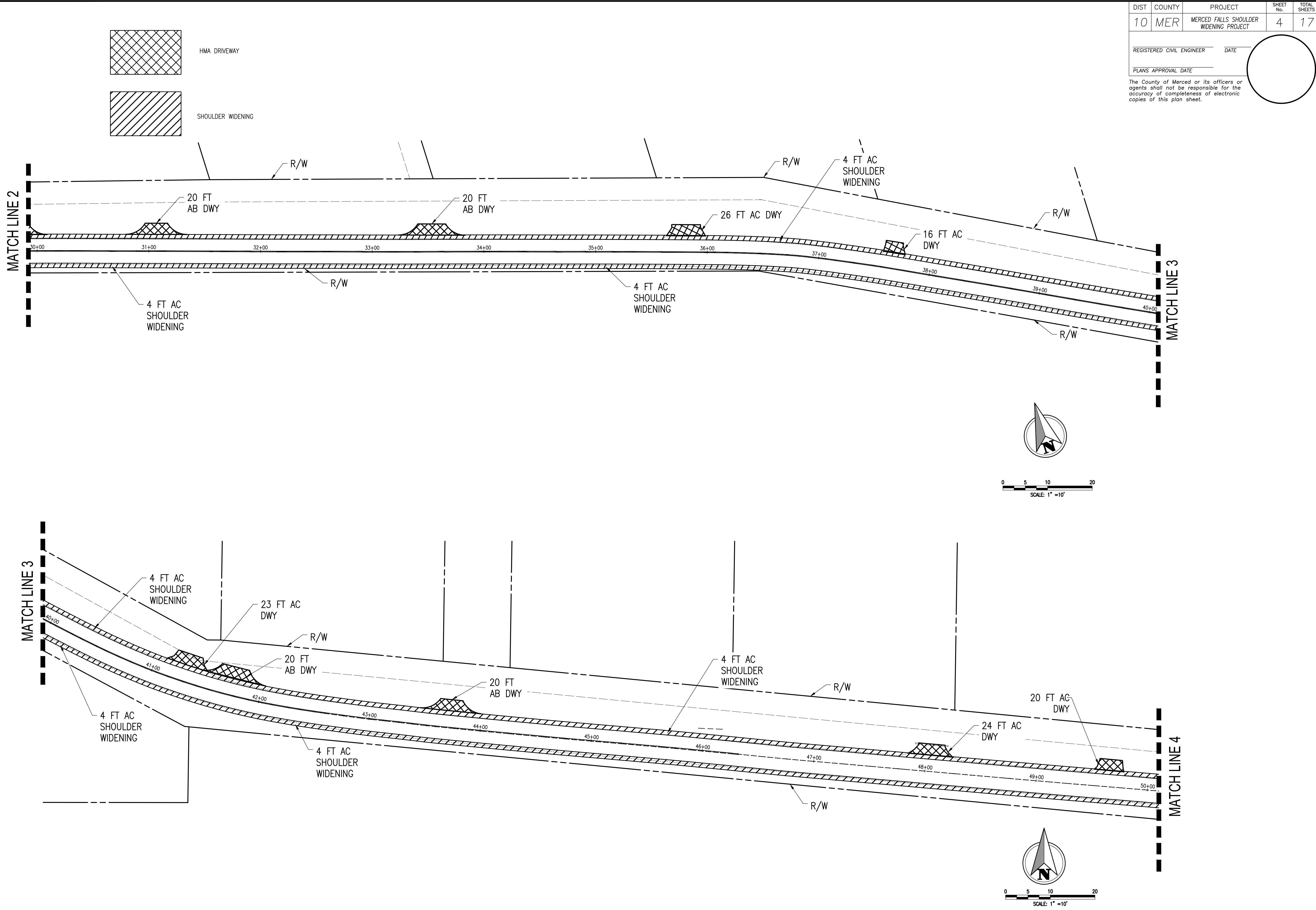
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MERCED FALLS ROAD
LAYOUT PLAN

L-1

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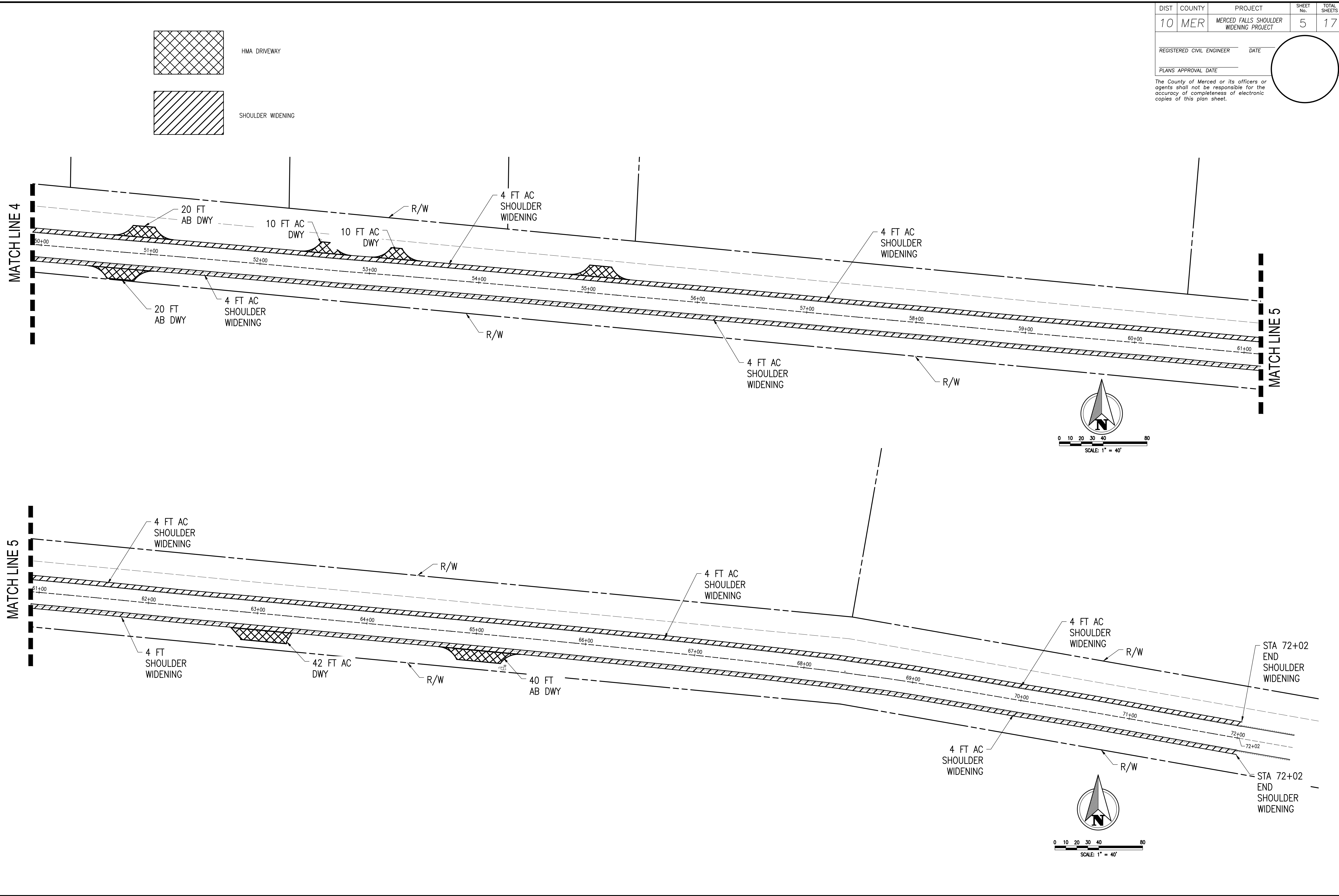
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MERCED FALLS ROAD
LAYOUT PLAN

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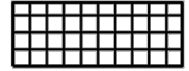
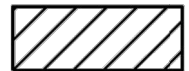


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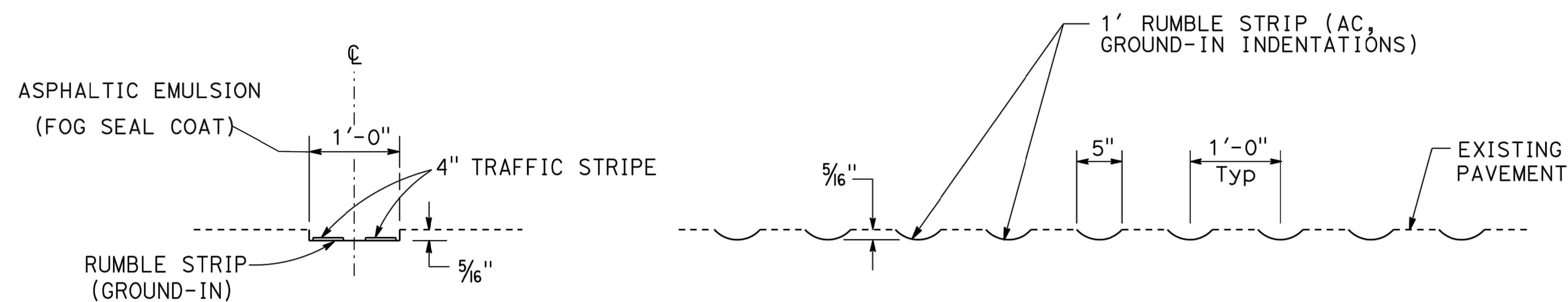
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MERCED FALLS ROAD
LAYOUT PLAN

L-3

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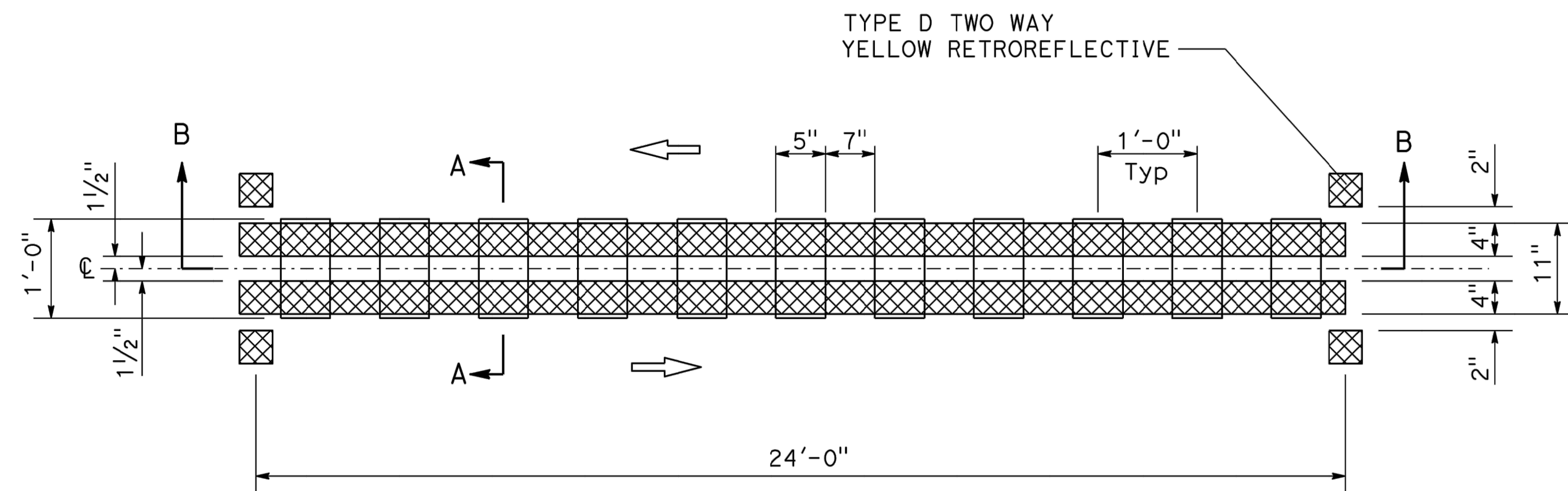
LEGEND

-  ASPHALTIC EMULSION (FOG SEAL COAT)
-  4" THERMOPLASTIC WHITE STRIPE
-  4" THERMOPLASTIC YELLOW STRIPE
-  TYPE D TWO-WAY YELLOW RETROREFLECTIVE



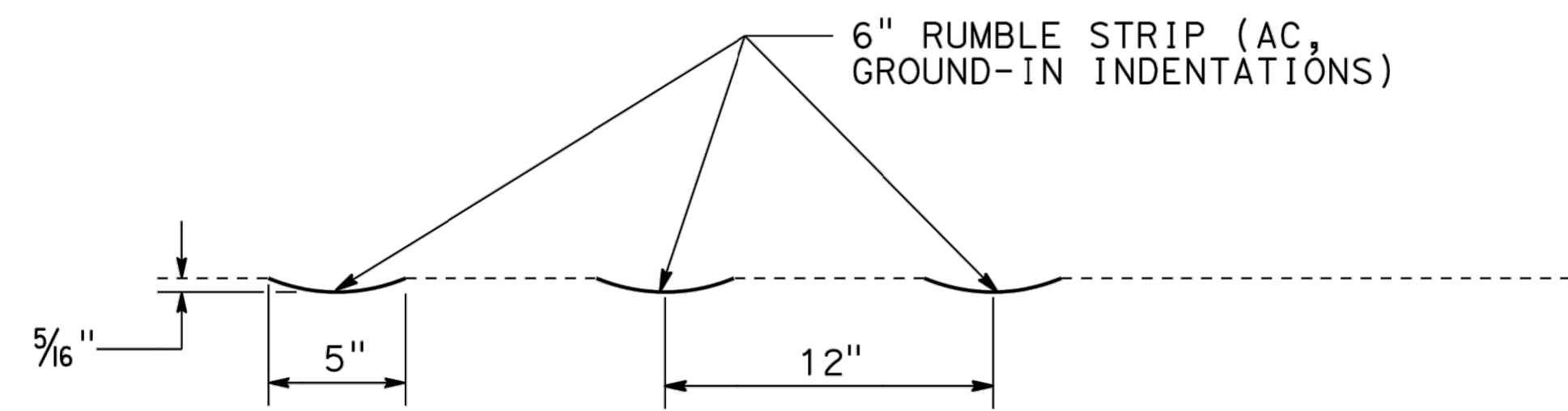
SECTION A-A

SECTION B-B

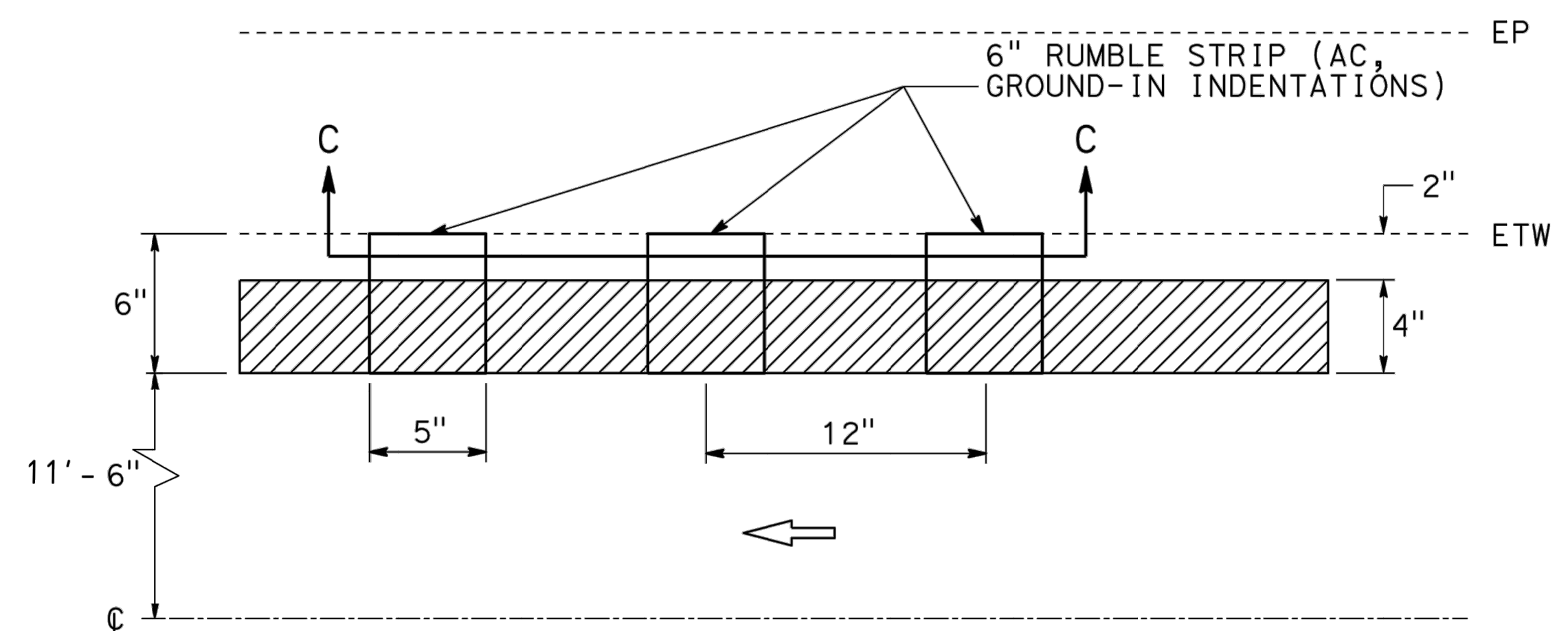


PLAN

CENTERLINE RUMBLE STRIPS WITH
DETAIL 22 TRAFFIC LINE



SECTION C-C



PLAN

6" SHOULDER RUMBLE STRIPS WITH
DETAIL 27B TRAFFIC LINE NO SCALE

DIST	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
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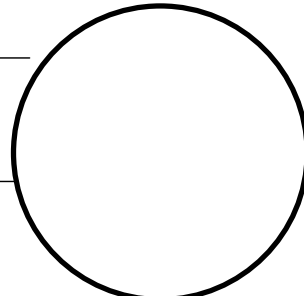
REVISIONS	BY	DATE
	R. MARQUEZ	
	R. MARQUEZ	
	J. XU	
DESIGN		
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CHECKED		
SCALE:		

GOLDEN VALLEY
ENGINEERING & SURVEYING
405 W. 19TH STREET MERCED, CA 95340
Phone: (209) 722-3200 FAX: (209) 722-3254

MERCED COUNTY DEPARTMENT OF PUBLIC WORKS
MERCED FALLS ROAD
CONSTRUCTION DETAILS

NOTE:
EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THESE PLANS.

- LEGEND:**
- 4" THERMOPLASTIC WHITE STRIPE
 - 4" THERMOPLASTIC YELLOW STRIPE
 - TYPE D TWO-WAY YELLOW RETROREFLECTIVE
 - TYPE H ONE-WAY YELLOW RETROREFLECTIVE

DIST	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
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R. MARQUEZ	R. MARQUEZ	
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CHECKED	J. XU	
SCALE:		

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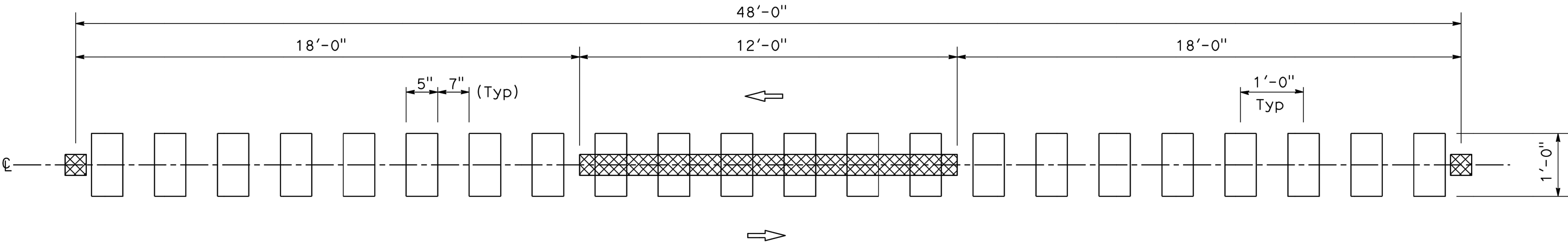
405 W. 19TH STREET MERCED, CA 95340
Phone: (209) 722-3200 FAX: (209) 722-3254

