ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

Tulare SR 99 Corridor and Paige Avenue Multimodal Interchange Enhancements

Resolution TCEP-P-2526-08B
(to be completed by CTC)

1. FUNDING PROGRAM

- ☐ Active Transportation Program
- ☐ Local Partnership Program (Competitive)
- ☐ Solutions for Congested Corridors Program
- ☐ State Highway Operation and Protection Program
- ☑ Trade Corridor Enhancement Program

2. PARTIES AND DATE

2.1 This Project Baseline Agreement (Agreement) effective on 1/30/2026 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, Tulare Association of Governments (TCAG), and the Implementing Agency, Caltrans, sometimes collectively referred to as the "Parties".

3. RECITAL

3.1 Whereas at its 6/27/2025 meeting the Commission approved the Trade Corridor Enhancement Program and included in this program of projects the Tulare SR 99 Corridor and Paige Avenue Multimodal Interch..., the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as ***Exhibit A***, the Project Report attached hereto as ***Exhibit B***, the Performance Metrics Form, if applicable, attached hereto as ***Exhibit C***, as the baseline for project monitoring by the Commission.

3.2 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.

4.2 To adhere, as applicable, to the provisions of the Commission:

- ☐ Resolution _____, "Adoption of Program of Projects for the Active Transportation Program", dated _____
- ☐ Resolution _____, "Adoption of Program of Projects for the Local Partnership Program", dated _____
- ☐ Resolution _____, "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated _____
- ☐ Resolution _____, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated _____
- ■ Resolution G-25-42, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated 6/27/2025

4.3 All signatories agree to adhere to the Commission's Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.

4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.

4.5 TCAG agrees to secure funds for any additional costs of the project.

4.6 Caltrans agrees to report to Caltrans on a quarterly basis; on the progress made toward the implementation of the project, including scope, cost, schedule, and anticipated benefits/performance metric outcomes.

4.7 Caltrans agrees to prepare program progress reports on a on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.

4.8 Caltrans agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.

4.9 Caltrans agrees to submit a timely Project Performance Analysis as specified in the Commission's SB 1 Accountability and Transparency Guidelines.

4.10 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits and performance metric outcomes during the course of the project, and retain those records for six years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.11 The Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for six years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

5.1 Project Schedule and Cost
See Project Programming Request Form, attached as Exhibit A.

5.2 Project Scope
See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.

5.3 Performance Metrics
See Performance Metrics Form, if applicable, attached as Exhibit C.

5.4 Additional Provisions and Conditions *(Please attach an additional page if additional space is needed.)*

The Department will only consider supplemental TCEP funding on Caltrans nominated projects. The state's contribution to the overrun shall not exceed 20% of the original TCEP state share contribution at the time of TCEP adoption, as identified in the Project Programming Request (PPR) at the time of Baseline agreement. Should unforeseen circumstances arise the Department and TCAG will collaborate on funding solutions and are committed to the successful completion of the project. Any supplemental TCEP funding added to a Caltrans-nominated project must also be approved by the Commission.

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report
Exhibit C: Performance Metrics Form *(if applicable)*

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Project Name: Tulare SR 99 Corridor and Paige Avenue Multimodal Interchange Enhancements

Resolution: TCEP-P-2526-08B

(to be completed by CTC)

Theodore Smalley — 01/14/2026 (Date)

Theodore Smalley

Tulare County Assocation of Governments

Project Applicant

Nabeelah Abi-Rached — 01/14/2026 (Date)

Nabeelah Abi-Rached

Caltrans

Implementing Agency

Michael Navarro — 01/14/2026 (Date)

Michael Navarro

District Director

California Department of Transportation

Dina El-Tawansy (Jan 30, 2026 13:52:37 PST) — 01/30/2026 (Date)

Dina El-Tawansy

Director

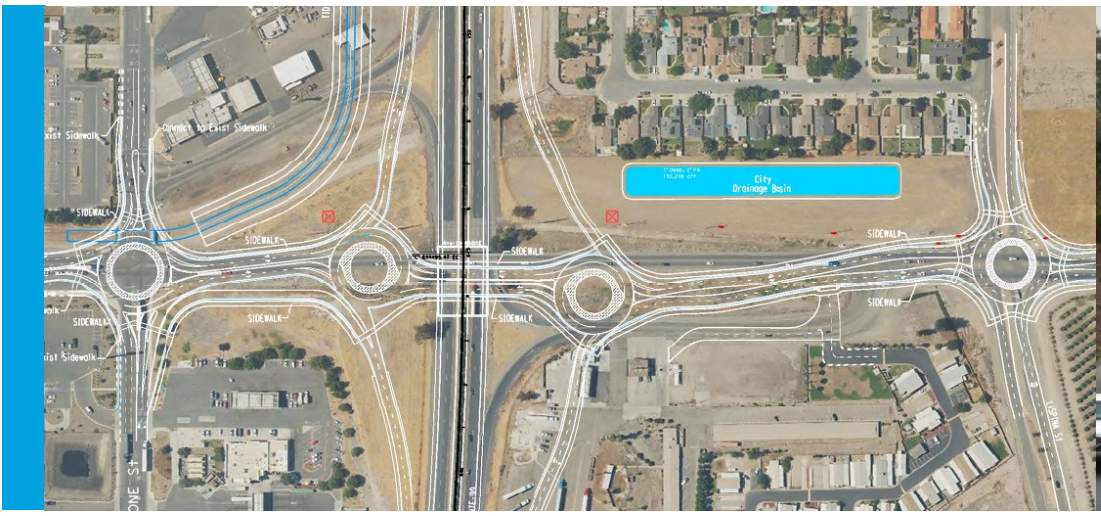
California Department of Transportation

Tanisha Taylor — 02/13/2026 (Date)

Tanisha Taylor

Executive Director

California Transportation Commission





Tulare SR 99 Corridor and Paige Avenue Multimodal Interchange Enhancements

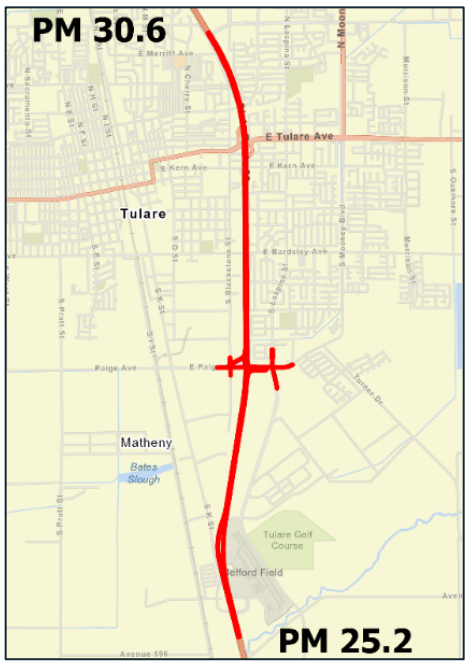
Project Location

Project is located on State Route (SR) 99 in the City of Tulare, Tulare County from 0.4 miles south of Avenue 200 Overcrossing to 0.3 miles north of Prosperity Overcrossing (Postmile 25.2 to 30.6). The Paige Avenue interchange is included in these limits and extends east-west to the adjacent Blackstone Street & Laspina Street intersections.

