

# Colusa Rehabilitation Project

STATE ROUTE 20 IN COLUSA COUNTY  
DISTRICT 3 – COL – 20 (PM 31.8/32.8)  
EA: 2F980 / EFIS: 0312000026

## Initial Study with Proposed Negative Declaration



Prepared by the  
State of California Department of Transportation



May 2016

## General Information about This Document

### What's in this document:

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

### What you should do:

- Please read this document.
- Additional copies of this document are available for review at the following locations:
  - ❖ <http://www.dot.ca.gov/dist3/departments/envinternet/envdoc.htm>
  - ❖ Colusa County Library at 738 Market Street in Colusa, CA 95932.
- This document and associated technical studies are available for review on weekdays between 8:00 a.m. and 4:00 p.m. at the Caltrans District 3 Office at 703 B Street in Marysville, CA 95901.
- A public open house is scheduled for June 1, 2016 from 5:30 p.m. to 7:00 p.m. at the Boy Scout Cabin at 901 Parkhill Street in Colusa, CA 95932.
- We'd like to hear what you think. If you have any comments about the proposed project, please send your written comments to Caltrans by the deadline.
- Send comments via postal mail to:  
California Department of Transportation  
Environmental Management M2 Branch  
Attn: Dotrik Wilson  
703 B Street  
Marysville, CA 95901
- Send comments via email to: [dotrik.wilson@dot.ca.gov](mailto:dotrik.wilson@dot.ca.gov)
- Be sure to send comments by the deadline: June 22, 2016.

### What happens next:

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

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to California Department of Transportation, Attn: Deanna Shoopman- Public Information Officer, 703 B Street, Marysville, California 95901; (530) 741-4572 Voice, or use the California Relay Service TTY number 1-800-735-2929.

SCH#  
03-COL-20-PM 31.8/32.8  
EA: 2F980 / EFIS: 0312000026

Rehabilitate State Route 20 between post miles 31.8 to 32.8 in Colusa County

**INITIAL STUDY with Proposed Negative Declaration**

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

THE STATE OF CALIFORNIA  
Department of Transportation

5-12-16  
Date of Approval

Susan D. Bauer  
Susan Bauer, Acting Office Chief  
North Region Environmental Services, South  
California Department of Transportation

## PROPOSED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

### ***Project Description***

The California Department of Transportation (Caltrans) proposes to rehabilitate the roadway on State Route 20 between post miles 31.8-32.8 in the City of Colusa. The existing roadway would be reconstructed to accommodate two 12-foot wide lanes, two 10-foot wide shoulders, new 12-foot wide turn lanes, continuous Americans with Disabilities Act (ADA) compliant sidewalks and curb ramps, and upgraded drainage facilities. Work on City streets, including new overlay and sidewalk and ramp conforms, may be required.

### ***Determination***

This proposed Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Negative Declaration for this project. This does not mean that Caltrans' decision on the project is final. This Negative Declaration is subject to change based on comments received by interested agencies and the public.

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

The proposed project would have no effect on land use, coastal zones, wild and scenic rivers, parks and recreational facilities, growth, community character and cohesion, environmental justice, utilities and service systems, agriculture and forest resources, hazards and hazardous materials, hydrology and water quality, air quality, geology and soils, paleontology, natural communities, wetlands and other waters, animal species, plant species, invasive species, threatened or endangered species, mineral resources, population and housing, relocation and real property acquisition, public services, and recreation.

In addition, the proposed project would have less than significant effects to visual/aesthetics, cultural resources, noise, and transportation and traffic.

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Susan Bauer, Acting Office Chief  
North Region Environmental Services, South  
California Department of Transportation

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Date

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# Section 1 – Proposed Project

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## **Project Title**

Colusa Rehabilitation Project

## **Project Location**

The proposed project is located on State Route 20 between post miles 31.8-32.8 in the City of Colusa. The City of Colusa is in Colusa County, approximately 9 miles east of Williams and 26 miles west of Marysville. The project limits would extend from the State Route 20/Market Street intersection to just south of the State Route 20/Butte Vista Drive intersection (Figure 1: Project Location and Vicinity and Figure 2: Layout Mapping).

## **Purpose and Need**

The purpose of this project is to rehabilitate the existing pavement in order to improve ride quality and extend pavement life. Rehabilitation strategies consist of improving the roadway profile and cross slopes, upgrading curbs, gutters, and sidewalks, and repairing and upgrading drainage facilities within the project limits.

## **Project Description**

The California Department of Transportation (Caltrans) proposes to rehabilitate the roadway on State Route 20 between post miles 31.8-32.8 in the City of Colusa. The existing roadway would be reconstructed to accommodate two 12-foot wide lanes, two 10-foot wide shoulders, new 12-foot wide turn lanes, continuous Americans with Disabilities Act (ADA) compliant sidewalks and curb ramps, and upgraded drainage facilities. Work on City streets, including new overlay and sidewalk and ramp conforms, may be required.

Reconstruction of the roadway involves grinding or removal of existing pavement, excavation of the existing roadway, addition of imported borrow material within the roadway profile, construction and compaction of aggregate base layers, placement of hot mix asphalt, and installation of pavement delineation, striping, and signage.

The maximum depth of excavation would be approximately 8 feet. Excess material would become property of the contractor. Removal of vegetation and approximately 63 trees would be required. To facilitate subsurface drainage, approximately 72 new drainage inlets would be constructed. Two 48-inch diameter pipes would be installed along State Route 20 between Market Street and Wescott Road, and one 36-inch diameter pipe would be installed along State Route 20 between Wescott Road and the southern project limit. The existing Sioc/Lewis Ditch cross culverts, which convey water under State Route 20, would be reconstructed.

The State Route 20/Sioc Street intersection would be upgraded. New traffic signal foundations, poles, and traffic signals would be installed along with new electrical cabinets, loop detectors,

radar, and lighting. A Class III bikeway would be included along both shoulders of State Route 20 between Sioc Street and Carson Street.

Relocation of up to twenty joint Pacific Gas and Electric (PG&E) and American Telephone and Telegraph (AT&T) poles would be necessary. Additionally, buried fiber optic cable, City sewer and water, and PG&E gas lines may need to be relocated. All anticipated utility relocations would be completed prior to construction. At locations where conflicts with proposed construction exist, a Utility Relocation Plan would be developed by each of the utility owners and approved by Caltrans prior to utility relocation work. No disruption of service is anticipated.

Temporary lane and/or shoulder closure with traffic control would be required during construction; however, two-way traffic would be maintained throughout the project limits. No designated detours are anticipated. Construction staging would be located on paved roadway and existing pullouts within the project limits. At this time, night work is anticipated.

Minor permanent right-of-way acquisition would be required from approximately five parcels. Temporary construction easements would be required from approximately seven parcels. Encroachment permits may also be necessary.

#### Scope of Work:

- Reconstruct roadway and widen shoulders between post miles 31.8-32.5.
- Install new traffic signal foundations, poles, and traffic signals along with new electrical components.
- Repair, upgrade, or replace existing drainage facilities and install new drainage facilities.
- Overlay State Route 20 between post miles 32.5-32.8.
- Reconstruct existing curbs, gutters, sidewalks, and ramps.
- Repair pavement throughout the project limits.
- Conform driveways, sidewalks, and intersecting streets to reconstructed roadway.
- Place landscaping.