MERCED COUNTY DEPARTMENT OF PUBLIC WORKS

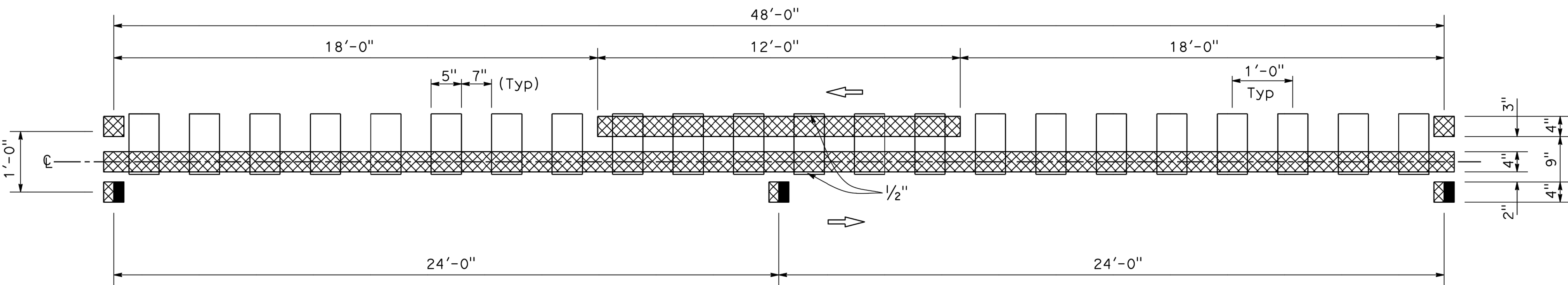
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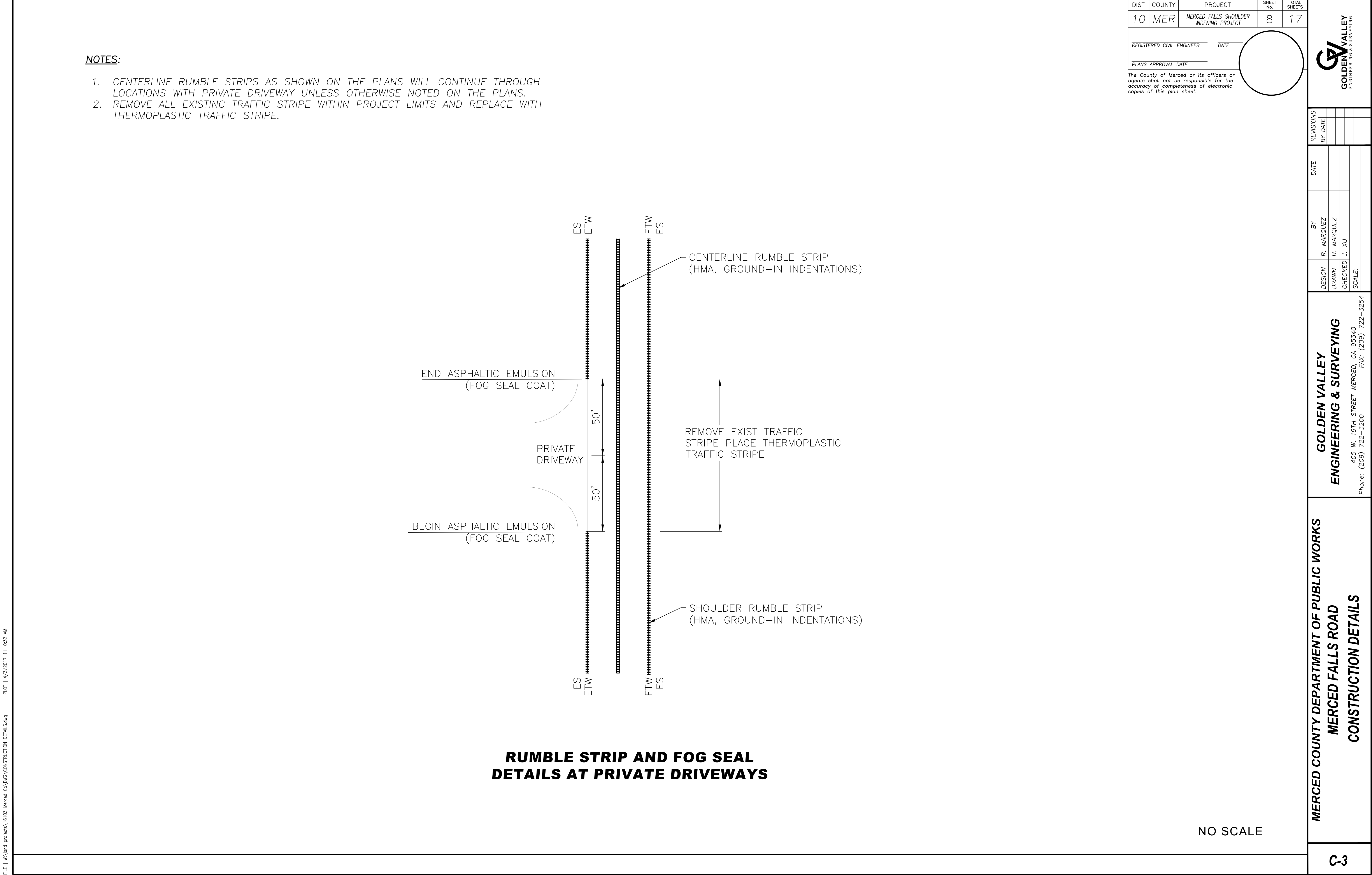
C-2



**CENTERLINE RUMBLE STRIPE WITH
DETAIL 6 TRAFFIC LINE**



**CENTERLINE RUMBLE STRIPE WITH
DETAIL 19 TRAFFIC LINE**



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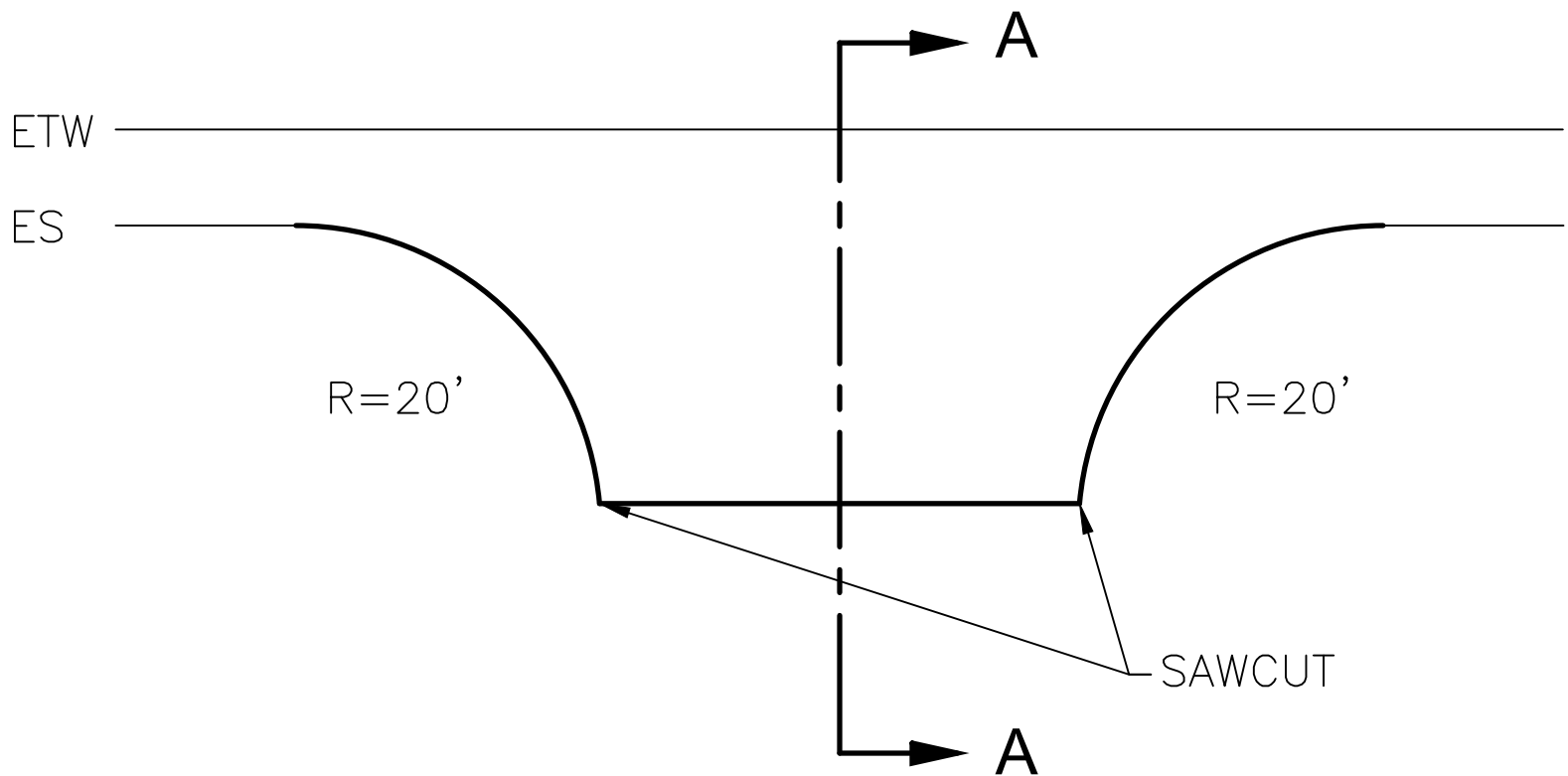
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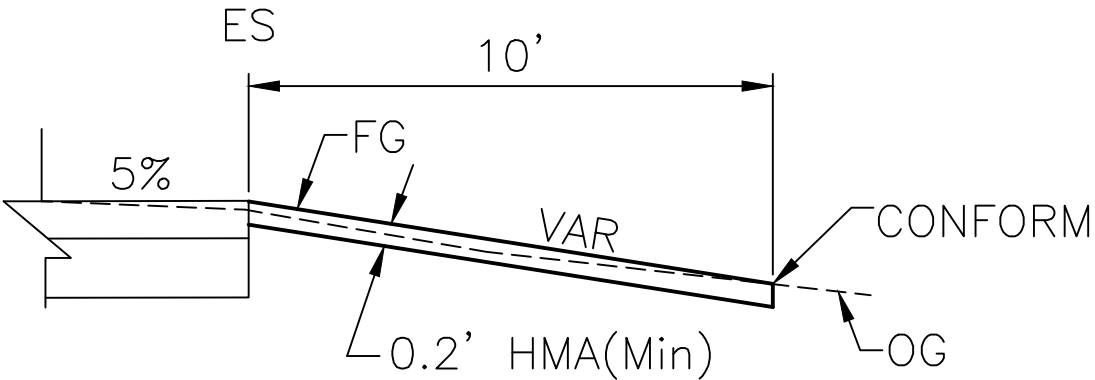
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405 W. 19TH STREET
MERCED, CA 95340
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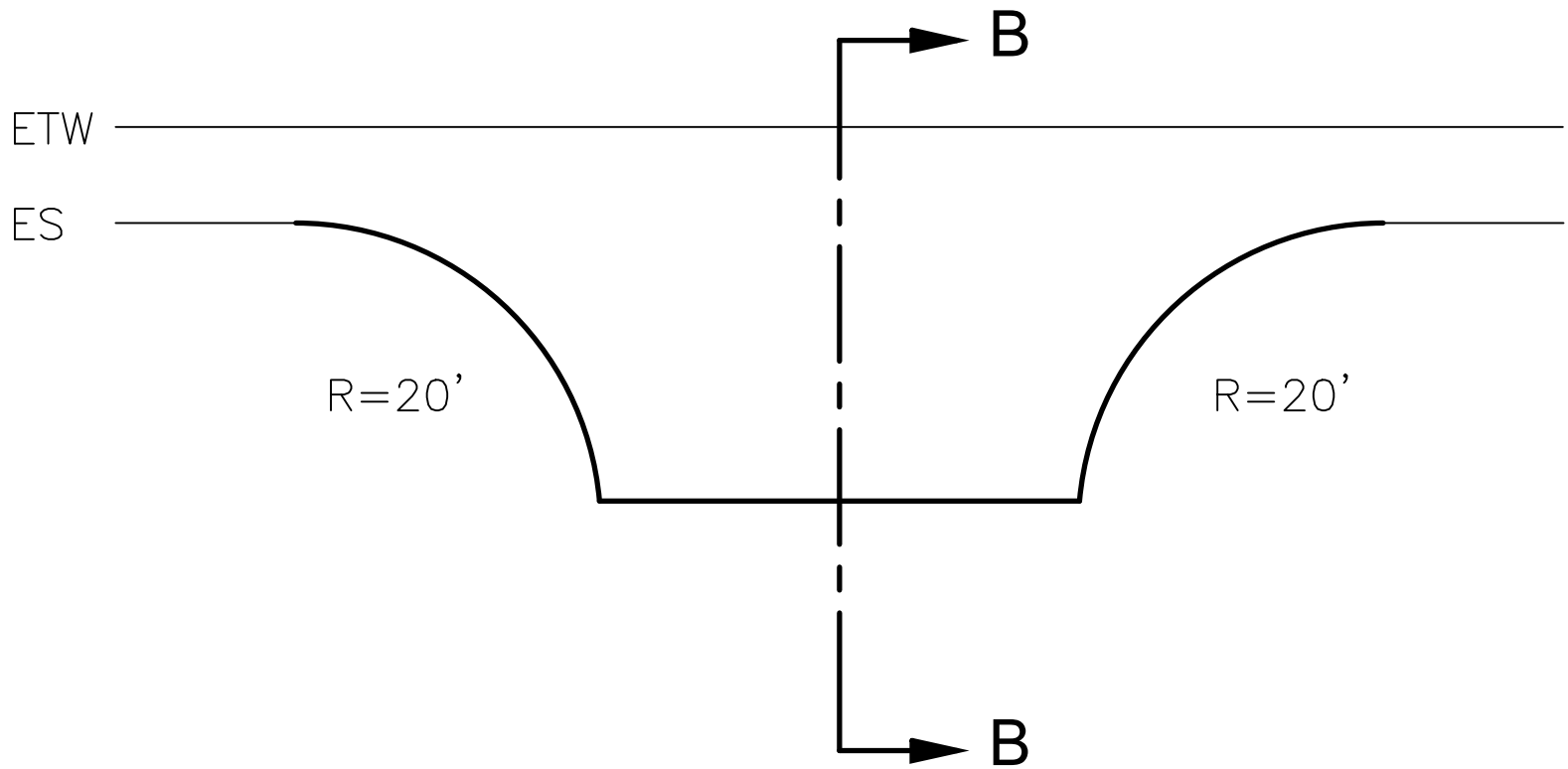
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MERCED FALLS ROAD
CONSTRUCTION DETAILS**



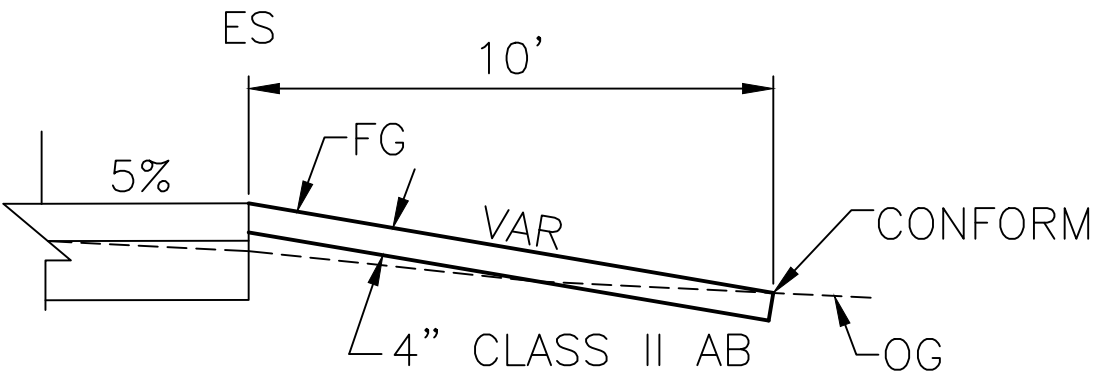
**CONFORM DETAIL
PAVED DRIVEWAY**



SECTION A - A



**CONFORM DETAIL
UNPAVED DRIVEWAY**



SECTION B - B

NO SCALE

1. LOCATION AND POSITION OF CONSTRUCTION AREA SIGNS AND PORTABLE CHANGEABLE MESSAGE SIGNS ARE APPROXIMATE. EXACT LOCATION TO BE DETERMINED BY THE ENGINEER.

ⓧ - PLACEMENT TYPE
 † - CONSTRUCTION AREA SIGNS (ONE POST)

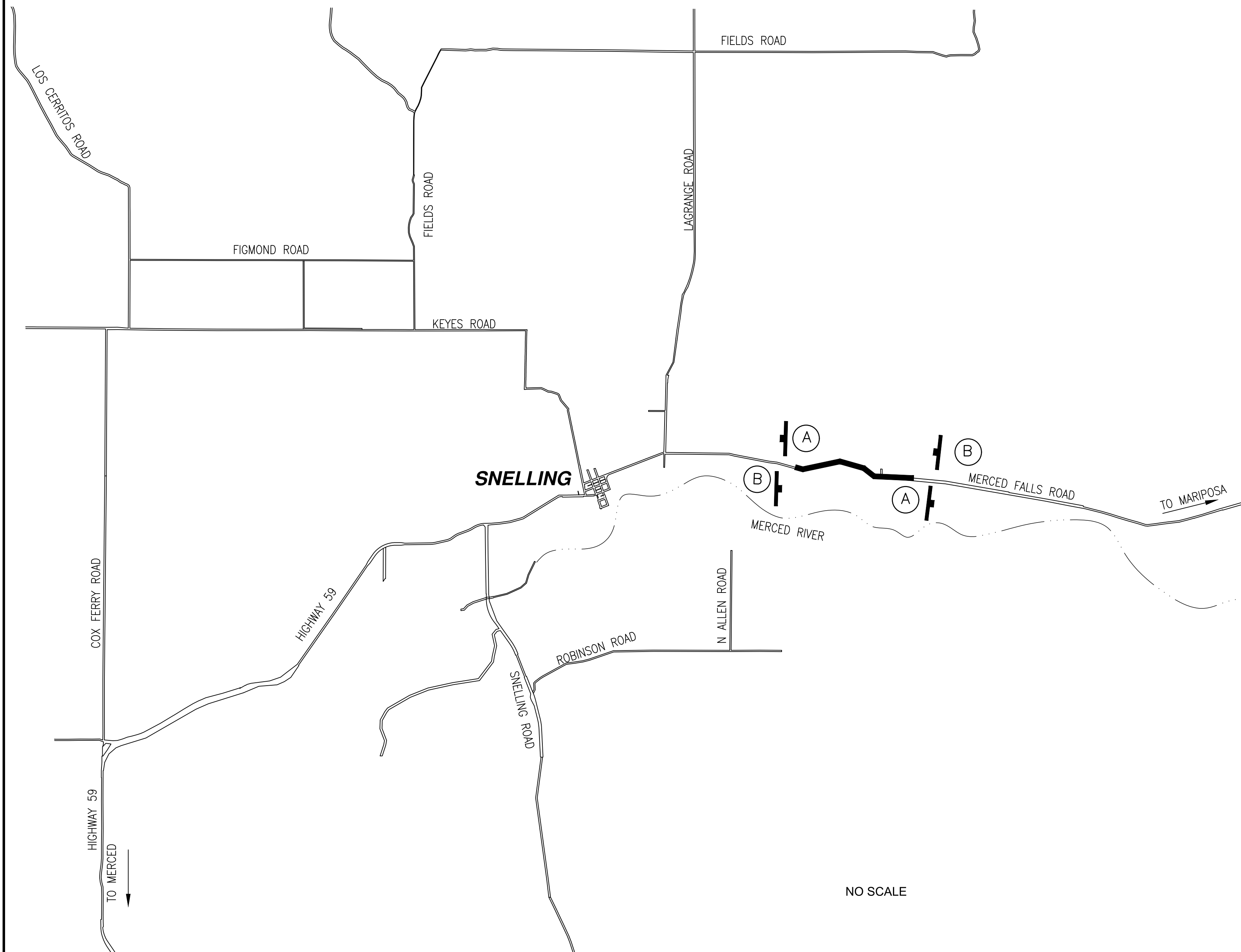
REVISIONS	BY	DATE

	BY	DATE
DESIGN	R. MARQUEZ	
DRAWN	R. MARQUEZ	
CHECKED	J. XU	
SCALE:		

(A) ROAD WORK AHEAD
 W20-1
 $48'' \times 48''$
 ON $6'' \times 6''$ POST

SHOULDER WIDENING
 C23B (CA)
 $42'' \times 18''$

(B) END ROAD WORK
 G20-2
 $36'' \times 18''$
 $4'' \times 4''$ POSTS



NO SCALE


**GOLDEN VALLEY
ENGINEERING & SURVEYING**

Phone: (209) 722-3200 FAX: (209) 722-3254

MERCED COUNTY DEPARTMENT OF PUBLIC WORKS
MERCED FALLS ROAD
CONSTRUCTION AREA SIGN

CS-1

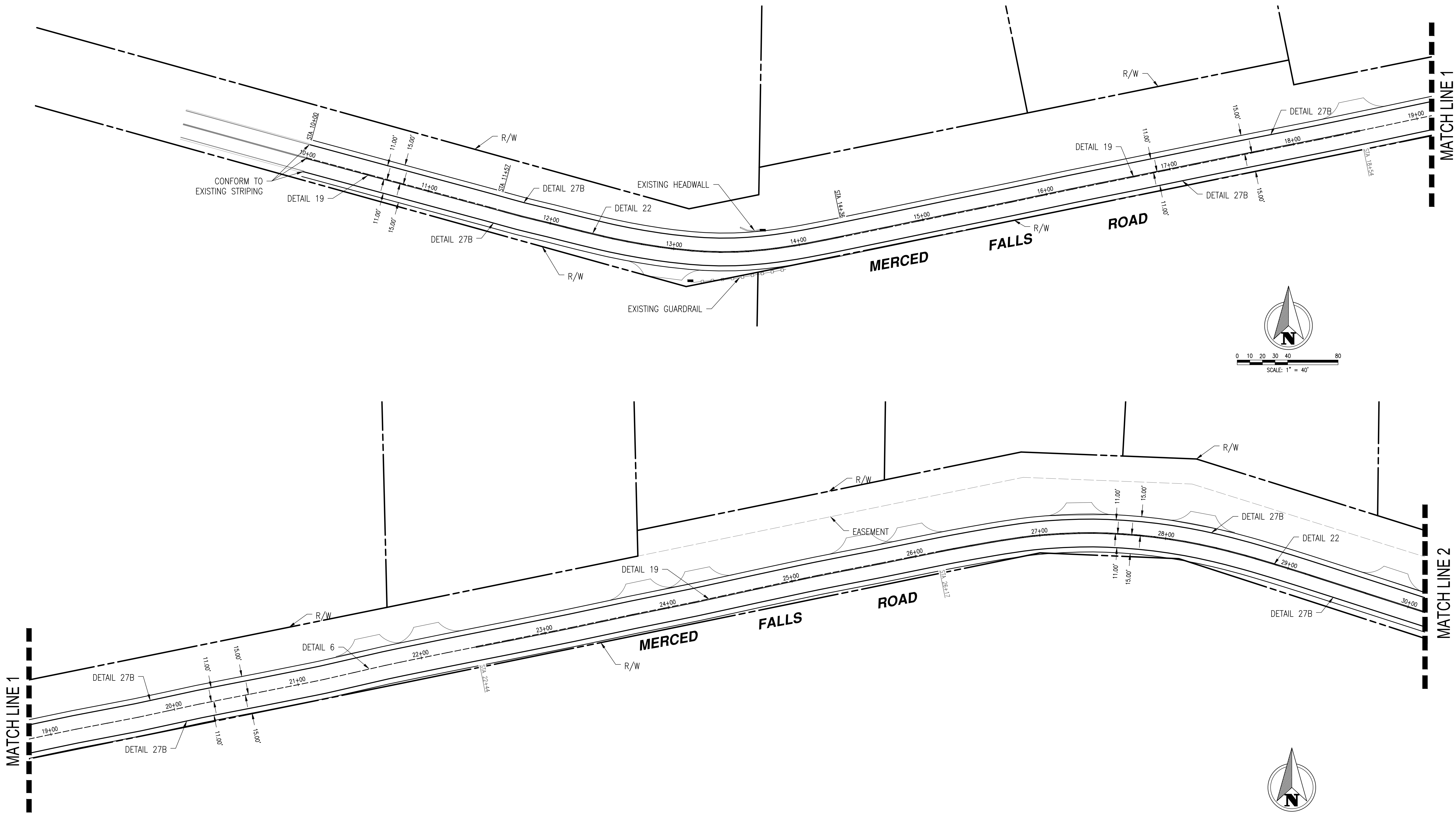
FILE I:\Work\projects\16103 Merced\CO.DWG\PAVEMENT DELINEATION & SIGN PLAN.dwg PLOT 1 4/3/2017 11:12:29 AM

DIST	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
10	MER	MERCED FALLS SHOULDER WIDENING PROJECT	11	17
REGISTERED CIVIL ENGINEER _____		DATE _____		
PLANS APPROVAL DATE _____				
The County of Merced or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.				