Project Scope of Work

Caltrans, in partnership with the Tulare County Association of Governments, proposes to upgrade roughly five miles SR 99 from four lanes to six lanes in the City of Tulare. The Project would upgrade the existing mainline lanes, shoulders, drainage systems, structures, and Transportation Management Systems within the Project limits. At Paige Avenue (Ave), the Project would reconstruct the interchange ramps and adjacent local road intersections. Paige Ave would see holistic enhancements including the addition of roundabouts, wide shared-use paths, and gap-closing sidewalks to expand safe, accessible, low-cost modes of transport.

Project Location Map



Project Need and Funding Information

SR 99 is designated as part of the National Highway Freight Network (NHFN) and provides a critical linkage for shipment of agricultural goods to markets outside of the Central Valley via freight trucks and provides for through traffic between major seaports and metropolitan areas of California and the greater US West Coast. Enhancement of this section of SR 99, which runs through the heart of Tulare County, is needed to improve freight truck mobility and travel time reliability, preserve acceptable facility operation, increase safety, and modernize existing infrastructure.

The Paige Ave interchange lacks adequate geometrics and is not up to current Caltrans design standards, presenting a concern for the safe and efficient movement of freight, vehicles, and residents. The existing interchange has limited active transportation facilities that restricts safe east-west connectivity. The Project would significantly enhance access, mobility, and safety for the surrounding area which includes disadvantaged communities and some of Tulare's largest businesses that drives goods movement on Paige Ave and onto SR 99.

In October 2024, Project was awarded $98.04 million in construction funding from the USDOT MPDG program. Project currently seeks approximately $62.7 million from the SB1 TCEP program to complete the funding package.

Key Project Benefits

- Improves operational performance, increases connectivity, and improves travel-time reliability.
- Installs Complete Street elements such as 10-ft. wide shared-use paths along Paige Ave.
- Replaces existing signalized intersections with roundabouts along Paige Avenue, resulting in less vehicle delay, removal of conflict points and collision types associated with intersecting traffic.
- Mitigation funding for Vehicles Miles Traveled (VMT) in the form of transit and vanpool expansion within disadvantaged communities.

Project Cost, Schedule, & Outputs

COST

PHASE	AMOUNT
Project Approval and Environmental Document (PA&ED)	$4,150,000
Preliminary Specifications and Engineering (PS&E)	$6,370,000
Right Of Way (R/W)	$43,623,000
Construction	$172,000,000
TOTAL PROJECT COST	$226,143,000

PROPOSED SCHEDULE

MILESTONE	DATE
PA&ED Certification	December 2023
PS&E Completion	June 2026
R/W Completion	June 2026
Begin Construction	February 2027
OPEN TO TRAFFIC	October 2029

KEY OUTPUTS

- ✓ Construct 10.6 miles of new lane on SR 99.
- ✓ Reconstruct Paige Ave overcrossing across SR 99 into an undercrossing.
- ✓ Modification to four interchange ramps.
- ✓ Construct four roundabouts.
- ✓ Construct 1.7 miles of Class 1, ten-foot wide, shared-use active transportation facilities.
- ✓ Construct 1.53 miles of new sidewalk where there are currently gaps or missing facility.
- ✓ Construct 0.3 miles of sound walls.
- ✓ Improvements to SR 99 shoulders, medians, cross culverts, horizontal curves, vertical clearances, and adjacent drainage basins.

Aligning with the California Action Plan for Transportation Infrastructure (CAPTI)

ENVIRONMENT AND CLIMATE

The project reduces environmental impacts by decreasing localized traffic congestion (and associated greenhouse gas and criteria pollutant emissions) surrounding the project limits, including disadvantaged communities. Furthermore, the project will allow for Caltrans to implement future lane management strategies on SR 99 (i.e., managed lanes) that can decrease greenhouse gas emissions.

ECONOMY AND SAFETY

The Paige Ave interchange reconstruction would lessen traffic queuing and alleviate congestion and delay by removing the need for vehicles to stop at a signal or stop sign. All traffic would flow through the Paige Ave/interchange roundabouts at reasonable speeds, ensuring reliable travel times for goods and people while increasing safety.

Roundabouts are proven traffic measures to significantly reduce severe and fatal traffic collisions. The addition of a mainline travel lane on SR 99 in each direction will provide safety for merging truck and vehicle traffic and improve throughput of critical goods through Tulare and the San Joaquin Valley.

TRANSPORTATION EQUITY AND ACCESSIBILITY

The project builds on critical community needs by expanding low-cost, multi-modal transportation choices through the construction of dedicated active transportation facilities at Paige Ave and surrounding local streets, better connecting residents to jobs, goods, services, and educational/medical facilities.

The project footprint minimizes community impacts and will not require acquisition of any residences. Mitigation measures include installing sound walls and providing funding for transit expansion and vanpools to fully off-set the increase in Vehicle Miles Traveled (VMT).

Contact Us

PROJECT MANAGER
MICHAEL DENNISON
michael.dennison@dot.ca.gov
(559) 383-5175

METROPOLITAN PLANNING ORGANIZATION
TULARE COUNTY ASSOCIATION OF GOVERNMENTS
tcaginfo@tularecag.ca.gov
(559) 623-0450

Caltrans

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2022-0004 v6

Amendment (Existing Project) ☐ YES ☒ NO				Date	09/29/2025 16:59:56
Programs ☐ LPP-C ☐ LPP-F ☐ SCCP ☐ TCEP ☒ STIP ☐ Other					
District	EA	Project ID	PPNO	Nominating Agency	
06	48950	0614000040	6369	Caltrans District 6	
County	Route	PM Back	PM Ahead	Co-Nominating Agency	
Tulare County	99	25.200	30.600	Tulare County Association of Governments	
				MPO	Element
				TCAG	Capital Outlay
Project Manager/Contact			Phone	Email Address	
Shavonne Conley			559-383-5609	shavonne.conley@dot.ca.gov	

Project Title

Tulare SR 99 Corridor and Paige Avenue Multimodal Interchange Enhancements

Location (Project Limits), Description (Scope of Work)

In and near the City of Tulare, from 0.2 mile south of Avenue 200 Overcrossing to 0.1 mile north of Prosperity Avenue Overcrossing. This project will improve goods movement and passenger travel along State Route 99 by converting the facility from four lanes to six lanes. In addition, the project will reconstruct the Paige Avenue interchange, including roundabouts on Paige Avenue at the ramp termini, Blackstone Street, and Laspina Street to improve traffic operations , wide shared-use paths, and gap-closing sidewalks to expand safe, low-cost modes of transport.