Construction would have a duration of approximately two construction seasons. Construction is scheduled to begin summer 2018 and continue through 2019.

### **Surrounding Land Uses and Setting**

Land use in the vicinity of the proposed project is designated Commercial (C), Industrial (I), Urban Residential (UR), and Mixed Use (MU).

The project area is characterized by a Mediterranean climate with cool, wet winters and warm, dry summers. The elevation of the proposed project location is approximately 53 feet above sea level. Average annual temperatures range from 48 degrees Fahrenheit to 75 degrees Fahrenheit. Average annual precipitation is approximately 16 inches.

The proposed project is located in an urban setting with minimal natural vegetation. Residential dwellings, private driveways, commercial and industrial buildings, and local roads are located throughout the project limits. Habitat surrounding the proposed project consists of landscaped yards, irrigated agricultural fields, and disturbed non-native grassland along roadside shoulders.

## **Complete Streets**

Complete streets was considered in development of the proposed project. Caltrans Deputy Directive DD-64-R1 provides for the needs of travelers of all ages and abilities in the planning, programming, design, construction, operations, and maintenance of the State highway system. The overall goal of complete streets is to provide a transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users.

A City of Colusa Complete Streets Concept Plan was developed December 2010 for the portion of State Route 20/State Route 45 known as Market Street between 10<sup>th</sup> Street and Bridge Street. The City of Colusa Complete Streets Concept Plan was built on previously completed studies including the 2007 City of Colusa General Plan, the 2009 City of Colusa Streets and Roadways Master Plan, and the 2009 Caltrans Transportation Concept Report for State Route 20. The City of Colusa Complete Streets Concept Plan study area is a mix of light industrial, commercial, retail, residential and public uses.

The project limits cross the City of Colusa Complete Streets Concept Plan study area at the Market Street/Bridge Street intersection near the northeast limit of the project. The majority of the City of Colusa Complete Streets Concept Plan study area is outside the project limits; however, incorporation of complete street elements have been included in the proposed project design.

The City of Colusa Complete Streets Concept Plan identified three major complete street elements including pedestrian facilities, space for vehicles and bicycles, and amenities. These elements include continuous, safe and comfortable pedestrian facilities, safe, visible and well-marked crosswalks and crossings, adequate automobile travel lanes, well-signed intersections, appropriate landscaping, and appropriate signage and lighting.

The purpose of the proposed project is to rehabilitate the existing pavement in order to improve ride quality and extend pavement life. Americans with Disabilities Act (ADA) compliant sidewalks and ramps, 10-foot wide shoulders, new turn lanes, striping, landscaping, and signage as well as a Class III bikeway and new signal system have been incorporated into the project design. These design elements are consistent with the major complete streets elements outlined in the City of Colusa Complete Streets Concept Plan. Furthermore, all roadway work would follow the requirements of the Caltrans Highway Design Manual which was updated in

2014 to address complete street elements such as design speed, lane and shoulder width, and curb extensions.

Coordination with the City of Colusa was conducted May 5<sup>th</sup>, 2016. It was determined the project is consistent with the City of Colusa Complete Streets Concept Plan and City of Colusa Bikeway Master Plan.

### **Zoning**

Zoning adjacent to the proposed project location is designated Residential Single Family (R-1-8), Residential Multiple Family (R-3), Mixed Use (MU), and Light Industrial (M-1).

### **Permits and Approvals Needed**

No permits or approvals are required.

**Figure 1: Project Location and Vicinity**

STATE OF CALIFORNIA  
 DEPARTMENT OF TRANSPORTATION  
 PROJECT PLANS FOR CONSTRUCTION ON  
 STATE HIGHWAY  
 IN COLUSA COUNTY  
 FROM 0.06 MILES EAST OF 1st STREET  
 TO 0.05 MILES SOUTH OF BUTTE VISTA DRIVE

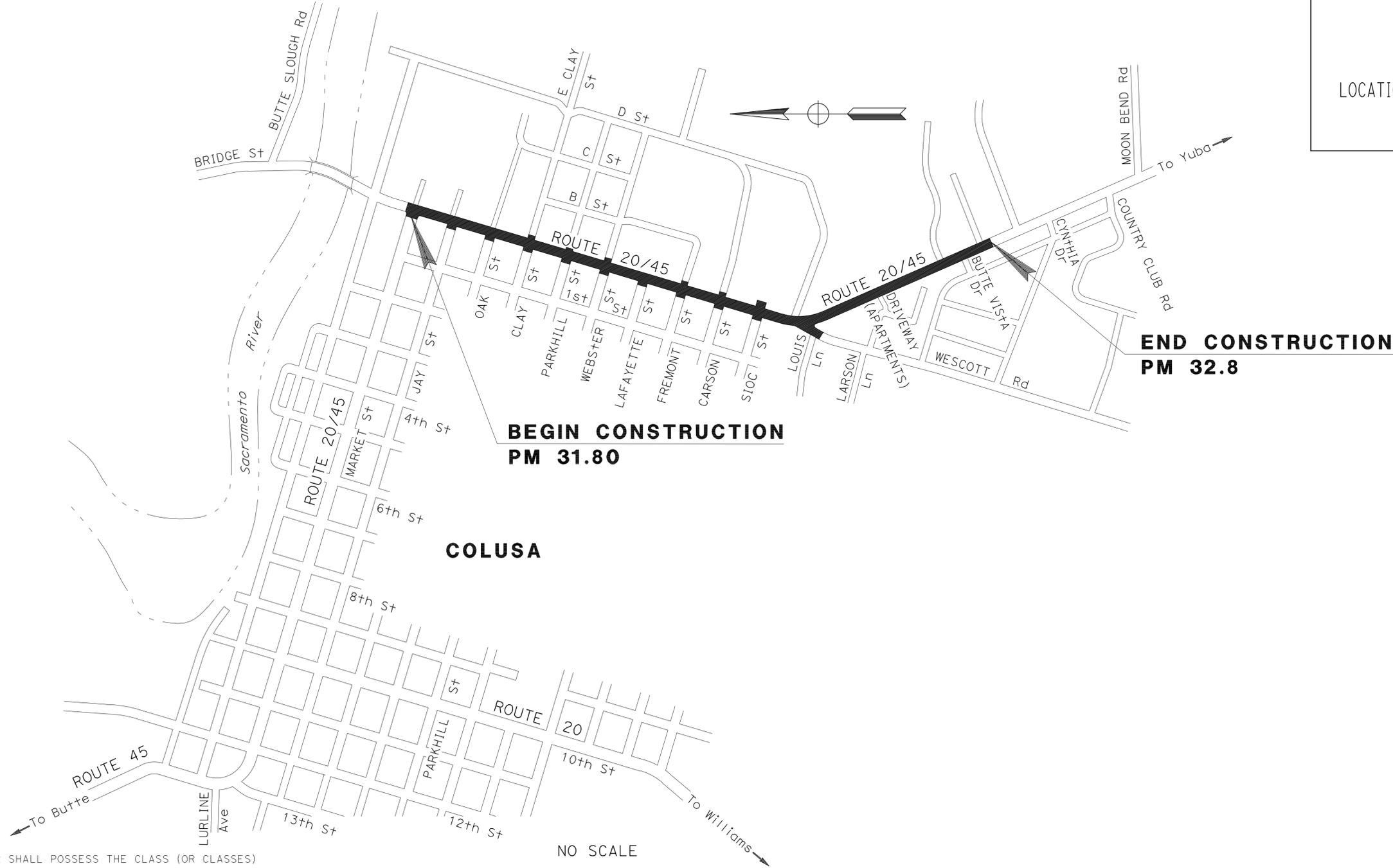
TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2015

