

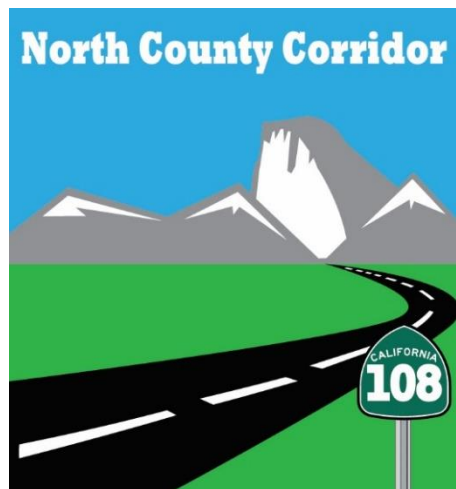
North County Corridor New State Route 108 Project and Route Adoption

STANISLAUS COUNTY, CALIFORNIA
DISTRICT 10 – STA – 108
(SR-108 [PM 27.5/44.5], SR-219 [PM 3.7/4.8], SR-120 [PM 6.9-11.6])
EA: 10-0S8000 & Project ID: 1000000263
SCH #: 2010082078

Final Environmental Impact Report/ Environmental Impact Statement and Final Section 4(f) De Minimis Finding

Volume I of III

Volume I includes Chapter 1 through Chapter 7



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required by applicable Federal environmental laws for this project are being, or have been, carried-out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by the Federal Highway Administration (FHWA) and Caltrans.



March 2020

General Information about This Document

The California Department of Transportation (Department), as assigned by the Federal Highway Administration (FHWA), has prepared this Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) and Section 4(f) De Minimis finding for the proposed project located in Stanislaus County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives have been considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. The Draft Environmental Impact Report/Environmental Impact Statement circulated to the public for 69 days between August 9, 2017 and October 16, 2017. A public hearing was held on September 7, 2017, at the Gene Bianchi Community Center at 110 South Second Avenue, Oakdale, CA from 4:00 p.m. to 8:00 p.m. Comments received during this public circulation period are included in Appendix N contained in Volume III. Elsewhere throughout this document, a vertical line in the margin indicates a change made since the draft document circulation. Minor editorial changes and clarifications have not been so indicated. Additional copies of this document and the related technical studies are available for review at the following locations:

- Caltrans District 6: 855 M Street, Suite 200, Fresno, CA 93721
- Caltrans District 10: 1976 East Charter Way, Stockton, CA 95205
- Stanislaus County Public Works Department: 1716 Morgan Hill Road, Modesto, CA 95354
- Riverbank City Hall: 6707 3rd Street, Riverbank, CA 95367
- Oakdale City Hall: 455 South Fifth Avenue, Oakdale, CA 95361
- Modesto City Hall: 1010 10th Street, Modesto, CA 95354

For more information and to request this document, please visit:

- (<http://www.stancounty.com/publicworks/ncc-main.shtm>)

If you would like a hardcopy of this document, please make your request by contacting Jennifer Lugo via phone at 559-445-6172, via email at jennifer.lugo@dot.ca.gov, or via mail at Caltrans District 6, 855 M Street, Suite 200, Fresno, CA 93721.

Alternative Formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Department of Transportation, Attn: Jennifer Lugo, Caltrans District 6, 855 M Street, Suite 200, Fresno, CA 93721; 559-445-6172 Voice, or use the California Relay Service TTY number, 1-800-735-2922 or dial 711.

Construct a new freeway/expressway from SR-219 and Tully Road, (SR-108 [PM 27.5/44.5], SR-219 [PM 3.7/4.8], SR-120 [PM 6.9-11.6]) to SR-108/120 east of the City of Oakdale

FINAL ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT and Final Section 4(f) Finding

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C), 49 USC 303, and/or 23 USC 138

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies: North County Corridor Transportation Expressway Authority

March 13, 2020

Date of Approval



Dan McElhinney
District 10 Director
California Department of Transportation
National Environmental Policy Act Lead Agency and
California Environmental Quality Act Lead Agency

The following person may be contacted for more information about this document:

Jennifer Lugo
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Fresno, CA 93721

Abstract: The purpose of the project is to reduce average daily traffic volumes and current traffic congestion and accommodate anticipated future traffic on SR-108 and the surrounding regional transportation network in Stanislaus County and the cities of Modesto, Riverbank, and Oakdale; support the efficient movement of goods and services throughout the region for the benefit of the regional economy by providing a more direct and dependable truck route, increasing the average operating speeds of all vehicles, and reducing the number of areas of conflict between motorized traffic and non-motorized means of travel; and improving the efficiency of interregional travel by reducing travel times for long-distance commuters, recreational traffic, and interregional goods movement. The proposed project will connect SR-219 near Modesto to SR-120 near Oakdale. The project is about 18 miles long with a western end at SR-219 (Kiernan Avenue)/Tully Road intersection and an eastern end at SR-108/SR-120. The project would have substantial effects to the community due to relocation impacts, farmland, noise and biological resources.

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Summary

NEPA Assignment

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Department entered into a Memorandum of Understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016 for a term of five years. In summary, the Department continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and the Department assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to the Department under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

Project Summary

The California Department of Transportation (Caltrans), in cooperation with the North County Corridor Transportation Expressway Authority (NCCTEA), proposes to construct the North County Corridor New State Route 108 (SR-108) Project. The NCCTEA is represented by Caltrans District 10, Stanislaus County, and the Cities of Oakdale, Riverbank and Modesto. Caltrans is the lead agency for both National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) compliance.

The project lies in northern Stanislaus County between Tully Road SR-219 at the western end, to SR-108/SR-120 at the eastern end. The project area is generally bounded by SR-108/120 on the north, Kiernan Avenue/SR-219/Claribel Road on the south, Tully Road on the west, and Lancaster Road on the east. Within the limits of the project, the current location of SR-108 is a conventional two-lane, undivided highway with two 12-foot-wide lanes, flanked by 2- to 4-foot-wide non-standard shoulders.

The proposed project is a joint project by Caltrans and the Federal Highway Administration (FHWA), and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. Caltrans is the lead agency under NEPA and the lead agency under CEQA. In addition, the Federal Highway Administration's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 United States Code (USC) 327.

The draft environmental document circulated for public review and comments from August 9, 2017 to October 16, 2017. Comments were collected and responded to in this document (see Appendix N located in Volume III). After considering all the comments received, the Project Development Team identified a preferred alternative and made the final determination of the project's effects on the environment. Under CEQA, unmitigatable significant impacts were identified due to impacts associated with relocation, farmland, and noise are anticipated. Therefore, Caltrans prepared a Statement of Overriding Considerations. Similarly, Caltrans

determined the action does significantly impact the environment; therefore Caltrans, as assigned by FHWA, issued a Record of Decision in accordance with NEPA.

Purpose and Need

The purpose of the project is to reduce existing and future traffic congestion in northern Stanislaus County, support the efficient movement of goods and services and improve interregional travel as follows:

- Reduce average daily traffic volumes and current traffic congestion and accommodate anticipated future traffic on the existing SR-108 and the surrounding regional transportation network in Stanislaus County and the cities of Modesto, Riverbank, and Oakdale.
- Support the efficient movement of goods and services throughout the region for the benefit of the regional economy by providing a more direct and dependable truck route, increasing the average operating speeds of all vehicles, and reducing the number of areas of conflict between motorized traffic and non-motorized means of travel.
- Improve the efficiency of interregional travel by reducing travel times for long distance commuters, recreational traffic, and interregional goods movement.

The project has been identified as a necessary improvement to accommodate regional east-west traffic and to improve north-south connectivity in Stanislaus County and southern San Joaquin County. The current action is needed because:

- Travel conditions in the region, including traffic congestion on existing SR-108, will continue to worsen due to regional population growth and projected traffic volume increases.
- Traffic congestion on existing truck routes (SR-108/SR-120) will continue to hinder the efficient movement of goods and services.
- Existing SR-108 is part of the interregional system, and interregional circulation will become increasingly constrained as travel times on existing SR-108 increase substantially with planned residential and employment growth.

Proposed Action

The proposed project will connect SR-219 near Modesto to SR-120 near Oakdale. This environmental document analyzes the four Build Alternatives (1A, 1B, 2A, and 2B) and the No-Build Alternative. The western end of all alternatives is at the SR-219 (Kiernan Avenue)/Tully Road intersection. The project is analyzed as three distinct segments for environmental evaluation purposes and explaining the proposed improvements. Segment 1 represents the more urbanized area; Segment 2 represents a transition from urbanized area to rural area; and Segment 3 represents the rural foothill area.

Segment 1, which has the same western end for all Build Alternatives, begins at the SR-219 Kiernan Avenue/Tully Road intersection. All of the Build Alternatives proceed along the same alignment and have similar improvements to the vicinity of the existing Claus Road/Claribel Road intersection near the southeast portion of the City of Riverbank and northeast portion of the City of Modesto's future sphere of influence.

Segment 2 is where the four similar alternatives separate into two different alignments (1A/1B and 2A/2B). In Segment 2, Alternatives 1A and 1B veer northeast from near the existing Claus Road/Claribel Road intersection and pass through the southern boundary of the City of Oakdale to just east of Albers Road, and Alternatives 2A and 2B continue to extend easterly along Claribel Road and veer northeastward past the intersection of Claribel Road/Bentley Road to

just east of Albers Road. Each of the alternatives then continues to the respective proposed eastern end (A and B).

In Segment 3, Alternatives 1A and 2A merge as similar alternatives at the southern end of the City of Oakdale and continue on the same alignment to the proposed eastern end (A) at the new SR-108/SR-120 intersection just east of the City of Oakdale boundary. In Segment 3, Alternatives 1B and 2B merge as similar alternatives north of the existing Warnerville Road/Emery Road intersection and continue on a northeasterly direction to the proposed other eastern end (B) at the new SR-108/SR-120 intersection west of the existing SR-120/Lancaster Road intersection (see Section 2, Figure 2.3-1).

In general, the proposed project includes the following:

- New freeway/expressway controlled-access travel lanes.
- At-grade intersections.
- Grade-separation bridge structures at major roadway and railway crossings.
- Structures at waterway crossings (Modesto and Oakdale Irrigation District canals).
- County and City roadway improvements at various locations.
- Relinquishment of existing SR-108 back to local jurisdictions.
- Vehicular, bicycle, and pedestrian access that is in compliance with the California Complete Streets Act and the Americans with Disabilities Act.
- Utility relocations for gas, electric, water, and communication lines.
- Intelligent Transportation System elements (signal coordination and traffic cameras).

Preferred Alternative

After review of public comments, the Project Development Team met on February 5, 2018 to discuss the proposed project alternatives. During the meeting, the four build alternatives in the environmental document (Alternatives 1A, 1B, 2A, and 2B) were discussed relative to any issues raised by the public during the public review period and the local agencies' input on the locally preferred alternative. Based on public review and local agency input, it was then determined that Alternative 1B was the preferred alternative.

Alternative 1B was selected as the preferred alternative for the following reasons:

- 1) Alternative 1B meets the purpose and need of the project.
- 2) Alternative 1B has fewer adverse impacts to homes and businesses in the area.
- 3) Alternative 1B maximizes traffic operations compared to Alternatives 2A or 2B.
- 4) Alternative 1B is closest to the urbanized areas and planned growth areas in the region.
- 5) Alternative 1B was preferred by the public as expressed during public meetings public comments.
- 6) The local jurisdictions (City of Modesto, City of Oakdale, City of Riverbank, and Stanislaus County) unanimously support the selection of Alternative 1B as the locally preferred alternative. Each of these local jurisdictions approved a resolution in support of Alternative 1B.

Project Impacts

See Summary of Major Potential Impacts from Alternatives table.

Summary of Major Potential Impacts from Alternatives

Potential Impact		Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
	Consistency with the Stanislaus County General Plan	YES	YES	YES	YES	NO
	Consistency with the City of Modesto General Plan	YES	YES	YES	YES	NO
	Consistency with the City of Riverbank General Plan	YES	YES	YES	YES	NO
	Consistency with the City of Oakdale General Plan	YES	YES	YES	YES	NO
Growth		Moderate influence on growth.	Moderate influence on growth.	Moderate influence on growth.	Moderate influence on growth.	No impact.
Farmlands		Acquisition of 470 acres of farmland. Permanent impacts to Williamson Act land are 351 acres.	Acquisition of 576 acres of farmland. Permanent impacts to Williamson Act land are 540 acres.	Acquisition of 397 acres of farmland. Permanent impacts to Williamson Act land are 305 acres.	Acquisition of 540 acres of farmland. Permanent impacts to Williamson Act land are 495 acres.	No impact.
Community Character and Cohesion		Traffic and pedestrian facilities would be greatly improved. Minor	Traffic and pedestrian facilities would be greatly improved. Minor	Traffic and pedestrian facilities would be greatly improved. Minor	Traffic and pedestrian facilities would be greatly improved. Minor	No impact.
Relocation	Business Relocations	Displace 36 businesses.	Displace 33 businesses.	Displace 42 businesses.	Displace 38 businesses.	No Impact
	Housing Relocations	Displace 124 homes.	Displace 114 homes.	Displace 136 homes.	Displace 114 homes.	No Impact
Utilities		Relocation of PG&E, AT&T, San Francisco Public Utilities Commission, City of Modesto (water and sanitary sewer), City of Riverbank (water and sanitary sewer), Modesto Irrigation District, and Oakdale Irrigation District.	Relocation of PG&E, AT&T, San Francisco Public Utilities Commission, City of Modesto (water and sanitary sewer), City of Riverbank (water and sanitary sewer), Modesto Irrigation District, and Oakdale Irrigation District.	Relocation of PG&E, AT&T, San Francisco Public Utilities Commission, City of Modesto (water and sanitary sewer), City of Riverbank (water and sanitary sewer), Modesto Irrigation District, and Oakdale Irrigation District.	Relocation of PG&E, AT&T, San Francisco Public Utilities Commission, City of Modesto (water and sanitary sewer), City of Riverbank (water and sanitary sewer), Modesto Irrigation District, and Oakdale Irrigation District.	No impact.

Summary

Potential Impact	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
Emergency Services	Operational efficiency for emergency service will ultimately be improved. Minor	Operational efficiency for emergency service will ultimately be improved. Minor	Operational efficiency for emergency service will ultimately be improved. Minor	Operational efficiency for emergency service will ultimately be improved. Minor	No impact.
Traffic and Transportation/ Pedestrian and Bicycle Facilities	Build Alternative 1A would result in a substantial improvement in present and future traffic operations, including interregional movement of goods. However, construction could impact traffic temporarily. Pedestrian and bicycle facilities would be improved. Reduction in Daily Traffic Volume 27 percent	Build Alternative 1B would result in a substantial improvement in present and future traffic operations, including interregional movement of goods. However, construction could impact traffic temporarily. Pedestrian and bicycle facilities would be improved. Reduction in Daily Traffic Volume 21 percent	Build Alternative 2A would result in a substantial improvement in present and future traffic operations, including interregional movement of goods. However, construction could impact traffic temporarily. Pedestrian and bicycle facilities would be improved. Reduction in Daily Traffic Volume 17 percent	Build Alternative 2B would result in a substantial improvement in present and future traffic operations, including interregional movement of goods. However, construction could impact traffic temporarily. Pedestrian and bicycle facilities would be improved. Reduction in Daily Traffic Volume 11 percent	The No-Build would not improve existing or future traffic operations, nor would it improve safety, pedestrian facilities, or bicycle facilities.
Visual/Aesthetics	Moderate	Moderate	Moderate	Moderate	No impact.
Cultural Resources	No adverse effect to 5 known historic properties (historic era structures). Additional cultural resource identification, evaluation, effect determination, and mitigation (if applicable) efforts needed upon right-of-way acquisition.	No adverse effect to 5 known historic properties (historic era structures). Additional cultural resource identification, evaluation, effect determination, and mitigation (if applicable) efforts needed upon right-of-way acquisition.	No adverse effect to 5 known historic properties (historic era structures). Additional cultural resource identification, evaluation, effect determination, and mitigation (if applicable) efforts needed upon right-of-way acquisition.	No adverse effect to 5 known historic properties (historic era structures). Additional cultural resource identification, evaluation, effect determination, and mitigation (if applicable) efforts needed upon right-of-way acquisition.	No impact.
Water Quality and Storm Water Runoff	Net new impervious surface of 179 acres and would have the potential to introduce pollutants during construction.	Net new impervious surface of 211 acres and would have the potential to introduce pollutants during construction.	Net new impervious surface of 189 acres and would have the potential to introduce pollutants during construction.	Net new impervious surface of 222 acres and would have the potential to introduce pollutants during construction.	No impact.
Paleontology	Geologic formations present with high Paleontological Sensitivity within the project limits. Paleontological Mitigation Plan required.	Geologic formations present with high Paleontological Sensitivity within the project limits. Paleontological Mitigation Plan required.	Geologic formations present with high Paleontological Sensitivity within the project limits. Paleontological Mitigation Plan required.	Geologic formations present with high Paleontological Sensitivity within the project limits. Paleontological Mitigation Plan required.	No impact.
Hazardous Waste/Materials	2 High-Risk Properties, 62 Medium-Risk Properties.	2 High-Risk Properties, 64 Medium-Risk Properties.	1 High-Risk Properties, 62 Medium-Risk Properties.	1 High-Risk Properties, 66 Medium-Risk Properties.	No impact.