DESIGN	DRAWN	CHECKED	SCALE
R. MARQUEZ	R. MARQUEZ	J. XU	
REVISIONS	BY	DATE	

GOLDEN VALLEY
ENGINEERING & SURVEYING
405 W. 19TH STREET MERCED, CA 95340
Phone: (209) 722-3200 FAX: (209) 722-3254

MERCED COUNTY DEPARTMENT OF PUBLIC WORKS
MERCED FALLS ROAD
PAVEMENT DELINEATION & SIGN PLAN
PD-1



NOTES:

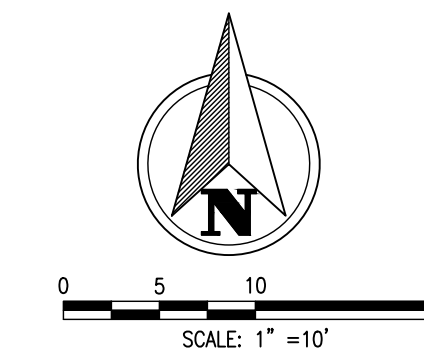
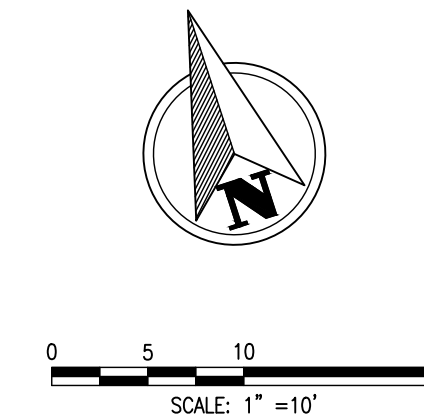
1. REMOVE EXIST TRAFFIC STRIPE AND PLACE THERMOPLASTIC TRAFFIC STRIPE.
2. ANY UTILITY POLE, ROADSIDE SIGN, OR MAILBOX LOCATED WITHIN NEW SHOULDER AREA SHALL BE RELOCATED AT A NEW LOCATION DETERMINED BY THE ENGINEER.

The logo for Golden Valley Engineering & Surveying features a stylized 'GV' monogram on the left, followed by the text 'GOLDEN VALLEY' in a large, bold, sans-serif font, and 'ENGINEERING & SURVEYING' in a smaller, all-caps, sans-serif font below it.

**GOLDEN VALLEY
ENGINEERING & SURVEYING**

405 W. 19TH STREET MERCED, CA 95340
Phone: (209) 722-3200 FAX: (209) 722-3254

PD-2



1. REMOVE EXIST TRAFFIC STRIPE AND PLACE THERMOPLASTIC TRAFFIC STRIPE.
2. ANY UTILITY POLE, ROADSIDE SIGN, OR MAILBOX LOCATED WITHIN NEW SHOULDER AREA SHALL BE RELOCATED AT A NEW LOCATION DETERMINED BY THE ENGINEER.

FILE I:\Work\projects\16103 Merced\CO.DWG(PAVEMENT DELINEATION & SIGN PLAN).dwg PLOT 1 4/3/2017 11:11:52 AM

DIST	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
10	MER	MERCED FALLS SHOULDER WIDENING PROJECT	13	17
REGISTERED CIVIL ENGINEER		DATE		
PLANS APPROVAL DATE				
The County of Merced or its officers or agents shall not be responsible for the accuracy of completeness of electronic copies of this plan sheet.				

REVISIONS

BY	DATE

DESIGN

DRAWN

CHECKED

SCALE:

BY

R. MARQUEZ

R. MARQUEZ

J. XU

DATE

GOLDEN VALLEY

ENGINEERING & SURVEYING

405 W. 19TH STREET
MERCED, CA 95340
Phone: (209) 722-3200
FAX: (209) 722-3254

MERCED COUNTY DEPARTMENT OF PUBLIC WORKS

MERCED FALLS ROAD

PAVEMENT DELINEATION & SIGN PLAN

PD-3

The plan view shows Merced Falls Road with stationing from 50+00 to 72+00. It includes right-of-way (R/W) lines, easements, and details 27B and 6. Match lines 4 and 5 are indicated at the ends. A north arrow and scale bar (1" = 40') are provided.

NOTES:

1. REMOVE EXIST TRAFFIC STRIPE AND PLACE THERMOPLASTIC TRAFFIC STRIPE.
2. ANY UTILITY POLE, ROADSIDE SIGN, OR MAILBOX LOCATED WITHIN NEW SHOULDER AREA SHALL BE RELOCATED AT A NEW LOCATION DETERMINED BY THE ENGINEER.

DIST	COUNTY	PROJECT	SHEET No.	TOTAL SHEETS
10	MER	MERCED FALLS SHOULDER WIDENING PROJECT	14	17
REGISTERED CIVIL ENGINEER		DATE		
PLANS APPROVAL DATE				

The County of Merced or its officers or agents shall not be responsible for the accuracy of completeness of electronic copies of this plan sheet.



GOLDEN VALLEY
ENGINEERING & SURVEYING

DESIGN	BY	DATE	REVISIONS
DRAWN			
CHECKED			
SCALE:			

GOLDEN VALLEY
ENGINEERING & SURVEYING

405 W. 19TH STREET
MERCED, CA 95340
Phone: (209) 722-3200 FAX: (209) 722-3254

MERCED COUNTY DEPARTMENT OF PUBLIC WORKS
MERCED FALLS ROAD
SUMMARY OF QUANTITIES

Q-1

ROADWAY EXCAVATION

LOCATION	CY
STA. 10+00 TO STA. 72+02	3,450
TOTAL	3,450

CLASS II AGGREGATE BASE

LOCATION	CY
STA. 10+00 TO 72+02	2,310
TOTAL	2,310

HOT MIX ASPHALT (TYPE A)

LOCATION	TON
STA. 10+00 TO 72+02	950
TOTAL	950

6" RUMBLE STRIP SHOULDER

LOCATION	
STA. 10+00 TO 72+02 (LT) LF	6,202
STA. 10+00 TO 72+02 (RT) LF	6,202
TOTAL	12,404
TOTAL (STA)	124

12" RUMBLE STRIP CENTERLINE

LOCATION	
STA. 10+00 TO 103+49 LF	7,184
TOTAL	7,184
TOTAL (STA)	72

THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE) &
REMOVE PAINTED TRAFFIC STRIPE

LOCATION	REMOVE PAINTED TRAFFIC STRIPE				THERMOPLASTIC TRAFFIC STRIPE			
	DETAIL 6	DETAIL 19	DETAIL 22	DETAIL 27B	DETAIL 6	DETAIL 19	DETAIL 22	DETAIL 27B
	BROKEN YELLOW 4"	BROKEN AND SOLID YELLOW 4"	DOUBLE YELLOW 4"	SOLID WHITE 4"	BROKEN YELLOW 4"	BROKEN AND SOLID YELLOW 4"	DOUBLE YELLOW 4"	SOLID WHITE 4"
	LF				LF			
STA. 10+00 TO 72+02 LT				6,202				6,202
STA. 10+00 TO 72+02 RT				6,202				6,202
STA. 10+00 TO 11+57		157				157		
STA. 11+57 TO 14+36			279				279	
STA. 14+36 TO 18+54		418				418		
STA. 18+54 TO 22+44	390				390			
STA. 22+44 TO 26+17		373				373		
STA. 26+17 TO 42+64			1,647				1,647	
STA. 42+64 TO 46+33		369				369		
STA. 46+33 TO 72+02	2,569				2,569			
SUBTOTAL (LF)	2,959	1,317	1,926	12,404	2,959	1,317	1,926	12,404
TOTAL (LF)	18,606				18,606			

2.1 Environmental Factors Potentially Affected

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

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

2.2 Determination

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to 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 an impact on the environment that is “potentially significant” or “potentially significant unless mitigated” but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and (2) has been addressed by mitigation measures based on the earlier analysis, as described on attached sheets.
- ☐ An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Signature

Date

Merced County

Printed Name

For

2.3 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.

3. Evaluation of Environmental Impacts

I. Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Local Regulations

2030 Merced County General Plan

The Natural Resources Element of the 2030 Merced County General Plan identifies the following policies as they relate to aesthetics for the project (Merced County, 2013):

- 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.

Project Impacts

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

No Impact. A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. The project area is located in a rural area with sparse residential development. The project area includes visual resources, such as waterways and vegetated areas south of the roadway. The waterway and riparian area that parallel Merced Falls Road is visible from some portions of the project area; however, in other portions of the project area, views are blocked by a berm adjacent to the roadway. Lining the roadway to the north, there are several residences with flat, open lawns and ornamental vegetation. The topography within and surrounding the project area is relatively flat, and the primary vertical elements in the immediate project area are trees and power poles.

The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. The new roadway would appear similar to the existing roadway, and the project would not include any vertical elements that would block or distort views to surrounding waterways and vegetated areas. Therefore, there would be no impacts on scenic vistas during operation of the project.

During construction of the project, there could be temporary visual impacts associated with any onsite storage of construction materials and debris and the use of equipment throughout the project area could temporarily affect views of scenic resources. However, these impacts would be temporary, and following construction, the area shall be restored to pre-project conditions to the greatest extent feasible. Therefore, there would be no impacts.

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 (California Department of Transportation, 2011), there are no state or County designated scenic highways in the project area. The nearest state designated scenic highways are segments of Interstate 5 and State Route 152 in the County, located over 40 miles southwest of the project area. The project area is not visible from these highways. Therefore, there would be no impacts on state scenic highways or County designated scenic highways.

c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?

No Impact. The project area is located in a rural area with sparse residential development and there are no publicly accessible vantage points. The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. The new roadway would be of similar visual character and quality to the existing roadway, with minor changes including a wider paved surface and the addition of rumble strips. As such, the project would not significantly degrade the existing visual character or quality of public views of the project area. Therefore, impacts would be less than significant.

During construction of the project, there could be temporary visual impacts associated with any onsite storage of construction materials and debris and the use of equipment throughout the project area would temporarily affect views of scenic resources. However, these impacts would be temporary, and following construction, the area would generally be restored to pre-project conditions to the greatest extent feasible. Therefore, there would be no impacts.

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

No Impact. Existing light or glare in the project area comes from vehicles traveling on the roadway and from residences along the roadway. There are no existing street lights along the roadway. The project would include widening and paving the shoulders along the existing roadway and would not create new sources of light or glare; therefore, there would be no impacts on day or nighttime views in the area.

II. Agricultural and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<p>In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:</p>				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment that, 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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, 2015b). 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 2030 Merced County General Plan identifies the following policies as they relate to agriculture and forestry resources for the project (Merced County, 2013):

- 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.

Project Impacts

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

No Impact. Merced County contains 978,667 acres of farmland, according to the 2012 Census of Agriculture (United States Department of Agriculture, 2012). The California Department of Conservation (CDOC) Farmland Mapping and Monitoring Program produces maps for analyzing impacts on California's agricultural resources that are updated every two years, with the most recent map published in July 2016 (California Department of Conservation, 2016). According to the most recent CDOC map, the project is located primarily on and adjacent to "Vacant or Disturbed Land" and "Rural Residential Land" (California Department of Conservation, 2016). The project area is within existing County ROW, and no ROW acquisitions or TCEs would be required to accommodate the project. Therefore, there would be no impacts on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

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

No Impact. The project area is within existing County ROW, and no ROW acquisitions or TCEs would be required to accommodate the project. The project area is not zoned for agricultural use and the site is not under the Williamson Act Contract. Therefore, there would be no impacts on agricultural uses or land under a Williamson Act Contract.

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

No Impact. As discussed in Response II b) above, the project area is entirely within County ROW and is not zoned as forest land or timberland. Therefore, there would be no impacts on forest land or timberland.

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

No Impact. The project area does not contain forest land. The project area is within existing County ROW, and no ROW acquisitions or TCEs would be required to accommodate the project. Therefore, there would be no impacts on forest land.

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

No Impact. The project area is surrounded by vacant, disturbed, and rural residential land. There are no agricultural uses in the project area and surrounding area. The project area is within existing ROW, and no ROW acquisitions or TCEs would be required to accommodate the project. Therefore, there would be no impacts that would result in the conversion of Farmland to non-agricultural use.

III. Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
When 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:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Regulatory Setting

Federal and State Regulations

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 six criteria pollutants for which NAAQS have been established are carbon monoxide (CO), ozone (O₃), particulate matter equal to or smaller than 10 microns (PM₁₀) or 2.5 microns (PM_{2.5}) in diameter, sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead. In addition to these criteria pollutants, the California Clean Air Act of 1988 (CCAA) established California Ambient Air Quality Standards (CAAQS) for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

In 1959 California enacted legislation requiring the state Department of Public Health to establish air quality standards and necessary controls for motor vehicle emissions. The California Air Resources Board (CARB) was created by the legislature in 1967, and the CAAQS that had been set by the Department of Public Health were subsequently adopted by the CARB in 1969. Thus, the CAAQS predate the NAAQS set by the United States Environmental Protection Agency (U.S. EPA). California law continues to mandate CAAQS, although attainment of the NAAQS has precedence over attainment of the CAAQS due to federal penalties for failure to meet federal attainment deadlines. California law continues to mandate CAAQS, which are often more stringent than national standards (California Air Resources Board, 2017b).

A State Implementation Plan (SIP) is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain national air quality standards. The SIP for the State of California is administered by the CARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts – these air districts prepare their federal attainment plans, which are sent to CARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

Local Regulations

San Joaquin Valley Air Basin

The project is located in the San Joaquin Valley Air Basin, which is responsible for air quality monitoring in Merced County. The Air District's Rules and Regulations outlines the following rule and regulations that are applicable to the proposed project (San Joaquin Valley Air Pollution Control District, 2018).

Rule 4101-Visible Emissions: The purpose of this rule is to prohibit the emissions of visible air contaminants to the atmosphere. The provisions of this rule shall apply to any source operation which emits or may emit air contaminants. A person shall not discharge into the atmosphere from any single source of emission whatsoever, any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

1. As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.
2. Of such opacity as to obscure an observer's view to a degree equal to or greater than the smoke described in Section 5.1 of this rule.

Rule 4102-Nuisance: The purpose of this rule is to protect the health and safety of the public. This rule shall apply to any source operation which emits or may emit air contaminants or other materials. A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.

Rule 4201-Particulate Matter Concentration: The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard. This rule shall apply to any source operation which emits or may emit dust, fumes, or total suspended particulate matter. A person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions,.

Rule 8021-Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities: The purpose of this rule is to limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities. This rule applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on site, and travel on access roads to and from the site. This rule also applies to the

construction of new landfill disposal sites or modification to existing landfill disposal sites prior to commencement of landfilling activities. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII (Fugitive PM₁₀ Prohibition). A person shall control the fugitive dust emissions to meet the following requirements:

- Pre-Activity: Pre-water site sufficient to limit Visible Dust Emissions (VDE) to 20% opacity, and A2 Phase work to reduce the amount of disturbed surface area at any one time.
- During Active Operations:
 - B1. Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity; or
 - B2. Construct and maintain wind barriers sufficient to limit VDE to 20% capacity. If utilizing wind barriers, control measure B1 above shall also be implemented.
 - B3. Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface.
- Temporary Stabilization During Periods of Inactivity:
 - C1. Restrict vehicular access to the area; and
 - C2. Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acres or more of disturbed surface area remains unused for seven or more days, the area must comply with the conditions for a stabilized surface area as defined in section 3.58 of Rule 8011.

Rule 4641-Cutback, Slow Cure, and Emulsified Asphalt, Paving, and Maintenance Operations: The purpose of this rule is to limit volatile organic compound emissions by restricting the application and manufacturing of certain types of asphalt for paving and maintenance operations. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Rule 8041-Carryout and Trackout: The purpose of this rule is to prevent or limit fugitive dust emissions from carryout and trackout. This rule applies to all sites that are subject to any of the following rules where carryout or trackout has occurred or may occur on paved public roads or the paved shoulders of a paved public road: Rules 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), 8031 (Bulk Materials), 8061 (Paved and Unpaved Roads), and 8071 (Unpaved Vehicle and Equipment Traffic Areas). The use of blower devices, or dry rotary brushes or brooms, for removal of carryout and trackout on public roads is expressly prohibited. The removal of carryout and trackout from paved public roads does not exempt an owner/operator from obtaining state or local agency permits which may be required for the cleanup of mud and dirt on paved public roads.

Rule 8061-Paved and Unpaved Roads: The purpose of this rule is to limit fugitive dust emissions from paved and unpaved roads by implementing control measures and design criteria. This rule applies to any

new or existing public or private paved or unpaved road, road construction project, or road modification project.

2030 Merced County General Plan

The Air Quality Element of the 2030 Merced County General Plan identifies the following policies that are applicable to the project (Merced County, 2013):

- 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 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.

Project Impacts

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

Less Than Significant Impact. The FCAA requires the U.S. EPA to establish NAAQS for criteria pollutants, which are O₃, PM₁₀, PM_{2.5}, CO, NO₂, SO₂, and lead. Under the 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 project is within the San Joaquin Valley Air Basin, which is in the San Joaquin Valley Air Pollution Control District (SJVAPCD) (California Air Resources Board, 2014a). According to the Caltrans Table of Conformity Areas, the County is designated as a NAAQS nonattainment area for O₃ and PM_{2.5} standards, and a maintenance area for PM₁₀ standards (California Department of Transportation, 2018). The SJVAPCD has developed the following air quality plans to work towards attainment for O₃, PM_{2.5}, and PM₁₀:

- 2004 Extreme Ozone Attainment Demonstration Plan
- 2007 Ozone Plan
- 2009 Reasonably Available Control Technology (RACT) SIP
- 2013 Plan for the Revoked 1-Hour Ozone Standard
- 2014 RACT Demonstration for the 8-Hour Ozone SIP
- 2016 Plan for the 2008 8-Hour Ozone Standard
- 2008 PM_{2.5} Plan
- 2012 PM_{2.5} Plan
- 2015 Plan for the 1997 PM_{2.5} Standard
- 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard
- 2007 PM₁₀ Maintenance Plan

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 of the roadway. Therefore, no long-term air quality impacts would result from the project.

Project construction would also be subject to SJVAPCD rules and regulations, which include:

- SJVAPCD Rule 4102 – Nuisance
- SJVAPCD Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving, and Maintenance Operations
- SJVAPCD Rule 8021 – Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities
- SJVAPCD Rule 8041 – Carryout and Trackout
- SJVAPCD Rule 8061 – Paved and Unpaved Roads

CARB has passed numerous regulations to reduce the public's exposure to diesel particulate matter and nitrous oxide (NO_x) emissions. For example, the In-Use Off-Road Diesel Vehicle Regulation includes enforceable elements, such as limits on vehicle idling to no more than five consecutive minutes, and equipment reporting and labeling. Construction activities for the project would be required to comply with these regulations. With implementation of the SJVAPCD Rules and CARB regulations, the project would result in less than significant short-term air quality impacts and the project would not conflict with applicable 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. As described in Response III a), the County is designated as a NAAQS nonattainment area for O₃ and PM_{2.5} standards, and a maintenance area for PM₁₀ standards (California Department of Transportation, 2018).

Existing air pollutant sources in the project area include emissions from vehicles traveling on Merced Falls Road. During operation, the project would not result in additional pollutant sources because the project is not expected to generate greater vehicular traffic to the area. In addition, the project would maintain the same number of through lanes (one in each direction) and would not increase the capacity of the roadway.

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 could result from the project are fugitive dust emissions and mobile source emissions.