Component	Implementing Agency
PA&ED	Caltrans District 6
PS&E	Caltrans District 6
Right of Way	Caltrans District 6
Construction	Caltrans District 6

Legislative Districts

Assembly:	26	Senate:	16	Congressional:	22

Project Milestone		Existing	Proposed
Project Study Report Approved		03/18/2009	
Begin Environmental (PA&ED) Phase		05/01/2019	05/01/2019
Circulate Draft Environmental Document	Document Type EIR/EIS	03/01/2023	03/01/2023
Draft Project Report		09/14/2023	09/14/2023
End Environmental Phase (PA&ED Milestone)		12/29/2023	12/29/2023
Begin Design (PS&E) Phase		04/17/2024	04/17/2024
End Design Phase (Ready to List for Advertisement Milestone)		06/30/2026	10/23/2026
Begin Right of Way Phase		04/17/2024	04/17/2024
End Right of Way Phase (Right of Way Certification Milestone)		06/15/2026	10/09/2026
Begin Construction Phase (Contract Award Milestone)		01/22/2027	05/19/2027
End Construction Phase (Construction Contract Acceptance Milestone)		10/19/2029	10/19/2029
Begin Closeout Phase		10/19/2029	10/22/2029
End Closeout Phase (Closeout Report)		09/19/2033	12/19/2031

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PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2022-0004 v6

Date 09/29/2025 16:59:56

Purpose and Need

Purpose: The purpose of this project is to improve freight movement along this segment of the State Route (SR) 99 trade corridor which runs through the City of Tulare. This project will also improve vehicle access to Paige Avenue Interchange which directly services trucking-related facilities. Additionally, this project will construct pedestrian and bicycle improvements on Paige Avenue.
Need: SR 99 is a valuable route for the transportation of freight through the Central Valley and moreover, the State. Truck volumes along SR 99 comprise a large part of the total traffic volume. Tulare County is the top agricultural producing county in the Country and improvements to the SR 99 trade corridor are needed to ensure the reliable delivery of time sensitive agricultural goods. In 2021, Tulare County farms produced over $8.4 billion in gross revenue. The Paige Avenue Overcrossing structure was constructed in 1952 and the antiquated design constricts access to the many truck related facilities that are serviced by this interchange. Furthermore, the overcrossing roadway lacks accommodations for non-motorized travel.; This acts as a barrier for pedestrian and bicycle movements across SR 99. Furthermore, the interchange ramps have an antiquated design that constricts access to the many truck related facilities that are serviced by this interchange.

NHS Improvements ☒ YES ☐ NO | Roadway Class 1 | Reversible Lane Analysis ☒ YES ☐ NO

Inc. Sustainable Communities Strategy Goals ☒ YES ☐ NO Reduce Greenhouse Gas Emissions ☒ YES ☐ NO

Project Outputs

Category	Outputs	Unit	Total
Pavement (lane-miles)	Ramps and Connectors constructed	Miles	1
Operational Improvement	Ramp modifications	EA	4
Active Transportation	Pedestrian/Bicycle facilities miles constructed	Miles	1.7
Pavement (lane-miles)	Roadway lane miles	Miles	10.6
Other	Sound wall miles constructed	Miles	0.3
Drainage	Culverts	LF	3,000
TMS (Traffic Management Systems)	Changeable message signs	EA	1
ADA Improvements	New sidewalk	LF	8,078
Bridge / Tunnel	Modified/Reconstructed bridges/tunnels	SQFT	5,300

Additional Information

ADA is checked
Bike/Ped is checked

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Congestion Reduction	TCEP	Change in Daily Vehicle Hours of Delay	Hours	490	8,106	-7,616
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	3,428	11,044	-7,616
	Optional	Daily Truck Trips	# of Trips	12,695	12,695	0
	Optional	Daily Truck Miles Traveled	Miles	0	0	0
	TCEP	Change in Daily Truck Hours of Delay	Hours	150	2,435	-2,285
Throughput (Freight)	TCEP	Change in Truck Volume	# of Trucks	4,633,493	4,633,493	0
	TCEP	Change in Rail Volume	# of Trailers	0	0	0
			# of Containers	0	0	0
	Optional	Change in Cargo Volume That Can Be Accommodated	# of Tons	0	0	0
			# of Containers	0	0	0
System Reliability (Freight)	Optional	Truck Travel Time Reliability Index	Index	0	0	0
	Optional	Daily Vehicle Hours of Travel Time Reduction	Hours	0	0	0
Velocity (Freight)	TCEP	Travel Time or Total Cargo Transport Time	Hours	1,251,043,110	472,894,296	778,148,814
Air Quality & GHG (only 'Change' required)	LPPC, SCCP, TCEP, LPPF	Particulate Matter	PM 2.5 Tons	1	0	1
			PM 10 Tons	1	0	1
	LPPC, SCCP, TCEP, LPPF	Carbon Dioxide (CO2)	Tons	20,768	0	20,768
	LPPC, SCCP, TCEP, LPPF	Volatile Organic Compounds (VOC)	Tons	-1	0	-1
	LPPC, SCCP, TCEP, LPPF	Sulphur Dioxides (SOx)	Tons	0	0	0
	LPPC, SCCP, TCEP, LPPF	Carbon Monoxide (CO)	Tons	-248	0	-248
	LPPC, SCCP, TCEP, LPPF	Nitrogen Oxides (NOx)	Tons	-78	0	-78
Safety	Optional	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	Number	0	0	0
	LPPC, SCCP, TCEP, LPPF	Number of Fatalities	Number	1.39	1.4	-0.01
	LPPC, SCCP, TCEP, LPPF	Fatalities per 100 Million VMT	Number	1.85	1.87	-0.02
	LPPC, SCCP, TCEP, LPPF	Number of Serious Injuries	Number	2.03	2	0.03

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
	LPPC, SCCP, TCEP, LPPF	Number of Serious Injuries per 100 Million VMT	Number	2.7	2.66	0.04
Economic Development	LPPC, SCCP, TCEP, LPPF	Jobs Created (Only 'Build' Required)	Number	2,940	0	2,940
Cost Effectiveness (only 'Change' required)	LPPC, SCCP, TCEP, LPPF	Cost Benefit Ratio	Ratio	3.4	0	3.4
Truck & Vehicle Volume (Freight)	TCEP	Existing Average Annual Vehicle Volume on Project Segment	Percent	75	75	0
	TCEP	Existing Average Annual Truck Percent on Project Segment	Percent	25	25	0
	TCEP	Estimated Year 20 Average Annual Vehicle Volume on Project Segment with Project	Number	13,900,478	13,900,478	0
	TCEP	Estimated Year 20 Average Annual Truck Percent on Project Segment with Project	Number	4,633,493	4,633,493	0