Dis#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Col	20	31.8/32.8	1	





LOCATION MAP



APPROVED AS TO IMPACT ON STATE FACILITIES AND CONFORMANCE WITH APPLICABLE STATE STANDARDS AND PRACTICES AND THAT TECHNICAL OVERSIGHT WAS PERFORMED.  
 DATE SIGNED \_\_\_\_\_  
 LICENSE Exp DATE \_\_\_\_\_  
 REGISTRATION No. \_\_\_\_\_  
 CALTRANS DESIGN OVERSIGHT APPROVAL  
 WINDER BAJWA  
 CONSULTANT DESIGN MANAGER  
 MARK RAYBACK

PROJECT ENGINEER DATE  
 REGISTERED CIVIL ENGINEER



PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

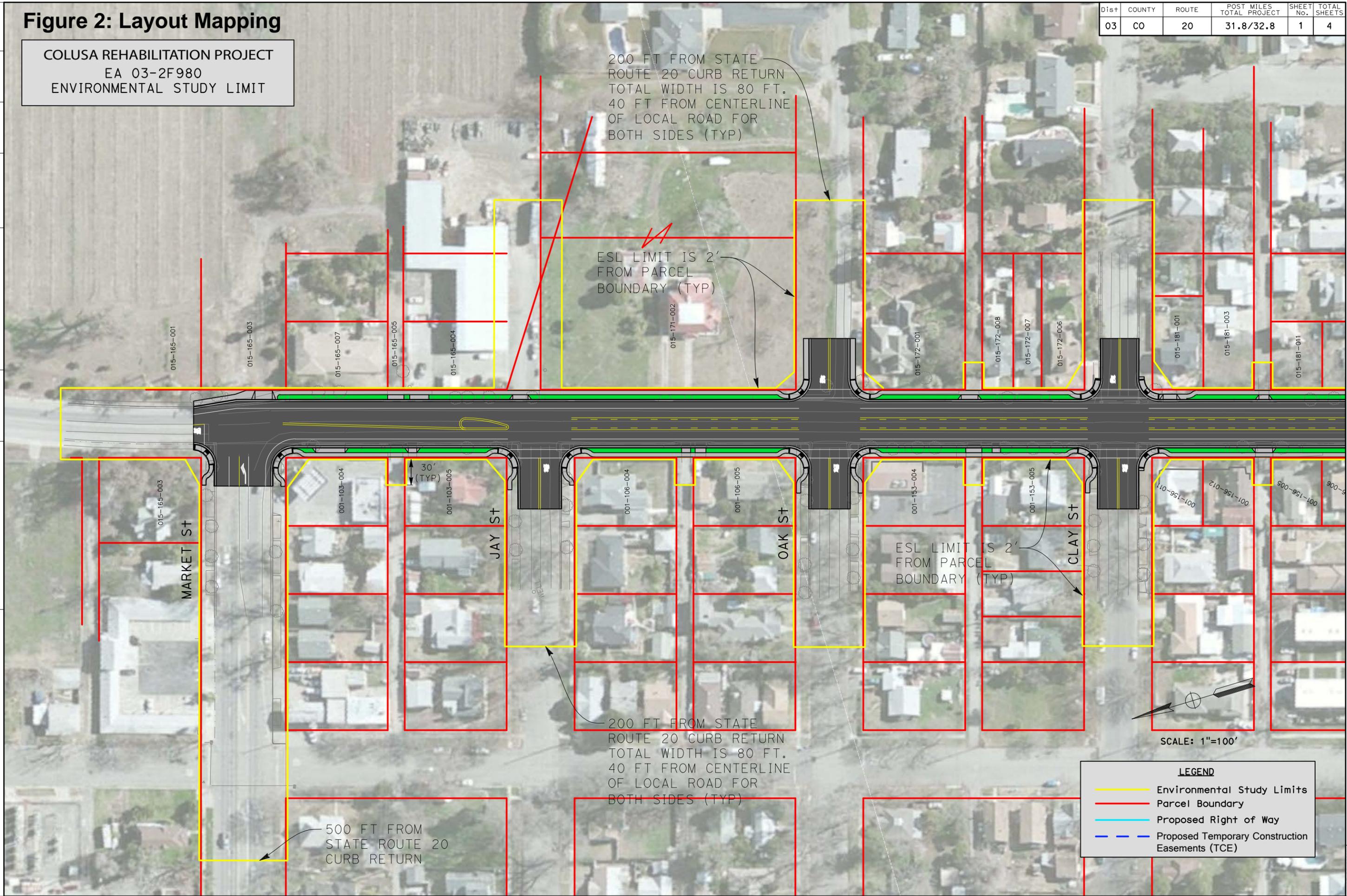
CONTRACT No.	<b>2F980</b>
PROJECT ID	<b>0312000026</b>

# Figure 2: Layout Mapping

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	CO	20	31.8/32.8	1	4

COLUSA REHABILITATION PROJECT  
EA 03-2F980  
ENVIRONMENTAL STUDY LIMIT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR BY
<b>St. Gibbons</b>	MARK RAYBACK	CHECKED BY	LUCAS J. FUSON
			DATE REVISED