Fugitive dust emissions include any solid particulate matter that is lifted into the ambient air. Construction activities with the potential to result in fugitive dust emissions include demolition and earth-moving activities.

Mobile source emissions primarily include oxides of nitrogen (NO_x), CO, volatile organic compounds (VOC), PM₁₀, PM_{2.5}, and diesel particulate matter (DPM). Emissions could also lead to the formation of O₃, 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.

CARB has passed numerous regulations to reduce the public's exposure to DPM and NO_x emissions. For example, the In-Use Off-Road Diesel Vehicle Regulation includes enforceable elements, such as limits on vehicle idling to no more than five consecutive minutes, and equipment reporting and labeling. Construction activities for the project would be required to comply with these regulations. Project construction would also be subject to SJVAPCD rules and regulations (San Joaquin Valley Air Pollution Control District, 2018). With implementation of SJVAPCD Rules and CARB regulations, the project would not result in a cumulatively considerable net increase of any criteria pollutant. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. Sensitive receptors are persons who are more susceptible to air pollution than the general population, such as 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.

Potentially sensitive receptors in the vicinity of the project area consist predominantly of rural residences and recreational areas (i.e., Henderson Park and recreational access points to the Merced River). The nearest residence is located approximately 80 feet north of the project area, along Merced Falls Road. There are several other residences within 170 feet of the project area.

The project is not expected to increase criteria pollutant emissions during operation because the project would maintain the same number of through lanes (one in each direction) and would not increase the capacity of the road. Therefore, no long-term air quality impacts would result from the project.

Construction of the project would be short-term and intermittent, and the project would comply with standard measures and applicable regulations to minimize construction emissions. In addition, construction would be completed during the daytime and weekdays, when most people are away from their homes, which would minimize the number of people potentially affected. Therefore, impacts would be less than significant.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. There are 17 residences adjacent to the project area that are potential sensitive receptors for odors. In addition, the project area is adjacent to Henderson Park and recreational access points to the Merced River. Operation of construction equipment (diesel exhaust) and paving operations could generate odors during construction of the project. However, generation of emissions,

such as those that could lead to odors, would be temporary, would be completed during daytime hours only, and would be isolated within the immediate vicinity of construction activities. Therefore, potential emissions would not affect a substantial number of people, and impacts would be less than significant.

Avoidance Measures

Project construction would be subject to the following SJVAPCD rules and regulations:

- SJVAPCD Rule 4102 – Nuisance;
- SJVAPCD Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving, and Maintenance; Operations;
- SJVAPCD Rule 8021 – Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities;
- SJVAPCD Rule 8041 – Carryout and Trackout; and
- SJVAPCD Rule 8061 – Paved and Unpaved Roads.

Additionally, the project would be required to comply with CARB regulations under Title 13, Article 4.8, Chapter 9, Section 2449 of the CCR, which regulates In-Use Off-Road Diesel Vehicle fleets. This regulation specifies measures to reduce NOx, particulate matter, and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles.

IV. Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special- status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following discussion incorporates the results of the Natural Environment Study (NES) that was prepared for the project (GPA Consulting, 2019).

Regulatory Setting

Federal and State Regulations

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 7 of the FESA requires federal agencies to ensure that actions they engage in, permit, or fund do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of designated critical habitat for these species. Section 7 consultation provides for the “incidental take” of endangered and threatened wildlife species by federal entities if adverse effects to species cannot be avoided. 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.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (50 Code of Federal Regulations [CFR] Part 10 and Part 21) protects migratory birds, their occupied nests, and their eggs from disturbance or destruction. “Migratory birds” include all nongame, wild birds found in the U.S., with the exception of 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.

California Fish and Game Code

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. State-listed species and those petitioned for listing by the California Department of Fish and Wildlife (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 Natural Resources Element of the 2030 Merced County General Plan identifies the following policies related to biological resources that are applicable to the project (Merced County, 2013):

- Policy NR-1.3: Forest Protection. Preserve forests, particularly oak woodlands, to protect them from degradation, encroachment, or loss.
- 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) is located 1.5 miles east of the community of Snelling, California, which is located north of the Merced River, 15 miles north of the City of Merced (see **Figure 5**, Biological Study Area). The BSA is approximately 16.2 acres. Land within the BSA consists of gravel/dirt access roads, adjacent agricultural fields, riparian and oak woodland, and rural-residential properties. According to the County, the land use surrounding the project area is zoned as general agricultural, with adjacent parcels to the north further classified as agricultural residential and single-family residential (County of Merced GIS Data, 2017).

The BSA includes areas that could be directly and indirectly impacted by the project, either temporarily or permanently. The limits of the BSA were determined by reviewing project plans and aerial photography, and evaluating potential jurisdictional areas during field visits. Land use surrounding the BSA is primarily agricultural or undeveloped land, which has been altered by past mining activities, with rural residences at the western end of the BSA, along the north side of Merced Falls Road. A backwater waterway, which is hydrologically connected to the Merced River, is located at the western end of the BSA, along the south side of Merced Falls Road. The Cuneo Fishing Access parking lot, which is owned and operated by Merced Irrigation District, is located at the eastern end of the BSA, on the south side of Merced Falls Road.

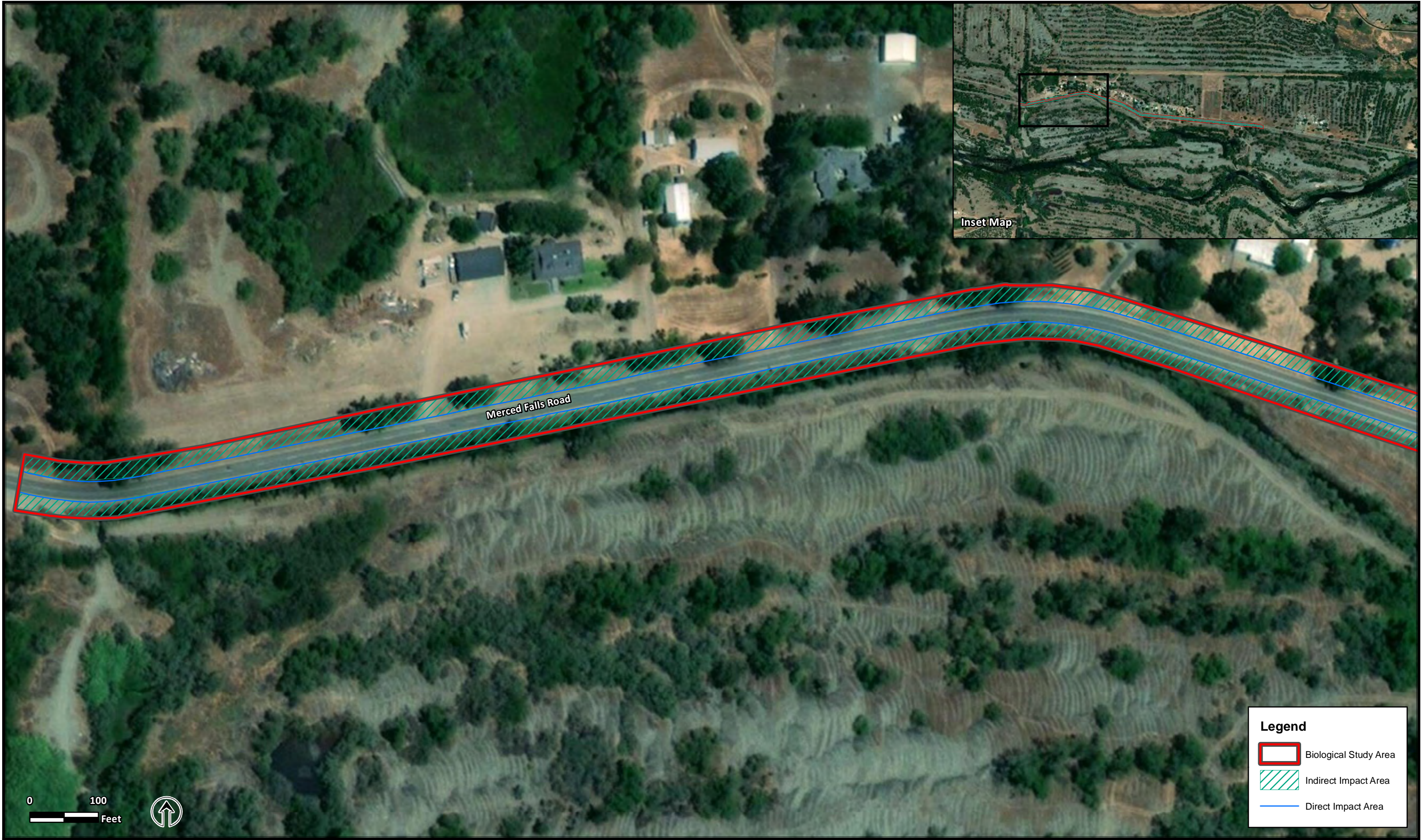




FIGURE 5. BIOLOGICAL STUDY AREA
Merced Falls Road Widening Project (Sheet 2 of 3)



Special-Status Species

Special-Status Plants

According to the CDFW's California Natural Diversity Database (CNDDB) and United States Fish and Wildlife Service (USFWS) search, 28 special-status plant species have the potential to be in the BSA based on recorded geographical distribution. Based on habitat requirements and survey results, seven special-status plant species have potential to be in the project area.

State Status

- Eel-grass pondweed (*Potamogeton zosteriformis*), S3
- Ewan's larkspur (*Delphinium hansenii* ssp. *ewanianum*), S3
- Henderson's bent grass (*Agrostis hendersonii*), Imperiled (S2)
- Hoover's calycadenia (*Calycadenia hooveri*), S2
- Northern California black walnut, Critically Imperiled (S1)
- Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*), Historical (SH)
- Sanford's arrowhead (*Sagittaria sanfordii*), S3

Other Status (California Native Plant Society)

- Eel-grass pondweed, 2B.2
- Ewan's larkspur, 4.2
- Henderson's bent grass, 3.2
- Hoover's calycadenia, 1B.3
- Northern California black walnut, 1B.1
- Peruvian dodder, 2B.2
- Sanford's arrowhead, 1B.2

A full species list with a discussion of the potential for each species to be within the BSA is in the NES.

Special-Status Animals

According to the CNDDB and USFWS searches, 53 special-status animal species have the potential to be in the BSA based on recorded geographical distribution. Based on habitat requirements and survey results, there is potential for 33 special-status species to be in the BSA.

Federal Status

- Central Valley steelhead DPS (*Oncorhynchus mykiss irideus*), FT
- Northern California steelhead DPS (*Oncorhynchus mykiss irideus*), FT
- San Joaquin kit fox, FE
- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Threatened (FT)

State Status

- Bald eagle (*Haliaeetus leucocephalus*), SE/FP
- Burrowing owl (*Athene cunicularia*), SSC

- Central Valley steelhead DPS, S2
- Cooper's hawk (*Accipiter cooperii*), Watch List (WL)
- Ferruginous hawk (*Buteo regalis*), WL
- Golden eagle (*Aquila chrysaetos*), Fully Protected (FP)
- Great blue heron (*Ardea herodias*), S4
- Great egret, Apparently Secure (S4)
- Hoary bat (*Lasiurus cinereus*), S4
- Merced kangaroo rat (*Dipodomys heermanni dixonii*), S2S3
- Merlin (*Falco columbarius*), WL
- Molestan blister beetle (*Lytta molesta*), S2
- Morrison's bumble bee (*Bombus morrissoni*), S1S2
- Mountain Plover (*Charadrius montanus*), SSC
- Northern California steelhead DPS, S2S3
- Oak titmouse, S4
- Osprey (*Pandion haliaetus*), WL
- Pacific lamprey (*Entosphenus tridentatus*), SSC
- Pallid bat (*Antrozous pallidus*), Species of Special Concern (SSC)
- River lamprey (*Lampetra ayresii*), SSC
- Sacramento hitch (*Lavinia exilicauda*), SSC
- San Joaquin kit fox, ST
- San Joaquin pocket mouse (*Perognathus inornatus*), S2S3
- San Joaquin roach (*Lavinia symmetricus* ssp. 1), SSC
- Swainson's hawk (*Buteo swainsoni*), ST
- Townsend's big-eared bat (*Corynorhinus townsendii*), SSC
- Tricolored blackbird (*Agelaius tricolor*), SE
- Valley elderberry longhorn beetle, S2
- Western mastiff bat (*Eumops perotis californicus*), SSC
- Western pond turtle (*Emys marmorata*), SSC
- Western red bat (*Lasiurus blossevillii*), SSC
- Yellow-breasted chat (*Icteria virens*), SSC
- Yuma myotis (*Myotis yumanensis*), S4

No other special-status animal species are expected to be within the BSA. A full species list with a discussion on the potential for each species to be in the BSA is in the NES.

Project Impacts

- Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in**

local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than significant with mitigation incorporated.

Special-Status Plant Species

The project would not require work within the waterway along Merced Falls Road, and no direct impacts on the eel-grass pondweed, Henderson's bent grass, Peruvian dodder, and Sanford's Arrowhead are expected. Indirect impacts could result from construction dust or debris, were it to enter into the waterway; however, with implementation of avoidance measures, no impacts on these species are anticipated.

The project would not require any tree removal or trimming of trees and shrubs along Merced Falls Road; therefore, no impacts on walnut trees are anticipated. Indirect impacts could result from construction dust or activities within the dripline of a tree; however, with implementation of avoidance measures, no impacts on this species are anticipated.

There is potential for the Ewan's larkspur and Hoover's calycadenia to be in the BSA, but because the existing habitats are highly disturbed and predominately comprised of non-native species, the potential is low. In addition, these species were not observed during project levels surveys, which were conducted during the appropriate blooming period for these species. Removal of low vegetation along the roadway could impact these species if they were to be within areas disturbed during construction; however, with the implementation of the proposed avoidance and minimization measures, adverse impacts on the Ewan's larkspur and Hoover's calycadenia are not expected.

Special-Status Animal Species

As described above, 53 special-status animal species have the potential to be in the BSA based on recorded geographical distribution. Based on research regarding habitat requirements, 33 of the special-status animal species have the potential to be in the project area.

Invertebrates

The project would not require any tree removal or trimming of trees and shrubs along Merced Falls Road. Shrubs within the project ROW are approximately 6.5 feet or more from the existing road. Therefore, road widening would not require the removal of elderberry shrubs within the BSA. However, dust and vibration from construction activities could result in indirect impacts on shrubs within 165 feet of the work. Therefore, the project may affect, but is not likely to adversely affect, the valley longhorn beetle.

Road widening activities could result in direct impacts on the Morrison's bumble bee, molestan blister beetle, and other invertebrates feeding on vegetation in the area. Grading could directly impact nesting bees. Indirect impacts on these species could result from dust and habitat loss. However, with the implementation of avoidance and minimization measures discussed below, impacts on Morrison's bumble bee and molestan blister beetle are not anticipated.

Fish

The waterway in the BSA is connected to the Merced River, which is a part of the San Joaquin watershed. There are no known fish barriers downstream of the BSA. The BSA is within designated critical habitat for Central Valley steelhead distinct population segment (DPS) and essential fish habitat for chinook salmon. During the biological surveys on May 19, 2017, fish were observed in the waterway.

Based on the habitat features in the waterway, six different fish species of federal and state concern have the potential to be present within the BSA. These include Central Valley steelhead DPS, northern California steelhead DPS, pacific lamprey, river lamprey, Sacramento hitch, and San Joaquin roach.

The project would not require work within the waterway along Merced Falls Road. Construction materials, dust, and debris could result in temporary impacts on fish if they were to enter flowing water within the waterway. However, with the implementation of avoidance and minimization measures discussed below, the project would have no effect on steelhead and other fish species.

Reptiles

The project would not require work within the waterway along Merced Falls Road. However, widening of the road and associated construction activities could result in direct and indirect impacts on western pond turtle and its associated upland aestivation habitat if individuals were to be present in the BSA during construction. The project would result in direct impacts on this species if they were to be trampled by construction equipment. Indirect impacts could result if they were to become trapped in the construction area. However, with the implementation of avoidance and minimization measures discussed below, adverse impacts on the western pond turtle are not anticipated.

Birds

Construction activities associated with the project could directly impact migratory birds if they were to be conducted while birds are nesting in and/or adjacent to the BSA. Temporary noise-generating activities, such as grading, could result in temporary indirect impacts on nesting birds, if the activities are loud enough to cause disturbance. However, with implementation of avoidance and minimization measures discussed below, the project would have no adverse impacts on the burrowing owl, Cooper's hawk, golden eagle, great blue heron, great egret, mountain plover, oak titmouse, osprey, and yellow-breasted chat. No direct take of Swainson's hawk is anticipated.

Mammals

The project would not require any tree removal or trimming of trees and shrubs along Merced Falls Road; therefore, adverse impacts on bats are not anticipated. However, the project could result in indirect impacts on bats if they were to be roosting in trees immediately adjacent to the BSA and if noise and construction activities were to result in roost abandonment. However, with implementation of the proposed avoidance and minimization measures listed below, adverse impacts on bats are not anticipated.

The project could result in direct impacts on the Merced kangaroo rat and/or the San Joaquin pocket mouse if they were to have burrows in the BSA during construction. The Merced kangaroo rat and San

Joaquin pocket mouse could be indirectly impacted if operation of construction equipment and other construction activities were to inhibit Merced kangaroo rat and/or and the San Joaquin pocket mouse movement through the BSA. In addition, if individuals were to be trapped in the BSA, they would be more vulnerable to being harmed. Road widening activities could result in temporary disruption and/or loss of habitat. However, with the implementation of avoidance and minimization measures discussed below, adverse impacts on the Merced kangaroo rat and San Joaquin pocket mouse are not anticipated.

Widening of the road and related construction activities could result in indirect impacts on the San Joaquin kit fox, if individuals were to be in the BSA during construction. The San Joaquin kit fox is not expected to den in the BSA, but may travel through the area, and operation of construction equipment and other construction activities could temporarily inhibit San Joaquin kit fox movement through the BSA. In addition, if individuals were to be trapped in the BSA, they would be more vulnerable to being harmed. Road widening activities could result in temporary disruption and/or loss of habitat. However, with the implementation of avoidance and minimization measures, adverse impacts on the San Joaquin kit fox are not anticipated. Therefore, the project may affect, but not likely to adversely affect the San Joaquin kit fox.

Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented to reduce potential impacts to the extent feasible.

Special-Status Plant Species

BIO-1 To avoid and/or minimize impacts on the northern California black walnut, the following measures would be implemented:

- Removal of mature northern California walnut would be avoided and protective fencing would be installed beyond the dripline of the tree(s) during construction to prevent construction staff or equipment from entering this area.

BIO-2 To avoid and/or minimize impacts on the Ewan's larkspur and Hoover's calycadenia, the following measures would be implemented:

- Prior to construction, a qualified botanist would conduct rare plant surveys throughout the BSA. Surveys would be conducted during the appropriate blooming period for species with potential to be in the construction area, to the extent feasible.
- If a special-status plant species is found during pre-construction surveys, high visibility Environmental Sensitive Area (ESA) protective fencing could be installed around the special-status plants to prevent construction staff or equipment from entering this area. The ESA protective fencing buffer would be species specific, with a minimum buffer radius based on the guidance from a qualified biologist. Plants would be 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 and a plan would be developed by a qualified biologist to relocate the plants to a suitable location, and monitor their

survival. The plan would include, at a minimum, details on the relocation site, the methods for relocation, methods for monitoring, and survival criteria. The relocated plants would be monitored for a period of time sufficient to confirm they have survived the transplanting, as identified by the qualified biologist.

Special-Status Animal Species

Invertebrates

BIO-3 To avoid and/or minimize impacts on the molestan blister beetle and Morrison's bumble bee, the following measures would be implemented:

Vegetation removal and excavation would be reduced to the extent feasible.

Pesticide/insecticide would not be used as part of the project.

Within 48 hours of construction, a qualified biologist would survey the BSA to confirm the presence/absence of Morrison's bumble bee nests within the construction area.

If a Morrison's bumble bee nest is identified within the BSA, all efforts would be taken to avoid the nest, and an appropriate buffer would be installed as determined by a qualified biologist. If avoidance cannot be accomplished, the nest would be safely relocated by a qualified biologist.

Areas temporarily impacted during construction would be restored using native species, including one or more of the food plant genera for the molestan beetle (*Lupinus*, *Trifolium*, and *Erodium*) and Morrison's bumble bee (*Cirsium*, *Cleome*, *Helianthus*, *Lupinus*, *Chrysothamnus*, and *Melilotus*), if appropriate for the region.

BIO-4 To avoid and/or minimize impacts on the valley longhorn beetle, the following measures would be implemented:

To the extent feasible construction would be conducted out of the flight season for the valley elderberry longhorn beetle (March through July).

Training for all contractors, work crews, and any onsite personnel on the status of the valley elderberry longhorn beetle, its host plant and habitat, the need to avoid damaging the blue elderberry shrubs (*Sambucus nigra* ssp. *cerulea*), and the possible penalties for non-compliance would be provided by a qualified biologist.

All areas that would be avoided during construction activities would be fenced and/or flagged as close to construction limits as feasible.

The trimming and/or removal of blue elderberry shrubs would be avoided.

No insecticides, herbicides, fertilizers, or other chemicals that could harm the valley elderberry longhorn beetle or blue elderberry shrubs would be used within 100 feet of any blue elderberry shrub with stems measuring greater than one inch in diameter.

To prevent fugitive dust from drifting into adjacent habitat, all clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, demolition activities or other dust generating activities would be effectively controlled for fugitive dust emissions utilizing application of water or by presoaking.

Fish

BIO-5 To avoid and/or minimize impacts on steelhead and other fish species, the following measures will be implemented:

Work areas would be reduced to the maximum extent feasible, and staging areas would be along the roadway and outside of the waterway and adjacent riparian habitat.