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STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2022-0004 v6

District	County	Route	EA	Project ID	PPNO
06	Tulare County	99	48950	0614000040	6369

Project Title

Tulare SR 99 Corridor and Paige Avenue Multimodal Interchange Enhancements

Existing Total Project Cost ($1,000s)									
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Implementing Agency
E&P (PA&ED)	4,150							4,150	Caltrans District 6
PS&E	6,370							6,370	Caltrans District 6
R/W SUP (CT)	5,371							5,371	Caltrans District 6
CON SUP (CT)		14,000						14,000	Caltrans District 6
R/W	38,252							38,252	Caltrans District 6
CON		158,000						158,000	Caltrans District 6
TOTAL	54,143	172,000						226,143	
Proposed Total Project Cost ($1,000s)									Notes
E&P (PA&ED)	4,150	1,501						5,651	
PS&E	6,370	3,156						9,526	
R/W SUP (CT)	5,371							5,371	
CON SUP (CT)		14,000						14,000	
R/W	38,252							38,252	
CON		158,000						158,000	
TOTAL	54,143	176,657						230,800	

Fund #1:	RIP - National Hwy System (Committed)								Program Code
Existing Funding ($1,000s)									20.XX.075.600
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)	2,150							2,150	Tulare County Association of Govern
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	2,150							2,150	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)	2,150	778						2,928	PA&ED increased $778,000 to cover overrun.
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	2,150	778						2,928	

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PPR ID
ePPR-D06-2022-0004 v6

Fund #2:	IIP - National Hwy System (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.025.700
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)	2,000							2,000	Caltrans HQ
PS&E	4,300							4,300	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	6,300							6,300	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)	2,000	723						2,723	PA&ED increased by $723,000 to cover overrun. PS&E increased by $3,156,000 to cover overrun.
PS&E	4,300	3,156						7,456	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	6,300	3,879						10,179	

Fund #3:	State Bond - State Route 99 Corridor (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.722.000
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)									Caltrans HQ
PS&E	2,070							2,070	$2070 PSE voted 03/21/24
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	2,070							2,070	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E	2,070							2,070	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL	2,070							2,070	

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STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2022-0004 v6

Fund #4:	Local Funds - Local Transportation Funds - Advance Construction (Committed)								Program Code
	Existing Funding ($1,000s)								20.10.400.100
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)									Tulare County Association of Govern
PS&E									
R/W SUP (CT)	819							819	
CON SUP (CT)									
R/W	5,835							5,835	
CON									
TOTAL	6,654							6,654	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)	819							819	
CON SUP (CT)									
R/W	5,835							5,835	
CON									
TOTAL	6,654							6,654	

Fund #5:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.723.100
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)									
PS&E									$12967 RW voted 03/21/24
R/W SUP (CT)	1,821							1,821	
CON SUP (CT)									
R/W	12,967							12,967	
CON									
TOTAL	14,788							14,788	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)	1,821							1,821	
CON SUP (CT)									
R/W	12,967							12,967	
CON									
TOTAL	14,788							14,788	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2022-0004 v6

Fund #6:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.723.200
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)									
PS&E									$19450 RW voted 03/21/24
R/W SUP (CT)	2,731							2,731	
CON SUP (CT)									
R/W	19,450							19,450	
CON									
TOTAL	22,181							22,181	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)	2,731							2,731	
CON SUP (CT)									
R/W	19,450							19,450	
CON									
TOTAL	22,181							22,181	

Fund #7:	Local Funds - Local Measure (Committed)								Program Code
	Existing Funding ($1,000s)								20.10.400.100
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)									Tulare County Association of Govern
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		11,290						11,290	
TOTAL		11,290						11,290	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON		11,290						11,290	
TOTAL		11,290						11,290	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2022-0004 v6

Fund #8:	Federal Disc. - Infrastructure For Rebuilding America (INFRA)Grant (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.400.300
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)		2,520						2,520	
R/W									
CON		95,520						95,520	
TOTAL		98,040						98,040	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)		2,520						2,520	
R/W									
CON		95,520						95,520	
TOTAL		98,040						98,040	

Fund #9:	SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.723.100
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)									Caltrans HQ
PS&E									State 20.xx.723.100; TCEP State Shares $4,592 RW Sup and $20,476 RW voted 06/26/2025
R/W SUP (CT)									
CON SUP (CT)		4,592						4,592	
R/W									
CON		20,476						20,476	
TOTAL		25,068						25,068	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)		4,592						4,592	
R/W									
CON		20,476						20,476	
TOTAL		25,068						25,068	

DRAFT

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2022-0004 v6

Fund #10:	SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
Existing Funding ($1,000s)									20.XX.723.200
Component	Prior	26-27	27-28	28-29	29-30	30-31	31-32+	Total	Funding Agency
E&P (PA&ED)									Caltrans HQ
PS&E									Regional 20.xx.723.200; TCEP Regional Shares $6,888 RW Sup and $30,714 RW voted on 06/26/2025
R/W SUP (CT)									
CON SUP (CT)		6,888						6,888	
R/W									
CON		30,714						30,714	
TOTAL		37,602						37,602	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)		6,888						6,888	
R/W									
CON		30,714						30,714	
TOTAL		37,602						37,602	

DRAFT

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2022-0004 v6

Complete this page for amendments only

Date 09/29/2025 16:59:56

District	County	Route	EA	Project ID	PPNO
06	Tulare County	99	48950	0614000040	6369

SECTION 1 - All Projects

Project Background

Goods movements is a major component of vehicle traffic on SR 99 in the San Joaquin Valley. More specifically, agriculture accounts for a large percentage of commodity movement and truck traffic within and through Tulare County. The traffic analysis conducted by Traffic Operation Branch on August 23, 2016, and the projected traffic forecast provided by Technical Planning Branch showing the existing interchange at Paige Avenue Overcrossing will deteriorate to a Level of Service (LOS) F prior to 2047. The increases in traffic volume at Paige Avenue interchange will cause long delays and lead to excessive queuing at existing off-ramps, potentially overflowing traffic onto the freeways mainline. The project proposes to upgrade five miles of SR 99 from four lanes to six lanes. The project will upgrade the existing mainline lanes and shoulders, drainage systems, structures, and Transportation Management Systems within the project limits. The project also reconstructs the interchange ramps at Paige Avenue. Paige Avenue will see improvements including the addition of roundabouts, bicycle lanes and new sidewalks where there are currently gaps.