Summary

Potential Impact	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
Air Quality	Not a Project of Air Quality Concern. Meets Regional Conformity requirements by federal Clean Air Act. Moderately high construction (short-term) impacts related to NOx, ROG, PM ₁₀ , PM _{2.5} , and CO.	Not a Project of Air Quality Concern. Meets Regional Conformity requirements by federal Clean Air Act. Moderately high construction (short-term) impacts related to NOx, ROG, PM ₁₀ , PM _{2.5} , and CO.	Not a Project of Air Quality Concern. Meets Regional Conformity requirements by federal Clean Air Act. Moderately high construction (short-term) impacts related to NOx, ROG, PM ₁₀ , PM _{2.5} , and CO.	Not a Project of Air Quality Concern. Meets Regional Conformity requirements by federal Clean Air Act. Moderately high construction (short-term) impacts related to NOx, ROG, PM ₁₀ , PM _{2.5} , and CO.	No impact.
Climate Change	Increase vs No-Build 2.8 percent increase modeled for 2046. (Pavley Regulations)	Increase vs No-Build 2.6 percent increase modeled for 2046. (Pavley Regulations)	Increase vs No-Build 2.5 percent increase modeled for 2046. (Pavley Regulations)	Increase vs No-Build 2.2 percent increase modeled for 2046. (Pavley Regulations)	CO ₂ Emissions in 2046 (tons/year) 543,120.
Noise and Vibration	Moderately high impacts to adjacent receptors. Two soundwalls have been found feasible and reasonable.	Moderately high impacts to adjacent receptors. Two soundwalls have been found feasible and reasonable.	Moderately high impacts to adjacent receptors. Two soundwalls have been found feasible and reasonable.	Moderately high impacts to adjacent receptors. Two soundwalls have been found feasible and reasonable.	No impact.
Natural Communities	Impacts to 1.32 acres (1.0 acre of direct impacts, 0.32 acre indirect impacts) of Interior Live Oak Woodland in the project area. No impacts to Blue Oak Savannah. Impacts to 0.48 acres (0.13 acre of direct impacts, 0.35 acre indirect impact) of Riparian Scrub in the project area.	Impacts to 3.44 acres (3.07 acres of direct impacts, 0.37 acre of indirect impacts) of Interior Live Oak Woodland in the project area and 1.0 acre (0.23 acre of direct impacts, 0.77 acre of indirect impacts) of Blue Oak Savannah. Impacts to 0.48 acres (0.13 acre of direct impacts, 0.35 acre indirect impact) of Riparian Scrub in the project area.	Impacts to 1.32 acres (1.0 acre of direct impacts, 0.32 acre of indirect impacts) Interior Live Oak Woodland in the project area. No impacts to Blue Oak Savannah. Impacts to 0.48 acres (0.13 acre of direct impacts, 0.35 acre indirect impact) of Riparian Scrub in the project area.	Impacts to 3.44 acres (3.07 acres of direct impacts, 0.37 acre of indirect impacts) of Interior Live Oak Woodland in the project area and 1.0 acre (0.23 acre of direct impacts, 0.77 acre of indirect impacts) of Blue Oak Savannah. Impacts to 0.48 acres (0.13 acre of direct impacts, 0.35 acre indirect impact) of Riparian Scrub in the project area.	No impact.
Wetlands and other Waters	Direct impacts to 1.43 acres of wetlands and indirect impacts to 0.35 acres of wetlands in the project area.	Direct impacts to 0.66 acres of wetlands and indirect impacts to 0.91 acres of wetlands in the project area	Direct impacts to 1.53 acres of wetlands and indirect impacts to 0.7 acres of wetlands in the project area	Direct impacts to 1.02 acres of wetlands and indirect impacts to 2.58 acres of wetlands in the project area.	No impact.
Animal Species	Build Alternative 1A would result in impacts to animal species. Bats (impacts: Tree = 26; Building = 29); Western Burrowing Owl (impacts:	Build Alternative 1B would result in impacts to animal species. Bats (impacts: Tree = 5; Building = 8); Western Burrowing Owl (impacts:	Build Alternative 2A would result in impacts to animal species. Bats (impacts: Tree = 17; Building = 17); Western Burrowing Owl (impacts:	Build Alternative 2B would result in impacts to animal species. Bats (impacts: Tree = 5; Building = 5); Western Burrowing Owl (impacts:	No impact.

Summary

Potential Impact	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
	Habitat = 12.34 acres); Northern Harrier, and California horned lark, White-tailed kite and Merlin (wintering) (Nesting Habitat = 12.34 acres; Foraging Habitat = 335.96 acres); Loggerhead shrike (Nesting Habitat = 1.00 acre; Foraging Habitat = 335.96 acres); Pacific Pond Turtle (Aquatic Habitat = 8.42 acres); Western spadefoot toad (Impacts Direct = 0.36 acre; Indirect = 0.07 acre)	Habitat = 31.45 acres); Northern Harrier and California horned lark, White-tailed kite and Merlin (wintering) (Nesting Habitat = 31.45 acres; Foraging Habitat = 409.29 acres); Loggerhead shrike (Nesting Habitat = 1.00 acre; Foraging Habitat = 335.96 acres); Pacific Pond Turtle (Aquatic Habitat = 0.86 acre); Western spadefoot toad (Impacts Direct = 0.27 acre; Indirect = 0.15 acre)	Habitat = 13.44 acres); Northern Harrier and California horned lark, White-tailed kite and Merlin (wintering) (Nesting Habitat = 13.44 acres; Foraging Habitat = 330.04 acres); Loggerhead shrike (Nesting Habitat = 1.00 acre; Foraging Habitat = 330.04 acres); Pacific Pond Turtle (Aquatic Habitat = 0.29 acre); Western spadefoot toad (Impacts Direct = 0.74 acre; Indirect = 0.49 acre)	Habitat = 41.66 acres); Northern Harrier and California horned lark, White-tailed kite and Merlin (wintering) (Nesting Habitat = 41.66 acres; Foraging Habitat = 405.43 acres); Loggerhead shrike (Nesting Habitat = 3.30 acre; Foraging Habitat = 405.43 acres); Pacific Pond Turtle (Aquatic Habitat = 5.82 acres); Western spadefoot toad (Impacts Direct = 0.66 acre; Indirect = 0.90 acre)	
Threatened and Endangered Species	Moderately high. Impacts to the following animal species habitat: Swainson's Hawk (foraging habitat 335.96 acres) and two known nest trees, Tricolored blackbird (impacts: Foraging habitat = 335.96 acres, Nesting Habitat = 1.98 acres), and Valley Elderberry Longhorn Beetle: no known shrubs will be impacted, however, due to Right of Entry restrictions, not all of the project study area has been surveyed for potential shrub locations.	Moderately high. Impacts to the following threatened and endangered species habitat: Swainson's Hawk (foraging habitat 409.29) and two known nest trees, Tricolored blackbird (impacts: Foraging habitat = 409.29 acres, Nesting Habitat = 1.54 acres), Hartweg's golden sunburst habitat (Impacts: Direct = 3.28 acres, Temporary = 0.57 acres, and Indirect to annual grasslands = 11.73 acres), Green's tuctoria and Colusa grass habitat (Impacts: Direct = 0.06 acres, Temporary = 0.01 acres, and Indirect to vernal pools = 2.22 acres), California tiger salamander habitat (Aquatic Habitat Impacts: Direct = 14.07 acres, Temporary = 2.92 acres, and Indirect = 52.45 acres, and Upland Habitat Impacts	Moderately high. Impacts to the following animal species habitat: Swainson's Hawk (foraging habitat 330.04 acres) and two known nest trees, Tricolored blackbird (impacts: Foraging habitat = 330.04 acres, Nesting Habitat = 2.51 acres), and Valley Elderberry Longhorn Beetle: no known shrubs will be impacted, however, due to Right of Entry restrictions, not all of the project study area has been surveyed for potential shrub locations.	Moderately high. Impacts to the following animal species habitat: Swainson's Hawk (foraging habitat 405.43 acres) and two known nest trees, Tricolored blackbird (impacts: Foraging habitat = 405.43 acres, Nesting Habitat = 0.82 acres), and Vernal Pool Invertebrates (Impacts: Direct = 0.04 acres, Indirect = 2.11 acres), Valley Elderberry Longhorn Beetle: no known shrubs will be impacted, however, due to Right of Entry restrictions, not all of the project study area has been surveyed for potential shrub locations.	No impact.

Summary

Potential Impact	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
		= Direct = 237.43 acres, Temporary = 58.98 acres, and Indirect = 516.44 acres), Vernal Pool Invertebrates (Impacts: Direct = 0.07 acres, Indirect = 2.22 acres), and Valley Elderberry Longhorn Beetle: one known shrub is within 165 feet of the footprint will be impacted.			
Invasive Species	The project area is already moderately impacted by non-native species. No new invasive species would be introduced. Permanent impacts include the low probability to spread invasive species within the project area during construction activities.	The project area is already moderately impacted by non-native species. No new invasive species would be introduced. Permanent impacts include the low probability to spread invasive species within the project area during construction activities.	The project area is already moderately impacted by non-native species. No new invasive species would be introduced. Permanent impacts include the low probability to spread invasive species within the project area during construction activities.	The project area is already moderately impacted by non-native species. No new invasive species would be introduced. Permanent impacts include the low probability to spread invasive species within the project area during construction activities.	No impact.
Cumulative Impacts	Build Alternative 1A could potentially have cumulative impacts for community impacts, relocations, land use, noise visual, waters, and wetlands.	Build Alternative 1B could potentially have cumulative impacts for community impacts relocations, land use, noise visual, waters, and wetlands.	Build Alternative 2A could potentially have cumulative impacts for community impacts relocations, land use, noise visual, waters, and wetlands.	Build Alternative 2B could potentially have cumulative impacts for community impacts relocations, land use, noise visual, waters, and wetlands.	No impact.
Number of Interchanges	4	4	4	4	None
Number of Roundabout	2	3	2	3	None
Number of Intersections	6	7	6	7	None
Railroad Crossings	2	2	2	2	None
Canal Crossings	17	22	24	34	None

Summary

Potential Impact	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
Number of Hetch-Hetchy Crossings	12	12	6	5	None
Cost	\$660 million	\$680 million, with escalated costs of \$724 million	\$676 million	\$699 million	None

Coordination with the Public and Other Agencies for the Route Adoption

During the North County Corridor SR-108 East Route Adoption Project phase, coordination took place with the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and California Department of Fish and Wildlife to determine proper methods and action for endangered, threatened and special-status species. The table below outlines the coordination efforts with each agency throughout the route adoption phase of the project.

In addition, input was also solicited from the Federal Highway Administration through the 23 USC §139 review process from public agency participants regarding the alternatives to be addressed in the environmental document.

Agency Coordination and Public Outreach for Route Adoption

Meeting or Document Type	When and Where
Public meetings: Caltrans in cooperation with the Stanislaus Council of Governments, Stanislaus County, and the Cities of Modesto, Oakdale, and Riverbank	November 13, 2008 (Salida Regional Library) November 20, 2008 (Oakdale Community Center) June 15, 2009 (Riverbank Community Center) June 1, 2009 (StanCOG office, local property owners individual requested meetings)
CEQA Notice of Preparation Filed with the State Office of Planning and Research	October 17, 2008
CEQA Notice of Preparation Filed with the State Office of Planning and Research (adjusted western end from SR-99 to McHenry Avenue)	April 20, 2009
Public Hearing: Caltrans public hearing for SR-108 East Route Adoption Project (as part of public circulation of the Draft EIR)	October 13, 2009 (Gene Bianchi Community Center) October 22, 2009 (Riverbank Community Center)

Coordination with the Public and Other Agencies for the North County Corridor New SR-108 Project

As a continuation to the Route Adoption coordination, the NCCTEA has coordinated with U.S. Fish and Wildlife Service and California Department of Fish and Wildlife as part of the North County Corridor New SR-108 Project. On January 23, 2014, the NCCTEA reintroduced the agencies to the project and requested concurrence on survey methodology.

The Notice of Intent (NOI) to prepare an EIS for the North County Corridor New SR-108 Project was issued in August 23, 2010 by the Federal Highway Administration. Also, a NOI was published in the Federal Register on August 27, 2010. Caltrans, in cooperation with the NCCTEA, held two public scoping meetings in September 2010. The meetings were held at the following dates, times and places:

	Meeting One	Meeting Two
Date	September 8, 2010	September 13, 2010
Time	6:30 p.m. – 8:00 p.m.	6:30 p.m. – 8:00 p.m.
Location	Oakdale Community Center 110 S. 2nd Avenue, Oakdale, CA	Salida Regional Library 4835 Sisk Road, Salida, CA

Summary

These meetings were held to inform the public, interest groups, affected Native American tribes and government agencies of the EIR/EIS, and provided an opportunity for public involvement. The scoping meetings were conducted pursuant to the CEQA Guidelines Section 15083 (Early Public Consultation).

A Notice of Preparation (NOP) for the Draft EIR was published August 30, 2010 through the State Clearinghouse.

Two public information meetings have been held to inform the community of the North County Corridor New SR-108 Project.

	Meeting One	Meeting Two
Date	June 16, 2011	March 6, 2014
Time	6:30 p.m. – 8:00 p.m.	6:30 p.m. – 8:00 p.m.
Location	Riverbank Community Center 3600 Santa Fe Street, Riverbank, CA	Riverbank Community Center 3600 Santa Fe Street, Riverbank, CA

The first public information meeting was held at the Riverbank Community Center on June 16, 2011. The purpose of the meeting was to inform the community that could be affected by the new SR-108 alignment about the environmental process, alternatives screening criteria, and the environmental and engineering studies that were underway. Attendees were also encouraged to tell the project team about environmental issues and alternatives to consider and analyze in the EIS/EIR.

The second public information meeting took place on March 6, 2014. The purpose of the meeting was to inform the community of the progress of the project and share the proposed alternatives with the community. The public was encouraged to give feedback on the alternatives, including access to their individual properties. To further understand the needs of the public, individual property meetings have also taken place to inform property owners of the project and discuss their individual needs in terms of access.

A public hearing was held during circulation of the draft environmental document.

	Public Hearing
Date	September 7, 2017
Time	4:00 p.m. – 8:00 p.m.
Location	Gene Bianchi Community Center 110 S 2nd Ave, Oakdale, CA 95361

The public hearing was held on Thursday, September 7, 2017 from 4:00 p.m. – 8:00 p.m. in the Gene Bianchi Community Center in Oakdale, California, on Thursday, September 7, 2017 from 4:00 p.m. – 8:00 p.m. 305 people attended the hearing where they roamed the room to see extensive map displays and exhibits. Attendees were able to provide comments via comment cards or dictate comments to the onsite court reporter.

Additionally, a neighborhood open house was held to keep the community up to date with the status of the project.

Summary

Neighborhood Open House	
Date	October 28, 2019
Time	6:00 p.m. – 8:00 p.m.
Location	Covenant Grove Church 4825 Roselle Ave, Modesto, CA

The neighborhood open house was held in the Covenant Grove Church in Modesto, California, on Monday, October 28, 2019 from 6:00 p.m. – 8:00 p.m. The purpose of the meeting was to inform the community of the current status of the project.

Chapter 5, Section 5.3 includes detailed discussion of all Technical Advisory Committee Meetings that took place throughout the Route Adoption as well as the North County Corridor New SR-108 Project. These meetings are open to the public.

The following permits and project approvals are anticipated for the project.

Permits and Project Approvals

Agency	Permit/Approval	Status
United States Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species Review and comment on 404 Permit	USFWS issued Section 7 Biological Opinion on December 11, 2019.
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States.	Application to be submitted during final design.
Natural Resources Conservation Service	Farmland Conversion Impact Rating for Corridor Type Projects	Review of farmland analysis. Completed analysis is included in Section 3.1.3.
California Department of Fish and Wildlife	1602 Agreement for Streambed Alteration Section 2081 Permit for Threatened and Endangered Species	Application to be submitted during final design.
Regional Water Quality Control Board – Central Valley Region 5	401 Certification	Application to be submitted during final design.
State Historic Preservation Officer	Finding of Effect	SHPO issued concurrence on Finding of No Adverse Effect on July 23, 2019.
State Historic Preservation Officer	Programmatic Agreement and Management Plan	SHPO issued concurrence on Programmatic Agreement on September 19, 2019
Hetch-Hetchy	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Oakdale Irrigation District	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Modesto Irrigation District	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Union Pacific Railroad	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Burlington Northern Santa Fe Railroad	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Sierra Railroad	Encroachment Permit and Permanent Easement	Application to be submitted during final design.