Appropriate hazardous material Best Management Practices (BMP) would be implemented to reduce the potential for chemical spills or contaminant releases into the waterway or riparian areas, including any non-stormwater discharge.

All equipment refueling, and maintenance would be conducted in the staging area away from the waterway and adjacent riparian habitat. 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.

Reptiles

BIO-6 To avoid and/or minimize impacts on the western pond turtle, the following measures will be implemented:

Pre-construction surveys for the western pond turtle would be conducted 24 hours prior to start of construction. Surveys of the BSA would be repeated if construction activities are delayed for two weeks or more.

If western pond turtles are found in the construction area, they would be allowed to leave the construction area to an area of suitable habitat, out of harm's way.

Birds

BIO-7 To avoid and/or minimize impacts on special-status birds and raptors, the following measures will be implemented:

Construction during bird nesting season (typically February 1 to September 30) would be avoided to the extent feasible.

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

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.

To avoid or minimize impacts on the burrowing owl, pre-construction surveys for the burrowing owl would be conducted by a qualified biologist prior to the breeding season (typically February 1 to September 1) and prior to disturbance. The surveys would be conducted at dawn or dusk not more than seven days prior to ground or vegetation disturbing activities, and would include a thorough examination of all suitable habitat within the project area and vicinity for burrowing owl or its sign. Surveys would be conducted for at least three days prior to starting construction.

If burrowing owls or their sign are detected, then the CDFW and other appropriate regulatory agencies would be consulted. If an occupied burrow is found during surveys, a 165-foot buffer would be established around the burrow where feasible. If a buffer is not feasible, CDFW would be consulted, and the burrowing owls would be passively relocated using CDFW-approved protocols. Passive relocation of burrowing owls would only be allowed during the non-breeding season. If burrowing owls are found during the breeding season, a 165-foot buffer would be established around the burrow and no work would be allowed until the nestlings have fledged. After fledging, the burrowing owls would be passively relocated per CDFW guidelines. Additional surveys would be conducted, if required by these agencies, prior to any construction activities, and requirements of the regulatory agencies regarding protection of the burrowing owl would be followed.

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.

BIO-8 To avoid and/or minimize impacts on foraging birds and raptors, the following measures will be implemented:

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

BIO-9 To avoid and/or minimize impacts on nesting bald eagle and Swainson's hawk, the following measures would be implemented:

- If construction activities begin during the Swainson's hawk nesting season, 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. Three surveys would be conducted during each survey period to determine if Swainson's hawks are nesting within 600 feet of the construction zone.
- If construction activities begin during the bald eagle nesting season, surveys for bald eagle would be conducted according to the *Bald Eagle Breeding Survey Instructions by the California Department of Fish and Wildlife Service* for three times during nesting season.
- If a nesting Swainson's hawk and/or bald eagle is found within 600 feet of the construction zone prior to the start of construction, appropriate buffers (typically 600 feet) would be installed and

maintained until nesting activity has ended, to ensure that the birds and/or their nests are not harmed.

Mammals

BIO-10 To avoid and/or minimize potential indirect impacts on the bats potentially roosting in the BSA, the following measures would be implemented:

- The removal trees and trimming of trees and shrubs would be avoided.
- At least 30 days prior to construction, all trees that would be encroached upon by road widening activities would be surveyed by a qualified biologist to assess the presence of bats or potential bat-roosting cavities. 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 over 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.

BIO-11 To avoid and/or minimize potential indirect impacts on the Merced kangaroo rat and San Joaquin pocket mouse potentially in the BSA, the following measures would be implemented:

- Pre-construction surveys for the Merced kangaroo rat and San Joaquin pocket mouse would be conducted 24 hours prior to start of construction. Surveys of the BSA would be repeated if construction activities are delayed for two weeks or more.
- If Merced kangaroo rat and/or San Joaquin pocket mouse are found in the construction area, they would be allowed to leave the construction area to an area of suitable habitat, out of harm's way.

BIO-12 To avoid and/or minimize potential impacts on the San Joaquin kit fox, the following measures would be implemented:

- Pre-construction surveys for the San Joaquin kit fox would be conducted by a qualified biologist. The surveys would be conducted no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. Surveys would identify San Joaquin kit fox habitat features in the project area and evaluated use by kit fox and, if possible, assess the potential impacts on the kit fox by the proposed activity. The status of all dens would be determined and mapped. Written results of pre-construction surveys would be sent to the USFWS and CDFW within five days after survey completion and prior to the start of ground disturbance and/or construction activities. If any dens are discovered, avoidance, of the dens would follow the USFWS Standardized Recommendations for Protection of the Endangered San Joaquin kit fox Prior to or During Ground Disturbance. If a natal/pupping den is discovered in the project area or within 200 feet of the project boundary, the USFWS would be notified and, under no circumstances, would the den be disturbed or destroyed without an ITS for endangered species.

- To prevent inadvertent entrapment of San Joaquin kit fox or other animals during construction, all excavated, steep-walled holes or trenches more than two feet deep would be covered at the end of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks would be installed. Before such holes or trenches are filled, they would be thoroughly inspected for trapped animals.
- A litter control program would be instituted in the project area. All workers would make sure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers would be removed from the project area at the end of each working day.
- No pets or firearms (except for federal, state, or local law enforcement office and security personnel) would be permitted on construction sites to avoid harassment, killing, or injuring of listed species.
- Use of rodenticides and herbicides at the project site would be restricted.
- A representative appointed by the County would be the contact source for any employee or contractor who might inadvertently injure or kill a San Joaquin kit fox or finds a dead, injured, or trapped individual. The representative would be identified during the employee education program. The representative's name and phone number would be provided to the USFWS. Any contractor, employee, or agency personnel who inadvertently kills, injures, or notices an entrapped kit fox would immediately report the incident to the representative. The representative would immediately contact the 24-hour CDFW dispatch at (916) 445-0045. All project work would stop until the County, Caltrans, and USFWS identify the appropriate measures needed to continue work and avoid take, or Caltrans obtains an Incidental Take Permit.
- Worker Environmental Awareness Training for the San Joaquin kit fox would be given to all personnel working on site and would include the ecology of the species, the sensitivity of the species to human activities, legal protection afforded to the species, penalties for violations of federal and state laws, reporting requirements, and project features designed to reduce impacts on the species.
- Upon completion of the project, all temporarily impacted areas, including storage and staging areas, temporary roads, pipeline corridors, etc., would be recontoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion would not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas would be determined on a site-specific basis in consultation with the USFWS, CDFW, and other experts.
- The Sacramento Fish and Wildlife Office (2800 Cottage Way, Room W-2605, Sacramento, California 95825) and CDFW (1416 9th Street, Sacramento, California 95814) would be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or the finding of a dead or injured kit fox and any other pertinent information.

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

Less than significant impact. The project would not require any tree removal or trimming of trees and shrubs along Merced Falls Road; therefore, adverse impacts on oak trees are not anticipated. However, the project could result in indirect impacts on oak trees if the operation of construction equipment and other construction activities were to encroach on areas containing oak trees. However, with the implementation of the proposed avoidance and minimization measures discussed below, adverse impacts on oak trees are not anticipated.

Avoidance, Minimization, and or Mitigation Measures

The following measure will be implemented to reduce potential impacts to the extent feasible.

BIO-13 To avoid and/or minimize impacts on the oak trees, the following measure would be implemented:

- Removal of oak trees would be avoided, and protective fencing would be installed beyond the dripline of the tree(s) during construction to prevent construction staff or equipment from entering this area.

c) Would the project 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 western section of the BSA includes an unnamed waterway that is hydrologically connected to the Merced River, which is a navigable water of the U.S. Therefore, the unnamed waterway is expected to fall under United States Army Corps of Engineers (USACE) jurisdiction. Surface waters were observed in the waterway during the biological surveys; therefore, the waterway is expected to fall under Regional Water Quality Control Board (RWQCB) jurisdiction. Because the waterway has a defined bed and bank and supports vegetation, it is anticipated to fall under CDFW jurisdiction.

The project would not require work within the waterway or its banks along Merced Falls Road, within areas under jurisdiction of USACE and the RWQCB. However, the project would require work on the road, which crosses a small northern branch of the waterway in the far western end of the BSA that is within CDFW jurisdiction. A courtesy consultation would be conducted with CDFW prior to construction.

The widening of Merced Falls Road would not require fill within the waterway; therefore, there would be no direct impacts on the waterway; however, construction materials, dust, and debris could result in temporary impacts on water quality if they were to enter flowing water within the waterway. No permanent impacts on water quality are anticipated. With implementation of avoidance and minimization measures listed below, the project would not have a substantial adverse effect on state or federally protected wetlands; therefore, impacts would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

BIO-14 To avoid indirect impacts on the jurisdictional waterway, the following measures would be implemented:

- Work areas would be reduced to the maximum extent feasible, and staging areas would be along the roadway and outside of the waterway and adjacent riparian habitat.
- Appropriate hazardous material Best Management Practices (BMP) would be implemented to reduce the potential for chemical spills or contaminant releases into the waterway or riparian areas, including any non-stormwater discharge.
- All equipment refueling, and maintenance would be conducted in the staging area away from the waterway and adjacent riparian habitat. 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.

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. According to the CDFW, Biogeographic Information and Observation System, there are essential wildlife connectivity areas in the BSA; therefore, the BSA is likely used as a migration or travel corridor. There are no known downstream fish passage barriers in the Merced River; therefore, the waterway in the BSA may also be used for fish interbreeding and colonization. Many plants, reptiles, amphibians, birds, insects, and small mammals likely occupy the BSA as a land corridor. Other species that could use the BSA as a corridor include large herbivores, such as deer, medium to large carnivores, and migratory species. Signs of wildlife, including deer and raccoon, were observed during biological surveys.

Temporary noise-generating activities, such as excavation and grading, could result in temporary indirect impacts on migratory or native resident wildlife species, such as bats and nesting birds, if the activities are loud enough to cause disturbance. These impacts would be potentially significant unless mitigation is incorporated; however, with implementation of avoidance, minimization, and/or mitigation measures BIO-3 through BIO-14 listed above, impacts would be less than significant.

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

No impact. There are no tree preservation policies or ordinances for Merced County. As described above, the Natural Resources Element of the 2030 Merced County General Plan identifies the following policies related to biological resources that are applicable to the project (Merced County, 2013):

- Policy NR-1.3: Forest Protection. Preserve forests, particularly oak woodlands, to protect them from degradation, encroachment, or loss.
- 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.

As described under Discussion IV b), the project would not require tree and shrub removal along the roadway or work within the waterway or its banks along Merced Falls Road. Therefore, with implementation of Measures BIO-13 and BIO-14 listed above, the project would not conflict with any local policies or ordinances protecting forests, wetlands, and riparian habitat; therefore, there would be no 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. According to the CDFW, there are no Natural Community Conservation Plans or Habitat Conservation Plans (HCP) that overlap with the project area (California Department of Fish & Wildlife, 2017). Though the County is within the boundaries of the Pacific Gas and Electric (PG&E) San Joaquin Valley Operation and Maintenance HCP, the project would take place entirely within existing County ROW; therefore, the project would not be subject to the provisions of the PG&E San Joaquin Valley Operation and Maintenance HCP, and there would be no impact.

V. Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Federal and State Regulations

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, and water conveyance systems), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.”

The National Historic Preservation Act of 1966

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 CFR 800).

California Environmental Quality Act

CEQA requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California PRC Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal

cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object that has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

Local Regulations

Several goals and policies are identified in the *2030 County of Merced General Plan* that pertain to potential cultural resources in the project area (Merced County, 2013). The following goals and policies are related to the project.

- Goal RCR-2: Protect and preserve the cultural, archeological, and historic resources of the County in order to maintain its unique character.
- Policy RCR-2.1: Require development projects that affect archeological sites and artifacts to avoid disturbance or damage to these sites.
- Policy RCR-2.2: Support the preservation of historical structures and areas, particularly those listed on the National Registrar of Historic Places and California Registrar of Historic Places.
- Policy RCR-2.3: Require that the original architectural character of significant State- and Federally-listed historic structures be maintained in compliance with preservation standards and regulations.
- Policy RCR-2.5: 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: 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 Office of Planning and Research Tribal Consultation Guidelines (2005).

Affected Environment

The following background information and analysis include results from the Historic Property Survey Report (HPSR) and Archaeological Survey Report (ASR) that were completed for the project (InContext, 2019).

Area of Potential Effects

The Area of Potential Effect (APE) encompasses the maximum area needed for the construction of the proposed project including all areas of ground disturbance. In accordance with Section 106 Programmatic Agreement (PA) Stipulation VIII.A, the four-acre APE for the project was established in consultation with Caltrans, on September 27, 2018. The horizontal extent of the APE entirely within the ROW for Merced Falls Road and the maximum vertical extent of the APE is three feet below ground surface (bgs). The APE is identified in **Figure 6**, Area of Potential Effects.

Matt Hespenheide

Matt Hespenheide
County Engineer- Merced County

9/17/18

Date

Kelli Sullivan

Kelli Sullivan, PQS
Prehistoric Archaeology- Caltrans District 10

9/27/2018

Date

Parminder Singh

Parminder Singh
District Local Assistance Manager- Caltrans District 10

9/27/18

Date



 Project APE

1:2,400



Merced Falls Road Shoulders Improvement Project
Federal Aid Number: 5939(111)

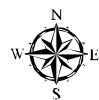


Sheet 1 of 2

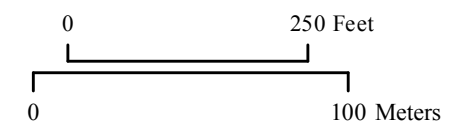


 Project APE

1:2,400



Merced Falls Road Shoulders Improvement Project Federal Aid Number: 5939(111)



Sheet 2 of 2

Historical Resources

A records search of the APE and an area of a 0.25-mile radius was conducted by staff of the California Historic Resources Information System, Central California Information Center (CCIC) on November 13, 2017 to identify any historic properties or previous cultural resources studies on file at the CCIC.

The records search identified one cultural resource within the APE, the Merced River Dredge Tailings (P-24-1782), as a result of previous cultural resources studies. This resource was recommended by the Department of Water Resources to USACE as not eligible for listing in the NRHP; however, no documentation regarding a determination or State Historic Preservation Officer concurrence for this resource could be found. This resource is a placer mining feature with no associated structural remains or archaeological deposits and, consistent with Section 106 PA Attachment 4, the property is exempt from evaluation.

Two built environment resources were identified within the larger 0.25-mile radius, and include a segment of the Yosemite Valley Railroad (P-24-76/CA-MER-343H) and a portion of proposed Merced Irrigation Historic District (P-24-1909). Resource P-24-76 is approximately 0.10 mile north of the APE. Although portions of Resource P-24-76 have been determined not eligible for listing in the NRHP, the portion nearest the APE has neither been recorded nor evaluated. Resource P-24-1909 is a proposed Historic District comprised of components in the Merced Irrigation District. No components of the proposed district have been identified within the APE or 0.25-mile radius as a result of current or previous investigations.

Archaeological Resources

On November 29, 2017, a cultural resources specialist/archaeologist conducted a pedestrian survey of the project APE. The majority of the APE is covered in paved roadway, preventing visibility of the ground surface below the pavement. In areas where no pavement existed (along the roadway shoulders), visibility was excellent with little or no vegetation to obscure observation of the soil. No cultural resources were identified within the APE as a result of the survey.

Project Impacts

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations Section 15064.5?

No Impact. As described above, a records search of the APE and an area of 0.25-mile radius was conducted to identify any historic properties. One cultural resource was identified within the APE; however, consistent with Section 106 PA Attachment 4, the property is exempt from evaluation. Two built environment resources were identified within the 0.25-mile radius; however, neither of these two resources would be directly or indirectly affected by the project because they are not within the project APE. Therefore, there would be no impacts on historical resources.

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

No Impact. As described above, a pedestrian survey was completed for the project; however, no archaeological resources pursuant to CCR Section 15064.5 were identified within the APE. Because of previous disturbance within Merced Falls Road ROW, the APE has a low potential for buried archaeological resources. Construction of the project would require some ground disturbance, with excavation to a maximum depth of three feet bgs. While much of the area has been previously disturbed, there is potential for archaeological resources to be discovered during construction, which could result in disturbance of the resources. If archaeological resources are discovered during construction, the project would comply with Avoidance and Minimization Measure CUL-1 described in the section below. Therefore, there would be no impacts on archaeological resources.

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

No Impact. It is not anticipated that human remains are present in the project area; however, with any subsurface work, there is a chance that human remains interred outside of formal cemeteries may be present. If human remains are discovered during construction, the project would comply with Avoidance and Minimization Measure CUL-2 described in the section below. Therefore, there would be no impacts on human remains.

Avoidance and Minimization

To avoid or minimize impacts on cultural resources, the following measure will be implemented:

- CUL-1 If archaeological resources, paleontological resources, or unique geologic features are encountered during construction, all ground-disturbing work will be stopped until an archaeologist or monitor can properly assess the resources(s) and identify the appropriate measures to ensure that the resources will not be adversely affected.
- CUL-2 If human remains are uncovered during construction activities, ground disturbing activities in the area will stop, and the County Coroner will be notified pursuant to the requirements of the California Health and Safety Code Section 7050.5. No further disturbance in the area will 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 will notify the California Native American Heritage Commission (NAHC), who will determine and notify the most likely descendent (MLD). The County will coordinate with the MLD to identify appropriate analyses and treatment or disposition of the remains and any items associated with Native American burials.

VI. Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The California Public Utilities Commission (CPUC) 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).

Privately owned companies that provide electricity, and natural gas, are regulated by the CPUC. The CPUC is available to help resolve disputes and work through issues unresolvable through the service provider.

Project Impacts

- a) **Would the project 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. Operation of the project would not require energy input beyond what is currently required because the project would not increase vehicle use. However, project construction would involve the use of equipment that requires fuel or electricity to operate. The use of this equipment would be temporary and intermittent throughout the project construction period. Energy consumption, such as the use of gasoline or diesel for worker vehicles, maintenance equipment, and generators used to power equipment, would be relatively minor. As such, the project would not result in significant impacts of wasteful or inefficient energy consumption. Therefore, impacts would be less than significant.

- 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.

VII. Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Federal and 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 Code

The State of California provides minimum standards for building design through the California Building Standards Code (CCR, Title 24). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. The California Building Standards Code (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 Health and Safety Code 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 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, and the current 2013 CBC took effect January 1, 2014.

Local Regulations

2030 Merced County General Plan

The Health and Safety Element of the 2030 Merced County General Plan contains the following policies that are applicable to the project (Merced County, 2013):

- Goal HS-1: Minimize the loss of life, injury, and property damage of county residents due to seismic and geologic hazards.
- Policy HS-1.4: 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.

Project Impacts

- a) **Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
- i. **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

No Impact. According to the most recent Alquist-Priolo Earthquake Fault Zoning Map, the project area is outside of the Alquist-Priolo Fault Zone, and there are no Alquist-Priolo faults in Merced County (California Department of Conservation, 2015a). The only active fault (i.e., a fault that has moved one or more times in the last 10,000 years) in the County is the Ortigalita Fault, approximately 50 miles southwest of the project area (California Geological Survey, 2010). Because the project area is outside of the Alquist-Priolo fault zone, the potential for surface fault rupture is considered low. In addition, the roadway project design would be consistent with standard engineering practices and would adhere to applicable standards related to seismic safety, in accordance with the geotechnical evaluation conducted for the project; therefore, there would be no impacts.

- ii. **Strong seismic ground shaking?**

No Impact. According to the most recent Fault Activity Map of California, there are no potentially active faults that pass through the project area (California Geological Survey, 2010). The Ortigalita Fault,

approximately 50 miles southwest of the project area, has not been recently active; however, there is potential that the fault could become active again. There are several active faults that affect seismic activity in the County, including the San Andreas Fault, approximately 15 miles west of the County; the Hayward, Greenville, and Calaveras Faults, approximately 15 miles northwest of the County; and the Bear Mountain Fault Zone, approximately five miles east of the County (Merced County, 2000). Therefore, the project area could be subject to seismic ground shaking.

The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. Project construction would be consistent with standard engineering practices and would adhere to applicable standards related to seismic safety. Therefore, there would be a low risk of loss, injury, or death resulting from roadway failure, and no impacts are anticipated.

iii. Seismic-related ground failure, including liquefaction?

No Impact. Soil liquefaction occurs when a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress, usually earthquake shaking or other sudden change in stress condition, causing it to behave like a liquid. No liquefaction hazard areas have been identified in the County; however, there is potential for liquefaction throughout the San Joaquin Valley where unconsolidated sediments and a high-water table coincide (Merced County, 2000). Because the project would include widening and paving the shoulders of an existing roadway, and would not include new structures, the potential for exposure of people or structures to potential adverse effects related to liquefaction is considered low. Therefore, there would be no impacts.

iv. Landslides?

No Impact. Landslides are the sliding down of a mass of earth or rock from a mountain or cliff. Factors that contribute to landslide potential are steep slopes, unstable terrain, and proximity to earthquake faults. There are currently no landslide inventory maps that include the County; furthermore, landslide risks are considered low because the majority of the County, including the project area, is within the low-lying areas of the Central Valley basin (Merced County, 2000).

The project area is in a relatively flat area. Because the project would include widening and paving the shoulders along the existing roadway, and would not include new structures, the potential for exposure of people or structures to potential substantial adverse effects involving landslides is considered low; therefore, there would be no impacts.

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

Less Than Significant Impact. The soil-erodibility factor (K) represents: (1) the susceptibility of soil or surface material to erosion, (2) the transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff, although these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially

susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high runoff rates and large runoff volumes (State Water Resources Control Board, 2018).