Programming Change Requested

Reason for Proposed Change

To update project cost.

If proposed change will delay one or more components, clearly explain 1) reason for the delay, 2) cost increase related to the delay, and 3) how cost increase will be funded

Other Significant Information

SECTION 2 - For SB1 Project Only

Project Amendment Request (Please follow the individual SB1 program guidelines for specific criteria)

We will continue to refine the project scope of work and explore opportunities to lower support costs.

Approvals

I hereby certify that the above information is complete and accurate and all approvals have been obtained for the processing of this amendment request.

Name (Print or Type)	Signature	Title	Date

SECTION 3 - All Projects

Attachments
1) Concurrence from Implementing Agency and/or Regional Transportation Planning Agency
2) Project Location Map

Project ID: 614000040 **EA:** 06-48950

Source Data: Cal B/C Sketch Model v8.1

Existing Average Annual Vehicle Volume	8,713,764
Existing Average Annual Truck Percent on Project Segement	25%
Esimated Year 20 Average Annual Vehicle Volume on Project Segment with Project	13,900,478
Estimated Year 20 Average Annual Truck Percent on Project Segment	25%

Performance Metric	Future No Build	Built	Change	Methodology
Change in Daily Vehicle Hours of Delay	8,106	490	-7,617	Annual Avg. Vol. multiply by (Avg. Travel Time minus Free-Flow Travel Time) divide by 365 Avg. Travel Time = Impacted Length divided by Avg. Speed Limit Free-Flow Travel Time = Impacted Length divided by Posted Speed Limit
Change in Daily Truck Hours of Delay	2,435	150	-2,285	Avg. Truck Volume multiply by (Avg. Truck Travel Time minus Truck Free-Flow Travel Time) divide by 365
Change in Truck Volume (# of Truck)	4,633,493	4,633,493	0	Truck Avg. Volume from BCA Travel Time Tab
Change in Rail Volume	N/A	N/A	N/A	N/A
Truck Travel Time Reliability Index	N/A	N/A	N/A	N/A
Velocity	472,894,296	1,251,043,110	778,148,814	Impacted Length multiply by Avg. Speed multiply by Avg. Volume
Number of Serious Injures	2.00	2.03	0.03	No Build - Avg. Number of Fatalities & Serious per year from TSAR 5 years. 'Build - 'No Build' Avg. Number of Fatalities & Serious multiply by [100% minus ('No Build' Rates minus 'Build' Rates)] from BCA Section 1C
Number of Fatalities	1.40	1.39	-0.01	
Rate of Serious Injuries per 100 Million VMT	2.66	2.70	0.04	Avg. Number of Serious Injuries per year divided by VMT, then multiply by 100,000,000
Rates of Fatalities per 100 Million VMT	1.87	1.85	-0.01	Avg. Number of Fatalities per year divided by VMT, then multiply by 100,000,000
Air Quality				From BCA Results Tab
- Carbon Monoxide (CO)	0	-248	-248	
- Carbon Dioxide (CO_2)	0	20,768	20,768	
- Nitrogen Oxides (NO_X)	0	-78	-78	
- Particulate Matter PM 2.5	0	1	1	
- Particulate Matter PM 10	0	1	1	
- Sulphur Dioxides (SO_X)	0	0	0	
- Volatile Orangic Compounds (VOC)	0	-1	-1	
Cost Effectiveness (Benefit Cost Ratio)	0	3.4	3.4	From BCA Results Tab
Jobs Created	0	2,940	2,940	Project Cost multiply by 0.000013 jobs per dollar

ePPR

	Future No Build	Built	Change	
Daily vehicle hours of travel time reduction	11,044	3,428	-7,617	From BCA Travel time tab - Annual Avg. Vol. divided by 365 multiply by Avg. Travel time
Daily Truck Trip	12,695	12,695	0	
Existing Avg. Annual Vehicle Volume on Project Segment	75%	75%	0	From BCA
Existing Avg. Annual Truck Percent on Project Segment	25%	25%	0	From BCA
Estimate Year 20 Average Annual Truck Volume on Project Segment with Project	4,633,493	4,633,493	0	

06 – Tul – 099 – PM 25.2/30.6
EA: 06-48950 – Project ID: 0614000040 (PPNO: 6369)
025.700 (STIP)
December 2023

PROJECT REPORT

For Project Approval

On Route 99 in Tulare County

Between 0.2 mile south of Avenue 200 Overcrossing

And 0.1 mile north of Prosperity Avenue Overcrossing

I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current, and accurate:

MARIA TOLES
DEPUTY DISTRICT DIRECTOR, RIGHT OF WAY

APPROVAL RECOMMENDED:

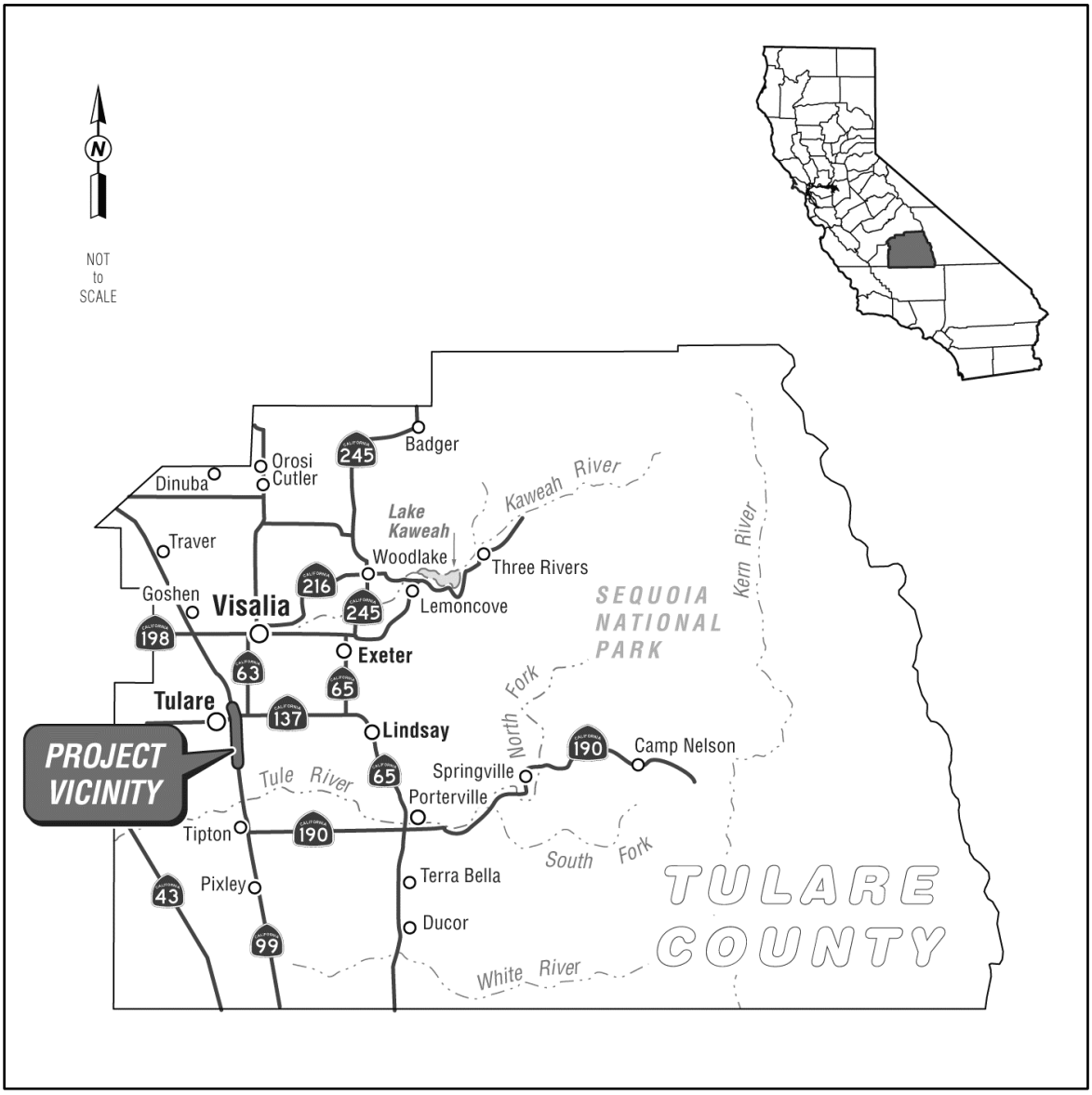
MICHAEL DENNISON, *PROJECT MANAGER*

APPROVED:

Philip Vallejo
for **DIANA GOMEZ**, *DISTRICT 6 DIRECTOR*

12/29/2023
DATE

Vicinity Map



This project report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Peter Chander 12/27/2023

Peter Chander
REGISTERED CIVIL ENGINEER *DATE*



Table of Contents

1. INTRODUCTION ……. **1**

2. RECOMMENDATION …… **2**

3. BACKGROUND ……. **2**

4. PURPOSE AND NEED …… **5**

5. ALTERNATIVES ……... **18**

6. CONSIDERATIONS REQUIRING DISCUSSION …… **31**

7. FUNDING, PROGRAMMING, AND ESTIMATE ……... **45**

8. DELIVERY SCHEDULE …… **46**

9. RISKS ……... **47**

10. EXTERNAL AGENCY COORDINATION …… **48**

11. PROJECT REVIEWS …… **48**

12. PROJECT PERSONNEL …… **48**

13. ATTACHMENTS …… **49**

1. INTRODUCTION

Description:

The California Department of Transportation (Caltrans), in cooperation with the Tulare County Association of Governments (TCAG) proposes the following improvements along State Route (SR) 99 in Tulare County:

Widen SR 99 from four to six-lane to reduce future traffic congestion.
One build and one no-build alternative were considered for this work. The build alternative will widen the existing 4-lane freeway to a 6-lane freeway by constructing one Hot Mix Asphalt Concrete (HMA) lane in each direction in the existing median of SR 99. The project construction begins 0.2 mile south of the Avenue 200 Overcrossing (OC) at PM 25.20 and ends just north of the Prosperity Avenue OC at PM 30.60.

Reconstruct Paige Ave interchange to improve traffic operations.
Two build Options were considered for this work. The first Options would build a Paige Ave overcrossing bridge with 4 roundabouts along Paige Ave. The second Option would elevate SR 99 over Paige Ave and construct a Paige Ave undercrossing bridge, with 4 roundabouts on Paige Ave.

Project Limits	*06-Tul-99, PM 25.2/30.6*	
	Current Cost Estimate ($1000):	**Escalated Cost Estimate ($1000):**
Capital Outlay Support	28,325	29,891
Capital Outlay Construction	$128,000	157,345
Capital Outlay Right-of-Way	$31,469	38,250
Funding Source	RIP/IIP/State Bond	
Funding Year	2025/2026	
Type of Facility	4-lane divided freeway	
Number of Structures	1	
Environmental Determination or Document	Environmental Impact Report (EIR) under the California Environmental Quality Act (CEQA) and an Environmental Assessment under the National Environmental Policy Act (NEPA)	
Legal Description	In Tulare County, in the City of Tulare, from 0.2 mile south of Ave 200 overcrossing to 0.1 mile north of Prosperity Avenue overcrossing.	
Project Development Category	3	

2. RECOMMENDATION

It is recommended that the project be approved using the preferred alternative, and that the project proceed to the Plans, Specification and Estimate (PS&E) phase. The affected local agencies have been consulted with respect to the recommended plan, their views have been considered, and the local agencies are in general accord with the plan as presented.

3. BACKGROUND

Project History

Caltrans' Interregional Transportation Strategic Plan, dated 2015, identified SR 99 as a priority interregional highway. It is a critical north-south interregional freight corridor and an important highway for California's economy. This corridor serves as a major farm to market route for most of the agricultural products from the Central Valley. Most of the commercial and personal travel between the cities within the San Joaquin Valley use SR 99. This route also serves as the main access route for smaller urban areas to urban services available in the larger urbanized areas.

A primary goal of the SR 99 Business Plan, issued in 2005 and updated in 2013, was to improve goods movement throughout California. Other goals included expanding SR 99 to a minimum six-lane facility in order to facilitate economic growth. The study determined that correcting gaps in flow, or chokepoints, along this route is needed to improve safety, reduce vehicle hours traveled, increase travel-time reliability for goods movement and general traffic on the freight mobility system, and to preserve acceptable facility operation.

To address the above-mentioned goals, a Project Study Report/Project Development Support (PSR/PDS) was prepared and approved for a freeway widening project on March 18, 2009. The PSR/PDS proposed 4 alternatives, 3 build and 1 no-build alternatives. Alternative 1 proposed widening to a 6-lane facility by constructing an inside lane in each direction and a northbound auxiliary lane between Bardsley Avenue and Prosperity Avenue. Alterative 2 proposed widening to an 8-lane facility by constructing an inside and outside lane. Alternative 3 proposed to widen to a 6-lane facility by constructing an inside lane in both directions only. Alterative 4 was the no-build alternative with no improvements to SR 99. For a detailed discussion on the alternatives considered, see section-5 of this report.