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Chapter 1 Proposed Project

1.1 Introduction

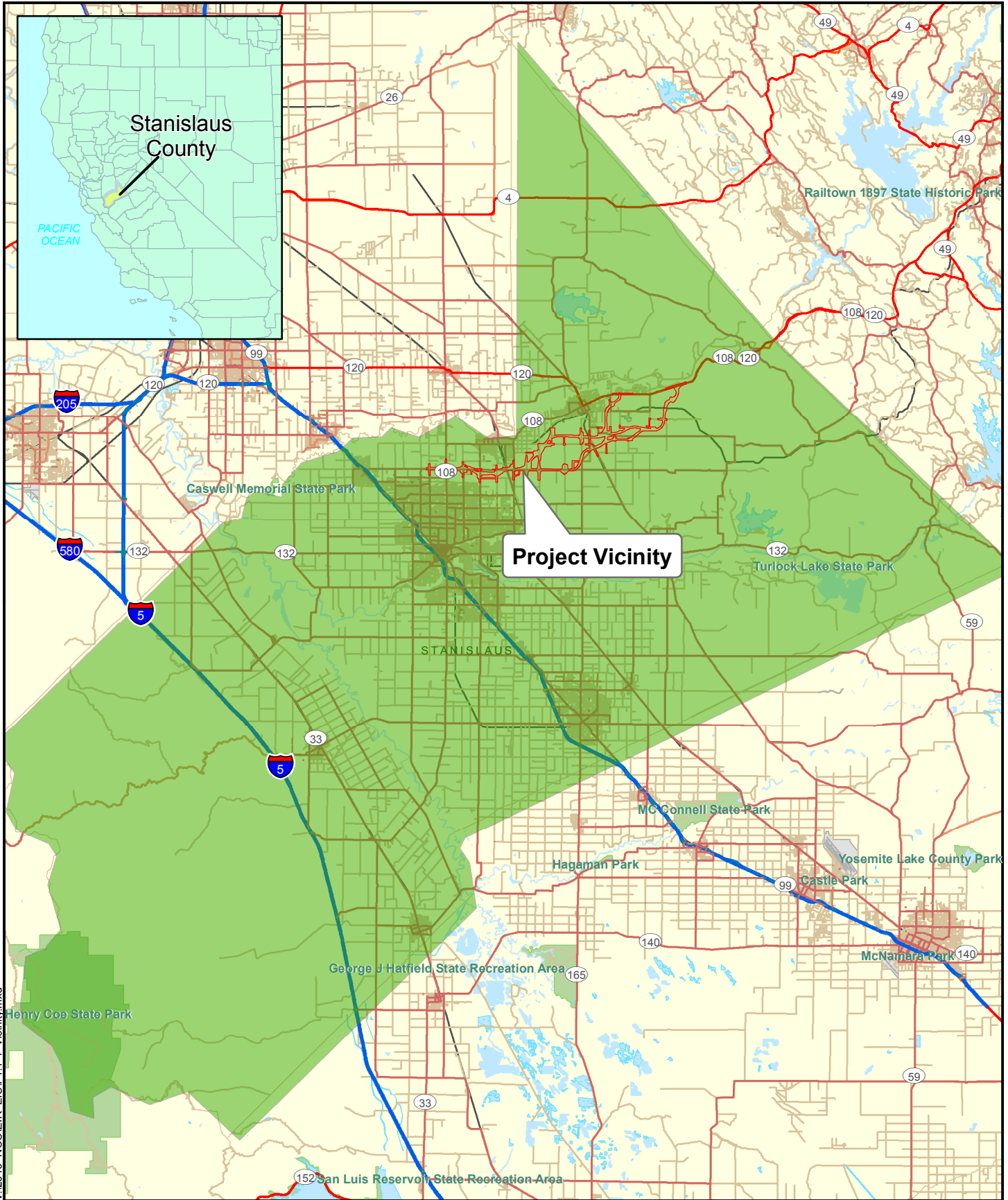
The California Department of Transportation (Caltrans), in cooperation with the North County Corridor Transportation Expressway Authority (NCCTEA), proposes to construct the North County Corridor New State Route 108 Project. The NCCTEA consists of Caltrans District 10, Stanislaus County, and the Cities of Oakdale, Riverbank and Modesto. Caltrans is the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) lead agency for the project.

The project area is located in northern Stanislaus County between the intersection of Tully Road and State Route 219 (SR-219) at the western end (SR-219 PM 3.7) and the existing SR-108/State Route 120 (SR-120) in East Oakdale at the eastern end (SR-120 PM 11.6). The project area is generally bounded by SR-108/SR-120 on the north, Kiernan Avenue/SR-219/Claribel Road on the south, Tully Road on the west, and Lancaster Road on the east. The total length of the project is approximately 22 miles. Figures 1.1-1 and 1.1-2 show the project vicinity and location, respectively. The existing SR-108 is located outside the project area and is currently a conventional two-lane, undivided highway with two 12-foot-wide lanes, flanked by 2- to 4-foot-wide non-standard shoulders. This project would relocate SR-108 to a newly created alignment. Thereafter, Caltrans will relinquish the existing SR-108 to the County of Stanislaus. Although it will no longer be a State Highway, it will remain in operation as an east-west route in its current form and location.

In May 2010, the California Transportation Commission approved a Route Adoption for North County Corridor to become the new SR-108. The Route Adoption proposed two potential corridors south of the existing SR-108. The proposed North County Corridor project also proposes two corridors in the same vicinity; however, certain project features have been modified within the corridors since the route adoption to improve the placement and transitions of the proposed North County Corridor New SR-108 alignments. It is anticipated that the request to the California Transportation Commission for approval of these changes in the adopted route alignment will be submitted after the final environmental document is approved.

SR-120 will remain a controlled access highway even after it merges with the new North County Corridor public road connection east of the City of Oakdale. The new North County Corridor public road connection may impact the SR-120 route adoption.

The 2018 Stanislaus County Regional Transportation Plan (Stanislaus County, 2019) includes \$680 million for construction of a 2-6 lane expressway from Tully Rd to SR-120/SR-108 via the North County Corridor New SR-108 to open to traffic in 2026. Conceptual-level cost estimates to build a roadway within either of the wide corridors are for Alternative 1A \$660 million, 1B \$680 million, and escalated cost of \$724 million, 2A \$676 million, and 2B \$699 million (1A, 1B, 2A, and 2B based on 2016 costs). The additional funding needed will come from the State Transportation Improvement Program, impact fees, regional transportation impact fees, reprogrammed Oakdale Bypass State Project funds (State Transportation Improvement Program, Regional Improvement Program, Interregional-Improvement Program, and local funds); and anticipated revenue generated through Measure "L," which allots a ½ cent sales tax to transportation projects within Stanislaus County.



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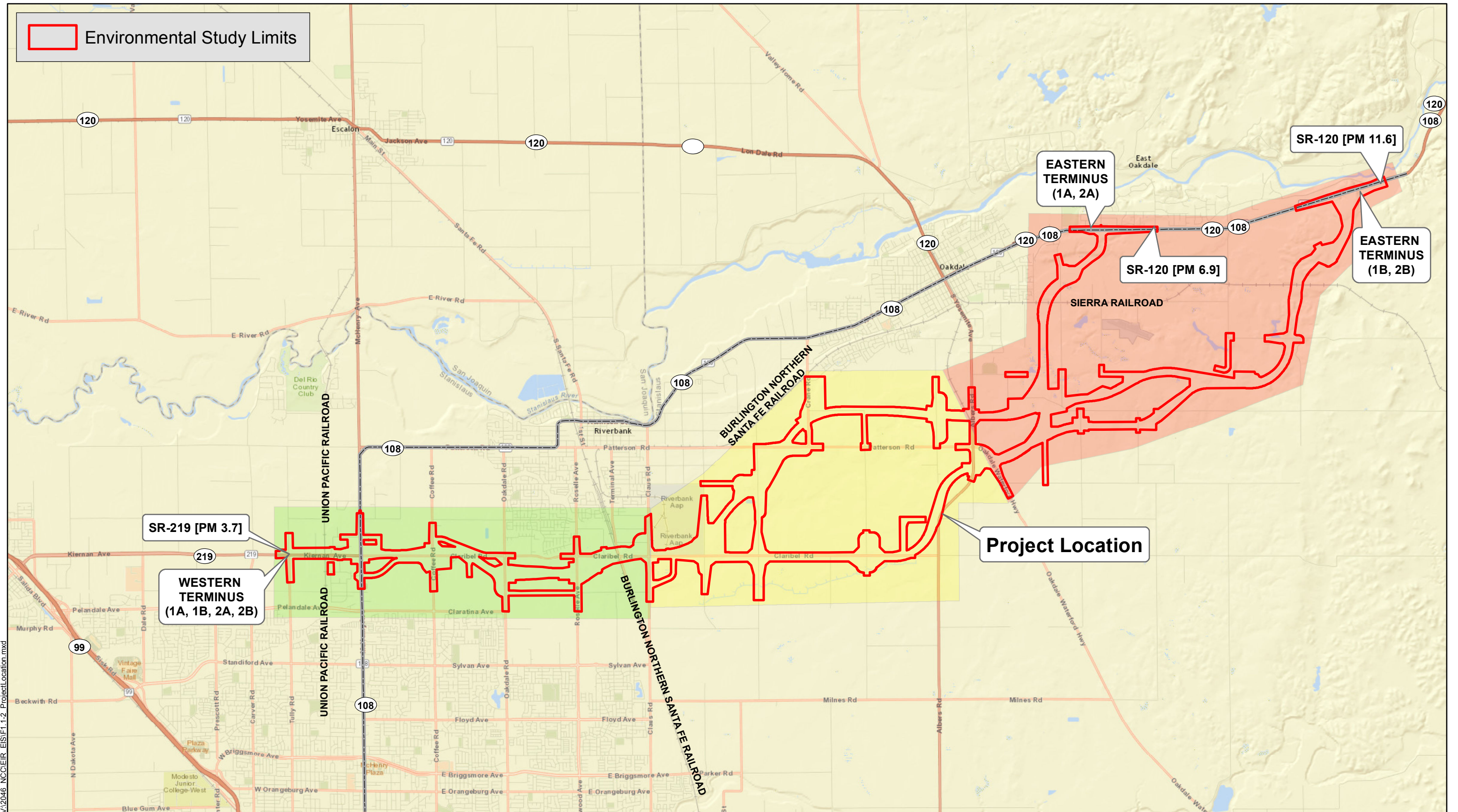
Source: ESRI 2008; 1/4/2016.



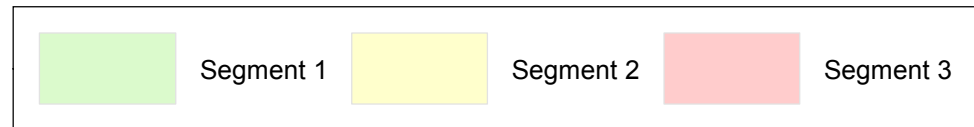
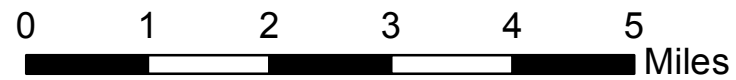
0 5 10 Miles

FIGURE 1.1-1 Project Vicinity

EA: 10-OS8000, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



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**FIGURE 1.1-2
Project Location**

EA: 10-0S8000, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California

1.2 Purpose and Need

The purpose and need statement is an essential part of the environmental process. It explains why the project is being proposed. The purpose and need statement provides context and criteria for developing a range of possible alternatives and eventually the selection of a preferred alternative. The project “purpose” is a set of objectives the project intends to meet. The project “need” is the transportation deficiency that the project was initiated to address.

1.2.1 Purpose

The purpose of the project is to:

- Reduce average daily traffic volumes and current traffic congestion and accommodate anticipated future traffic on the existing SR-108 and the surrounding regional transportation network in Stanislaus County and the cities of Modesto, Riverbank, and Oakdale.
- Support the efficient movement of goods and services throughout the region for the benefit of the regional economy by providing a more direct and dependable truck route, increasing the average operating speeds of all vehicles, and reducing the number of areas of conflict between motorized traffic and non-motorized means of travel.
- Improve the efficiency of interregional travel by reducing travel times for long distance commuters, recreational traffic, and interregional goods movement.

1.2.2 Need

The current action is needed because:

- Travel conditions in the region, including traffic congestion on existing SR-108, will continue to worsen due to regional population growth and projected traffic volume increases.
- Traffic congestion on existing truck routes (SR-108/SR-120) will continue to hinder the efficient movement of goods and services.
- Existing SR-108 is part of the interregional system, and interregional circulation will become increasingly constrained as travel times on existing SR-108 increase substantially with planned residential and employment growth.

Traffic Congestion on Existing SR-108

Population Growth

Stanislaus County’s population is expected to grow from a current (2015) estimate of 532,297 to a projected 821,715 in 2030. The projected populations in 2030 for the cities of Modesto, Riverbank, and Oakdale are 370,000, 32,903, and 35,000, respectively.

Table 1.2.2-1: Projected Population in Northern Stanislaus County

City/County	1970 ¹	1980 ¹	1990 ²	2000 ²	Current Estimate (2015) ²	Projected 2030
Modesto	61,712	106,963	164,746	188,861	209,186	370,000 ⁴
Riverbank	3,949	5,695	8,591	15,826	23,485	32,903 ⁵
Oakdale	6,594	8,474	11,978	15,503	21,773	35,000 ⁶
Stanislaus County	194,506	265,900	370,522	446,997	532,297 ³	821,715 ⁷

1 US Census

2 CA Department of Finance, Table E-4, Estimates for city, county and state, with 1990 and 2000 Census.

3 US Census 2012

4 2008 City of Modesto Final Urban Area General Plan Final Master EIR, Chapter I and StanCOG RTP/SCS

5 2016 Riverbank Municipal Service Review & Sphere of Influence Update

6 City of Oakdale General Plan

7 Stanislaus County General Plan

Traffic Volume Increases

Based on population trends and projections as well as the regional countywide traffic model, average daily traffic volumes are projected to increase through 2046, which represents the 20 year design life of the North County Corridor New SR-108 project. Continued growth in Stanislaus County, its communities, and its surrounding areas, coupled with increasing travel needs through northern Stanislaus County for improved access to and around the growing cities of Modesto, Riverbank, and Oakdale, has resulted in the need for this project.

Average 2014 daily traffic volumes on existing SR-108 range from 15,200 vehicles along the McHenry Avenue portion of existing SR-108 to 22,300 vehicles in downtown Oakdale (see Table 1.2.2-2). This table further indicates that future 2026 and 2046 daily traffic volumes will also increase. The year 2014 has been used to represent present-day baseline condition without the North County Corridor New SR-108 project, 2026 represents the anticipated construction completion year of the North County Corridor New SR-108 project and 2046 represents the end of the 20-year life expectancy of the North County Corridor New SR-108 project if constructed.

Table 1.2.2-2 Average Daily Traffic Volumes at Representative Locations

Volumes	Existing SR-108 – McHenry Segment North of Modesto	Existing SR-108 – Vicinity of Riverbank (Ladd/Patterson Road)	Existing SR-108 – Downtown Oakdale
Existing 2014	15,200	21,100	22,300
2026 No-Build	16,700	22,600	25,600
2046 No-Build	19,200	25,000	31,200

Source: Traffic Operations Report for the North County Corridor 2015, and TOR Addendum, 2019

In addition to the existing SR-108, other existing arterial roadways within and near the project area will experience substantial increases in traffic volumes. Projected growth in the region will place increased strain on east-west travel, as well as strain the capacity of the region's roadway network (particularly existing SR-108).

Table 1.2.2-3 Average Daily Traffic Volumes on Existing Arterial Roadways

Location	Existing (2014)	2046 No-Build
Claribel Road east of Roselle Avenue	14,570	21,000
Pelandale Avenue west of Coffee Road	16,656	53,700
Patterson Road east of Langworth Road	4,665	12,500

Movement of Goods and Services

Interregional Goods Movement

Traffic on the existing SR-108 includes a combination of commuter, local commerce, goods movement, agricultural and farm operations, and a large component of interregional recreational traffic. Interregional traffic involved in the movement of goods and services currently conflicts with local traffic, creating congestion, as well as local noise and air pollution because the existing SR-108 provides direct access to local residences, farms, and other community facilities along its route. Stanislaus County is an important food-processing region. Poultry, dairy, and vegetable products are processed locally and distributed throughout the world every day. Goods movement is the result of production activities within and outside the region, and movement takes place within a complex system of routes, modes, terminals, and warehouse facilities.