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	CO	20	31.8/32.8	2	4

**COLUSA REHABILITATION PROJECT**  
EA 03-2F980  
ENVIRONMENTAL STUDY LIMIT

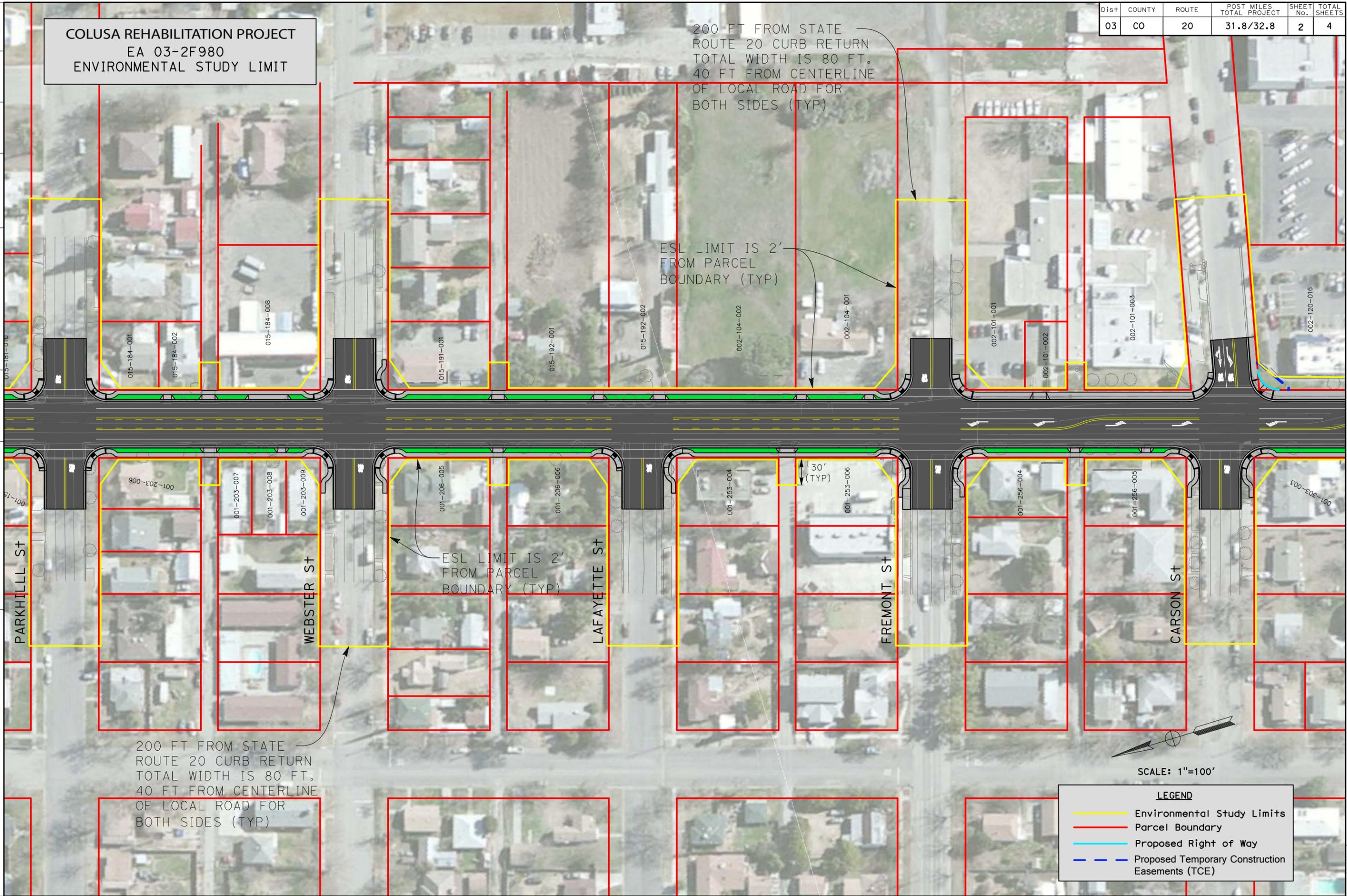
200 FT FROM STATE ROUTE 20 CURB RETURN  
TOTAL WIDTH IS 80 FT.  
40 FT FROM CENTERLINE OF LOCAL ROAD FOR BOTH SIDES (TYP)

ESL LIMIT IS 2' FROM PARCEL BOUNDARY (TYP)

ESL LIMIT IS 2' FROM PARCEL BOUNDARY (TYP)

200 FT FROM STATE ROUTE 20 CURB RETURN  
TOTAL WIDTH IS 80 FT.  
40 FT FROM CENTERLINE OF LOCAL ROAD FOR BOTH SIDES (TYP)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
*EtG Gilbane*  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 MARK RAYBACK  
 CALCULATED-DESIGNED BY  
 CHECKED BY  
 LUCAS J. FUSON  
 REVISED BY  
 DATE REVISED



**LEGEND**

- Environmental Study Limits
- Parcel Boundary
- Proposed Right of Way
- - - Proposed Temporary Construction Easements (TCE)

LAST REVISION DATE PLOTTED => \$DATE  
100-00-001 TIME PLOTTER => \$TIME

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	CO	20	31.8/32.8	3	4

**COLUSA REHABILITATION PROJECT**  
EA 03-2F980  
ENVIRONMENTAL STUDY LIMIT

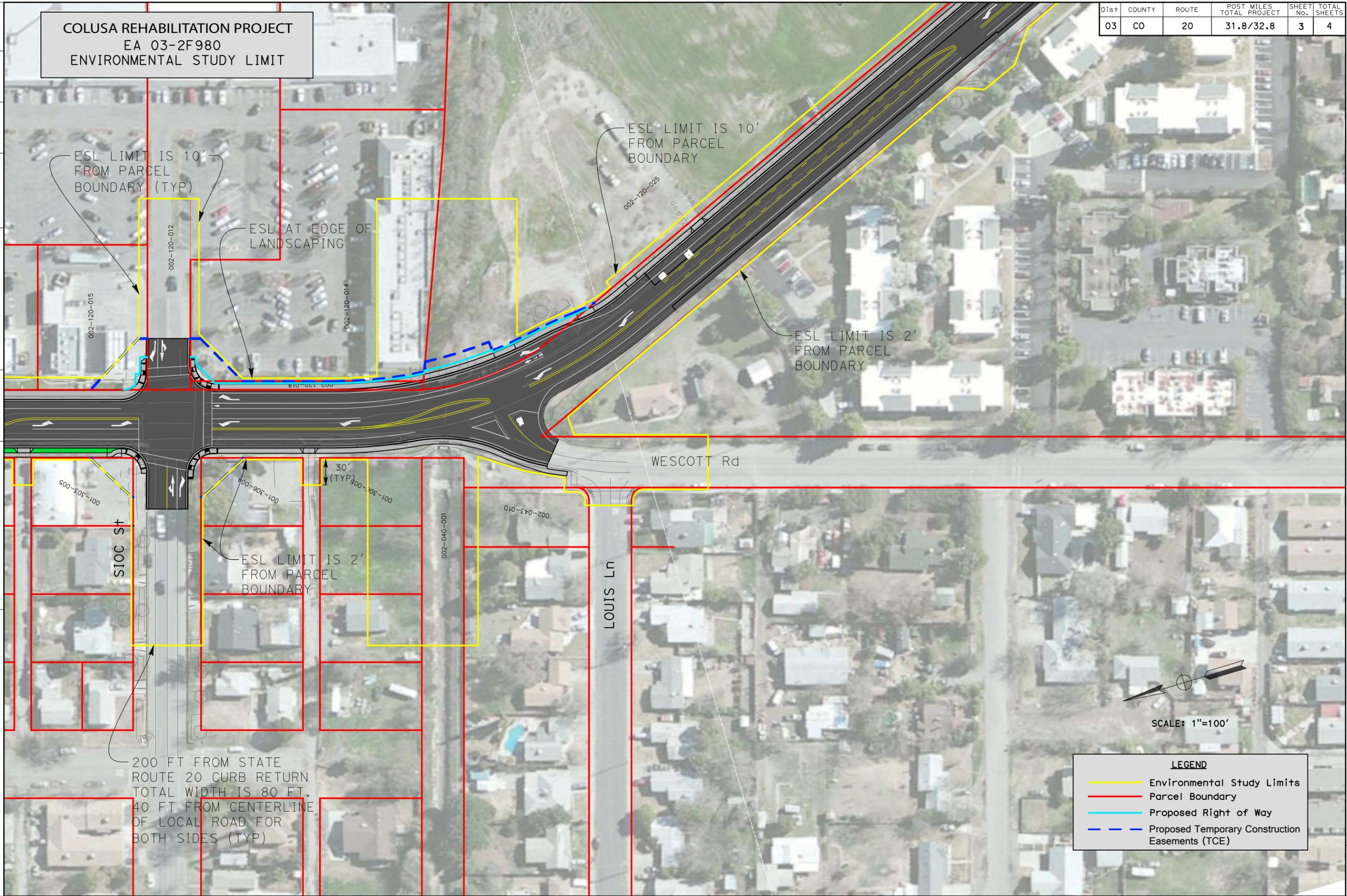
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**EtG** *Gilbert*