Community Interaction

A Project Development Team (PDT) meeting to discuss and evaluate the 3 build alternatives proposed in the PSR-PDS phase was held on August 26, 2019. This meeting included representatives from the City of Tulare, TCAG and Caltrans functional units. During the meeting the 3 proposed build alternatives were presented along with the findings from the preliminary investigation. The participants also considered the project risks, traffic analysis, right-of-way impacts, anticipated environmental document, structure involvement, and construction costs associated with each alternative. After a discussion on each alternative, the

PDT members decided to proceed with Alternative-3 since it met the project's purpose and need and had the least amount of impact on the project schedule, cost and the environment when compared to the other alternatives.

In that meeting TCAG requested Caltrans to include the Paige Ave interchange improvements also in the proposed project scope. This request was to improve the traffic circulation near the International Agri-Center Way Interchange which is presently under construction (Project EA: 06-0U880; TUL-99-PM 27.6/30.6).

Caltrans prepared a cost estimate for the combined SR 99 widening alternative-3 and Paige Ave Interchange improvement project. The combined project cost estimate was $216 million. Adding Paige Ave interchange improvements to the project scope substantially increased the project cost estimate and also delayed project delivery time due to additional design, right-of-way, and environmental work that need to be done. To reduce the combined project cost and project delivery time delay, Caltrans proposed to rehabilitate the existing freeway lanes and ramps, instead of replacing them.

To accelerate the delivery of the existing pavement rehabilitation, a separate rehabilitation project named Tulare City Rehabilitation project (EA 06-0W910) was initiated for the section of SR 99 between PM 27.6 and PM 30.6. This rehabilitation project is slated to go for construction in year 2024. As such, the revised Tulare City Widening project scope dropped the replacement of the existing freeway and ramp lanes. In addition, to reduce project cost, the PDT decided to drop freeway profile correction for sight distance and increasing vertical clearance under the over crossing structures. This revised project scope is defined in Section 5A.

The Project Development Team held an open house on Wednesday, April 26, 2023, at the Tulare International Agricultural Center (Banquet Hall) for the Tulare Six-Lane and Paige Avenue Interchange Improvement Project. The open house provided members of the public and other interested parties with an opportunity to learn more about the project and to comment on the Draft Environmental Document/Environmental Assessment for the project.

Based on public comments, Caltrans decided to revise the Draft Environmental Impact Report/Environmental Assessment to provide supplemental and clarifying information regarding the project and its potential environmental effects.

An additional public meeting was held on Tuesday, August 15, 2023, at Palo Verde Elementary School in Tulare. There was a short presentation that was pre-recorded in English and Spanish discussing the project and its potential impacts. Project staff members were available to interact with the attendees.

Comment sheets were provided at the open house for attendees to submit written comments about the project at the open house, or through email or U.S. mail to Caltrans. Participants also dictated their comments to the onsite court reporter. Comments received during the public

circulation period, including those received at the public hearing, are provided in the environmental document, see Attachment-J, Appendix F. Responses to all public comments received during the public circulation period are also provided in Attachment-J.

On October 5, 2023, staff members from Caltrans, the Tulare County Association of Governments, the City of Tulare, and the Tulare County Resource Management Agency attended a neighborhood meeting hosted by the Leadership Counsel of Justice and Accountability in the Matheny Tract community. All the comments have been addressed in the Environmental Document.

Existing Facility

Within the project limits SR 99 is a 4-lane divided freeway. The original state highway (present South K Street and North J Street through the City of Tulare) was realigned to go around the outskirts of the then Tulare City limits and constructed as the present 4-lane freeway in the mid-1950s. Since then, the city has grown on both sides of the highway. Traffic demand for this facility has steadily grown due to the regional population growth and development in the Tulare City area. The expected urban and regional growth will increase the traffic volume, which will likely add to the operational deficiencies that currently exist.

The existing 4-lane divided freeway has 42-foot-wide depressed dirt median. Median thrie-beam barriers run along the entire length of the highway within the project limits. The existing width of the inside shoulder is 5-foot, and the outside shoulder width varies between 8-foot and 10-foot. The highway passes through a relatively flat terrain. On the south side of the project between PM 25.2 and PM 28.4 the highway is on low level embankment section 3 to 4-foot above existing ground level. Beyond PM 28.4, the highway runs through alternating cut and fill sections to pass under several city street overcrossing structures that are situated at ground level. The side slopes along cut sections (up to 20-foot-deep) are generally 2:1. Between Bardsley Ave and Prosperity Ave, 10-foot-wide concrete slope paving is present to minimize soil erosion along cut sections. In addition to the concrete slope paving, landscaping plants and mature trees protect the cut slope.

The land use throughout the project limits is a mix of agricultural land, light to heavy industrial areas, community commercial facilities, low to high density residential tracts, and neighborhood commercial shopping centers.

Storm water generally sheet flows away from the pavement to the roadside or to the depressed dirt median. Roadside ditches and culverts collet the storm water and convey across to the west side of the highway. Along the depressed sections of the highway, there are 3 existing pumping plants at Bardsley Avenue, SR 137/Tulare Avenue, and Prosperity Avenue. These pumping plants convey the water to local ditch or drainage basins.

There are five existing interchanges within the project limits at, Avenue 200, Paige Avenue, Bardsley Avenue, SR 137/Tulare Avenue, and Prosperity Avenue. In addition, there are two

more overcrossing structures, one was formerly known as the Tulare Underpass that was a part of Santa Fe Railroad, at PM 29.85. This railroad was converted to a trail in year 2004 and is now a part of Tulare City parks. The second overcrossing structure is Cross Ave at PM 29.89.

The vertical clearance to the overcrossing structures do not meet the current design standards. The structure spans are also not wide enough to accommodate 6-lane freeway with standard shoulder width. The geometrics of several existing ramps also do not meet current design standards.

The existing Paige Avenue interchange is a Type L-6 interchange with the freeway ramps connecting to Blackstone Street and Paige Avenue. Paige Avenue is a 2-lane local road that runs in the east-west direction and designated as a local truck route. The existing SB hook ramps connect to Blackstone Street in the Northwest (NW) corner of the interchange at an intersection approximately 150 feet north of the Paige Avenue and Blackstone Street intersection. These two intersections are currently signalized.

The existing Northbound (NB) hook ramps connect directly to Paige Avenue in the southeast corner of the interchange. To the east side of this intersection there is another intersection at Paige Avenue and Laspina street. Both are signalized intersections. Currently, there are no sidewalks or bike lanes along the existing Paige Ave.

The existing utilities include overhead powerlines, telecommunication lines, underground water and sewer lines, and gas lines. The Tulare irrigation District Main Canal crosses the highway on the North side of Paige Ave.