The State of California has recognized the importance of agricultural goods movement in the Central Valley. The State’s Goods Movement Action Plan (November 2007) identifies four high priority gateway regions in California, including the Central Valley, that are necessary to support the continued growth of the California economy. SR-99 and Interstate 5 and important east-west corridors (existing SR-108, Patterson Road, and Claratina Avenue) that cross Stanislaus County are located within these high-priority regions. Traffic congestion and operational conflicts between trucks and passenger vehicles have been identified as key issues that need to be addressed to maintain efficient goods movement. The high percentage of trucks on the roads in the project area reflects the high demand in the area for goods movement (Caltrans District 10 TSN TASAS). Many interstate truck lines and contract carriers operate in the Stanislaus region. These operators, distributed throughout the region, rely on the regional system of state highways, expressways, intermodal yards (such as in the City of Ripon and community of Empire), and major arterials to move supplies and products to the backbones of the highway freight system (SR-99, Interstate 5, and SR-132).

Existing/Future Traffic

Transportation planners use the term “level of service” to describe a roadway’s performance based on average delay per vehicle. Level of service ranges from level of service A, indicating free-flow or excellent conditions with short delays, to level of service F, indicating congestion or overloaded conditions with extremely long delays (see Figure 1.2.2-7: Level of Service for Two-Lane Highway and Figure 1.2.2-8: Level of Service for Intersections with Traffic Signals).

Level of service is an effective measure to compare the quality of traffic performance over time and against alternative scenarios. As a baseline for comparison, level of service on the region’s roadway network was determined for existing 2014, 2026, and 2046 conditions.

The existing conditions at main intersections and modeling information show deteriorating levels of service at many intersections in and near the project area by 2046. This means deteriorating access to, through, and around the growing cities of Modesto, Riverbank, and Oakdale.

Table 1.2.2-4 lists the existing levels of service for key intersections serving interregional traffic within and near the project area and the projected 2026 and 2046 morning (AM) and evening (PM) peak hour levels of service.

Table 1.2.2-4 No-Build Alternative Projected Intersection Level of Service – 2026 and 2046

Location	Peak Hour	2014 Level of Service	2026 Level of Service	2046 Level of Service
1. Kiernan Avenue (SR-219)/ Carver Road	AM	F	B	C
	PM	C	B	C
2. Kiernan Avenue (SR-219)/ Tully Road	AM	D	B	C
	PM	F	C	F
3. McHenry Avenue/Ladd Road	AM	C	C	E
	PM	C	D	F
4. McHenry Avenue/SR-108	AM	B	B	B
	PM	A	A	B
5. SR-108/Patterson Road	AM	A	A	F
	PM	A	B	F
6. SR-108/Kiernan Avenue	AM	C	C	F
	PM	C	C	E
7. SR-108/Pelandale Avenue	AM	C	C	F
	PM	D	D	F
8. Coffee Road/Claribel Road	AM	F	B	C
	PM	F	B	C
9. Coffee Road/Claratina Avenue	AM	F	C	F
	PM	F	C	F
10. Oakdale Road/SR-108	AM	C	C	C
	PM	D	C	D
11. Oakdale Road/Claribel Road	AM	C	D	D
	PM	D	D	E
12. Oakdale Road/Claratina Avenue	AM	A (B)	C	D
	PM	B (D)	C	E

Source: Traffic Operations Report for the North County Corridor, 2015, and TOR Addendum, 2019

Interregional Circulation

Route Discontinuity

The existing SR-108 within Stanislaus County terminates at the junction of State Route 120 and Yosemite Avenue in the city of Oakdale. Although the route break occurs, traffic on SR-108 continues and then begins again in Tuolumne County at the State Route 120 Yosemite Junction. Traffic on the existing SR-108 must also travel through the busy downtown areas of Oakdale and Riverbank. These conditions will remain as development continues and traffic volumes increase (see Figure 1.2.2-1, in Appendix A).







On existing SR-108 between the intersections of SR-108/McHenry Avenue and SR-108/Lancaster Road, motorists are slowed and required to stop by 83 public street intersections and many private driveways that have direct access onto existing SR-108. This access has made existing SR-108 ineffective as a major east-west route. The intersections and driveways increase the number of cross interactions of motorists. The route is highly congested during peak hours, and these conditions are expected to worsen as traffic volumes increase. "Peak hours" are defined as the hours during which traffic congestion and volume are at their highest for the day. This is usually experienced twice a day, once in the morning and once in the afternoon during commute times. In addition, many of these 83 intersections have traffic signals or stop signs. During periods of high traffic volumes, motorists must wait at the intersections, causing further delay. Slower-moving trucks add to the congested traffic conditions.

Legislation

On October 11, 2009, the Governor of California signed into law Senate Bill 532. The bill added to the Streets & Highway Code Section 164.15 the segment of SR-108 "from Route 132 in Modesto to Route 120 east of Oakdale" into the system of interregional routes eligible to be funded as interregional improvements and revised the authorized route description.

LEVELS OF SERVICE

for Two-Lane Highways

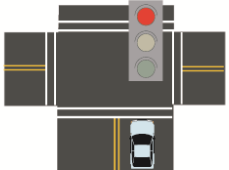
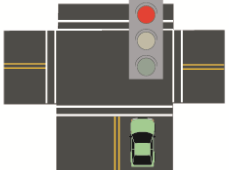
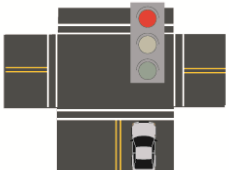
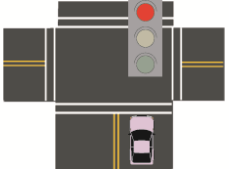
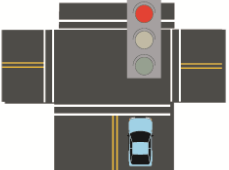
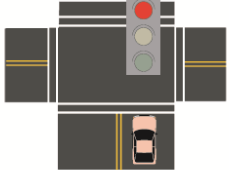
Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		55+	Highest quality of service. Free traffic flow with few restrictions on maneuverability or speed. No delays
B		50	Stable traffic flow. Speed becoming slightly restricted. Low restriction on maneuverability. No delays
C		45	Stable traffic flow, but less freedom to select speed, change lanes or pass. Minimal delays
D		40	Traffic flow becoming unstable. Speeds subject to sudden change. Passing is difficult. Minimal delays
E		35	Unstable traffic flow. Speeds change quickly and maneuverability is low. Significant delays
F			Heavily congested traffic. Demand exceeds capacity and speeds vary greatly. Considerable delays

Source: 2000 HCM, Exhibit 20-2, LOS Criteria for Two-Lane Highways in Class 1

Figure 1.2.2-7: Level of Service for Two-Lane Highways

LEVELS OF SERVICE

for Intersections with Traffic Signals

Level of Service	Delay per Vehicle (seconds)
A	 ≤ 10
B	 11-20
C	 21-35
D	 36-55
E	 56-80
F	 >80

Factors Affecting LOS of Signalized Intersections

Traffic Signal Conditions:

- Signal Coordination
- Cycle Length
- Protected left turn
- Timing
- Pre-timed or traffic activated signal
- Etc.

Geometric Conditions:

- Left- and right-turn lanes
- Number of lanes
- Etc.

Traffic Conditions:

- Percent of truck traffic
- Number of pedestrians
- Etc.

Source: 2000 HCM, Exhibit 16-2, Level of Service Criteria for Signalized Intersections

Figure 1.2.2-8: Level of Service for Intersections with Traffic Signals

1.3 Independent Utility and Logical Termini

Federal Highway Administration regulations (23 Code of Federal Regulations (CFR) § 771.111(f)) require that the action evaluated in an Environmental Impact Statement shall:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
2. Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

As discussed below, the North County Corridor New State Route 108 Project complies with these requirements.

Logical termini means that the project has (1) rational end points for a transportation improvement, and (2) rational end points for a review of the environmental impacts. The proposed project begins at the intersection of Tully Road and SR-219 and ends at SR-108/SR-120, acting as a bypass for the Cities of Riverbank and Oakdale. The project would address the transportation deficiencies between the two endpoints and future projected congestion affecting the movement of traffic and goods between these routes. The project is a regional-scale transportation corridor that would facilitate multimodal movement, as well as improve traffic continuity.

Table 1.2.2-1 above shows the forecasted growth in population. Those increases, coupled with the generally declining LOS for the No-Build Alternative in 2046, signify that changes are needed on the route. The project features have been developed to fully address the purpose and the need of the project and address circulation and multimodal transportation within the corridor. Based on the above discussion, the project meets the criteria for “logical termini.”

Independence utility means the project will function properly without requiring additional transportation improvements elsewhere. The proposed project is a stand-alone project intended to improve the operation, capacity, and flow of traffic along the new SR-108 corridor. The proposed project is independent of other Caltrans projects and is in no way dependent on the implementation of other Caltrans projects on SR-108, SR-120, or SR-219 prior or subsequent to this proposed undertaking. This environmental document studies the entire project area. If any of the Build Alternatives are selected, the improvements would create a useable facility even if no other transportation improvements are made. Based on the aforementioned, and pursuant to 23 CFR 771.11(f), this project has independent utility and logical termini.

A problem of “segmentation” may also occur where a transportation need extends throughout an entire corridor but environmental issues and transportation needs are inappropriately discussed for only a segment of the corridor. As indicated above, the EIR/EIS appropriately addresses the environmental issues and transportation needs of the entire project corridor; therefore, segmentation of the analysis of issues and needs has not occurred in this document.

Chapter 2 Project Alternatives

2.1 Project Description

This chapter describes the proposed action and the project alternatives developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. The alternatives are Alternative 1A, 1B, 2A, 2B, and the No-Build Alternative.

Caltrans, as lead agency under NEPA, as assigned by the Federal Highway Administration (FHWA), and in cooperation with the Project Development Team has identified Alternative 1B as the preferred alternative. The preferred alternative would meet the project's Purpose and Need, has fewer adverse impacts to homes and businesses in the area, maximizes traffic operations compared to Alternatives 2A or 2B, is closest to the urbanized areas and planned growth areas in the region. was preferred by the public as expressed during public meetings public comments, and the local jurisdictions (City of Modesto, City of Oakdale, City of Riverbank, and Stanislaus County) unanimously support the selection of Alternative 1B as the locally preferred alternative. Each of these local jurisdictions approved a resolution in support of Alternative 1B. Additional information regarding the preferred alternative can be found in Section 2.5.

Identification of the preferred alternative occurs only after specific impacts and reasonable mitigation measures have been identified for each project alternative. The identification is made after all comments are received from the circulation of the draft environmental document for public comment and from the public hearing process, and discussion regarding the preferred alternative can be found in Section 2.5 of this document. All comments received during the Draft EIR/EIS public review period were considered and responded to. This Final EIR/EIS was prepared to address all public comments and incorporate any changes to the project design, environmental setting, and impacts that have occurred since the Draft EIR/EIS was completed. Comments and responses may be found in Appendix N found in Volume III of the Final EIR/EIS.

In response to the region's increasing traffic volumes and worsening traffic congestion, the inefficiencies related to the movement of goods and services, and the increasingly constrained interregional circulation on existing SR-108, Caltrans and the NCCTEA will construct the North County Corridor New SR-108 Project in northern Stanislaus County. The project will build the North County Corridor/New SR-108 from the intersection of SR-219 and Tully Road to SR-120/existing SR-108 east of the City of Oakdale along one or a combination of the four alternative routes discussed in this chapter. The proposed project will include the following features:

- New freeway/expressway controlled-access travel lanes;
- At-grade intersections;
- Grade-separated bridge structures at major roadway and railway crossings;
- Structures at various waterway crossings, including the Modesto Irrigation District and Oak Irrigation District canals; and,
- County and City roadway improvements at various locations.

With this project, the newly created North County Corridor alignment will become SR-108, and the City would thereafter relinquish the existing SR-108 to the County of Stanislaus. The old alignment would no longer be a state highway, but will operate as an east-west route in its current form and location.

The alternatives are evaluated for environmental purposes in three main segments, shown in Figure 2.3.1 at the end of Chapter 2. Figure 2.3.1 is continued in Appendix A, which contains additional details regarding each alternative. Segment 1 represents the more urbanized area; Segment 2 represents a transition from urbanized to rural area; and Segment 3 represents the rural foothill area. The project was divided into these segments to assist the public in visualizing the location and landscape of the project area.

Segment 1 begins at the SR-219 Kiernan Avenue/Tully Road intersection, which is the western end of the project for all four alternatives. All of the Build Alternatives proceed along the same alignment, extending to the existing Claus Road/Claribel Road intersection near the southeast portion of the City of Riverbank and northeast portion of the City of Modesto's future sphere of influence, including future areas projected to be incorporated into the City boundaries.

Segment 2 is where the four similar alternatives separate into two different alignments (1A/1B and 2A/2B). In Segment 2, Alternatives 1A and 1B veer northeast from near the existing Claus Road/Claribel Road intersection and pass through the southern boundary of the City of Oakdale to just east of Albers Road, and Alternatives 2A and 2B continue to extend easterly along Claribel Road and veer northeastward past the intersection of Claribel Road/Bentley Road to just east of Albers Road.

In Segment 3, Alternatives 1A and 2A merge as similar alignments at the southern end of the City of Oakdale and continue on the same alignment to the proposed eastern end (A) at the new SR-108/SR-120 intersection just east of the City of Oakdale boundary. In Segment 3, Alternatives 1B and 2B merge as similar alignments north of the existing Warnerville Road/Emery Road intersection and continue on a northeasterly direction to the proposed other eastern end (B) at the new SR-108/SR-120 intersection west of the existing SR-120/Lancaster Road intersection.

To maintain access to all parcels, new and realigned local access roads will be included as part of the proposed project. A discussion of the access roads is included in Section 2.3.1 of this chapter.

2.2 Alternatives

Four Build Alternatives are being considered for the project: Alternative 1A, 1B, 2A, and 2B. In some locations, portions of one or more alternatives may overlap. All alternatives begin at the same location within Segment 1 on the west at the SR-219 (Kiernan Avenue)/Tully Road intersection. There are two possible eastern end locations: SR-108/SR-120 just east of the City of Oakdale boundary for Alternatives 1A and 2A, or further east of the Alternatives 1A and 2A end point along SR-108/SR-120 in the vicinity of Lancaster Road for Alternatives 1B and 2B.

2.3 Build Alternatives

2.3.1 Common Design Features of the Build Alternatives

The following roadway segment design is common to all Build Alternatives for Segment 1.

The North County Corridor New SR-108 alignment begins at SR-219 (Kiernan Avenue)/Tully Road intersection, which is north of the City of Modesto between the Kiernan Avenue/Carver Road intersection and SR-219/McHenry Avenue intersection. The alignment continues eastward along the existing SR-219 (Kiernan Avenue), which becomes Claribel Road east of existing SR-

108/McHenry Avenue. Alternative 1A shifts to the south of Claribel Road east of Coffee Road, and returns onto Claribel Road west of Claus Road.

Roadway Corridor

- The proposed North County Corridor alignment will be a freeway/expressway with controlled access.
- A minimum 244-foot-wide right-of-way with two to three 12-foot-wide through lanes in each direction of the roadway with 5-foot-wide to 10-foot-wide shoulders. See Figure 2.3.1-1, at the end of Chapter 2 for an example of a typical roadway cross section.
- The eastbound and westbound alignments will be separated by a 46-foot-wide to 70-foot-wide median. There will be drainage swales along each side of the roadway.
- From Claus Road to the end of the new alignment at SR-108/SR-120, a Class 3 bike lane will be included in each direction on the shoulders of the North County Corridor.

Local Access Roads

The proposed project will be a freeway/expressway with controlled access. There will be entry and exit at most crossroad intersections at a minimum of 1 mile apart, except for Alternatives 1A and 2A, which have the SR-108/Stearns Road intersection at only 0.6-mile spacing from the SR-108/SR-120 intersection at end "A." Existing properties will be accessible via a discontinuous local roadway system. These proposed local access road alignments and their relationship to local streets are shown in Figure 2.3-1, at the end of Chapter 2. Additional details are depicted on Figure 2.3-1, continued in Appendix A.

- Local access roads will generally have a 12-foot-wide lane and 4-foot-wide to 8-foot-wide shoulder in each direction.
- Up to a 12-foot-wide area between the right-of-way limit and the edge of pavement would allow for drainage swales.
- Where required, left-turn lanes and right-turn lanes will be provided at intersections.

Interchanges/Intersections

Signals will be added to the proposed intersections along the project alignment unless a roundabout is proposed. Any maintenance storage, pullout, or ramp metering needed throughout the project will be included within the project footprint.

The following interchange/intersection designs are common to all Build Alternatives for Segment 1:

- Tully Road/SR-219 (Kiernan Avenue) intersection will consist of a modified signalized at-grade intersection.
- SR-108 (McHenry Avenue)/SR-219, (Kiernan Avenue)/new SR-108, Coffee Road/new SR-108, Oakdale Road/new SR-108, and Roselle Avenue/new SR-108 will all consist of a proposed single-point urban interchange and separate-grade undercrossing structures. See Figure 2.3.1-2 in Appendix A for an example of a single-point interchange. These will be the only four interchanges within the proposed project.
- The Claus Road/new SR-108 signalized at-grade intersection will provide access from the new SR-108 facility east of Claus Road as well as the local road access to the City of Riverbank and future northeastern areas of the City of Modesto.