Erosion is the movement of rocks and soil from the Earth's surface by wind, rain, or running water. Several factors influence erosion, such as the size of soil particles (larger particles are more prone to erosion), and vegetation cover, which prevents erosion. The USDA Web Soil Survey rates the erosion hazard of soils based on soil erosion factor K. Erosion factor K indicates the susceptibility of soil to erosion by water, with values ranging from 0.02 to 0.69. Other factors being equal, the higher the rating, the more susceptible the soil is to erosion by water. The rating of factor K for soils in the project area is 0.15, which indicates a low susceptibility to erosion, which means that erosion of these soils is unlikely under ordinary climatic conditions (United States Department of Agriculture, 2017).

Project construction would require the removal of ruderal vegetation, and excavation to a depth of approximately 1.5 feet. Standard BMPs would be implemented to minimize the potential for soil erosion during construction, and after construction is complete, exposed soils would either be paved or stabilized through compaction. Operation of the project would not result in soil erosion or loss of topsoil. Therefore, impacts would be less than significant.

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

No Impact. See Responses VI a) (i)-(iv) above. The project would include widening and paving the shoulders along the existing roadway to improve public safety, and would be consistent with standard engineering practices and standards. Therefore, the project would not increase risks from soil instability, and there would be no impacts.

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. Expansive soil is a soil that is prone to large volume changes (swelling and shrinking) that are directly related to changes in water content — with higher moisture levels, the soils will swell, and with lower moisture levels, the soils will shrink. According to Table 18-1-B of the California Building Code, special foundation design is required if the Expansion Index (which predicts the swelling potential of compacted soils) is higher than 20. Based on a 1989 United States Geological Survey (USGS) map, the project is located in an area with little or no swelling clay (U.S. Geological Survey, 1989). The project is located on or adjacent to mine tailings where are not expansive soils. Therefore, there would be no impacts from expansive soils.

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

No Impact. The project would include widening and paving of the shoulders along the existing roadway and would not require the installation of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impacts.

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

No impact. The project area was not considered sensitive for paleontological resources. Due to the historic lack of paleontological resource discovery and prehistory of the project area, the project area was not identified as potential site for future paleontological discovery.

Because excavation would not extend below three feet bgs and the project area has been previously disturbed, it is unlikely that paleontological resources would be encountered during excavation activities. However, the discovery of paleontological or unique geologic features is a possibility during sub-surface work. If paleontological resources are discovered during construction, the project would comply with Avoidance and Minimization Measure CUL-1 described in Section V. Cultural Resources above. Therefore, there would be no impacts on paleontological resources.

VIII. Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

There are numerous state plans, policies, regulations, and laws related to greenhouse gases (GHG) and global climate change that 1) establish overall state policies and GHG reduction targets; 2) require state or local actions that result in direct or indirect GHG emission reductions for the project; 3) require CEQA analysis of GHG emissions; and 4) provide generally-accepted guidance in performing GHG analyses. The major components of California's climate change policy are reviewed below.

State Regulations

Assembly Bill 32

Assembly Bill 32 (AB 32), or the California Global Warming Solutions Act of 2006, was passed to establish regulations that reduce GHG emissions in California to 1990 levels by 2020, and to monitor and enforce compliance with the program. As part of AB 32, a scoping plan was created to outline the strategies for meeting emissions goals (California Air Resources Board, 2017a).

Senate Bill 97 and Amendments to the State CEQA Guidelines

As directed by Senate Bill 97, the California Natural Resources Agency adopted amendments to the State CEQA Guidelines on December 30, 2009, adding a new Section 15064.4, "Determining the Significance of Impacts from Greenhouse Gas Emissions," and a new Section 15126.4(c), "Mitigation Measures Related to Greenhouse Gas Emissions." The amendments became effective on March 18, 2010.

CARB GHG Emissions Data and Scoping Plan

AB 32 requires CARB to develop a scoping plan to lower the state's GHG emissions to meet the 2020 limit. The Assembly Bill 32 Scoping Plan was approved at the December 2008 CARB meeting, and the First Update to the Assembly Bill 32 Scoping Plan was approved in May 2014 (California Air Resources Board, 2014b). Key elements of the scoping plan include expanding and strengthening existing energy efficiency

programs and building and appliance standards; achieving a statewide renewable energy mix of 33 percent; developing a California cap and trade program linked with other similar programs; establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets; implementing existing laws and standards, such as California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and issuing targeted fees to fund the state's long-term commitment to Assembly Bill 32 administration.

Local Regulations

2030 Merced County General Plan

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 County 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. Policies set forth in the General Plan include the following.

- Policy CIR-1.3: Encourage transportation programs that result in more efficient energy use, reduce greenhouse gas emissions and noise levels, and improve air quality.
- Policy AQ-1.3: Promote greenhouse gas emission reductions by encouraging agricultural operators to use carbon efficient farming methods (e.g., no-till farming, crop rotation, cover cropping); install renewable energy technologies; protect grasslands, open space, oak woodlands, riparian forest and farmlands from conversion to other uses; and develop energy-efficient structures.
- Policy AQ-2.2: Use the development review process to achieve measurable reductions in criteria pollutant, toxic air contaminants, and greenhouse gas emissions.

Project Impacts

- 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. 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, 2018). The majority of GHG from transportation are carbon dioxide emissions resulting from the combustion of petroleum-based products, like gasoline, in internal combustion engines (U.S. Environmental Protection Agency, 2018). 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.

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 roadway. Therefore, operation of the project would not result in impacts related to GHG emissions.

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. Therefore, construction of the project would result in less than significant impacts related to GHG emissions.

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

No Impact. AB 32, or the California Global Warming Solutions Act of 2006, was passed to establish regulations that reduce GHG emissions in California to 1990 levels by 2020, and to monitor and enforce compliance with the program. As part of AB 32, a scoping plan was created to outline the strategies for meeting emissions goals (California Air Resources Board, 2017a).

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 County 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.

As discussed in Response VII a) above, operation of the project is not expected to increase GHG emissions, and construction of the project would contribute to minimal increases in GHG emissions. Therefore, the project is not expected to conflict with any local or state targets for GHG emissions reduction, and there would be no impacts.

IX. Hazards and Hazardous Materials

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

The following discussion incorporates the results of the Initial Site Assessment (ISA) that was prepared for the project (Crawford & Associates, Inc., 2018).

Regulatory Setting

State Regulations

Hazardous Waste and Substances Site List - Site Cleanup (Cortese List)

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code section 65962.5 requires the California Environmental Protection Agency (CalEPA) 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 the Resource Conservation and Recovery Act (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 outlined in 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 U.S. 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 2030 Merced County General Plan contains the following policies that are applicable to the project (Merced County, 2013):

- 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.

Project Impacts

- 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. A hazardous material is any substance or material that could adversely affect the safety of the public, handlers, or transportation carriers. An ISA was completed for the project. It evaluated the potential for hazardous materials within the study area. The ISA was based on regulatory agency databases, topographic maps, aerial photographs, and a visual site survey conducted on January 15, 2018.

The project would include widening and paving the shoulders along the existing roadway and would not involve the routine transport, use, or disposal of hazardous materials. The project could include the transport of fuels to equipment; therefore, BMPs for use and transport will be implemented to ensure less than significant impacts. Lead-based paint and asbestos-containing construction material were identified as potentially present in roadway striping and concrete box culverts, respectfully. If those materials would be disturbed by the project, mitigation measures would be implemented as defined below. Therefore, impacts would be less than significant with mitigation incorporated.

- 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 Response VIII a) above. Operation of the project would not involve the use or release of hazardous materials into the environment. An ISA was completed for the project. It evaluated the potential for hazardous materials within the study area. The ISA was based on regulatory agency databases, topographic maps, aerial photographs, and a visual site survey conducted on January 15, 2018. There is no evidence to suggest that the project would create significant hazard to the public or environment.

Substantial mine tailings from previous mining activities in the Merced River are located immediately adjacent to Merced Falls Road to the south, and approximately 0.1 mile of Merced Falls Road to the north. Although the project would not acquire additional ROW, the mine tailings immediately adjacent to the roadway may be disturbed by the project, which may have the potential to contain hazardous materials. Mine tailings could possibly be disturbed by the construction of this project; however, their disturbance

would not pose as a plausible threat to the public or the project. Therefore, the impacts from routine transport, use, or disposal of hazardous materials would be less than significant.

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. The nearest school is the Snelling-Merced Falls Elementary School. The school is over one mile west of the project area. Because the school is greater than one-quarter mile from the project area, any emissions or handling of hazardous waste would not affect the 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. Government Code Section 65962.5 requires the CalEPA to compile the Hazardous Waste and Substances Sites List, also called the Cortese List. The following data sources were reviewed for information on hazardous materials sites in the project area (California Environmental Protection Agency, 2018):

- List of Hazardous Waste and Substances sites from DTSC EnviroStor database.
- List of Leaking Underground Storage Tank (LUST) Sites by County and Fiscal Year from State Water Resources Control Board's (SWRCB) GeoTracker database.
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
- List of "active" cease and desist orders and cleanup and abatement orders from SWRCB.
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

There are no Hazardous Waste and Substances sites included on the Cortese List in proximity to the project area. The nearest site in the County is the Castle Air Force Base, approximately 14.5 miles southwest of the project area. According to the SWRCB's GeoTracker database, the nearest LUST cleanup site is approximately 1.5 miles southwest of the project area. Cleanup for this site has been completed, and the case has been closed as of 2011 (State Water Resources Control Board, 2015). 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 for people residing or working in the project area?

No Impact. There are no public airports within two miles of the project area. The nearest public airport is the Merced County Castle Airport, approximately 13.7 miles southwest of the project area. In addition, the project would not include tall vertical structures or create new sources of light or glare that could result in airport safety 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 Falls Road is classified as a major collector road, and could be used as an evacuation route. Because the project would include widening and paving the shoulders along the existing roadway, the project would not include features that would impede emergency access or obstruct emergency evacuation routes in the project area during operation. During project construction, lane closures could temporarily affect traffic flow. However, vehicles would continue to have access throughout the project area, and full access would be restored following construction. Therefore, impacts related to emergency response and evacuation would be less than significant.

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

No Impact. The project area is surrounded by rural residential land uses. The project corridor is lined with sparse trees of various sizes, including oaks, pines, and large eucalyptus, as well as shrubby vegetation. Vegetation throughout the project area corridor consists primarily of grassy and ruderal areas adjacent to the roadway, with limited ornamental landscaping on some residential properties. For the purposes of this fire hazard analysis, the vegetated areas around the project area are considered wildlands, and there is a risk for wildland fires in these areas. However, the project would include widening and paving the shoulders along the existing roadway and would not introduce additional heat sources or combustible materials in the project area. With implementation of the project, the roadway would continue to operate similar to existing conditions.

During construction, wildland fires could start from construction equipment or the use of flammable materials. However, fire hazards would be minimized through the implementation of standard BMPs. Therefore, there would be no impacts related to wildland fires.

Avoidance, Minimization, and/or Mitigation Measures

Based on the public records, historical aerial photographs, and historical aerial photographs reviewed for the project, and the site reconnaissance performed, the following avoidance and minimization measures were identified in the ISA:

- HAZ-1 Test the white fog line paint for lead if project activities include disturbing or removing this material.
- HAZ-2 Test the low concrete wall of the box culvert for asbestos and lead-based paint if this structure will be disturbed by planned project activities. Asbestos testing should be performed by a Certified Asbestos Consultant.
- HAZ-3 Test soil at the base of the low concrete wall for lead if this soil will be disturbed by planned project activities.
- HAZ-4 Implement BMPs during the use and transport of fuels.

Through the compliance with mandatory regulations and implementation of the identified avoidance and minimization measures, the project would result in less than significant impacts on the transport, use, or disposal of potentially hazardous materials. No further mitigation would be required for the project.

X. Hydrology and Water Quality

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

The following discussion incorporates the results of the NES that was prepared for the project (GPA Consulting, 2019).

Regulatory Setting

Federal and State Regulations

Federal Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters, including waters of the state. Section 404 of the CWA requires a permit for discharges of dredged or fill material into the navigable waters of the U.S. from the USACE. Section 401 of the CWA requires that any applicant for a federal permit for an activity that may result in any discharge into navigable waters shall provide the permitting agency with a certification from the applicable state agency that such discharge would comply with state water quality requirements. In California, the applicable state agency is the SWRCB, which supports the regulatory activities of nine RWQCBs. The RWQCB that oversees water quality compliance in the project area is the Central Valley RWQCB.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include groundwater and surface waters not considered waters of the U.S. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the CWA.

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.

Executive Order 11988 (Floodplain Management, 1977)

Executive Order 11988 (Floodplain Management) directs all federal agencies to avoid, to the extent possible, long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. Requirements for compliance are outlined in Title 23, CFR, Part 650, Subpart A (23 CFR 650A) titled “Location and Hydraulic Design of Encroachment on Floodplains” (2015).

If the preferred alternative involves significant encroachment onto the floodplain, the final environmental document (final Environmental Impact Statement or finding of no significant impact) must include:

- The reasons why the proposed action must be located in the floodplain,
- The alternatives considered and why they were not practicable, and
- A statement indicating whether the action conforms to applicable state or local floodplain protection standards.

Executive Order 13690 (Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input)

The Federal Flood Risk Management Standard (FFRMS) is the national flood risk management standard established by Executive Order 13690 to be incorporated into existing processes used to implement Executive Order 11988. Executive Order 13690 amends “Executive Order 11988, Floodplain Management,” and directs all federal agencies to avoid conducting, allowing, or supporting construction in the base floodplain. The executive order also directs federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by the floodplain. The floodplain elevation and flood hazard area should be the result of using a climate-informed science approach.

The FFRMS requires all future federal investments in and affecting floodplains to meet the level of resilience as established by the Executive Order 13690. The vertical flood elevation and corresponding horizontal floodplain determined using the approaches in the FFRMS establish the level to which a structure or facility must be resilient. This may include using structural or nonstructural methods to reduce or prevent damage; elevating a structure; or, where appropriate, designing it to adapt to, withstand, and rapidly recover from a flood event. The implementation of the Executive Order 13690 for floodplains gives agencies the flexibility to select one of the following approaches for establishing the flood elevation and hazard area used in siting, design, and construction:

- Use data and methods informed by best-available actionable hydrologic and hydraulic data and methods that integrate current and future changes in flooding based on climate-informed science;
- Build two feet above the 100-year (one percent chance annually) flood elevation for standard non-critical projects, and three feet above the 100-year flood elevation for critical projects, such as hospitals and evacuation centers;
- Build to the 500-year (0.2 percent chance annually) flood elevation; or
- Build to an elevation and flood hazard area that results from using any other method identified in an update to the FFRMS.

Executive Order 13690 is not a self-implementing requirement. Both the U.S. Department of Transportation (DOT) and the Federal Highway Administration (FHWA) have to take actions to update their procedures before they apply to FHWA projects. The U.S. DOT has been working on an implementation plan to comply with Executive Order 13690. However, no FHWA programs should deviate from the existing requirements (23 CFR 650A) until promulgation of any new/revised regulation, policies, and guidance for compliance with the Executive Order 13690.

On August 15, 2017, an Executive Order was signed revoking Executive Order 13690 in its entirety. Therefore, the project will continue to be compliant with FHWA regulations contained in 23 CFR 650A,

“Location and Hydraulic Design of Encroachments on Flood Plains.” These regulations are the FHWA’s current method for implementing the Executive Order 11988, which relates to Floodplain Management.

Local Regulations

Merced County Storm Water Management Program

The Merced County Storm Water Management Program (SWMP) was developed to limit the discharge of pollutants from the Merced Storm Water 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 storm water runoff control program, a post-construction storm water management in new development and redevelopment program, and a pollution prevention/good housekeeping for municipal operations program.

Proposed Merced County Storm Water Ordinance

The County has proposed an ordinance that would add a new article to the Merced County Code regarding urban storm water quality management and discharge control. The purpose of the ordinance is to ensure the health, safety, and general welfare of citizens, and to protect and enhance the water quality of watercourses and water bodies in a manner pursuant to and consistent with the CWA. The ordinance is proposed to ensure the reduction of pollutants in storm water discharges to the maximum extent practicable and to prohibit non-storm water discharges to the storm drain system. The proposed ordinance states that the County will adopt requirements identifying BMPs for any activity, operation, or facility that may cause or contribute to pollution or contamination of storm water, the storm drain system, or waters of the U.S. and may do so as a separate BMP Guidance Series.

Merced County General Plan

The County’s General Plan contains the County’s goals and desires concerning land use and is designed to serve as the basis for development decisions. The following goals and policies from the County’s General Plan, Water Element are applicable to the project:

- 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. EPA National Pollutant Discharge Elimination System (NPDES) program to control non-point source water pollution.
- Policy W-2-8: Coordinate with the SWRCB, 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.

Project Impacts

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. Waste discharge requirements are issued by the SWRCB to regulate point source discharges (defined by the U.S. EPA as any single identifiable source of pollution from which pollutants are discharged, such as a pipe or ditch) that are exempt from Title 27, Section 20090 of the CCR and are not subject to the CWA.

The project is within the County, which is regulated by the Central Valley RWQCB. The Central Valley RWQCB has adopted NPDES Permits and General Waste Discharge Requirements for the County. Because the project would include widening and paving of the shoulders along the existing roadway, and all improvements would be completed within existing ROW, no waste discharge requirements are applicable to the project area.

Operation of the project would maintain the same number of lanes in the project area (one in each direction) and would not increase capacity or result in additional vehicles on the roadway. Therefore, the project would not result in an increase in pollutants such as oil and dirt compared to existing conditions.

Tributaries that convey water to the Merced River are adjacent to the project area south of the roadway. Construction activities could result in soil and debris to be carried by stormwater runoff into nearby tributaries, thereby contributing to degraded water quality. However, standard BMPs and avoidance and minimization measure BIO-14 (described in Section IV above) would be implemented to minimize soil erosion and protect water quality. Therefore, the project would not violate water quality standards or waste discharge requirements or substantially degrade surface or groundwater quality. Therefore, impacts would be less than significant.

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

No Impact. The project would include widening and paving of the shoulders along the existing roadway, resulting in the addition of a minor amount of impervious surface area. Although the project would result in increased runoff flows, the increase would be minimal, and the existing hydrology would not be substantially altered. Surface waters flowing off of impervious surfaces could still percolate into surrounding pervious surfaces. Therefore, the project is not anticipated to interfere with groundwater recharge.

During construction, the roadway would be excavated to a depth of about 1.5 feet, which would not have the potential to reach groundwater. Additionally, the project would not require the use of groundwater during construction or operation of the project. Therefore, there would be no impacts related to groundwater.

- 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 or through the addition of impervious surfaces, in a manner that would**

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

Less Than Significant Impact. The project would include widening and paving the shoulders along the existing roadway, which would result in an increase in impervious surface area. This would likely result in a slight increase in surface runoff; however, drainage patterns in the project area would remain similar to existing conditions and would not result in substantial erosion or siltation on- or off-site.

Project construction would require ground disturbance, which could temporarily alter the existing drainage pattern in the project area. However, standard BMPs would be implemented during construction to minimize soil erosion and siltation of receiving waterways. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. See Response IX c) above. The project would include widening and paving the shoulders along the existing roadway. The project could result in a slight increase in surface runoff; however, the project would be designed to accommodate existing and anticipated runoff levels, and the project would not result in substantial increases in runoff that would result in flooding on- or off-site. Therefore, impacts would be less than significant.

- 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. See Responses IX a) and c) above. The project could result in a slight increase in surface runoff; however, the project would be designed to accommodate existing and anticipated runoff levels, and drainage patterns in the project area would remain largely unchanged from existing conditions. Operation of the project would not result in increased traffic volume on the roadway, and would therefore not result in increased pollutant runoff from vehicles. Therefore, impacts would be less than significant.

- iv. **impede or redirect flood flows?**

No Impact. The project area is within Federal Emergency Management Agency Flood Insurance Rate Maps Map Number 06047C0100G and is located in Zone X, which are areas determined to be outside the 0.2 percent annual chance floodplain. The project would include widening and paving the shoulders along the existing roadway, and all improvements would be completed within existing ROW. Therefore, there would be no encroachment into a regulatory floodway, and there would be no impacts.

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

No Impact. As described under Response X a) (iv), the project is outside the 0.2 percent annual chance floodplain and is therefore not located in a flood hazard area.

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 are not a high risk area for mudflows.

A seiche is an oscillation of a land-locked water body, such as a lake or dam. Tributaries that convey water to the Merced River are adjacent to the project area south of the roadway; however, these tributaries are not land-locked water bodies subject to seiche. Therefore, there would be no impacts.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact. The project area is subject to the Merced County SWMP, General Plan policies, and City ordinances. Construction debris, wastes, loose soils, and fuels generated by the project could potentially enter the creek and impact water quality. However, the project would include standard BMPs and avoidance and minimization measure BIO-14 (described in Section IV above). As described under Response X b), project construction would not have the potential to reach groundwater and project construction and operation would not require groundwater use. Therefore, impacts would be less than significant.

XI. Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Merced County 2030 General Plan

The Merced County 2030 General Plan Land Use Element includes land use standards, goals, and policies that are designed to maintain a healthy balance of competing land uses within Merced County. Land Use goals and policies related to the project are described below.

- 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 AG-2.4: Preservation Programs. Encourage property owner participation in programs that preserve farmland, including the Williamson Act, conservation easements, and USDA-funded conservation practices.

- Policy LU-1.11: Ensure that new development does not erode current levels of County service and that demands on public facilities and services from new development do not result in an unreasonable and inequitable burden on existing residents and property owners.
- Policy LU-2-3: Limit allowed land use within Agricultural and Foothill Pasture areas to agricultural crop production, farm support operations, and grazing and open space uses.
- Policy LU-2-4: Except as otherwise provided by law, limit ancillary uses in Agricultural and Foothill Pasture areas to include secondary single-family residences, farm worker housing, agricultural tourism related uses, and agricultural support services, provided that such uses do not interfere with historic agricultural practices, result in adverse health risks, or conflict with sensitive habitats or other biological resources.