CONSULTANT FUNCTIONAL SUPERVISOR  
**MARK RAYBACK**

CALCULATED-DESIGNED BY  
CHECKED BY

LUCAS J. FUSON

REVISED BY  
DATE REVISED



ESL LIMIT IS 10'  
FROM PARCEL  
BOUNDARY (TYP)

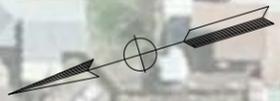
ESL AT EDGE OF  
LANDSCAPING

ESL LIMIT IS 10'  
FROM PARCEL  
BOUNDARY

ESL LIMIT IS 2'  
FROM PARCEL  
BOUNDARY

ESL LIMIT IS 2'  
FROM PARCEL  
BOUNDARY

200 FT FROM STATE  
ROUTE 20 CURB RETURN  
TOTAL WIDTH IS 80 FT.  
40 FT FROM CENTERLINE  
OF LOCAL ROAD FOR  
BOTH SIDES (TYP)



SCALE: 1"=100'

**LEGEND**

	Environmental Study Limits
	Parcel Boundary
	Proposed Right of Way
	Proposed Temporary Construction Easements (TCE)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	CO	20	31.8/32.8	4	4

**COLUSA REHABILITATION PROJECT**  
EA 03-2F980  
ENVIRONMENTAL STUDY LIMIT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Et. Gilberts**  
CONSULTANT FUNCTIONAL SUPERVISOR  
MARK RAYBACK  
CALCULATED-DESIGNED BY  
CHECKED BY  
LUCAS J. FUSON  
REVISED BY  
DATE REVISED



**LEGEND**

- Environmental Study Limits
- Parcel Boundary
- Proposed Right of Way
- - - Proposed Temporary Construction Easements (TCE)

## Section 2 – Environmental Factors Potentially Affected

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The environmental factors checked below would be potentially affected by this project as indicated by the checklist on the following pages.

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

# Section 3 – CEQA Environmental Checklist

**03-COL-20**

**31.8/32.8**

**2F980**

Dist.-Co.-Rte.

P.M/P.M.

E.A.

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

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

**Explanation: “No Impact” and “Less Than Significant Impact” determinations in this section are based on information provided in the Visual Impact Assessment prepared April 13, 2016. Refer to Section 4- Visual/Aesthetics for additional information.**

**II. AGRICULTURE AND FOREST RESOURCES:** Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of 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 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation: “No Impact” determinations in this section are based on the scope, description, and location of the proposed project. No farmland, Williamson Act land, or forest land was identified within the project limits.**

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
--------------------------------	---------------------------------------	------------------------------	-----------

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

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Explanation: "No Impact" determinations in this section are based on information provided in the Air Quality Analysis prepared February 23, 2016.**

**IV. BIOLOGICAL RESOURCES:** 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 Wildlife or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input checked="" 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"/> |

**Explanation: "No Impact" determinations in this section are based on information provided in the Natural Environment Study prepared February 11, 2016.**

**V. CULTURAL RESOURCES:** Would the project:

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation: “No Impact” and “Less Than Significant Impact” determinations in this section are based on information provided in the Historic Property Survey Report and Archaeological Resources Management Plan prepared May 2016. Refer to Section 4- Cultural Resources for additional information.**

**VI. GEOLOGY AND SOILS:** Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation: “No Impact” determinations in this section are based on the scope, description, and location of the proposed project.**

**VII. GREENHOUSE GAS EMISSIONS:** Would the project:

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

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

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
--------------------------------	---------------------------------------	------------------------------	-----------

**Explanation: Refer to Section 4- Climate Change for additional information.**

**VIII. HAZARDS AND HAZARDOUS MATERIALS:** 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input 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) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Explanation: "No Impact" determinations in this section are based on information provided in the Initial Site Assessment prepared March 4, 2016.**

**IX. HYDROLOGY AND WATER QUALITY:** Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input 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, in a manner which would result in substantial erosion or siltation on- or off-site?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation: "No Impact" determinations in this section are based on information provided in the Water Quality Assessment Report prepared February 25, 2016.**

**X. LAND USE AND PLANNING:** Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation: "No Impact" determinations in this section are based on the scope, description, and location of the proposed project.**

**XI. MINERAL RESOURCES:** 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"/>

**Explanation: "No Impact" determinations in this section are based on the scope, description, and location of the proposed project.**

**XII. NOISE:** Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	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 expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation: "No Impact" and "Less Than Significant Impact" determinations in this section are based on information provided in the Noise Analysis prepared March 29, 2016. Refer to Section 4- Noise for additional information.**

**XIII. POPULATION AND HOUSING:** Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation: "No Impact" determinations in this section are based on the scope, description, and location of the proposed project.**

**XIV. PUBLIC SERVICES:**

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation: "No Impact" determinations in this section are based on the scope, description, and location of the proposed project.**

**XV. RECREATION:**

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Explanation: "No Impact" determinations in this section are based on the scope, description, and location of the proposed project.**

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**XVI. TRANSPORTATION AND TRAFFIC:** Would the project:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

**Explanation: "No Impact" and "Less Than Significant Impact" determinations in this section are based on information provided in the Transportation Management Plan Data Sheet prepared October 22, 2015 and coordination with the District Public Information Officer. Refer to Section 4- Transportation and Traffic for additional information.**

**XVII. UTILITIES AND SERVICE SYSTEMS:** Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Explanation: "No Impact" determinations in this section are based on coordination with the District Utility Coordinator.**

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE**

- |  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## Section 4 – Affected Environment, Environmental Impacts, and Avoidance, Minimization, and/or Mitigation Measures

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### **VISUAL/AESTHETICS**

#### **Regulatory Setting**

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

#### **Affected Environment**

The proposed project is located on State Route 20 in Colusa County. The majority of the project is located in the City of Colusa, which consists largely of residential and commercial development.

The viewshed within the project limits includes relatively flat roadway with views of surrounding developments, coniferous and deciduous vegetation, farmland, open space, and the Butte Mountain Range. The visual quality of the area is scenic; however, the highway corridor is not eligible for designation as a State Scenic Highway.

#### **Environmental Impacts**

The majority of work would be conducted within the limits of the existing highway corridor. Visual impacts include the removal of vegetation and approximately 63 well-established trees that line the roadway as well as roadway improvements, such as new curbs, gutters, sidewalks, and ramps.

The loss of vegetation and trees would have a moderate effect on the visual quality of the adjacent roadside. Both residents and travelers would notice the removal of the trees that line the existing roadway. The initial visual impact to the viewshed would be high; however, this would be reduced over time as vegetation and trees re-establish throughout the project limits. As a result, the proposed project would cause a minor adverse effect on the visual character of the site and its surroundings. With appropriate replanting, the vegetated character of the roadway would be maintained.

The addition of the roadway improvements would not adversely impact the scenic quality of the project location. Vegetation and tree removal would be kept to the minimum required to complete the project. As such, the project would not have a substantial adverse effect on a scenic vista.