Canal Crossings

Various canals are within the areas of potential project construction. These canals supply irrigation water throughout Stanislaus County. Most of the major canals are owned and maintained by the Modesto Irrigation District and Oakdale Irrigation District. There are also many private canals within the project limits. The Build Alternatives will provide crossings over these canals as required by the Modesto Irrigation District and Oakdale Irrigation District. Most crossings will be at grade, and some will be elevated. Table 2.3.1-1 lists all canal crossings common to all Build Alternatives. The Build Alternatives will also provide crossings over private canals and ditches.

Hetch-Hetchy Crossing

The project crosses the Hetch-Hetchy/San Francisco Public Utilities Commission water pipeline and electrical transmission line approximately 1,200 feet west of the North County Corridor/Oakdale Road intersection. The Oakdale Road alignment crosses Hetch Hetchy about 500 feet north of this same intersection. All crossings of the Hetch-Hetchy/San Francisco Public Utilities Commission water pipeline and electrical transmission line are at grade over the water pipeline and under the power transmission lines. The project will cross the Hetch-Hetchy four times via one major and three minor crossings within Segment 1. The project will also cross three valve boxes within Segment 1.

Table 2.3.1-1: Canal Crossings Common to Alternatives 1A, 1B, 2A and 2B

Roadway Facility	Canal Name	Location/Intersection	Type of Structure
Local Road	Modesto Irrigation District Lateral Number 6	Coffee Road south of Coffee Road/Claribel Road intersection	At-grade
New SR-108	Modesto Irrigation District Lateral Number 6	North County Corridor between Coffee Road and Oakdale Road	At-grade
Local Road	Modesto Irrigation District Lateral Number 6	Local access road between Coffee Road and Oakdale Road	At-grade
Local Road	Modesto Irrigation District Lateral Number 6	Roselle Avenue north of Roselle Avenue/Claribel Road intersection	At-grade
Local Road	Modesto Irrigation District Main	New Claribel Road between Roselle Avenue and Claus Road	Elevated
Local Road	Modesto Irrigation District Main	North County Corridor between Roselle Avenue and Claus Road	Elevated
New SR-108	Modesto Irrigation District Main	Claus Road south of Claus Road/Claribel Road intersection	At-grade

Source: Draft Project Report, 2016

Railroads

In Segment 1, all alternatives will cross the Burlington Northern Santa Fe (BNSF) Railroad between Roselle Avenue and Claus Avenue using a grade separation. The new Claribel Road and North County Corridor will be elevated over the BNSF Railroad and Terminal Avenue with separate overhead structures. The BNSF Railroad and Terminal Avenue will remain at their current alignment (see Figure 2.3.1-3, in Appendix A).

The existing Union Pacific Railroad (UPRR) between Tully Road and McHenry Avenue is an abandoned line. Tracks associated with this railroad line will be removed as part of the SR-219/Kiernan Avenue Widening Project that began construction in March 2013. This project is expected to finish by the fall of 2015, before the construction of the North County Corridor.

Utility Relocation

Various utilities exist within the areas of potential construction, including sewer, water, gas, overhead and underground electrical, overhead and underground telephone and communications, storm drains, irrigation canals, street lighting and signal equipment. The following utilities exist within the project limits:

- Electric (overhead and underground) – PG&E
- Electric (Hetch-Hetchy overhead) – San Francisco Public Utilities Commission
- Gas – PG&E
- Telephone (overhead and underground) – AT&T
- Communications (overhead and underground) – various
- Water (Hetch-Hetchy) - San Francisco Public Utilities Commission
- Water – City of Modesto
- Water – City of Riverbank
- Sanitary Sewer – City of Modesto
- Sanitary Sewer – City of Riverbank
- Irrigation – Modesto Irrigation District
- Irrigation – Oakdale Irrigation District

Responsibility for relocation of existing utilities that are within the state and city rights-of-way would be subject to applicable state and federal regulations and statutes. The Build Alternatives would require relocation of existing utilities. The project will not require relocation of the Hetch-Hetchy electric transmission lines, Hetch-Hetchy underground pipelines, and main canals; however, valve boxes require relocation as well as access roads. All utility information within this report will be verified with the corresponding utility agency during the final design phase. Environmental impacts caused by relocating utilities associated with the project will be within the environmental study area and are analyzed as part of this EIR/EIS. Detailed utility information can be found in the Utility/Emergency Services Section in Chapter 3 of the EIR/EIS.

2.3.2 Unique Features of the Build Alternatives

Alternative 1A

Segment 2

Segment 2 is a multi-lane expressway facility about 5.5 miles long that would provide a transition between the urban Segment 1 and the rural Segment 3 facility. Alternative 1A veers northeast from the Claus Road intersection and crosses Langworth Road and Patterson Road while extending 3.2 miles northeast at an approximately 45-degree angle. Past the Lexington Road and Crane Road intersection, Alternative 1A overlies the existing Lexington Road and extends easterly to Albers Road. Within Segment 2, no private driveway access is proposed. From Albers Road, Alternative 1A splits into the other possible alignments to intersect SR-108/SR-120.

Intersections

The following roadways will be elevated over the North County Corridor alignment with an overcrossing structure along its current alignment:

- Eleanor Avenue
- Langworth Road
- Patterson Road
- Kaufman Road

The Claus Road/new SR-108 signalized at-grade intersection will provide access from the new SR-108 freeway to new SR-108 expressway east of Claus Road as well as the local road access to City of Riverbank and future northeastern areas of City of Modesto.

Hetch-Hetchy Crossings

In Segment 2, Alternative 1A crosses Hetch Hetchy approximately 500 feet east of Langworth Road. The crossings are at grade over the water pipeline and under the power transmission lines.

In addition, Alternatives 1A and 1B share canal crossings in Segment 2 (see Table 2.3.1-2).

Table 2.3.1-2 Canal Crossings Common to Alternatives 1A and 1B (Segment 2)

Canal Name	Location/Intersection	Type of Structure
Southwest Lateral	North County Corridor south of North County Corridor/Patterson Road Overcrossing	At-grade
Riverbank Lateral	North County Corridor south of North County Corridor/Patterson Road overcrossing	At-grade
Riverbank Lateral	Patterson Road east of North County Corridor/Patterson Road overcrossing	At-grade
Crane Drain	Crane Road north of North County Corridor/Crane Road intersection	At-grade
Crane Drain	Local access road northeast of North County Corridor/Crane Road intersection	At-grade
Riverbank Lateral	North County Corridor between Crane Road and Kaufman Road	At-grade
Crane Drain	North County Corridor southwest of North County Corridor/Crane Road intersection	At-grade

Source: Draft Project Report, 2016

Hetch-Hetchy Crossings Common to Alternative 1A and 1B

The North County Corridor alignment and east access road cross the Hetch-Hetchy water pipeline and electrical transmission line approximately 1,900 feet south of Patterson Road. The Langworth Road alignment crosses Hetch-Hetchy approximately 2,000 feet south of Patterson Road. The access road west of Langworth crosses Hetch-Hetchy at three locations, approximately 2,400 feet south of Patterson Road. The Kaufman Road alignment crosses Hetch-Hetchy approximately 1,600 feet south of the North County Corridor/Kaufman Road overcrossing. The Albers Road alignment crosses Hetch-Hetchy approximately 1,000 feet south

of the North County Corridor/Albers Road intersection. The North County Corridor, Langworth Road, the access road west of Langworth Road, Kaufman Road, and Albers Road are expected to clear the water pipeline and transmission towers. All crossings are at grade over the water pipeline and under the power transmission lines.

Segment 3

Segment 3 would be a rural multi-lane expressway facility that would connect Segment 2 east of the new SR-108/Albers Road intersection to the existing SR-108/SR-120 intersection at the proposed “A” eastern end about 0.6 mile east of the SR-120/South Stearns Road intersection. Alternative 1A begins near Warnerville Road west of South Stearns Road and the Sierra Railroad. Alternative 1A runs northward, parallel to South Stearns Road, before crossing over the Sierra Railroad west of the South Stearns Road and Sierra Road intersection. It curves eastward until it ultimately ends at the intersection with SR-120.

Intersections

The North County Corridor will be elevated over the following roadway with an undercrossing structure along its current alignment: Warnerville Road.

The North County Corridor will be elevated over the following roadways with an undercrossing/overhead structure combination:

- Sierra railroad overhead/Sierra Road overcrossing
- South Stearns Road undercrossing

The connection from the North County Corridor to South Stearns Road will include a three-way intersection at South Stearns Road and an at-grade four-way roundabout at the North County Corridor. The roundabout will include one 12-foot-wide combination through/exit lane and one exit lane for all directions.

Railroads

In Segment 3, Alternatives 1A and 2A will cross the Sierra Railroad south of Sierra Road at approximately 0.4 mile southwest of the North County Corridor/South Stearns Road intersection and west of South Stearns Road. At this railroad crossing, the North County Corridor will be elevated over Sierra Road and the Sierra Railroad with an overhead structure along the current alignment.

Alternatives 1A and 2A share four canal crossings in Segment 3 (see Table 2.3.1-3).

Table 2.3.1-3 Canal Crossings Common to Alternative 1A and 2A (Segment 3)

Canal Name	Location/Intersection	Type of Structure
Claribel Lateral	North County Corridor between Oakdale-Waterford Highway and Smith Road	At-grade
Riverbank Lateral	Local access road extension of Warnerville Road, west of the North County Corridor	At-grade

Private Irrigation Crossing	North County Corridor	At-grade
Crane Drain	North County Corridor northwest of existing South Stearns Road/Warnerville Road intersection	Elevated and at-grade

Source: Draft Project Report, 2016

Alternative 2A

Segment 2

Segment 2 is a multi-lane expressway facility about 5.4 miles long and would transition between the urban Segment 1 and the rural Segment 3 facility. Within Segment 2, no private driveway access is proposed. Alternative 2A continues east mostly along the existing Claribel Road alignment. Just east of the Bentley Road/Claribel Road intersection, Alternative 2A veers northeast and crosses Oakdale-Waterford Highway.

Alternatives 2A and 2B also share canal crossings in this segment (see Table 2.3.1-4). Figure 2.3-1, at the end of Chapter 2 shows all canal crossing locations within the project area.

Table 2.3.1-4 Canal Crossings Common to Alternatives 2A and 2B (Segment 2)

Canal Name	Location/Intersection	Type of Structure
Private Irrigation Crossing	McGee Avenue south of North County Corridor/McGee/Eleanor Avenue intersection	At-grade
Mootz Lateral	North County Corridor between McGee/Eleanor Avenue and Langworth Road	At-grade
Mootz Lateral	Local access road between McGee Avenue and Langworth Road	At-grade
Mootz Lateral	Local access road between Eleanor Avenue and Langworth Road	At-grade
Mootz Lateral	Local access road between McGee Avenue and Langworth Road	At-grade
Mootz Lateral	Langworth Road north of North County Corridor/Langworth Road overcrossing	At-grade
Mootz Lateral	Local access road northeast of North County Corridor/Langworth Road overcrossing	At-grade
Mootz Lateral	Bentley Road south of North County Corridor/Bentley Road intersection	At-grade
Mootz Lateral	Local access road southwest of North County Corridor/Bentley Road intersection	At-grade
Mootz Lateral	Local access road southeast of North County Corridor/Bentley Road intersection	At-grade
Mootz Lateral	North County Corridor west of Albers Road and between Bentley Road and Albers Road intersections with North County Corridor	At-grade
Brichetto Lateral/Pipeline	North County Corridor between Albers Road and Oakdale-Waterford Highway overcrossing	At-grade

Brichetto Lateral/Pipeline	Oakdale-Waterford Highway north of North County Corridor at Oakdale-Waterford Highway overcrossing	Elevated
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Source: Draft Project Report, 2016

Intersections

The following roadways will be elevated over the North County Corridor alignment with an overcrossing structure along its current alignment:

- Eleanor Avenue/McGee Avenue
- Langworth Road
- Oakdale Waterford Highway

The following intersections with the proposed North County Corridor alignment will consist of an at-grade intersection:

- Bentley Road
- Albers Road

Segment 3

After crossing the Oakdale/Waterford Highway, Alternative 2 curves northeast as it crosses the Claribel Lateral Canal, then continues northward toward the direction of South Stearns Road and the Sierra Railroad. It ends at the intersection with SR-108/SR-120, approximately two-thirds of a mile east of the SR-108/SR-120 and South Stearns Road intersection.

Intersections within Segment 3 of Alternative 2A share the same designs with all intersections within Segment 3 of Alternative 1A. These intersections are discussed under Alternative 1A Intersections.

Hetch-Hetchy Crossing

The North County Corridor alignment crosses Hetch-Hetchy approximately 500 feet south of Warnerville Road. The access road east of the North County Corridor crosses Hetch-Hetchy approximately 500 feet south of Warnerville Road. The North County Corridor and the access road are expected to clear the pipeline and transmission towers, and all crossings are at grade over the water pipeline and under the power transmission lines. In Segment 3 there is one major crossing and one minor crossing.

See Table 2.3.1-3 for the canal crossings.

Alternative 1B

Segment 2

Improvements for Alternative 1B in Segment 2 are identical to those listed in Alternative 1A, Segment 2 above. See Table 2.3.1-2 for the canal crossings.

Segment 3

Alternative 1B begins near Warnerville Road, similar to Alternative 1A. But instead of turning north toward South Stearns Road, Alternative 1B continues northeast for 3.3 miles, and then crosses the Sierra Railroad with a grade-separated structure before turning northward toward Fogarty Road and its SR-108/SR-120 end, 1.5 miles east of the SR-108/SR-120 and Wamble Road intersection.

The South Stearns Road intersection (east of Bendler Road and northeast of Oakdale Irrigation District South Main Canal) with the proposed North County Corridor alignment will consist of an at-grade intersection with two 12-foot-wide through lanes in each direction along the North County Corridor alignment.

Fogarty Road will be elevated over the North County Corridor alignment with an overcrossing structure along its current alignment.

A new local road intersection will cross the proposed North County Corridor alignment at approximately 5,000 feet south of the SR-108/SR-120 eastern end with an at-grade four-way roundabout. The roundabout will consist of one combination through/exit lane and one exit lane.

The intersection of SR-108/SR-120 with the proposed North County Corridor alignment will consist of an at-grade three-way roundabout with one 12-foot-wide combination through/exit lane and one exit lane for all directions except along westbound SR-108/SR-120.

Railroads

Alternatives 1B and 2B will cross the Sierra Railroad about 1 mile north of Fogarty Road and about half a mile southwest of the North County Corridor/New Intersection south of SR-108/SR-120. At this railroad crossing, the North County Corridor will be elevated over the Sierra Railroad with an overhead structure along the current alignment.

Alternatives 1B and 2B also have common canal crossings in this segment (see Table 2.3.1-5). Figure 2.3-1 shows the canal crossing locations in this area.

Table 2.3.1-5 Canal Crossings Common to Alternatives 1B and 2B (Segment 3)

Canal Name	Location/Intersection	Type of Structure
South Main	North County Corridor west of existing South Stearns Road/Warnerville Road intersection	At-grade
South Main	North County Corridor east of North County Corridor/South Stearns Road intersection	At-grade
South Main	Local access road northeast of South Stearns Road/Warnerville Road intersection	At-grade
Kearny Lateral	North County Corridor east of Smith Road near Warnerville Road	At-grade
Oakdale Irrigation District South Main	Local access road extension south of existing Wamble Road/Fogarty Road intersection and north of North County Corridor	At-grade

Oakdale Irrigation District South Main	North County Corridor between Warnerville Road and Fogarty Road	At-grade
Private Irrigation crossing	North County Corridor between Fogarty Road and Sierra Railroad	At-grade
Gray Lateral/Pipeline	North County Corridor between Sierra Railroad and new North County Corridor intersection south of SR-108/SR-120 intersection	At-grade

Source: Draft Project Report, 2016

Alternative 2B

Segment 2

Improvements for Alternative 2B in Segment 2 are identical to those listed in Alternative 2A, Segment 2 above. See Table 2.3.1-4 for the canal crossings.

Segment 3

Segment 3 of Alternative 2B shares the same design with Segment 3 of Alternative 1B intersections at North County Corridor/Fogarty Road, North County Corridor/New Local Access Road, and North County Corridor/SR-120. These three intersections are discussed under Alternative 1B Intersections. Other intersection designs unique to this alternative are discussed below.

The Smith Road intersection with the proposed North County Corridor alignment will consist of an at-grade intersection (see Figure 2.3-1, page 6, in Appendix A).

The North County Corridor will be elevated over Warnerville Road with an undercrossing structure along the current alignment of Warnerville Road.

Table 2.3.2-5 and Table 2.3.1-6 list the canals that will be crossed by Alternative 2B in Segment 3. Figure 2.3-1 shows the canal crossing locations in this area.