Project Impacts

a) Would the project physically divide an established community?

No Impact. The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. Improvements would be limited to the existing roadway and within County ROW, and would not physically disrupt or divide an established community. Therefore, there would be no impact.

b) Would the project 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 Transportation and Circulation Element of the 2030 Merced County General Plan establishes goals and policies for the circulation system of the County (Merced County, 2013). Goal CIR-1 states that the County will “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.” Because the project includes widening and paving the shoulders along the existing roadway that would support the maintenance of a safe and efficient roadway system, the project is consistent with the plans and goals adopted by the community. In addition, the project area is within existing County ROW, and no ROW acquisitions or TCEs would be required to accommodate the project. Therefore, the project would not result in land use changes, and there would be no impact.

XII. Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The County's General Plan contains the County's goals and desires concerning mineral resources and is designed to serve as the basis for development decisions. The following goals and policies from the County's General Plan, Soil and Mineral Resources Section are applicable to the project:

- 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-3.5: Require areas identified with mineral deposits on either the State Mine Land Classification Maps provided by the State Mining and Geology Board's Classification Report, or site-specific information, remain protected for possible future mineral extraction. Impose conditions upon new incompatible land uses in areas surrounding identified mineral deposits for the purpose of mitigating significant land use conflicts prior to approving a use that would otherwise be incompatible with mineral extraction. The identified mineral deposit may be determined by the classification maps, Classification Report, separate County maps, or on a site-specific basis.

Project Impacts

- 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. Mineral resources are geological deposits in or on the Earth's crust that may have economic value, and include fuels (e.g., coal, oil, and natural gas), metals (e.g., iron, copper, and aluminum) and non-metals (e.g., salt, gypsum, clay, sand, and phosphates). The California Surface Mining and Reclamation Act of 1975 requires the State Geologist to classify land into Mineral Resource Zones according to the known or inferred mineral potential of that land. The process is based solely on geology,

without regard to existing land use or land ownership. The primary goal of mineral land classification is to ensure that the mineral resource potential of land is recognized by local government decision-makers and considered before land-use decisions that could preclude mining are made.

The County General Plan identifies sand and gravel as the primary mineral resources found in the County (Merced County, 2013). All improvements would be made within the existing county ROW and that no land conversion would be needed for this project. No mineral resources that would be of value to the region or residents of the state have been identified in the vicinity of the project area. Therefore, no impacts resulting from the loss of mineral resources are anticipated.

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. The project area does not include any important mineral resources recovery sites delineated on the City's General Plan. Therefore, there would be no impacts on mineral resources.

XIII. Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

The following construction noise standards are applicable to the project.

Federal Regulations

23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. 23 CFR 772 requires that construction noise impacts be identified, but does not specify specific methods or abatement criteria for evaluating construction noise.

State Regulations

The California Department of Transportation's Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects (2011 Protocol) specifies the policies, procedures, and practices to be used by agencies that sponsor new construction or reconstruction of federal or federal-aid highway projects. The noise abatement criteria specified in the 2011 Protocol are the same as those specified in 23 CFR 772.

Caltrans Standard Specifications Section 14-8.02

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

- Per SSP 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

Merced County Noise Control Ordinance

The County's Noise Control Ordinance (Merced County Code, Title 10, Public Peace, Morals and Welfare) includes restrictions for the control of noise from non-transportation sources. In accordance with the County's Noise Control Ordinance, 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. The ordinance also requires that construction be properly muffled and maintained.

Project Impacts

- a) **Would the project result in the 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?**

No Impact. The project would not increase the roadway capacity or result in additional vehicles on the roadway. In addition, the project would not change the roadway alignment for travel lanes. Therefore, the project would not result in increases in ambient noise levels or bring traffic noise sources closer to sensitive noise receptors.

Adjacent land consists rural residential and recreational land uses. The nearest residential dwellings are approximately 130 feet north of the existing roadway and project construction area. Construction of the project may result in short-term and intermittent increases in noise levels at these residences. Construction noise levels would fluctuate depending on construction activity, equipment type, duration of use, and the distance between noise source and receiver. **Table 1** summarizes noise levels produced by construction equipment commonly used on roadway and bridge construction projects.

Based on the levels depicted in **Table 1**, construction equipment could be expected to generate noise levels up to 80 dBA maximum sound level (L_{max}) at a distance of 50 feet. Noise produced by construction equipment decreases at a rate of approximately six decibels per doubling of distance from the source. Therefore, average-hourly noise levels would be lower than 80 dBA at the nearest residential dwellings. Actual noise levels would vary depending on various factors, including the type and number of pieces of equipment used, and duration of use.

Construction of the project would not include pile driving, structure demolition, blasting, or other activities that would have the potential for adverse noise impacts. The project would be in compliance with current Caltrans Standard Specifications, which currently requires that construction noise does not exceed 86 dBA at 50 feet from the job site from 9 p.m. to 6 a.m. The project would be in compliance with

the County's noise control requirements, which limit construction activities from 7 a.m. to 6 p.m. Therefore, the project would result in no impacts on noise.

Table 1: Construction Equipment Noise

Equipment	Noise Level (dBA L_{max} at 50 feet)
Backhoe	78
Bulldozers	82
Compressor	78
Crane	81
Drill Rig	79
Heavy Trucks	81
Hoe Ram	90
Loader	79
Pile Driver	101
Pneumatic Tools	85
Pumps	81
Roller	80

dBA = A-weighted decibels; L_{max} = maximum sound level

Source: Federal Highway Administration, 2017

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

No Impact. The project would include widening and paving the shoulders along the existing roadway. Operation of the project would maintain the same number of lanes in the project area (one in each direction) and would not increase capacity or result in additional vehicles on the roadway. Therefore, project operation would not change the existing groundborne vibration or noise environment in the project vicinity.

Groundborne noise and vibration from project construction would be intermittent and would be localized near the project area. Adjacent land consists of rural residential land uses, and the nearest noise receptors are approximately 80 feet north of the project construction area.

There are no federal, state, or local regulatory standards for ground-borne vibration. However, Caltrans has developed vibration criteria based on potential structural damage risks and human annoyance. Caltrans-recommended criteria for the evaluation of groundborne vibration levels, with regard to structural damage and human annoyance, are summarized in **Table 2**. Vibration levels are listed as peak particle velocity in inches per second (in/sec ppv).

Table 2: Summary of Groundborne Vibration Levels and Potential Effects

Vibration Level (in/sec ppv)	Human Reaction	Effect on Buildings
0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of “architectural” damage to normal buildings
0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of “architectural” damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize “architectural” damage
0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage.

The vibration levels are based on peak particle velocity (ppv) in the vertical direction for continuous vibration sources, which includes most construction activities, with the exception of transient or intermittent construction activities, such as pile driving. For pile driving, the minimum criterion level is typically considered to be 0.2 in/sec ppv.

Source: California Department of Transportation, 2013

Groundborne vibration levels commonly associated with roadway construction equipment are summarized in **Table 3**. As indicated, the highest groundborne vibration levels are typically generated by the use of pile drivers and vibratory rollers. Actual vibration levels vary depending on ground conditions and the specific equipment to be used.

Construction related groundborne vibration would be primarily result from the excavation of the existing roadway. Construction would require the use of road rollers and excavators. As shown in **Table 3**, typical vibration levels associated with road rollers are approximately 0.210 in/sec ppv at 25 feet.

The nearest residential structure is located approximately 80 feet from the proposed excavation. Based on this distance, the highest predicted ground vibration levels at the nearest residential structure would not exceed Caltrans’ recommended criteria for structural damage or human annoyance (i.e., 0.2 in/sec ppv). Actual vibration levels would vary depending on ground conditions and the specific equipment to be used. Because predicted groundborne vibration levels from the project would not exceed the recommended criteria for structural damage or human annoyance. Therefore, there would be no impacts.

Table 3: Representative Vibration Levels for Construction Equipment

Equipment		Peak Particle Velocity at 25 Feet (in/sec)
Pile Driver (Impact)	Upper Range	1.518
	Typical	0.644
Pile Driver (Sonic)	Upper Range	0.734
	Typical	0.170
Vibratory Roller		0.210
Hoe Ram		0.089
Caisson Drill		0.089
Large Bulldozers		0.089
Loaded Trucks		0.076
Jackhammer		0.035
Small Bulldozers		0.003

in/sec = inches/second

Source: California Department of Transportation, 2013

- 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. There are no public airports within two miles of the project area. The nearest public airport is the Merced County Castle Airport, approximately 13.7 miles southwest of the project area. The project area is just south of the Bonanza Hills Airport, a private use airport. The Bonanza Hills Airport is a dirt runway on the old railroad alignment. The airport does not appear to be actively used; however, the airport could be used by small aircraft with less noise potential. Because the project would include widening and paving the shoulders along the existing roadway, the people residing or working in the project area would be exposed to the same noise levels they are currently exposed to during project operation; therefore, there would be no impacts.

Avoidance and Minimization

Sound control shall conform to the provisions in Section 14-8.02, "Noise Control," of the SSP. Caltrans SSP 14-8.02 requires the following mandatory avoidance and minimization measures:

- N-1 Per Section 14-8.02 Noise Control, do not exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- N-2 Each internal combustion engine, used for any purpose on the job, or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the job site without an appropriate muffler.

In addition, implementing the following recommended measures would help minimize temporary construction noise impacts:

- N-3 Construction activities, excluding activities that would pose a significant safety risk to workers or citizens, shall be limited to between the daytime hours of 7:00 a.m. and 6:00 p.m.
- N-4 As directed by the County resident engineer, the contractor shall implement appropriate additional noise abatement measures including, but not limited to, siting the location of stationary construction equipment away from sensitive noise receptors to the greatest extent feasible, turning off idling equipment after no more than five minutes of inactivity, and rescheduling construction activity to avoid noise-sensitive days or times.

The use of mufflers would reduce equipment noise levels by as much as approximately 10 dBA. Other noise-reduction measures, such as idling limitations for construction equipment, can result in further reductions in overall construction noise levels. With implementation of the above measures, as well as enforcement of the County of Merced noise control requirements that generally limit construction activities to between the daytime hours of 7:00 a.m. and 6:00 p.m., noise impacts associated with construction of the proposed project would not be anticipated to result in a significant impact to occupants of nearby residential dwellings.

XIV. Population and Housing

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

Regulatory Setting

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

Project Impacts

- 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 is limited to improvements to the existing roadway and within County ROW. The project does not include the construction of new homes or businesses, or the extension of roads or infrastructure to undeveloped areas. Therefore, there would be no impacts on population growth.

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

No Impact. The project is limited to improvements to the existing roadway and within County ROW. No ROW acquisitions or TCEs would be required to accommodate the project. The project would not displace any people or housing units and the construction of replacement housing would not be required. Therefore, there would be no impacts.

XV. Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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:				
i) Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

Several goals and policies are identified in the *2030 County of Merced General Plan* that pertain to public services that serve the project area (Merced County, 2013). The following goals and policies are related to the project.

- Goal PFS-6: Ensure the provision of timely and adequate law enforcement through proper management and staffing of the Sheriff Department in Merced County.
- Policy PFS-6.2: Strive to achieve and maintain appropriate Sheriff Department response times for all call priority levels to provide adequate law enforcement services for all County residents.
- Goal PFS-7: Provide adequate fire and emergency medical facilities and services to protect County residents from injury and loss of life, and to protect property from fire.
- Policy PFS-1: Strive to maintain fire department staffing levels and response times consistent with National Fire Protection Association standards.

Project Impacts

- 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 nearest fire station is Merced County Fire Station 65 (Snelling), located approximately 1.4 miles west of the project area. The project is limited to improvements to the existing roadway and within County ROW. Operation of the project would not adversely impact fire protection service ratios, response times, or personnel and facility requirements.

The closure of one lane on the roadway would be required during normal working hours for approximately two months to accommodate construction activities. Lane closures would be short-term and temporary, and vehicles would continue to have access throughout the project area. Therefore, lane closures would not result in slower response times for fire protection vehicles; impacts on fire protection would be less than significant.

ii. **Police protection?**

Less than Significant Impact. There are no police departments within 10 miles of the project area. The project is limited to improvements to the existing roadway and within County ROW. Operation of the project would not increase demand for police protection services.

The closure of one lane on the roadway would be required during normal working hours for approximately two months to accommodate construction activities. Lane closures would be short-term and temporary, and vehicles would continue to have access throughout the project area. Therefore, lane closures would not result in slower response times for police protection vehicles; impacts on police protection would be less than significant.

iii. **Schools?**

No Impact. The nearest school is the Snelling-Merced Falls Elementary School, located over one mile west of the project area. The project would not result in the development of residential dwellings or contribute to an increase in the school-aged child population, necessitating the construction or expansion of nearby schools. Therefore, there would be no impacts on schools.

iv. **Parks?**

No Impact. Merced Falls Road provides access to Henderson Park, located just west of the project area. The project would not create new housing units or induce population growth due to employment, and thus, would not result in the need for new or expanded parks. Therefore, there would be no impacts on parks.

v. **Other public facilities?**

No Impact. The project would not create new housing units or induce population growth due to employment, and thus, would not result in the need for new or expanded public facilities. Therefore, there would be no impacts on public facilities.

XVI. Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

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

Project Impacts

- 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. Merced Falls Road provides access to Henderson Park, as well as recreational access points to the Merced River to the south of the road. The project is limited to improvements to the existing roadway and within County ROW, and would not create new housing units or induce new population growth that would accelerate the deterioration of these existing parks and recreational areas. Therefore, there would be no impacts on parks or recreational facilities.

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

No Impact. The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. The project would not include the development of recreational facilities or require the construction or expansion of recreational facilities. Therefore, there would be no impacts related to recreational facilities.

XVII. Transportation/Traffic

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

Regulatory Setting

The Transportation and Circulation Element of the 2030 Merced County General Plan identifies the following goal and policies that are applicable to the project.

- 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: Require that roadways are maintained and improved consistent with established peak period level of service.
- Policy CIR-1.13: Support all methods to achieve cost-effective design, construction, and maintenance of existing and future roadways.

Project Impacts

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

No Impact. The Transportation and Circulation Element of the 2030 Merced County General Plan outlines the County's vision for the "safe and efficient circulation of people, vehicles, and goods" (Merced County, 2013). In addition, the MCAG 2018 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is a long-range planning document that includes goals for providing a "good system of roads that are well maintained, safe, efficient, and meet the transportation demands of people and freight"

(Merced County Association of Governments, 2018). The project would include long-term roadway safety improvements that would be consistent with the goals of the County's General Plan and the MCAG 2018 RTP/SCS.

Operation of the project would maintain the same number of lanes in the project area (one in each direction) and would not increase capacity or result in additional vehicles on the roadway. In addition, there are no bicycle or pedestrian facilities in the project area, and no public transit routes, including bus routes, that run through the project area. Therefore, operation of the project would not result in impacts on the circulation system.

Construction of the project would result in short-term changes in traffic flow. The project area has a low number of people who work and live within the project limits. The need for detour routes is not anticipated. The closure of one lane on the roadway would be required during normal working hours for approximately two months to accommodate construction activities. Lane closures would result in slight delays or increased travel time in the project area, though traffic flow would be restored to existing conditions following construction. Therefore, there would be no impacts on the circulation system.

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

No Impact. As described under Response XVII a) above, operation of the project would maintain the same number of lanes (one in each direction) and would not increase capacity or result in additional vehicles on the roadway. Therefore, the project would not conflict with CEQA Guidelines section 15064.3, subdivision (b) and there would be no impacts.

c) Would the project 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. The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. Therefore, operation of the project would not increase hazards due to design features.

During construction, potential safety hazards could result from construction vehicles and equipment either traveling or being staged along the roadway, which could result in potential collisions with oncoming traffic. Temporary measures would be implemented to minimize hazards from incompatible uses (e.g., construction equipment). Therefore, there would be no impacts related to design features or incompatible uses.

d) Would the project result in inadequate emergency access?

Less Than Significant Impact. The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. The project would not include features that would impede emergency access in the project area during operation. During project construction, lane closures could temporarily affect traffic flow. However, emergency vehicles would continue to have access throughout the project area, and full access would be restored following construction. Therefore, impacts related to emergency access would be less than significant.

XVIII. Tribal and Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Regulatory Setting

In 2014, AB 52 added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource.

Project Impacts

The following discussion includes results from the HPSR and ASR that were completed for the project (InContext, 2019).

- 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)?**

No Impact. In compliance with Section 106, outreach to Native Americans was initiated on November 16, 2017, with a request to the NAHC for a sacred lands search and a list of contacts for the project. On November 27, 2017, the NAHC responded that their search of Sacred Lands File returned negative results. NAHC also provided a Native American Consultation List for Merced County. On December 6, 2017, the following tribes were contacted regarding the project: *Picayune Rancheria of Chukchansi Indians, North Valley Yokuts Tribe, Southern Sierra Miwuk Nation, Dumna Wo-Wah Tribal Government, and the Amah Mutsun Tribal Band.*

On December 14, 2017, Katherine Perez of the *North Valley Yokuts Tribe* indicated that because the project is near water, it has a high potential for burial discoveries. Ms. Perez recommended a qualified archaeologist and a Native American monitor be present to observe project-related ground disturbance. No further comments from the *North Valley Yokuts Tribe* or the other contacted tribes were received.

A survey for cultural resources was completed within the APE. No tribal cultural resources that are 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) were identified within the APE. Because of previous disturbance within Merced Falls Road ROW, the APE has a low potential for buried tribal cultural resources. If tribal cultural resources are discovered during construction, the project would comply with avoidance and minimization measures CUL-1 and CUL-2 described in the section below. Therefore, there would be no 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?**

No Impact. See Response XVII a) above.

Avoidance and Minimization

To avoid impacts on tribal cultural resources, the following measure will be implemented:

- CUL-1 If archaeological resources, paleontological resources, or unique geologic features are encountered during construction, all ground-disturbing work will be stopped until an archaeologist or monitor can properly assess the resources(s) and identify the appropriate measures to ensure that the resources will not be adversely affected.
- CUL-2 If human remains are uncovered during construction activities, ground disturbing activities in the area will stop, and the County Coroner will be notified pursuant to the requirements of the California Health and Safety Code Section 7050.5. No further disturbance in the area will 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 will notify the California NAHC, who will determine and notify the MLD. The County will coordinate with the MLD to identify appropriate analyses and treatment or disposition of the remains and any items associated with Native American burials.

XIX. Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Regulatory Setting

Privately owned companies that provide electricity, natural gas, water and sewer, and telephone services are regulated by the California Public Utilities Commission (CPUC). The CPUC is available to help resolve disputes and work through issues unresolvable through the service provider. Publicly owned utilities, such as the Sacramento Municipal Utility District and the Los Angeles Department of Water and Power, and cable television and Internet services, are not regulated by the CPUC.

Project Impacts

- a) **Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or**

telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Impact. The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. The project would not result in the development of residential dwellings or other facilities that would increase the amount of wastewater generated in the project area. Therefore, there would be no impacts related to wastewater treatment.

The project area does not have drainage facilities. The project would include widening and paving the shoulders along the existing roadway, which would increase the impervious surfaces in the project area and could increase stormwater runoff. However, the project would adhere to the County's standard design guidelines and would be designed to accommodate existing and anticipated runoff levels. The project would not result in substantial water quality impacts that would require the construction of storm water drainage facilities or the expansion of existing facilities. Therefore, there would be no impacts related to storm water drainage.

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

No Impact. The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. The project would not induce population growth or require any water supplies for long-term operation; therefore. The project would require a small amount of water during construction (e.g., mixing cement and watering soils to control dust). However, there are sufficient water supplies available to serve the minor water needs of the project; therefore, there would be no impacts.

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?

No Impact. The project would include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. The project would not require any wastewater treatment during operation or construction. Therefore, there would be no impact.

d) Would the project 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 include widening and paving the shoulders along the existing roadway to improve long-term roadway safety. Operation of the project would not result in the generation of solid waste or require the need for solid waste disposal. Project construction would include removal of existing pavement and painted traffic stripes, which would generate small amounts of solid waste. The solid waste generated during project construction could be accommodated by existing nearby landfills. Therefore, impacts would be less than significant.

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

Less Than Significant Impact. Project construction would include removal of existing pavement and painted traffic stripes, which would generate small amounts of solid waste. The project would comply with applicable federal, state, and local laws pertaining to the safe handling, transport, and disposal of solid waste. Therefore, impacts would be less than significant.

XX. Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Regulatory Setting

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).

Project Impacts

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

Less than Significant Impact. Merced Falls Road is classified as a major collector road, and could be used as an evacuation route. Because the project would include widening and paving the shoulders along the existing roadway, the project would not include features that would impede emergency access or obstruct emergency evacuation routes in the project area during operation. During project construction, lane closures could temporarily affect traffic flow. However, vehicles would continue to have access

throughout the project area, and full access would be restored following construction. Therefore, impacts related to emergency response and evacuation would be less than significant.

- b) Would the project, 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. Project activities would be limited to widening and paving the shoulders along the existing roadway. These improvements would not exacerbate wildfire risks that would expose people to pollutant concentrations from wildfire or uncontrolled spread of a wildfire. Therefore, there would be no impact.

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

No Impact. The project would not require the installation or maintenance of any associated infrastructure that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, there would be no 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. The project would result in a minor increase of impervious surface area, which could cause a slight increase in surface runoff. However, the project would be designed to accommodate existing and anticipated runoff levels, and the project would not result in substantial increases in runoff or drainage changes that would result in downslope or downstream flooding or landslides. Therefore, the project would result in less than significant impacts.