## **Avoidance, Minimization, and/or Mitigation Measures**

The following measures would be implemented to reduce impacts to visual resources:

- Vegetation removal would be limited to the extent necessary to construct the project.
- Where mature trees and vegetation are present, design efforts would be given to save the landscaping. Large trees that frame the roadway would be preserved and protected, as feasible.
- Before project completion, vegetation and trees that are removed would be replaced with appropriate species. Drought tolerant species may be selected. Two options have been identified for tree replacement.
  - Option 1: This option would install trees with root barriers at regular intervals along both sides of State Route 20. Sleeving under sidewalks would be provided adjacent to driveways for property owners to utilize should they choose to install underground irrigation to trees. Wood mulch would be applied between the back of the curb and the sidewalk. Compost with seed would be applied in the 1-foot area between the sidewalk and the property lines.
  - Option 2: This option would install trees with root barriers at regular intervals along both sides of State Route 20. Temporary irrigation would be installed for tree establishment, including meters, backflows, valves, pipes, bubblers, and controllers. The temporary irrigation would be abandoned after trees are established. Compost with seed would be applied in all landscaped areas between the back of the curb and the sidewalk and in the 1-foot area between the sidewalk and the property lines.
- Concrete and pavement treatments, such as colored concrete and stamped pavement imprints, would be considered to create a uniformed corridor look.
- All disturbed areas, including access roads, would be re-graded to their pre-construction profiles and contours.
- At the end of construction all areas used for staging, access, or other construction activities would be repaired.

## **CULTURAL RESOURCES**

### **Regulatory Setting**

The term “cultural resources” as used in this document refers to all “built environment” resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance.

Historical resources are considered under the California Environmental Quality Act (CEQA), as well as CA Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet the National Register of Historic Places listing criteria. It further specifically requires the Department to inventory state-owned structures in its right-of-

way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

### **Affected Environment**

The Area of Potential Effects encompasses the maximum limits of potential ground disturbing activities that would reasonably be expected from the proposed project including, but not limited to, all existing Caltrans and County/City right-of-way, permanent right-of-way acquisition areas, temporary construction easements, equipment staging areas, and utility relocations within the project limits. The vertical Area of Potential Effects is a maximum of 8-feet below the existing ground surface.

The Area of Potential Effects is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.

Prior to the initiation of field surveys, a number of institutions, organizations, and references were contacted for information on existing archaeological and historical sites in or around the project area.

A records search and literature review was conducted by Caltrans staff at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University. Maps were examined for locational and informational data on known archaeological and historical resources. The National Register of Historic Places, the California Register of Historical Resources, California Points of Historical Interest, California State Historical Landmarks were consulted to determine if resources were present in the project area.

Historical maps, photographs, ethnographic information, and other background historical information was collected from the Sacramento Valley Museum, the Caltrans District 3 Environmental Laboratory in Marysville, the Caltrans Cultural Resource Database, the Colusa County Clerk and Recorder at the Colusa County Hall of Records, the Colusa County Library, the Colusa County Chamber of Commerce, the California History Room at the California State Library, the Online Archive of California, Calisphere of the University of California's Digital Library, and the Library of Congress.

The California Native American Heritage Commission (NAHC) was contacted to request a search of the sacred lands file and an updated list of Native American contacts for the project area. Consultation letters were mailed to representatives of the Colusa Indian Community Council, the Yocha Dehe Wintun Nation, the Enterprise Rancheria of Maidu Indians, the Grindstone Rancheria of Wintun-Wailaki, the Cortina Band of Indians, and the Paskenta Band of Nomlaki Indians.

In an effort to seek input from the public regarding cultural resources within the project area, letters were mailed to the Colusa County Historical Records Commission, the Colusa (Colusa) County Historical Society, and the Sacramento Valley Museum.

The record searches and literature reviews did not identify any cultural resources within the project limits; however, several cultural resources have been documented in the project vicinity.

The Native American Heritage Commission search failed to yield information on Native American cultural resources located within or adjacent to the project area. A pedestrian survey was conducted by Caltrans on February 4, 2016. No archaeological resources were identified within the project limits.

### **Environmental Impacts**

Although no cultural resources were identified within the project limits, due to the proximity of known cultural resources to the proposed project, there is a high probability that buried resources are present beneath the existing roadway and would be found during construction.

Caltrans has determined there is potential for discovery of unknown resources that may be determined eligible for the National Register of Historic Places and/or affected by the proposed project. A Historic Property Survey Report and associated Archaeological Resources Management Plan was prepared to address identification and evaluation of effects to cultural resources if found during construction. The Historic Property Survey Report and Archaeological Resources Management Plan would ensure cultural resources are adequately protected. Consultation with the Caltrans Cultural Studies Office and State Historic Preservation Officer on the assessment of effects is ongoing.

### **Avoidance, Minimization, and/or Mitigation Measures**

The following measures would be implemented to reduce impacts to cultural resources:

- An archaeological monitor would be on-site during all ground disturbing activities associated with utility and drainage work.
- If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find.
- If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC), which would then notify the Most Likely Descendent (MLD). At that time, the person who discovered the remains would contact Caltrans District 3 Environmental Planning so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

- Any cultural resources discovered during construction would be addressed in accordance with the approved Historic Property Survey Report and associated Archaeological Resources Management Plan.

## NOISE

### Regulatory Setting

The California Environmental Quality Act (CEQA) provides a broad basis for analyzing and abating highway traffic noise effects. The intent of this law is to promote general welfare and to foster a healthy environment.

### Affected Environment

State Route 20 is a two-lane conventional facility and serves as the City of Colusa’s main street. The segment of State Route 20 within the City of Colusa’s city limit accommodates approximately 25,000 vehicles per day including passenger vehicles, street-legal motorcycles, and large trucks. Land use surrounding the proposed project is primarily residential, commercial, and industrial. Although the area is highly developed and currently serving as a main thoroughfare, noise sensitive receptors, such as residential dwellings, are located within and adjacent to the project limits. Approximately 30 noise sensitive receptors have been identified within 50 feet of the proposed project.

### Environmental Impacts

During construction, noise would be generated from contractor’s equipment and vehicles as well as from construction activities. This would result in temporary noise level increases throughout the project limits.

The proposed project includes demolition, earthwork, excavation, grading, paving, concrete work, relocation of utilities, and installation of traffic signals. Construction noise would result primarily from the operation of heavy construction equipment and the arrival and departure of large trucks. Table 1 presents the estimated construction noise levels calculated for the proposed project.

Table 1: Estimated Construction Noise Levels

Construction Phase	Maximum Noise Level (L <sub>max</sub> , dBA)		
	25 feet	50 feet	100 feet
Demolition	95	89	83
Earthwork	88	82	76
Paving	91	85	79
Structures	87	81	75

Figure 3 lists estimated noise levels of common outdoor and indoor activities.

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime		Library
Quiet Rural Nighttime	30	Bedroom at Night, Concert Hall (Background)
	20	Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Figure 3: Noise Levels of Common Activities

Construction of the proposed project is anticipated to occur during both daytime and nighttime hours. Construction would occur as close as 25 feet from the nearest noise sensitive receptor. The nature of roadway construction is linear; therefore, construction would not take place in one area for a prolonged period of time. Construction impacts would be temporary and sensitive receptors would not be exposed to construction noise for any longer than necessary to complete the project.