Table 2.3.1-6 Canal Crossings Only for Alternative 2B (Segment 3)

Canal Name	Location/Intersection	Type of Structure
South Lateral	North County Corridor west of North County Corridor/Smith Road intersection	At-grade
Heggie Pipeline	North County Corridor east of North County Corridor/Smith Road intersection and west of existing Stoddard Road alignment	At-grade
Union Drain	North County Corridor east of North County Corridor/Smith Road intersection and west of existing Stoddard Road alignment	At-grade
Stoddard Lateral	North County Corridor east of existing Stoddard Road alignment	At-grade
Kearney Lateral	North County Corridor north of Warnerville Road	At-grade
Kearney Lateral	North County Corridor north of Warnerville Road	At-grade

Source: Draft Project Report, 2016

Hetch-Hetchy Crossing

The North County Corridor alignment crosses Hetch-Hetchy approximately 1-1/2 miles east of Smith Road and north Warnerville Road. The North County Corridor is expected to clear the pipeline and transmission towers. The crossing is at grade over the water pipeline and under the power transmission lines. Alternative 2B will have one major crossing with the Hetch-Hetchy.

2.3.3 Transportation System Management and Transportation Demand Management Alternatives

Transportation systems management (TSM) and transportation demand management (TDM) strategies would increase the efficiency of existing roadway facilities and increase the number of vehicle trips a facility can carry without increasing the number of through lanes.

Transportation system management and transportation demand management alternatives were identified for the project.

Transportation system management alternatives enhance the capacity of the existing transportation system by implementing a wide array of operational improvements. Typical transportation system management strategies include intersection and signal lighting, signal timing optimization, turn lanes, pavement striping, acceleration lane improvement on freeways, ramp metering, and lane-change sections. Transportation demand management alternatives focus on moving people through the study area more efficiently by using alternative means of transportation. The build alternatives were designed to include sidewalks, allow for safe bicycle movement, create park and ride facilities, and improve the locations of bus stops. Although transportation system management measures alone could not satisfy the purpose for and need of the project, all of the strategies listed above have been incorporated into all of the build alternatives for this project.

The following TSM/TDM Alternatives have been identified and proposed for the project where applicable:

TSM/TDM Alternative 1: Intersection and Signal Improvements. These proposed improvements are currently being included in the respective cities' and the county's capital improvement programs (StanCOG 2011). These improvements on their own would not be sufficient to meet the project purpose and need because substantial additional area-wide intersection and traffic signal improvements beyond what is currently planned would be needed to improve regional circulation. Congestion and roadway capacity issues would still exist beyond the capability of the circulation system, even with additional intersection and signal improvements, due to existing and projected high traffic volumes in the region. The appropriate Alternative 1 TSM/TDM applicable to the proposed project would be to synchronize the signals on all of the listed intersections below in order to enhance the capacity of the existing transportation system:

Existing intersections within the project area by Build Alternative:

- SR-219 (Kiernan Avenue)/Tully Road (1A, 2A, 1B, 2B)
- SR-219/McHenry Avenue (1A, 2A, 1B, 2B)
- Claribel Road/Coffee Road (1A, 2A, 1B, 2B)
- Claribel Road/Oakdale Road (1A, 2A, 1B, 2B)
- Claribel Road/Roselle Avenue (1A, 2A, 1B, 2B)
- Claribel Road/Terminal Avenue (1A, 2A, 1B, 2B)
- Claribel Road/Claus Road (1A, 2A, 1B, 2B)
- Claribel Road/McGee Avenue (2A, 2B)
- Claribel Road/Langworth Road (2A, 2B)
- Claribel Road/Bentley Road (2A, 2B)

TSM/TDM Alternative 2: Use of Carpools, Vanpools, Train, Bus, Bicycle, and Walking. Policies related to vanpools, trains, buses, bicycles, and walking are in place in the respective cities' and the county's general plans. These policies have been adopted as goals in each of the communities, but taken alone would not meet the project purpose and need to reduce congestion and support the efficient movement of goods and services for truck traffic throughout the region:

Carpools and Vanpools. Use of carpools and vanpools is identified in Stanislaus County's 2011 Regional Transportation Plan (StanCOG 2011) as well as in each of the cities' general plans.

Trains. Amtrak provides passenger rail service in the area. The passenger rail line runs north-south along Santa Fe Avenue, Terminal Avenue, and Santa Fe Road. At-grade crossings are provided at the following roadway segments: SR-132, Claus Road, Claribel Road, Patterson Road, and River Road. There is an Amtrak commuter station in the City of Modesto near the Briggsmore Avenue and Santa Fe Avenue intersection. Transit access to and from the station is provided by the Modesto Area Express.

Bicycles and Walking. Bicycle facilities are provided throughout the study area. The North County Corridor will accommodate a Class 3 bike route in each direction on shoulders from Claus Road to the North County Corridor end at SR-108/SR-120. A Class 2 bike facility is planned in the future and is well within the limits of the proposed corridor. Incorporation of the bike routes would enhance the existing bikeway network in Stanislaus County, and is consistent with the Non-Motorized Transportation Master Plan (StanCOG, 2013).

The pedestrian network in the study area will consist of sidewalks along most of the streets and crosswalks at major intersections. While sidewalks are provided on many of the roadways in the developed areas of the cities of Modesto, Riverbank, and Oakdale, most roadways in the unincorporated areas of Stanislaus County do not have pedestrian facilities. The North County Corridor will provide pedestrian access including sidewalks and crosswalks along all crossroads in Segment 1 and at locations of existing pedestrian access in Segments 2 and 3.

TSM/TDM Alternative 3: High-occupancy vehicle lane (HOV lane) on existing alignment(s). FHWA focuses on HOV lane proposals on existing alignments as part of their technical advisory for TSM analysis. Any HOV lanes proposed for this project would conflict with the desire to improve efficiencies without adding additional through lanes, and would not meet the project's purpose and need. Additionally, HOV lanes would be in conflict with any signal timing coordination. Right of Way restrictions and the lack of available lanes to convert to HOV lanes make the concept not feasible along existing SR-108. Lack of access control also makes the effort difficult to implement. The rural nature of the project limits makes successful HOV lanes questionable.

Land use strategies and policies related to the use of alternative means of transportation have been implemented to the extent feasible though inclusion of TSM/TDM measures in the general plans of the respective communities. Signal and intersection improvements, roadway improvements, and signal synchronization have been completed based on the respective jurisdictions' capital improvement programs. Use of the existing transit system and improvements to it were also implemented as feasible.

2.3.4 No-Build Alternative

In accordance with NEPA and CEQA, this EIR/EIS discusses the No-Build Alternative. This alternative describes environmental conditions that would exist in the event that none of the Build Alternatives is selected. Under the No-Build Alternative, no new alignment would be built. The No-Build Alternative also includes all future planned transportation network improvements in the project area as discussed below and under TSM/TDM alternatives.

Improvements scheduled for the existing SR-108 include, but are not limited to:

- Widening to four lanes in Riverbank from Jackson Street to the BNSF tracks;
- Widening to four lanes in Oakdale from Maag Avenue to Stearns Road;
- Intersection Improvements in Riverbank at the intersections of First and Claus;
- Traffic Signal Improvements east of Oakdale at the intersections of Atlas, Dillwood, Sterns, and Orange Blossom Roads;
- General improvements from Kiernan (SR-219) to Crane Road;
- Widening Callander Avenue (SRS 108) / Santa Fe Street intersection;
- Reconstructing Callander Avenue (SR-108) / Patterson Road intersection to create 2nd northbound lane and modify traffic signal;
- Traffic signal construction at Atchison St (SR-108) / Claus Road;
- Widening SR-108 to four lanes from Jackson Street to BNSF overcrossing;
- Widening four lanes from McHenry Ave to Coffee Road;
- Widening to four lanes from Oakdale Road to Jackson Street;
- Widening to four lanes from Santa Fe Street to 1st Street;
- Widening to four lanes from Claus Road to Snedigar Road;

- Widening to four lanes from Squire Wells Way to Roselle Avenue;
- Widening to four lanes from Roselle Avenue to Terminal Avenue;
- Widening to four lanes from Terminal Avenue to Claus Road;
- Widening four lanes from Claus Road to Eleanor Avenue;
- Widening to four lanes from Terminal Avenue to Snedigar Road;
- Build to ultimate configuration from Patterson Road to Claribel Road;
- Widening to four lanes from SR-108 to Patterson Road;
- Widening to four lanes from Townend Street to Claribel Road;
- Constructing a traffic signal at SR-108 / Coffee Road;
- Constructing a traffic signal at Retail Access / Claribel Road;
- Constructing a traffic signal at Roselle Avenue / Glow Road;
- Constructing a traffic signal at Patterson Road / Terminal Avenue;
- Constructing a traffic signal at Patterson Road / Snedigar Road;
-
- Constructing a traffic signal at Claus Road / California Avenue;
- Constructing a traffic signal at Claus Road / Kentucky Avenue;
- Constructing a traffic signal at Claribel Road / Eleanor Avenue;
- Railroad crossing improvements at Patterson Road and Snediger Road and Patterson Road west of Terminal Avenue;
- Bridge widening at Coffee Road north of SR-108, northwest of Claribel and Oakdale Roads;
- Utility relocations at Morrill Road to Claribel Road and Claus Road between SR-108 and Claribel Road;
- Constructing a traffic signal at Claribel Road / Terminal Avenue; and
- Widening F Street from a two-lane facility to a five-lane facility from Maag Avenue to Atlas Road.

The above improvements on existing SR-108 are not associated with the proposed project, and will occur independently of the project.

Even with these improvements, the No-Build Alternative would result in continued deterioration of roadway level of service, increased traffic congestion, reduced ability to move goods and services, and increased impacts to air quality and noise in the surrounding communities. The No-Build Alternative therefore does not meet the purpose and need of the project discussed in Chapter 1.

The No-Build Alternative may be selected if other alternatives have substantial impacts on the environment, do not serve the stated purpose and need, or are not economically feasible. Selection of the No-Build Alternative would not preclude future maintenance work of future highway projects within the project area.

2.4 Comparison of Alternatives

The Build Alternatives were comparatively evaluated by Caltrans and the other project decision makers and preferred alternative was selected and identified as Alternative 1B. Table 2.4-1 shows a comparison of the alternatives. The potential environmental effect, cost, and degree to which they meet the project purpose and need are factors used to evaluate the proposed project alternatives.

Table 2.4-1 compares the alternatives by comparing their environmental effects, cost and construction needs. Identified resources were compared in an attempt to define the important differences between alternatives. The criteria used for evaluating the alternatives consisted of environmental impacts, use of existing infrastructure, property acquisition needs, ease of phasing, and balancing cut-and-fill geometrics. While numerous options were presented based on existing land use, the improvement of traffic circulation and minimizing property acquisition was most prioritized.

Since public circulation of the Draft EIR/EIS, all comments were considered, and the Project Development Team (PDT) selected a preferred alternative and made the final determination of the project's effect on the environment. In accordance with CEQA, Caltrans certified that the project complies with CEQA and prepared findings for all significant impacts identified. Significant impacts have been identified for which there is no feasible mitigation, and thus, these impacts remain significant and unavoidable; therefore, a Statement of Overriding Considerations is required. Caltrans will file a Notice of Determination (NOD) with the State Clearinghouse that identifies that the project will have significant impacts, and include mitigation measures as conditions of project approval, and that findings were made. With respect to NEPA, Caltrans, as assigned by Federal Highway Administration, documented and explained its decision regarding the selected alternative, project impacts, and mitigation measures in the Record of Decision (ROD) in accordance with NEPA.

Table 2.4-1 Comparison of Alternatives

Potential Impact		Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
Consistency with Stanislaus County General Plan		YES	YES	YES	YES	NO
Consistency with City of Modesto General Plan		YES	YES	YES	YES	NO
Consistency with City of Riverbank General Plan		YES	YES	YES	YES	NO
Consistency with City of Oakdale General Plan		YES	YES	YES	YES	NO
Growth		Moderate influence on growth.	Moderate influence on growth.	Moderate influence on growth.	Moderate influence on growth.	No Impact.
Farmlands		Acquisition of 470 acres of farmland. Permanent impacts to Williamson Act land are 351 acres.	Acquisition of 576 acres of farmland. Permanent impacts to Williamson Act land are 540 acres.	Acquisition of 397 acres of farmland. Permanent impacts to Williamson Act land are 305 acres.	Acquisition of 540 acres of farmland. Permanent impacts to Williamson Act land are 495 acres.	No impact.
Community Character and Cohesion		Traffic and pedestrian facilities would be greatly improved. Minor.	Traffic and pedestrian facilities would be greatly improved. Minor.	Traffic and pedestrian facilities would be greatly improved. Minor.	Traffic and pedestrian facilities would be greatly improved. Minor.	No impact.
Relocation	Business Relocations	Displace 36 businesses.	Displace 33 businesses.	Displace 42 businesses.	Displace 38 businesses.	No Impact.
	Housing Relocations	Displace 124 homes.	Displace 114 homes.	Displace 136 homes.	Displace 114 homes.	No Impact.
Utilities		Relocation of PG&E, AT&T, San Francisco Public Utilities Commission, City of Modesto (water and sanitary sewer), City of Riverbank (water and sanitary sewer), Modesto Irrigation District, and Oakdale Irrigation District.	Relocation of PG&E, AT&T, San Francisco Public Utilities Commission, City of Modesto (water and sanitary sewer), City of Riverbank (water and sanitary sewer), Modesto Irrigation District, and Oakdale Irrigation District.	Relocation of PG&E, AT&T, San Francisco Public Utilities Commission, City of Modesto (water and sanitary sewer), City of Riverbank (water and sanitary sewer), Modesto Irrigation District, and Oakdale Irrigation District.	Relocation of PG&E, AT&T, San Francisco Public Utilities Commission, City of Modesto (water and sanitary sewer), City of Riverbank (water and sanitary sewer), Modesto Irrigation District, and Oakdale Irrigation District.	No impact.
Emergency Services		Operational efficiency for emergency service will ultimately be improved. Minor.	Operational efficiency for emergency service will ultimately be improved. Minor.	Operational efficiency for emergency service will ultimately be improved. Minor.	Operational efficiency for emergency service will ultimately be improved. Minor.	No impact.

Potential Impact	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
Traffic and Transportation/ Pedestrian and Bicycle Facilities	Build Alternative 1A would result in a substantial improvement in present and future traffic operations, including interregional movement of goods. However, construction could impact traffic temporarily. Pedestrian and bicycle facilities would be improved. Reduction in Daily Traffic Volume 27 percent.	Build Alternative 1B would result in a substantial improvement in present and future traffic operations, including interregional movement of goods. However, construction could impact traffic temporarily. Pedestrian and bicycle facilities would be improved. Reduction in Daily Traffic Volume 21 percent.	Build Alternative 2A would result in a substantial improvement in present and future traffic operations, including interregional movement of goods. However, construction could impact traffic temporarily. Pedestrian and bicycle facilities would be improved. Reduction in Daily Traffic Volume 17 percent.	Build Alternative 2B would result in a substantial improvement in present and future traffic operations, including interregional movement of goods. However, construction could impact traffic temporarily. Pedestrian and bicycle facilities would be improved. Reduction in Daily Traffic Volume 11 percent.	The No-Build would not improve existing or future traffic operations, nor would it improve safety, pedestrian facilities, or bicycle facilities.
Visual/Aesthetics	Moderate	Moderate	Moderate	Moderate	No impact.
Cultural Resources	Affect five Historic Properties during project construction. No sensitive archaeological resources are present within the project area. However, the identification/evaluation process is not complete due to lack of property access. Additional historic properties may be identified during additional survey efforts during right-of-way acquisition.	Affect five Historic Properties during project construction. No sensitive archaeological resources are present within the project area. However, the identification/evaluation process is not complete due to lack of property access. Additional historic properties may be identified during additional survey efforts during right-of-way acquisition.	Affect five Historic Properties during project construction. No sensitive archaeological resources are present within the project area. However, the identification/evaluation process is not complete due to lack of property access. Additional historic properties may be identified during additional survey efforts during right-of-way acquisition.	Affect five Historic Properties during project construction. No sensitive archaeological resources are present within the project area. However, the identification/evaluation process is not complete due to lack of property access. Additional historic properties may be identified during additional survey efforts during right-of-way acquisition.	No impact.
Water Quality and Storm Water Runoff	Net new impervious surface of 179 acres and would have the potential to introduce pollutants during construction.	Net new impervious surface of 211 acres and would have the potential to introduce pollutants during construction.	Net new impervious surface of 189 acres and would have the potential to introduce pollutants during construction.	Net new impervious surface of 222 acres and would have the potential to introduce pollutants during construction.	No impact.
Paleontology	Geologic formations present with high Paleontological Sensitivity within the project limits. Paleontological Mitigation Plan required.	Geologic formations present with high Paleontological Sensitivity within the project limits. Paleontological Mitigation Plan required.	Geologic formations present with high Paleontological Sensitivity within the project limits. Paleontological Mitigation Plan required.	Geologic formations present with high Paleontological Sensitivity within the project limits. Paleontological Mitigation Plan required.	No impact.
Hazardous Waste/Materials	2 High-Risk Properties, 62 Medium-Risk Properties.	2 High-Risk Properties, 64 Medium-Risk Properties.	1 High-Risk Properties, 62 Medium-Risk Properties.	1 High-Risk Properties, 66 Medium-Risk Properties.	No impact.