XXI. Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e. 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project Impacts

- 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, 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 discussed under Section IV above, the BSA consists of gravel/dirt access roads, adjacent agricultural fields, riparian and oak woodland, and rural-residential properties. 13 special-status plant species and 33 special-status wildlife species have potential to be in the BSA. During biological surveys, fish were observed in the waterway at the western end of the BSA.

Construction activities would include ground disturbance, ruderal ground cover vegetation removal, and vehicle movement, and could result in increased noise, vibration, human activity, and dust. These activities could result in direct (e.g., injury and death) and indirect impacts (e.g., removal of food resources and the loss of nesting and foraging habitat) on special-status species. However, the project would be in compliance with dust control regulations and applicable regulatory permits. In addition, the project would

implement avoidance, minimization, and mitigation measures BIO-1 through BIO-14 to reduce impacts on special-status plant and animal species to less than significant levels. Therefore, project construction would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

As discussed under Section V above, it is unlikely that paleontological resources would be discovered in the project area. However, the discovery of paleontological or unique geologic features is a possibility during sub-surface work. If paleontological resources are discovered during construction, the project would comply with Avoidance and Minimization Measure CUL-1. Therefore, project construction would not eliminate important examples of the major periods of California history or prehistory. As a result, impacts would be less than significant.

Once construction is complete, operational land use would not change in a way that would result in impacts to biological or paleontological resources in the project area. Therefore, project operation would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. As a result, impacts would be less than significant.

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 with Mitigation Incorporated. A cumulative impact could occur if the project would result in an incrementally considerable contribution to a significant cumulative impact in consideration of past, present, and reasonably foreseeable future projects.

The cumulative study area for hazards and hazardous materials, noise, and transportation/traffic is the immediate residential community where the project area is located. The cumulative study area for biological resources is the BSA. For cultural resources and tribal cultural resources, the resource study area is the APE; for hydrology and water quality, the resource study area is the San Joaquin Watershed; and for air quality and greenhouse gas emissions, the resource study area is the San Joaquin Valley Air Basin. As discussed in the sections above, the project would incorporate avoidance and minimization measures. Mitigation measures would also be adopted to reduce potential impacts on special-status plant species to less than significant. Therefore, the project would not result in unavoidable significant impacts for any resource area.

A review of the CEQANet database was conducted in order to compile a list of past, present, and reasonably foreseeable future projects. These cumulative projects include the following:

- Infrastructure: Bridge repair and replacement; sidewalk and roadway improvement; rail infrastructure improvement; highway safety and improvement; utility construction/improvement (e.g., communications, pipelines, wind and solar facilities, and electric charging stations), and drainage rehabilitation projects.
- Development: Expansion of commercial centers and educational facilities, construction/expansion of industrial facilities, lot subdivisions, and community and master plan updates.
- Other: Habitat restoration, erosion repair, and invasive species eradication projects.

Other past, present, and reasonably foreseeable future projects would be expected to comply with all local, state, and federal rules and regulations, as well as develop avoidance, minimization, and mitigation measures to reduce potential impacts to less than significant levels. Therefore potential cumulatively considerable impacts of the project would be less than significant with mitigation.

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

Less than Significant Impact. The project would comply with all local, state, and federal rules and regulations and would incorporate measures to avoid and minimize impacts. As discussed above, the project would result in less than significant impacts on resources that would directly or indirectly impact human beings, including air quality, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, and transportation/traffic. Therefore, the project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. As a result, impacts would be less than significant.

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5. Preparers and Contributors

Mark Hopkins, Senior Environmental Planner

Nicole Greenfield, Associate Environmental Planner

Nicole Ackerman, Environmental Planner

Angela Scudiere, Senior Biologist

Dawn Cunningham, Associate Biologist

6. Mitigation Monitoring or Reporting Plan (MMRP)

MERCED FALLS ROAD SHOULDERS PROJECT

California Environmental Quality Act Mitigation Monitoring and Reporting Program

Prepared by:

GPA Consulting

2600 Capitol Ave, Suite 100
Sacramento, CA 95816
Contact: Melissa Logue

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Mitigation Monitoring and Reporting Program

CEQA requires that a reporting or monitoring program be adopted for the conditions of project approval that are necessary to mitigate or avoid significant effects on the environment (Public Resources Code 21081.6). The mitigation monitoring and reporting program is designed to ensure compliance with adopted mitigation measures during project implementation.

For each mitigation measure recommended in the Mitigated Negative Declaration (MND), specifications are made herein that identify the action required and the monitoring that must occur. In addition, a responsible agency is identified for verifying compliance with individual conditions of approval contained in the Mitigation Monitoring and Reporting Program (MMRP).

To implement this MMRP, Merced County will designate a Project Mitigation Monitoring and Reporting Coordinator ("Coordinator"). The Coordinator will be responsible for ensuring that the mitigation measures incorporated into the project are complied with during project implementation.

The following table will be used as the Coordinator's checklist to determine compliance with required mitigation measures.

TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
					INITIAL	DATE	COMMENTS
BIOLOGY							
Bio-1 To avoid and/or minimize impacts on the northern California black walnut, the following measures would be implemented: Removal of mature northern California walnut would be avoided and protective fencing would be installed beyond the dripline of the tree(s) during construction to prevent construction staff or equipment from entering this area.	Avoid removal of California walnut trees and install protective fencing	During construction	As needed	Merced County			
Bio-2 To avoid and/or minimize impacts on the Ewan's larkspur and Hoover's calycadenia, the following measures would be implemented: • Prior to construction, a qualified botanist would conduct rare plant surveys throughout the BSA. Surveys would be conducted during the appropriate blooming period for species with potential to be in the construction area, to the extent feasible. • If a special-status plant species is found during pre-construction surveys, high visibility Environmental Sensitive Area (ESA) protective fencing could be installed around the special-status plants to prevent construction staff or equipment from entering this area. The ESA protective fencing buffer would be species specific, with a minimum buffer radius based on the guidance from a qualified biologist. Plants would be monitored by a qualified not directly or indirectly impacted. biologist during construction activities to ensure they are	Botanist to conduct plant survey	Prior to Construction	Once	Merced County			
	Install protective fencing if special status species is found and monitor plants during construction activities	Prior to and during construction	Continuous	Merced County			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
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<ul style="list-style-type: none"> 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 and a plan would be developed by a qualified biologist to relocate the plants to a suitable location, and monitor their survival. The plan would include, at a minimum, details on the relocation site, the methods for relocation, methods for monitoring, and survival criteria. The relocated plants would be monitored for a period of time sufficient to confirm they have survived the transplanting, as identified by the qualified biologist. 	Develop a plant relocation plan, relocate plants and monitor their survival	As needed, during construction	As determined by a qualified Botanist				
<p>Bio-3 To avoid and/or minimize impacts on the molestan blister beetle and Morrison's bumble bee, the following measures would be implemented:</p> <ul style="list-style-type: none"> Vegetation removal and excavation would be reduced to the extent feasible. Pesticide/insecticide would not be used as part of the project. 	Reduce vegetation removal and excavation and avoid pesticide/insecticide use	During construction	Continuous	Merced County			
	Biologist to survey the BSA for Morrison's Bumble bee nests	Within 48 hours of construction	Once				
	<ul style="list-style-type: none"> If a Morrison's bumble bee nest is identified within the BSA, all efforts would be taken to avoid the nest, and an appropriate buffer would be installed as determined by a qualified biologist. If avoidance cannot be accomplished, the nest would be safely relocated by a qualified biologist. Areas temporarily impacted during construction would be 	Avoid with a buffer or relocate Morrison's bumble bee nest	If encountered during construction	As needed			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
					INITIAL	DATE	COMMENTS
restored using native species, including one or more of the food plant genera for the molestan beetle (Lupinus, Trifolium, and Erodium) and Morrison's bumble bee (Cirsium, Cleome, Helianthus, Lupinus, Chrysothamnus, and Melilotus), if appropriate for the region.	Restore impacted areas with plant species that act as food for the molestan beetle and Morrison's bumble bee	Post construction	Once				
<p>Bio-4 To avoid and/or minimize impacts on the valley longhorn beetle, the following measures would be implemented:</p> <ul style="list-style-type: none"> To the extent feasible construction would be conducted out of the flight season for the valley elderberry longhorn beetle (March through July). Training for all contractors, work crews, and any onsite personnel on the status of the valley elderberry longhorn beetle, its host plant and habitat, the need to avoid damaging the blue elderberry shrubs (Sambucus nigra ssp. cerulea), and the possible penalties for non-compliance would be provided by a qualified biologist. All areas that would be avoided during construction activities would be fenced and/or flagged as close to construction limits as feasible. The trimming and/or removal of blue elderberry shrubs would be avoided. No insecticides, herbicides, fertilizers, or other chemicals that could harm the valley elderberry longhorn beetle or blue elderberry shrubs would be used within 100 feet of any blue elderberry shrub with stems measuring greater than one inch in diameter. 	Conduct construction outside of VELB flight season	Prior to and during construction	Continuous	Merced County			
	Provide training to avoid damaging blue elderberry shrubs	Prior to construction	Once	Merced County			
	Fence or flag all areas that will be avoided	Prior to construction	As needed	Merced County			
	Avoid trimming blue elderberry shrubs	During construction	Continuous	Merced County			
	No chemicals that could harm the VELB or the blue elderberry shrub will be used within 100 feet	During construction	Continuous	Merced County			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
					INITIAL	DATE	COMMENTS
<ul style="list-style-type: none"> To prevent fugitive dust from drifting into adjacent habitat, all clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, demolition activities or other dust generating activities would be effectively controlled for fugitive dust emissions utilizing application of water or by presoaking. 	Fugitive dust emissions will be controlled using application of water or presoaking	During construction	Continuous	Merced County			
<p>Bio-5 To avoid and/or minimize impacts on steelhead and other fish species, the following measures will be implemented:</p> <ul style="list-style-type: none"> Work areas would be reduced to the maximum extent feasible, and staging areas would be along the roadway and outside of the waterway and adjacent riparian habitat. 	Reduce work areas and staging areas outside of the riparian habitat						
<ul style="list-style-type: none"> Appropriate hazardous material Best Management Practices (BMP) would be implemented to reduce the potential for chemical spills or contaminant releases into the waterway or riparian areas, including any non-stormwater discharge. All equipment refueling, and maintenance would be conducted in the staging area away from the waterway and adjacent riparian habitat. 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. 	Implement BMP's	Prior to and during construction	Continuous	Merced County			
<p>Bio-6 To avoid and/or minimize impacts on the western pond turtle, the following measures will be implemented:</p> <ul style="list-style-type: none"> Pre-construction surveys for the western pond turtle would be conducted 24 hours prior to start of construction. Surveys of the BSA would be repeated if construction activities are delayed for two weeks or more. If western pond turtles are found in the construction area, they would be allowed to leave the construction area to an area of suitable habitat, out of harm's way. 	Conduct western pond turtle survey 24 hours prior to construction and allow pond turtles to move prior to start of construction	Prior to construction	Once	Merced County			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
					INITIAL	DATE	COMMENTS
<p>Bio-7 To avoid and/or minimize impacts on special-status birds and raptors, the following measures will be implemented:</p> <p>•Construction during bird nesting season (typically February 1 to September 30) would be avoided to the extent feasible.</p> <p>•If construction is required during the nesting season, vegetation removal required for the project would be conducted during the nonbreeding season, wherever feasible.</p> <p>•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.</p> <p>•To avoid or minimize impacts on the burrowing owl, pre-construction surveys for the burrowing owl would be conducted by a qualified biologist prior to the breeding season (typically February 1 to September 1) and prior to disturbance. The surveys would be conducted at dawn or dusk not more than seven days prior to ground or vegetation disturbing activities and would include a thorough examination of all suitable habitat within the project area and vicinity for burrowing owl or its sign. Surveys would be conducted for at least three days prior to starting construction.</p>	Avoid construction during bird nesting season (February to September)	During construction	Once	Merced County			
	Biologist to conduct bird nesting surveys	48 hours prior to construction	Once	Merced County			
	Biologist to conduct burrowing owl surveys	Within 7 days of construction start date	Once	Merced County			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
					INITIAL	DATE	COMMENTS
<p>Bio- 7 Continued... •If burrowing owls or their sign are detected, then the CDFW and other appropriate regulatory agencies would be consulted. If an occupied burrow is found during surveys, a 165-foot buffer would be established around the burrow where feasible. If a buffer is not feasible, CDFW would be consulted, and the burrowing owls would be passively relocated using CDFW-approved protocols. Passive relocation of burrowing owls would only be allowed during the non-breeding season. If burrowing owls are found during the breeding season, a 165-foot buffer would be established around the burrow and no work would be allowed until the nestlings have fledged. After fledging, the burrowing owls would be passively relocated per CDFW guidelines. Additional surveys would be conducted, if required by these agencies, prior to any construction activities, and requirements of the regulatory agencies regarding protection of the burrowing owl would be followed.</p> <p>•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.</p>	Implement a 165-foot buffer around any found burrowed owls	As needed	Continuous	Merced County			
	Install 300-500-foot buffers around nesting birds	As needed	Continuous	Merced County			
<p>Bio-8 To avoid and/or minimize impacts on foraging birds and raptors, the following measures will be implemented:</p> <p>In the event that a bird is observed foraging within the construction zone, it would be allowed to move away from the site prior to initiating any construction activities that could result in direct injury or disturbance of the individual.</p>	Allow foraging birds to move away from construction site before activities continue	As needed	Continuous	Merced County			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
					INITIAL	DATE	COMMENTS
<p>Bio-9: . To avoid and/or minimize impacts on nesting bald eagle and Swainson's hawk, the following measures would be implemented:</p> <ul style="list-style-type: none"> • If construction activities begin during the Swainson's hawk nesting season, 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. Three surveys would be conducted during each survey period to determine if Swainson's hawks are nesting within 600 feet of the construction zone. • If construction activities begin during the bald eagle nesting season, surveys for bald eagle would be conducted according to the Bald Eagle Breeding Survey Instructions by the California Department of Fish and Wildlife Service for three times during nesting season. • If a nesting Swainson's hawk and/or bald eagle is found within 600 feet of the construction zone prior to the start of construction, appropriate buffers (typically 600 feet) would be installed and maintained until nesting activity has ended, to ensure that the birds and/or their nests are not harmed. 	Conduct a Swainson's hawk survey if construction is to occur during nesting season	Prior to construction	Once	Merced County			
	Conduct bald eagle surveys if construction occurs during nesting season	Prior to construction	Once	Merced County			
	Install 600-foot buffer around any nesting Swainson's Hawk or bald eagle	As needed	Once	Merced County			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

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<p>Bio-10 . To avoid and/or minimize potential indirect impacts on the bats potentially roosting in the BSA, the following measures would be implemented:</p> <p>The removal trees and trimming of trees and shrubs would be avoided.</p> <p>At least 30 days prior to construction, all trees that would be encroached upon by road widening activities would be surveyed by a qualified biologist to assess the presence of bats or potential bat-roosting cavities. 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 over 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 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.</p>	Biologist to conduct bat surveys	At least 30 days prior to construction	Once	Merced County			
<p>Bio-11 To avoid and/or minimize potential indirect impacts on the Merced kangaroo rat and San Joaquin pocket mouse potentially in the BSA, the following measures would be implemented:</p> <ul style="list-style-type: none"> • Pre-construction surveys for the Merced kangaroo rat and San Joaquin pocket mouse would be conducted 24 hours prior to start of construction. Surveys of the BSA would be repeated if construction activities are delayed for two weeks or more. • If Merced kangaroo rat and/or San Joaquin pocket mouse are found in the construction area, they would be allowed to leave the construction area to an area of suitable habitat, out of harm's way. 	Conduct surveys for Merced kangaroo rat and San Joaquin pocket mouse	24 hours prior to start of construction	Once	Merced County			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
					INITIAL	DATE	COMMENTS
<p>Bio-12 To avoid and/or minimize potential impacts on the San Joaquin kit fox, the following measures would be implemented:</p> <ul style="list-style-type: none"> Pre-construction surveys for the San Joaquin kit fox would be conducted by a qualified biologist. The surveys would be conducted no fewer than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. Surveys would identify San Joaquin kit fox habitat features in the project area and evaluated use by kit fox and, if possible, assess the potential impacts on the kit fox by the proposed activity. The status of all dens would be determined and mapped. Written results of pre-construction surveys would be sent to the USFWS and CDFW within five days after survey completion and prior to the start of ground disturbance and/or construction activities. If any dens are discovered, avoidance, of the dens would follow the USFWS Standardized Recommendations for Protection of the Endangered San Joaquin kit fox Prior to or During Ground Disturbance. If a natal/pupping den is discovered in the project area or within 200 feet of the project boundary, the USFWS would be notified and, under no circumstances, would the den be disturbed or destroyed without an ITS for endangered species. 	Conduct preconstruction survey for San Joaquin kit fox	Between 14 and 30 days prior to construction	Once	Merced County			
	Cover all holes or trenches more than two feet deep	During construction	Daily	Merced County/ Construction crew			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
					INITIAL	DATE	COMMENTS
<p>Bio-12 continued... • A litter control program would be instituted in the project area. All workers would make sure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers would be removed from the project area at the end of each working day.</p> <ul style="list-style-type: none"> • No pets or firearms (except for federal, state, or local law enforcement office and security personnel) would be permitted on construction sites to avoid harassment, killing, or injuring of listed species. • Use of rodenticides and herbicides at the project site would be restricted. 	Institute a litter control program	During construction	Daily	Merced County/ Construction crew			
	Assure no pets or firearms are on site	During construction	Daily	Merced County /Construction crew			
	Avoid the use of rodenticides and herbicides	During construction	Continuous	Merced County/ construction crew			
<ul style="list-style-type: none"> • A representative appointed by the County would be the contact source for any employee or contractor who might inadvertently injure or kill a San Joaquin kit fox or finds a dead, injured, or trapped individual. The representative would be identified during the employee education program. The representative's name and phone number would be provided to the USFWS. Any contractor, employee, or agency personnel who inadvertently kills, injures, or notices an entrapped kit fox would immediately report the incident to the representative. The representative would immediately contact the 24-hour CDFW dispatch at (916) 445-0045. All project work would stop until the County, Caltrans, and USFWS identify the appropriate measures needed to continue work and avoid take, or Caltrans obtains an Incidental Take Permit. 	Contact a County representative in the event a San Joaquin kit fox is killed or injured	During construction	As needed	Merced County/ construction crew			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

MITIGATION MEASURE	ACTION REQUIRED	TIMING/PHASE	MONITORING FREQUENCY	RESPONSIBLE AGENCY OR PARTY	COMPLIANCE VERIFICATION		
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<ul style="list-style-type: none"> Worker Environmental Awareness Training for the San Joaquin kit fox would be given to all personnel working on site and would include the ecology of the species, the sensitivity of the species to human activities, legal protection afforded to the species, penalties for violations of federal and state laws, reporting requirements, and project features designed to reduce impacts on the species. 	Conduct Worker Environmental Awareness Training	Prior to construction	Once	Merced County/ Construction company			
<p>Bio-12 Continued... • Upon completion of the project, all temporarily impacted areas, including storage and staging areas, temporary roads, pipeline corridors, etc., would be recontoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion would not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas would be determined on a site-specific basis in consultation with the USFWS, CDFW, and other experts.</p>	Recontour and revegetate temporarily impacted areas	Post Construction	Once	Merced County			
<ul style="list-style-type: none"> The Sacramento Fish and Wildlife Office (2800 Cottage Way, Room W-2605, Sacramento, California 95825) and CDFW (1416 9th Street, Sacramento, California 95814) would be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or the finding of a dead or injured kit fox and any other pertinent information. 	Contact Sacramento Fish and Wildlife Office if accidental death or injury of San Joaquin kit fox occurs	Prior to, during, and post construction	As needed	Merced County			
<p>Bio-13 To avoid and/or minimize impacts on the oak trees, the following measure would be implemented:</p> <ul style="list-style-type: none"> Removal of oak trees would be avoided, and protective fencing would be installed beyond the dripline of the tree(s) during construction to prevent construction staff or equipment from entering this area. 	Avoid the removal of Oak trees and install protective fencing	Prior to construction	As needed	Merced County			

Merced Falls Road Shoulder's Project
Mitigation Monitoring and Reporting Program

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<p>Bio-14 To avoid indirect impacts on the jurisdictional waterway, the following measures would be implemented:</p> <ul style="list-style-type: none"> • Work areas would be reduced to the maximum extent feasible, and staging areas would be along the roadway and outside of the waterway and adjacent riparian habitat. • Appropriate hazardous material Best Management Practices (BMP) would be implemented to reduce the potential for chemical spills or contaminant releases into the waterway or riparian areas, including any non-stormwater discharge. • All equipment refueling, and maintenance would be conducted in the staging area away from the waterway and adjacent riparian habitat. 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. 	Hazardous waste BMP's will be implemented	During construction	Continuous	Merced County/ Construction company			
HAZARDS AND HAZARDOUS MATERIALS							
HAZ-1: Test the white fog line paint for lead if project activities include disturbing or removing this material.	Test paint for lead	Prior to construction	Once	Merced County			
HAZ-2: Test the low concrete wall of the box culvert for asbestos and lead-based paint if this structure will be disturbed by planned project activities. Asbestos testing should be performed by a Certified Asbestos Consultant.	Test for asbestos	Prior to construction	Once	Merced County			
HAZ-3: Test soil at the base of the low concrete wall for lead if this soil will be disturbed by planned project activities.	Test soil for lead	Prior to construction	Once	Merced County			
HAZ-4: Implement BMPs during the use and transport of fuels.	Implement Best Management Practices (BMP's)	Prior to and during construction	Continuous	Merced County			