### Avoidance, Minimization, and/or Mitigation Measures

The following measures would be implemented to reduce noise impacts:

- Residents within 100-feet of the project area would be notified at least two weeks prior to the start of nighttime construction.
- The Contractor would submit a detailed sound control plan to Caltrans. The plan would be prepared by a registered engineer and include a schedule for major noise generating

construction activities and a contingency plan to make sure sound control requirements are met.

- Caltrans would provide a 24-hour complaint/notification telephone number to adjacent property owners. All noise complaints would be entered into a “complaint log” that notes date, time, name of complainant, nature of complaint, and any corrective action taken.
- Demolition and construction of Portland Concrete sidewalks would occur during daytime hours between 6:00 a.m. and 9:00 p.m.
- Noise resulting from work activities would be controlled and monitored in accordance with Caltrans Standard Specifications Section 14-8.02 “Noise Control”. Noise levels would not exceed 86 dBA  $L_{max}$  at 50 feet from job site activities between 9 p.m. and 6 a.m.

In addition to the measures listed above, construction noise would be minimized, if feasible, through implementation of the following:

- Internal combustion engine driven equipment, pneumatic impact tools, and other equipment would be equipped with intake and exhaust mufflers recommended by the manufacturers to meet noise limitations.
- "Quiet" air compressors and other "quiet" equipment would be used where such technology exists.
- Operation of jackhammers, concrete saws, pneumatic tools, and demolition equipment would occur during daytime hours between 6:00 a.m. and 9:00 p.m.
- Unnecessary idling of internal combustion engines would be prohibited.
- Residents would be shielded from stationary construction equipment, such as compressors, light plants, and generators.
- Conveyor transfer points, storage bins, and chutes would be lined or covered with sound deadening material such as wood or rubber.
- Backup alarm noise would be minimized using measures that meet Occupational Safety and Health Administration regulations including the use of self-adjusting back-up alarms, manual alarms on lowest settings required to be audible above surrounding noise, use of observers, and scheduling of noise generating activities.

## **TRANSPORTATION AND TRAFFIC**

### **Regulatory Setting**

Caltrans gives full consideration to the safe accommodation of pedestrians and bicyclists during the development of highway projects. It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities.

When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

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

### **Affected Environment**

State Route 20 has a high volume of both local and regional average annual daily traffic. Average annual daily traffic is defined as the average number of vehicles per day in both directions. The segment of State Route 20 within the City of Colusa's city limits accommodates approximately 25,000 vehicles per day. State Route 20 provides vehicle, pedestrian, and bicycle access to numerous residential, commercial, and industrial areas throughout the City. Local authorities, emergency service agencies, and local transit and bus systems utilize State Route 20 to access areas throughout Colusa County.

### **Environmental Impacts**

During construction, temporary lane and shoulder closure would be required. This would result in a temporary traffic delay. The existing roadway would allow for half-width construction. Half-width construction would maintain two-way traffic throughout the project limits. Traffic control would be used to construct half the project while allowing traffic through the construction area. Once the first half is complete, traffic would be shifted to allow work on the second half. The entire length of State Route 20 between Market Street and Butte Vista Drive would be under construction at once. Traffic would have the option of either circulating through the construction area or using existing local roads as a detour. No designated detours are anticipated. Implementation of half-width construction would result in a shorter construction duration.

### **Avoidance, Minimization, and/or Mitigation Measures**

The following measures would be implemented to reduce impacts to transportation and traffic:

- Caltrans would coordinate with local authorities, emergency service agencies, and local transit and bus systems including, but not limited to, the City of Colusa Public Works Department, the Colusa Regional Medical Center, the Colusa Police and Sheriff Departments, the Colusa Fire Department, the Colusa County Transit Agency, the Colusa Unified School District, and the California Highway Patrol prior to and during construction.
- Caltrans would conduct public outreach to keep residents and businesses informed of construction work. Impacted groups within 100-feet of the proposed project would be notified at least one week prior to construction activities. Brochures and mailers, media releases, and changeable message signs may be used for public notification.
- Access to driveways, houses, cross streets, and businesses would be maintained.
- Emergency service vehicles, pedestrians, and bicyclists would be accommodated through the work zone.

# Greenhouse Gas Emissions

## CLIMATE CHANGE

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF<sub>6</sub>), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO<sub>2</sub>, mostly from fossil fuel combustion.

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

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.<sup>2</sup>

## Regulatory Setting

### *State*

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

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<sup>1</sup> [http://climatechange.transportation.org/ghg\\_mitigation/](http://climatechange.transportation.org/ghg_mitigation/)

<sup>2</sup> [http://www.fhwa.dot.gov/environment/climate\\_change/mitigation/](http://www.fhwa.dot.gov/environment/climate_change/mitigation/)

Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

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

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

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

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

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board (CARB) to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

## *Federal*

Although climate change and GHG reduction are a concern at the federal level, currently no regulations or legislation have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level GHG analysis.<sup>3</sup> FHWA supports the approach that climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies outlined by FHWA to lessen climate change impacts correlate with efforts that the state is undertaking to deal with transportation and climate change; these strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

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

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions. U.S. EPA in conjunction with NHTSA

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<sup>3</sup> To date, no national standards have been established regarding mobile source GHGs, nor has U.S. EPA established any ambient standards, criteria or thresholds for GHGs resulting from mobile sources.

issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010.<sup>4</sup>

The U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama's 2010 request to jointly establish greenhouse gas emissions and fuel efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO<sub>2</sub> emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy duty vehicles.

## **Project Analysis**

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.<sup>5</sup> In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental

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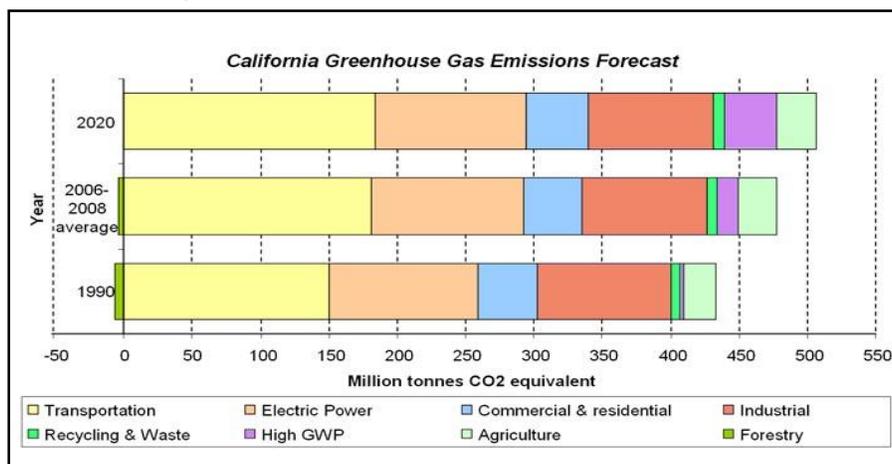
<sup>4</sup> <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

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

impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 includes the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, the ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Figure 4: California Greenhouse Gas Forecast



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

The Department and its parent agency, the Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, the Department has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.<sup>6</sup>

The purpose of the proposed project is roadway rehabilitation by reconstructing the road to accommodate widened shoulders, ADA compliance sidewalks and ramps, and new drainage facilities. The operation of this project would result in low-to-no potential for an increase in GHG emissions. This project is a roadway rehabilitation project. The existing roadway would be reconstructed to accommodate widened shoulders, ADA compliant sidewalks and ramps, and new drainage facilities. The project is not anticipated to increase capacity or change long-term traffic. Therefore, an increase in operational GHG emissions is not expected. Temporary construction emissions of GHG will be unavoidable. However, these GHG emissions have the potential to be offset over time through improved operation of the roadway.