Potential Impact	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
Air Quality	Not a Project of Air Quality Concern. Meets Regional Conformity requirements by federal Clean Air Act. Moderately high construction (short-term) impacts related to NOx, ROG, PM ₁₀ , PM _{2.5} , and CO.	Not a Project of Air Quality Concern. Meets Regional Conformity requirements by federal Clean Air Act. Moderately high construction (short-term) impacts related to NOx, ROG, PM ₁₀ , PM _{2.5} , and CO.	Not a Project of Air Quality Concern. Meets Regional Conformity requirements by federal Clean Air Act. Moderately high construction (short-term) impacts related to NOx, ROG, PM ₁₀ , PM _{2.5} , and CO.	Not a Project of Air Quality Concern. Meets Regional Conformity requirements by federal Clean Air Act. Moderately high construction (short-term) impacts related to NOx, ROG, PM ₁₀ , PM _{2.5} , and CO.	No impact.
Climate Change	Low increase vs No-Build 2.8 percent increase modeled for 2046. (Pavley Regulations)	Low increase vs No-Build 2.6 percent increase modeled for 2046. (Pavley Regulations)	Low increase vs No-Build 2.5 percent increase modeled for 2046. (Pavley Regulations)	Low increase vs No-Build 2.2 percent increase modeled for 2046. (Pavley Regulations)	CO ₂ emissions in 2046 (tons/year) 543,120 No impact.
Noise and Vibration	Moderately high impacts to adjacent receptors. Two soundwalls have been found feasible and reasonable.	Moderately high impacts to adjacent receptors. Two soundwalls have been found feasible and reasonable.	Moderately high impacts to adjacent receptors. Two soundwalls have been found feasible and reasonable.	Moderately high impacts to adjacent receptors. Two soundwalls have been found feasible and reasonable.	No impact.
Natural Communities	Impacts to 1.32 acres (1.0 acre of direct impacts, 0.32 acre indirect impacts) of Interior Live Oak Woodland in the project area. No impacts to Blue Oak Savannah. Impacts to 0.48 acres (0.13 acre of direct impacts, 0.35 acre indirect impact) of Riparian Scrub in the project area.	Impacts to 3.44 acres (3.07 acres of direct impacts, 0.37 acre of indirect impacts) of Interior Live Oak Woodland in the project area and 1.0 acre (0.23 acre of direct impacts, 0.77 acre of indirect impacts) of Blue Oak Savannah. Impacts to 0.48 acres (0.13 acre of direct impacts, 0.35 acre indirect impact) of Riparian Scrub in the project area.	Impacts to 1.32 acres (1.0 acre of direct impacts, 0.32 acre of indirect impacts) Interior Live Oak Woodland in the project area. No impacts to Blue Oak Savannah. Impacts to 0.48 acres (0.13 acre of direct impacts, 0.35 acre indirect impact) of Riparian Scrub in the project area.	Impacts to 3.44 acres (3.07 acres of direct impacts, 0.37 acre of indirect impacts) of Interior Live Oak Woodland in the project area and 1.0 acre (0.23 acre of direct impacts, 0.77 acre of indirect impacts) of Blue Oak Savannah. Impacts to 0.48 acres (0.13 acre of direct impacts, 0.35 acre indirect impact) of Riparian Scrub in the project area.	No impact.
Wetlands and other Waters	Direct impacts to 1.43 acres of wetlands and indirect impacts to 0.35 acres of wetlands in the project area.	Direct impacts to 0.66 acres of wetlands and indirect impacts to 0.91 acres of wetlands in the project area	Direct impacts to 1.53 acres of wetlands and indirect impacts to 0.7 acres of wetlands in the project area	Direct impacts to 1.02 acres of wetlands and indirect impacts to 2.58 acres of wetlands in the project area.	No impact.
Animal Species	Build Alternative 1A would result in impacts to animal species. Bats (impacts: Tree = 26; Building = 29); Western Burrowing Owl (impacts:	Build Alternative 1B would result in impacts to animal species. Bats (impacts: Tree = 5; Building = 8); Western Burrowing Owl (impacts:	Build Alternative 2A would result in impacts to animal species. Bats (impacts: Tree = 17; Building = 17); Western Burrowing Owl (impacts:	Build Alternative 2B would result in impacts to animal species. Bats (impacts: Tree = 5; Building = 5); Western Burrowing Owl (impacts:	No impact.

Potential Impact	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
	Habitat = 12.34 acres); Northern Harrier, and California horned lark, White-tailed kite and Merlin (wintering) (Nesting Habitat = 12.34 acres; Foraging Habitat = 335.96 acres); Loggerhead shrike (Nesting Habitat = 1.00 acre; Foraging Habitat = 335.96 acres); Pacific Pond Turtle (Aquatic Habitat = 8.42 acres); Western spadefoot toad (Impacts Direct = 0.36 acre; Indirect = 0.07 acre)	Habitat = 31.45 acres); Northern Harrier and California horned lark, White-tailed kite and Merlin (wintering) (Nesting Habitat = 31.45 acres; Foraging Habitat = 409.29 acres); Loggerhead shrike (Nesting Habitat = 1.00 acre; Foraging Habitat = 335.96 acres); Pacific Pond Turtle (Aquatic Habitat = 0.86 acre); Western spadefoot toad (Impacts Direct = 0.27 acre; Indirect = 0.15 acre)	Habitat = 13.44 acres); Northern Harrier and California horned lark, White-tailed kite and Merlin (wintering) (Nesting Habitat = 13.44 acres; Foraging Habitat = 330.04 acres); Loggerhead shrike (Nesting Habitat = 1.00 acre; Foraging Habitat = 330.04 acres); Pacific Pond Turtle (Aquatic Habitat = 0.29 acre); Western spadefoot toad (Impacts Direct = 0.74 acre; Indirect = 0.49 acre)	Habitat = 41.66 acres); Northern Harrier and California horned lark, White-tailed kite and Merlin (wintering) (Nesting Habitat = 41.66 acres; Foraging Habitat = 405.43 acres); Loggerhead shrike (Nesting Habitat = 3.30 acre; Foraging Habitat = 405.43 acres); Pacific Pond Turtle (Aquatic Habitat = 5.82 acres); Western spadefoot toad (Impacts Direct = 0.66 acre; Indirect = 0.90 acre)	
Threatened and Endangered Species	Moderately high. Impacts to the following animal species habitat: Swainson's Hawk (foraging habitat 335.96 acres) and two known nest trees, Tricolored blackbird (impacts: Foraging habitat = 335.96 acres, Nesting Habitat = 1.98 acres), and Valley Elderberry Longhorn Beetle: no known shrubs will be impacted, however, due to Right of Entry restrictions, not all of the project study area has been surveyed for potential shrub locations.	Moderately high. Impacts to the following threatened and endangered species habitat: Swainson's Hawk (foraging habitat 409.29) and two known nest trees, Tricolored blackbird (impacts: Foraging habitat = 409.29 acres, Nesting Habitat = 1.54 acres), Hartweg's golden sunburst habitat (Impacts: Direct = 3.28 acres, Temporary = 0.57 acres, and Indirect to annual grasslands = 11.73 acres), Green's tuctoria and Colusa grass habitat (Impacts: Direct = 0.06 acres, Temporary = 0.01 acres, and Indirect to vernal pools = 2.22 acres), California tiger salamander habitat (Aquatic Habitat Impacts: Direct = 14.07 acres, Temporary = 2.92 acres, and Indirect = 52.45 acres, and Upland Habitat Impacts	Moderately high. Impacts to the following animal species habitat: Swainson's Hawk (foraging habitat 330.04 acres) and two known nest trees, Tricolored blackbird (impacts: Foraging habitat = 330.04 acres, Nesting Habitat = 2.51 acres), and Valley Elderberry Longhorn Beetle: no known shrubs will be impacted, however, due to Right of Entry restrictions, not all of the project study area has been surveyed for potential shrub locations.	Moderately high. Impacts to the following animal species habitat: Swainson's Hawk (foraging habitat 405.43 acres) and two known nest trees, Tricolored blackbird (impacts: Foraging habitat = 405.43 acres, Nesting Habitat = 0.82 acres), and Vernal Pool Invertebrates (Impacts: Direct = 0.04 acres, Indirect = 2.11 acres), Valley Elderberry Longhorn Beetle: no known shrubs will be impacted, however, due to Right of Entry restrictions, not all of the project study area has been surveyed for potential shrub locations.	No impact.

Chapter 2: Project Alternatives

Potential Impact	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B	No-Build Alternative
		= Direct = 237.43 acres, Temporary = 58.98 acres, and Indirect = 516.44 acres), Vernal Pool Invertebrates (Impacts: Direct = 0.07 acres, Indirect = 2.22 acres), and Valley Elderberry Longhorn Beetle: one known shrub is within 165 feet of the footprint will be impacted.			
Invasive Species	The project area is already moderately impacted by non-native species. No new invasive species would be introduced. Permanent impacts include the low probability to spread invasive species within the project area during construction activities.	The project area is already moderately impacted by non-native species. No new invasive species would be introduced. Permanent impacts include the low probability to spread invasive species within the project area during construction activities.	The project area is already moderately impacted by non-native species. No new invasive species would be introduced. Permanent impacts include the low probability to spread invasive species within the project area during construction activities.	The project area is already moderately impacted by non-native species. No new invasive species would be introduced. Permanent impacts include the low probability to spread invasive species within the project area during construction activities.	No impact.
Cumulative Impacts	Build Alternative 1A could potentially have cumulative impacts in regard to community impacts, relocations, land use, noise visual, waters, and wetlands.	Build Alternative 1B could potentially have cumulative impacts in regard to community impacts relocations, land use, noise visual, waters, and wetlands.	Build Alternative 2A could potentially have cumulative impacts in regard to community impacts relocations, land use, noise visual, waters, and wetlands.	Build Alternative 2B could potentially have cumulative impacts in regard to community impacts relocations, land use, noise visual, waters, and wetlands.	No impact.
Number of Interchanges	4	4	4	4	None
Number of Roundabout	2	3	2	3	None
Number of Intersections	6	7	6	7	None
Railroad Crossings	2	2	2	2	None
Canal Crossings	17	22	24	34	None
Number of Hetch-Hetchy Crossings	12	4	6	5	None
Cost	\$660 million	\$680 million, with escalated cost of \$724 million	\$676 million	\$699 million	None

2.5 Identification of a Preferred Alternative

The Draft Environmental Impact Report/Environmental Impact Statement was circulated for public review and comment from August 9 to October 26, 2017. All comments received were considered and are included with responses in Volume III.

After evaluating all comments received during the public review period for the Draft Environmental Impact Report/Environmental Impact Statement, the Project Development Team, comprised of team members from Caltrans, North County Corridor JPA, Stanislaus County, City of Modesto, City of Riverbank, and City of Oakdale, selected Alternative 1B as the preferred alternative. Caltrans certified that the project complies with the California Environmental Quality Act, prepared findings for all significant impacts identified, prepared a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certified that the findings and Statement of Overriding Considerations have been considered before project approval. As required by the California Environmental Quality Act, Caltrans will file a Notice of Determination with the State Clearinghouse that will state whether the project will have significant impacts, whether mitigation measures are included as conditions of project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. At least 30 days after the publication of the Final Environmental Impact Statement, Caltrans, as assigned by the Federal Highway Administration, will document and explain its decision regarding the selected alternative, project impacts, and mitigation measures in a Record of Decision, in accordance with the National Environmental Policy Act.

As part of the screening process, equal levels of detail were used to identify and evaluate four build alternatives, 1A, 1B, 2A and 2B, in this environmental document and associated technical studies. All four alternatives reduce average daily traffic volumes and current traffic congestion, support the efficient movement of goods and services throughout the region, and improve the efficiency of interregional travel by reducing travel times for State Route 108 in accordance with the project purpose and need.

After review of public comments, the Project Development Team met on February 5, 2018 to discuss the proposed project alternatives. During the meeting, the four build alternatives in the environmental document (Alternatives 1A, 1B, 2A, and 2B) were discussed relative to any issues raised by the public during the public review period and the local agencies' input on the locally preferred alternative. Based on public review and local agency input, it was then determined that Alternative 1B was the preferred alternative.

Alternative 1B was selected as the preferred alternative for the following reasons:

- 1) Alternative 1B meets the purpose and need of the project.
- 2) Alternative 1B has fewer adverse impacts to homes and businesses in the area.
- 3) Alternative 1B maximizes traffic operations compared to Alternatives 2A or 2B.
- 4) Alternative 1B is closest to the urbanized areas and planned growth areas in the region.
- 5) Alternative 1B was preferred by the public as expressed during public meetings public comments.
- 6) The local jurisdictions (City of Modesto, City of Oakdale, City of Riverbank, and Stanislaus County) unanimously support the selection of Alternative 1B as the locally preferred alternative. Each of these local jurisdictions approved a resolution in support of Alternative 1B.

2.6 Alternatives Considered but Eliminated from Further Discussion Prior to Draft Environmental Document

A total of 18 alternatives were considered during the alternatives screening process based on wide-ranging public input as well as Project Development Team recommendations. The Project Development Team was composed of representatives from Caltrans; NCCTEA; the cities of Modesto, Riverbank, and Oakdale; the County of Stanislaus; and the Stanislaus Council of Governments (StanCOG). Two public scoping meetings were held on September 8, 2010, and September 13, 2010, in the communities of Oakdale and Salida. Each meeting was designed to solicit public input into the environmental compliance and alternatives screening processes. Participants were invited to draw alternative concepts on study area maps and aerial photos as well as provide written comments. Through the process, system/modal or alignment alternative concepts were identified, though components of one or more concept were combined to create a complete alternative.

As part of the Alternative Analysis Report, the alternatives were screened through a preliminary screening process that focuses on determining if a specific alternative will meet the 2030 traffic needs and if any major engineering considerations would affect the safety or function of the facility. From this preliminary screening, 18 alternatives were considered during the alternative screening process, and are discussed below. The TSM/TDM alternatives are not included in this list as they could not be implemented as standalone alternatives, but could be incorporated into the planned design as a combination of factors and project objectives (see Section 2.3.3). The initial 18 Build Alternatives are illustrated in Figure 2.5-1 (in Appendix A). Seven broad-based criteria of the Project Development Procedures Manual were used to screen the initial Build Alternatives. These criteria include the following:

- Purpose and need: Would the alternative meet the project's purpose and need?
- Excessive project cost: Would the alternative result in a substantially higher overall cost?
- Relocations and acreage: Would the alternative require excessive removal of businesses, residences, or urban or rural acreage?
- Operational or safety problems: Would the alternative result in operational or safety problems?
- Adverse social, economic, or environmental impacts of extraordinary magnitude: Would the alternative disrupt or divide an established community or result in economic or social impacts?
- Cumulative impacts: Would cumulative impacts result due to relocations, operational or safety problems, or social, economic, and environmental impacts?
- Rejected at an earlier stage: Was the alternative rejected at an earlier stage of project development?

Ten Build Alternatives were eliminated from consideration for not meeting the criteria listed above. Eight alternatives remained for further evaluation. The following section provides a brief description of the 18 considered Build Alternatives and the reasons for eliminating or moving forward a specific alternative based on the criteria described above. From this, pieces of eight Build Alternatives moved forward. These Alternatives include: 10A, 10B, 10C, 10C-1, 11, 11A, 11B, and 12.

Alternative 8 (SR-120 Oakdale Bypass) does not meet the project's purpose and need, because it does not accommodate anticipated future traffic on the existing SR-108 and the surrounding regional transportation network in Stanislaus County and the cities of Modesto, Riverbank, and

Oakdale. Further, it would not support the efficient movement of goods and services throughout the region for the benefit of the regional economy as it would not provide a more direct and dependable truck route, nor would it increase the average operating speeds of all vehicles. It would also not provide economic benefits to the cities of Modesto, Riverbank, and Oakdale as it would by-pass these cities. Adverse socio-economic impacts could occur in these communities as this alignment would redirect traffic away from existing business districts. With implementation of Alternative 8, travel conditions in the region, including traffic congestion on existing SR-108, would continue to worsen due to regional population growth and projected traffic volume increases. This alternative would have unacceptable adverse environmental impacts because it would cross over the Stanislaus River and would disturb sensitive biological habitat. This alternative would also result in excessive farmland bisection and would generate public controversy.

Alternative 9 (Existing SR-108) would make improvements to the existing SR-108 corridor in addition to improvements already planned notwithstanding the project, as indicated in section 2.3.4, above. Improving the existing SR-108 to meet the purpose and need of the project would exceed the \$1.2 billion construction cost identified in StanCOG's Regional Transportation Plan because many developed properties would need to be acquired, and this would dramatically increase overall project costs, including construction costs. The estimated cost for this alternative is \$1.411 billion, and this alternative would affect 1,361 parcels, 914 building structures which include 597 commercial buildings, 570 urban acres, and 357 rural acres. Operational and safety problems would result due to the density of development along the route. Unacceptable adverse social, economic, or environmental impacts would also occur due to the relocations required prior to construction. This alternative would not improve regional network circulation or reduce existing and future traffic congestion, and would not benefit commerce due to existing congestion and development along the present route. In addition, disruption to existing traffic operations and to existing businesses could occur during the construction process. The alternative is unlikely to reduce accidents as traffic volumes would increase, and it would not reduce conflicts between long distance travelers and local trips due to existing congestion.

Alternative 9A (Alternate 9 with F and G Streets One-way) would not meet the purpose and need of the project for many of the same reasons noted above for Alternative 9. This alternative would have excessive construction costs and negative relocation effects because many developed commercial and residential properties would need to be acquired, and this would increase overall project costs. The estimated cost for this alternative is \$1.429 billion, and this alternative would affect 1,600 parcels, 1,000 buildings which include 624 commercial buildings, 630 urban acres, and 348 rural acres. As with Alternative 9, this alternative would result in construction costs in excess of the \$1.2 billion identified in the 2011 Regional Transportation Plan (RTP). Operational and safety problems could result due to the density of development along the route and conflicts between existing development and the road. This alternative would have unacceptable adverse socio-economic impacts because many developed properties would be taken and the community character would be negatively affected.

As with Alternative 9 above, Alternative 9B (Extend SR-108 Beyond Present Limits) would not reduce existing and future traffic congestion as it extends beyond the present Project boundaries and would provide no benefit to regional traffic or the economy of the communities it is intended to serve. This alternative would have construction costs in excess of the \$1.2 billion identified in the 2011 RTP, mainly because many developed commercial and residential properties would need to be acquired. The estimated cost for this alternative is \$1.567 billion, and this alternative would affect 1,401 parcels, 924 buildings which include 597 commercial

buildings, 762 urban acres and 365 rural acres. This alternative would have unacceptable adverse environmental impacts because it would affect undeveloped areas with the potential for sensitive habitat to be disturbed.

Alternative 9C (Ladd/Patterson to SR-108) would not improve network circulation, reduce existing and future traffic congestion, or benefit the regional economy due to existing congestion and the density of development along most of the existing SR-108. This alternative would not meet the project purpose and need because it bypasses the city of Modesto and would not provide the city with any economic benefit. This alternative would have high construction costs and negative relocation effects because many developed commercial and residential properties would need to be acquired, and this would increase overall project costs. The estimated cost for this alternative is \$1.028 billion, and this alternative would affect 850 parcels, 628 buildings which include 388 commercial buildings, 333 urban acres, and 427 rural acres. Operational and safety problems would result due to the density of development along the eastern portion of the route. Traffic volumes would increase, and the alternative would not reduce conflicts between long distance travelers and local trips due to existing congestion.

Alternative 10 (SR-99 to Langworth) is under consideration as part of Alternative 1A, 1B, 2A, and 2B Segment 1.

Alternative 10A (Ladd/SR-219 to north of Lexington) is under consideration as part of Alternative 1A, 1B, 2A, and 2B Segment 1.

Alternative 10B (Ladd/SR-219/ south of Lexington) is under consideration as part of Alternative 1A, 1B, 2A, and 2B Segment 1.

Alternative 10C (Ladd/SR-219 to north of Lexington) is under consideration as part of Alternative 1A and 1B Segment 2.

Alternative 10C-1 (South Stearns to SR-120) is under consideration as part of Alternative 1A and A2.

Alternative 10C-2 (Same as Alternative 10C) was eliminated as it was too similar to Alternative 10C.

Alternative 10C-3 (Hammett/Ladd) would have excessive relocations, parcel acquisitions, and economic and social impacts for the cities of Modesto, Oakdale and Riverbank. This alternative would have moderate construction costs and there would be a low number of commercial and residential properties that would be taken. Estimated cost for this alternative is \$817 million; it would affect 258 parcels, 60 buildings which include 20 commercial buildings, 286 urban acres, and 628 rural acres. Operational and safety problems could result due to the density of development along the route and conflicts between existing development and the road. This alternative could have unacceptable adverse social, economic, or environmental impacts as it would negatively affect a large amount of farmlands and natural habitat areas.

Alternative 11 (SR-219/Kiernan/Claribel Corridor) is under consideration as part of Alternatives 2A and 2B, Segment 2.

Alternative 11A (SR-219 to Claus) is under consideration as part of Alternatives 2A and 2B, Segment 2.

Alternative 11B (Kiernan to Wamble) is under consideration as part of Alternatives 2A and 2B, Segment 2.

Alternative 12 (Patterson to Albers) is under consideration as part of Alternatives 2A, Segment 2.

Alternative 13 (Widen SR-219 to McHenry) would not improve network circulation or reduce existing and future traffic congestion due to conflicts with the existing intersection of SR-219 and SR-99 and the intersection of SR-219 and Sisk Road. It would also not reduce conflicts between long distance travelers and local trips. This alternative would have moderate construction costs but high numbers of parcels and relocations would be affected. The estimated cost for this alternative is \$724 million, but there would be 916 parcels and 399 buildings which include 20 commercial buildings, 410 urban acres, and 726 rural acres that would be affected. This alternative would have unacceptable adverse socio-economic impacts because many developed properties would be taken and the community character would be negatively affected.

Alternative 14 (Kiernan/Claus/SR-108) would not improve regional circulation, accommodate new and diverted traffic from future growth, or reduce existing and future vehicle delays due to conflicts with the existing intersection of SR-219 and SR-99 and the intersection of SR-219 and Sisk Road. This alternative would have moderate construction costs but high numbers of parcels would need to be acquired and relocations would be high. The estimated cost for this alternative is \$787 million, but there would be 822 parcels fully or partially acquired, and 670 building structures which include 20 commercial buildings, 466 urban acres, and 382 rural acres that would be affected. This alternative would have unacceptable adverse socio-economic impacts because many developed properties would be acquired and the community character would be negatively affected.

As discussed above, portions of Alternatives 10, 10A, 10B, 10C, 10C-1, 11, 11A, 11B and 12 have been incorporated into the current four alternatives. These alternatives have been combined into four concise alternatives that capture the most beneficial features in the alternatives considered but eliminated from further discussion.

As is shown in Figure 2.5-2, a total of three ending alignments were also considered during the alternatives screening process. Ending alignment refers to the location the project alternative terminates along SR-120. Similar to the alternative evaluation, the ending alignments were evaluated based on procedures and criteria outlined in the Caltrans Project Development Procedure Manual, as amended (Caltrans 2010a). Table 2.6-1 lists the three considered ending alignments, a brief description of each, and the reason for eliminating or moving forward a specific alternative based on the criteria described above.

Table 2.6-1 Considered Ending Alternatives

Ending Alignment	Name	Description	Reason for Elimination
A	Alternatives 1A and 2A	West of and parallel to South Stearns Road	Under consideration, Alignment 1A and 2A
B	Alternatives 1B and 2B	East of and parallel to Wamble Lane	Under consideration, merged into the new B connection point with SR-108/SR-120
C	Alternatives 1C and 2C	East of and parallel to Wamble Lane (east of ending alignment B)	Removed due to the following: Alternative C would have the greatest potential for impacts on paleontological and archaeological resources because it would have the greatest area of roadway cut and excavation. Alternative C would have the largest acreage of wetlands impacts that would be part of the 404 permitting process. Alternative C would have the largest acreages of potential habitat for Swainson's hawk. Alternative C would have the largest acreages of potential burrowing owl habitat. Alternative C provides considerably less traffic congestion relief.

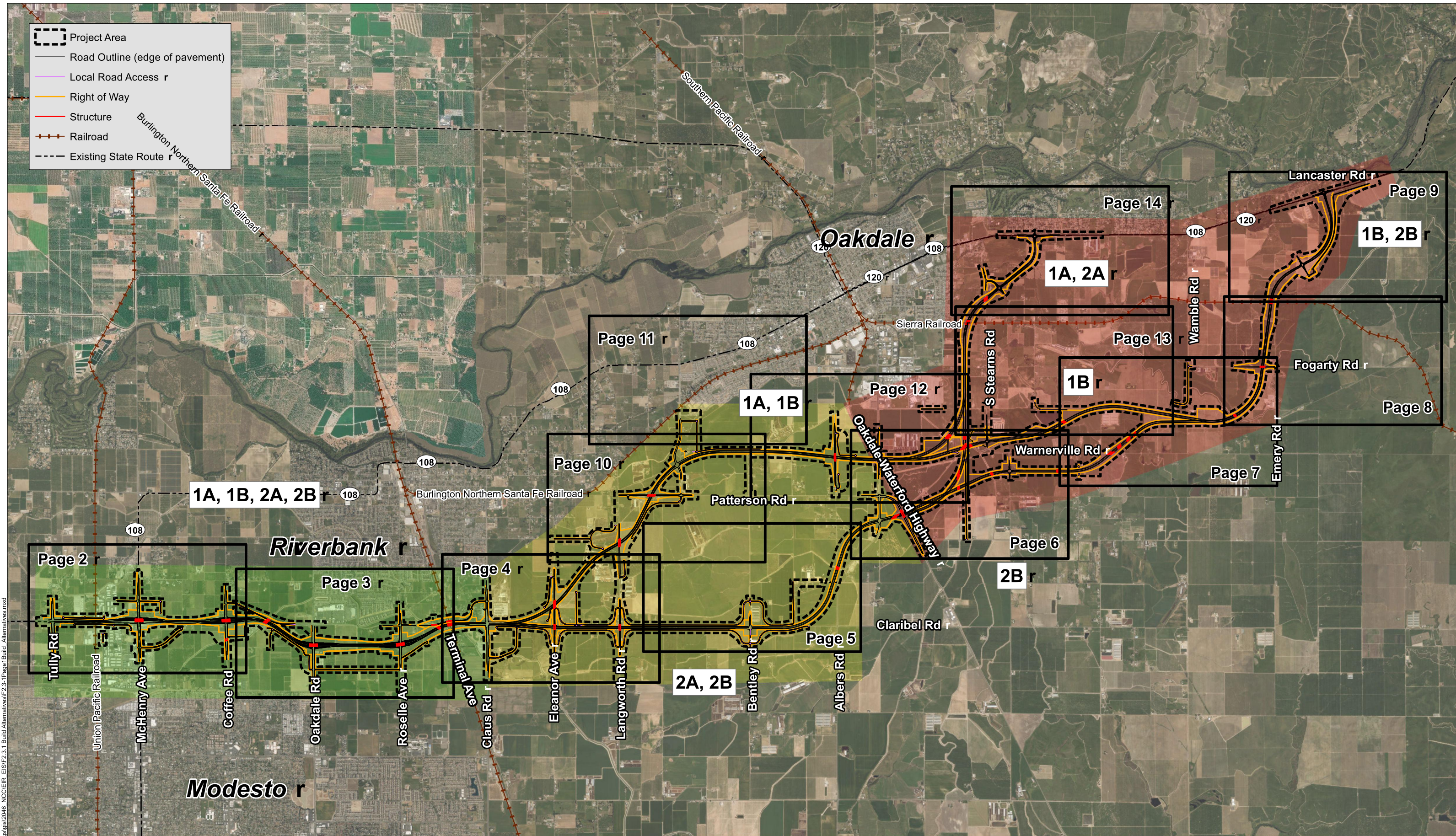
The eight Build Alternatives that moved forward have been revised and combined into the four Build Alternatives with two possible ending points. These are four Build Alternatives that have moved forward and are evaluated in this EIR/EIS.

2.7 Permits and Approvals Needed

Table 2.7-1 presents a summary of anticipated permits, reviews, and approvals required for project construction.

Table 2.7-1 Permits and Approvals Needed

Agency	Permit/Approval	Status
United States Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species Review and comment on 404 Permit	USFWS issued Section 7 Biological Opinion on December 11, 2019.
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States	Application to be submitted during final design.
Natural Resources Conservation Service	Farmland Conversion Impact Rating for Corridor Type Projects	Review of farmland analysis. Completed analysis is included in Section 3.1.3.
California Department of Fish and Wildlife	1602 Agreement for Streambed Alteration Section 2081 Agreement for Threatened and Endangered Species	Application to be submitted during final design.
Regional Water Quality Control Board – Central Valley Region 5	401 Certification	Application to be submitted during final design.
State Historic Preservation Officer	Finding of Effect	SHPO issued concurrence on Finding of No Adverse Effect on July 23, 2019.
State Historic Preservation Officer	Programmatic Agreement and Management Plan	SHPO issued concurrence on Programmatic Agreement on September 19, 2019.
Hetch-Hetchy	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Oakdale Irrigation District	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Modesto Irrigation District	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Union Pacific Railroad	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Burlington Northern Santa Fe Railroad	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
Sierra Railroad	Encroachment Permit and Permanent Easement	Application to be submitted during final design.
United States Environmental Protection Agency	Approval of Right-of-way acquisition for Riverbank Army Depot Superfund Site	Application to be submitted during final design.
Department of Toxic Control	Approval of Right-of-way acquisition for Riverbank Army Depot Superfund Site	Application to be submitted during final design.



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 Source: ESRI Maps Online March 2011; 2/26/2019.

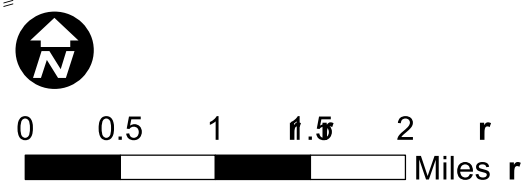
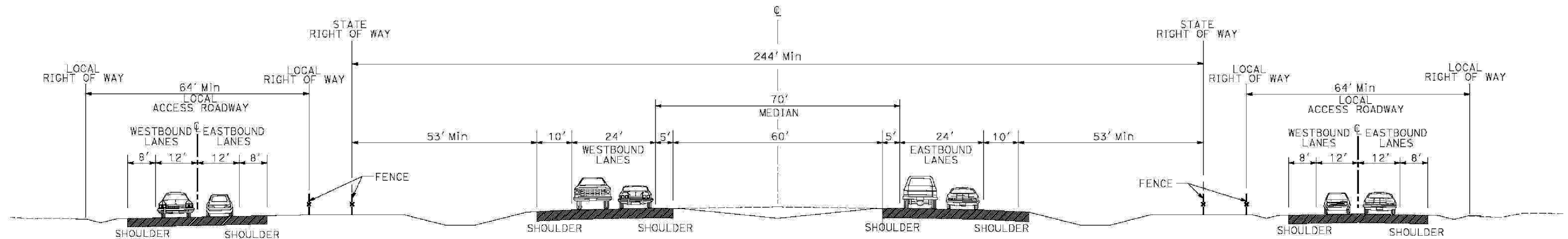


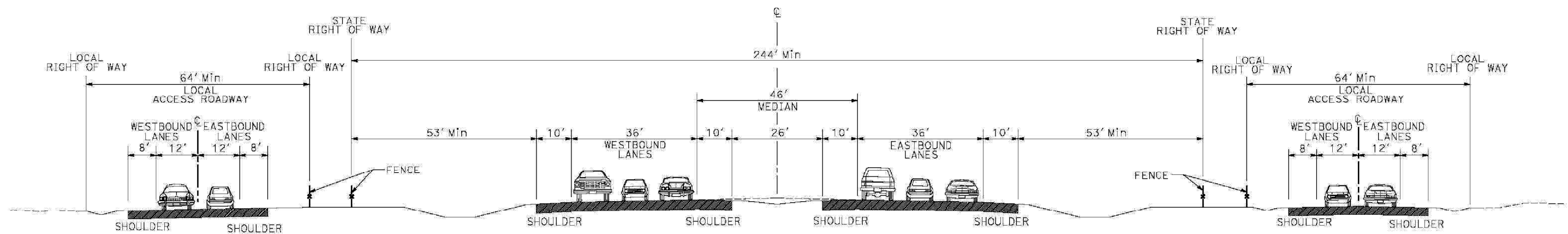
FIGURE 2.3-1
Build Alternatives
 Page 1 of 14
 EA: 10-0S8000, Project ID # 1000000263
 North County Corridor New State Route 108 Project
 Stanislaus County, California

V:\2016\NCC\EIR_EIS\F2.3.1-1 Roadway Cross Section.mxd

Source: 2011 Route Adoption; 1/6/2016.



ALTERNATIVE 1A, 1B, 2A AND 2B
4-LANE
OAKDALE Rd TO ROUTE 120



ALTERNATIVE 1A, 1B, 2A AND 2B
6-LANE
TULLY Rd TO OAKDALE Rd

PROPOSED ROUTE 108
(NCC)

TYPICAL CROSS SECTIONS
 NO SCALE

Not to Scale

FIGURE 2.3.1-1
Typical Roadway Cross Section
 EA: 10-0S8000, Project ID # 100000263
 North County Corridor New State Route 108 Project
 Stanislaus County, California