<sup>6</sup> Caltrans Climate Action Program is located at the following web address: [http://www.dot.ca.gov/hq/tpp/offices/ogm/key\\_reports\\_files/State\\_Wide\\_Strategy/Caltrans\\_Climate\\_Action\\_Program.pdf](http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf)

## Construction Emissions

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

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

## CEQA Conclusion

Although construction emissions are unavoidable, they are expected to be minimal. The proposed project will not increase capacity and is not expected to result in additional operational CO<sub>2</sub> emissions. It is Caltrans' determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a determination regarding significance of the project's direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

## Greenhouse Gas Reduction Strategies

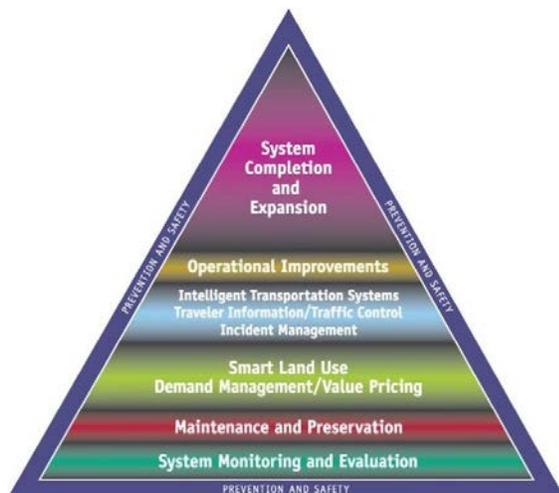


Figure 5: The Mobility Pyramid

The Department continues to be involved on the Governor's Climate Action Team as the ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies the Department is using to help meet the targets in AB 32 come from then-Governor Arnold Schwarzenegger's Strategic Growth Plan for California. The Strategic Growth Plan targeted a significant decrease in traffic congestion below 2008 levels and a corresponding reduction in GHG emissions, while accommodating growth in population and the economy. The Strategic Growth Plan relies on a complete systems approach to attain CO<sub>2</sub> reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as shown in Figure 5: The Mobility Pyramid.

The Department is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. The Department works closely with local jurisdictions on planning activities, but does not have local land use planning authority. The Department assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; the Department is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by participating on the Climate Action Team. It is important to note, however, that control of fuel economy standards is held by the U.S. EPA and ARB.

The Department is also working towards enhancing the State's transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under Senate Bill (SB) 375 (Steinberg 2008), SB 391(Liu 2009) requires the State's long-range transportation plan to meet California's climate change goals under Assembly Bill (AB) 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas (GHG) emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future, statewide, integrated, multimodal transportation system.

The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the CTP 2040 will identify the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the State's transportation needs.

Table 2 summarizes the Departmental and statewide efforts that the Department is implementing to reduce GHG emissions. More detailed information about each strategy is included in the [Climate Action Program at Caltrans](#) (December 2006).

**Table 2: Climate Change/CO2 Reduction Strategies**

Strategy	Program	Partnership		Method/Process	Estimated CO <sub>2</sub> Savings Million Metric Tons (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Transportation System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, ARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.045 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries	2.5 % limestone cement mix	1.2	4.2	
			25% fly ash cement mix	0.36	3.6	
			> 50% fly ash/slag mix			
Goods Movement	Office of Goods Movement	Cal EPA, ARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
<b>Total</b>					<b>2.72</b>	<b>18.18</b>

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013)<sup>7</sup> provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

The following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

- Caltrans Standard Specifications, a required part of all construction contracts, should effectively reduce and control emission impacts during construction under the provisions of Section 7-1.02C "Emission Reduction", Section 14-9.03 "Dust Control", and Section 14-9.02 "Air Pollution Control".

### **Adaptation Strategies**

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

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011<sup>8</sup>, outlining the federal government's progress in expanding and strengthening the Nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks.

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and

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<sup>7</sup> [http://www.dot.ca.gov/hq/tpp/offices/orip/climate\\_change/projects\\_and\\_studies.shtml](http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/projects_and_studies.shtml)

<sup>8</sup> <http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation>

biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

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

In addition to addressing projected sea level rise, the California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop The California Climate Adaptation Strategy (Dec 2009)<sup>9</sup>, which summarizes the best-known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

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

The National Academy of Science was directed to prepare a Sea Level Rise Assessment Report<sup>10</sup> to recommend how California should plan for future sea level rise. The report was released in June 2012 and included:

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

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<sup>9</sup> <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

<sup>10</sup> *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at [http://www.nap.edu/catalog.php?record\\_id=13389](http://www.nap.edu/catalog.php?record_id=13389).

In 2010, interim guidance was released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise. Subsequently, CO-CAT updated the Sea Level Rise guidance to include information presented in the National Academies Study.

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

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

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

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

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

## Section 5 – List of Preparers

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The following Caltrans staff contributed to the preparation of this Initial Study:

Winder Bajwa, Project Manager. Contribution: Project Management.

Sue Bauer, Supervising Environmental Planner. Contribution: Environmental Office Chief.

Rajive Chadha, Hazardous Waste Specialist. Contribution: Initial Site Assessment, March 4, 2016.

Sean Cross, Water Quality Specialist. Contribution: Water Quality Assessment Report, February 25, 2016.

Douglas Jones, Senior Design Engineer. Contribution: Project Design Oversight.

Chris Kuzak, Associate Environmental Planner (Architectural History). Contribution: Built Environment Analysis.

Lisa Machado, Associate Environmental Planner (Archaeology). Contribution: Historic Property Survey Report and Archaeological Resources Management Plan, May 2016.

Adele Pommerenck, Senior Environmental Planner. Contribution: Environmental Branch Chief.

Ryan Pommerenck, Air and Noise Specialist. Contribution: Air Quality Analysis, February 23, 2016 and Noise Analysis, March, 29, 2016.

Teresa Spade and Allison Kunz, Associate Environmental Planner (Natural Sciences). Contribution: Natural Environment Study, February 11, 2016.

Jennifer White, Landscape Architect. Contribution: Visual Impact Assessment, April 13, 2016.

Dotrik Wilson, Associate Environmental Planner (Coordinator). Contribution: Initial Study.

# Section 6 – Non-Discrimination Policy Statement

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## DEPARTMENT OF TRANSPORTATION

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March 2013

### NON-DISCRIMINATION POLICY STATEMENT

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For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: [http://www.dot.ca.gov/hq/bep/title\\_vi/t6\\_violated.htm](http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm).

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14<sup>th</sup> Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

A handwritten signature in blue ink that reads "Malcolm Dougherty".

MALCOLM DOUGHERTY  
Director

*"California improves mobility across California"*