At present, there are two programmed projects, 1) Tulare Agri-Center Way Interchange Project (EA: 06-0U880; Tul-99-PM 26.3/27.6), and 2) Tulare City Rehabilitation project (EA 06-0W9100, PM 27.6/30.6) are located within this project limits. The Tulare Interchange project will construct a new interchange at International Agri-Center Way, located about 0.8 mile south of Paige Avenue and is currently awarded for construction. This project is scheduled for completion in year 2024. The Tulare City Rehabilitation Project will rehabilitate the existing freeway and ramp lanes between Paige Ave, PM 27.6, and just north of Prosperity Ave, PM 30.6. This project is slated to go for construction in year 2024.

4. PURPOSE AND NEED

Purpose:

The purpose of this project is to relieve traffic congestion, improve traffic safety, improve freight movement, and improve access to local trucking-related facilities in the neighboring industrial area along this segment of the SR 99 trade corridor.

Need:

Due to increasing traffic volumes, SR 99 will have insufficient capacity by year 2049, resulting in an unsatisfactorily Level of Service (LOS). Therefore, improvements to SR 99 are needed to relieve traffic congestion. In addition, in the immediate vicinity of the Paige Avenue interchange, on the west side of the highway are a number of trucking-related facilities, industrial areas, gas stations and restaurants. On the east side of the highway new housing tracts are in development. The increasing traffic demand due to this growth is resulting in longer vehicle delays at the existing Paige Ave ramp termini intersections. The proposed improvements will improve traffic circulation within the vicinity of the Paige Ave Interchange.

4A. Problem, Deficiencies, Justification

Relieve congestion

SR 99, within the project limits, is currently operating at an acceptable Level of Service (LOS) during peak traffic hours and will continue to do so through year 2029 without any improvements. However, by year 2049 with no improvements, the freeway mainline will have insufficient capacity to accommodate the forecasted traffic demand under the No Build Alternative and vehicle delay will significantly increase. The predicted LOS by 2049 ranges from E to F, without improvement within the project limits. The Traffic Index (TI) and Average Daily Traffic (ADT) information for the segment of SR 99 within the project limits, with and without improvements, are summarized in the Current and Forecasted Traffic section below.

Improve freight movement

As stated in Caltrans' California Freight Mobility Plan 2020, trucking is the most commonly used mode for California's freight transportation, and trucks transport almost all freight and services during some point within the supply chain. For this reason, the trucking industry is one of California's most valuable freight assets. California must continue to develop, maintain, and operate a safe, efficient, and reliable freight transportation network to accommodate the truck volumes necessary to move freight within the state.

For year 2018 Average Daily Truck Traffic (ADTT) between Avenue 200 OC and Paige Avenue OC is approximately 15,500 trucks, which is about 27.6% of all traffic. More than half the volume of these trucks are large, long-haul trucks (with 5 or more axles). Between 2029 and 2049, the amount of truck traffic is expected to almost double.

Currently, the average number of trucks-per-lane-per-day within the project limits exceeds 2,000. Where this condition exists on a route, traffic congestion is characterized by large, long-haul trucks using all lanes for travel and passing, which creates potential safety and capacity problems for interregional automobile travelers. This condition is particularly noticeable within the 4-lane freeway segments of SR 99 inside Tulare County and within the City of Tulare.

Improve access to trucking-related facilities

In the immediate vicinity of the Paige Avenue and the proposed International Agri-Center Way interchanges there are several trucking-related businesses, including truck stops and truck washing and repair facilities. The industrial area of the city extends west of the freeway, south from Bardsley Avenue and southwards along State Route 99. The Tulare City 2035 General Plan indicates a planned shift more towards heavy industrial area in the future.

As previously mentioned, the City of Tulare and TCAG have requested Caltrans to improve traffic circulation along the Paige Avenue and International Agri-Center Way interchange area. The Tulare City 2035 General Plan implementation measures state that the city will coordinate with Caltrans for the design, funding, and construction of the freeway interchanges.

At the Paige Avenue interchange, the existing NB hook ramps intersection, and the intersection of Paige Avenue and Laspina Street provide unsatisfactory intersection spacing. An analysis of the existing traffic volumes conducted on April 2018 concluded that the existing Paige Avenue interchange operates at Level of Service (LOS) D during the peak traffic periods. The NB ramps accessing to and from the intersection at Paige Avenue/Laspina Street operate at LOS F. The queue length for eastbound (EB) approach of Paige Avenue and Laspina St is longer than the existing spacing between the two intersections. This insufficient spacing leads to excessive queuing at the NB off ramp which could possibly extend onto the freeway mainline in the future.

The existing Paige Avenue interchange is of Type L-6 configuration. As per Highway Design Manual (HDM), due to the inherent geometric deficiencies of the Type L-6 configuration, this configuration can only be considered when all other interchange types are not acceptable. Currently, there is no sidewalk or bike lane facility along the existing Paige Avenue leading to the bridge structure, discouraging multi-model use. However, the Paige Ave OC structure does have an existing 5-foot sidewalk on the southside of the overcrossing.

4B. Regional and System Planning

Identify Systems

SR 99 is a component of the National Highway System (NHS), functionally classified as a principal arterial and an adopted freeway throughout its length. The segment of SR 99 of interests was constructed during the 1950's and 1960's, as part of the Interregional Road System (IRRS). SR 99 is an integral corridor to the economic vitality of the State of California due to its role as an interregional thoroughfare for the movement of people and goods. SR 99 serves the primary population centers in the San Joaquin Valley as well as much of the rural agricultural areas. It is the transportation backbone for the movement of agricultural products and other commercial goods and serves as a major link for recreation-bound traffic, identifying this route as an Intermodal Corridor of Economic Significance (ICES). This route is the primary link that connects the San Joaquin Valley with the Sacramento metropolitan area and the Los Angeles area, via Interstate 5 (I-5).

State Planning

As per the November 2008 Rural Corridor System Management Plan (CSMP) and the Transportation Concept Report (TCR) the Ultimate Transportation Corridor (UTC) for this segment of Route-99 is an 8-lane freeway beyond year 2030. SR 99 is part of the National Truck Network allowed by the Surface Transportation Assistance Act of 1982 (STAA). State Route 99 is deemed as a Regionally Significant Route and is part of the Strategic Highway Network (STRAHNET).

Within the vicinity of this project, the following projects are currently programmed:

- Tulare City Rehab Project (EA: 06-0W910; Tul-99-PM 27.6/30.6) proposes to rehabilitate the existing lanes of SR-99 from Paige Avenue OC (PM: 27.6) to Prosperity Avenue OC (PM 30.578). The anticipated Ready to list (RTL) date for this project is February 2024.
- Tulare Agri-Center Way Interchange Project (EA: 06-0U880; Tul-99-PM 26.3/27.6) proposes to construct a new interchange at International Agri-Center Way (formerly International Agri-Center Way, PM: 26.8), 0.9-mile south of Paige Avenue OC (PM: 27.6). This project is currently awarded for construction.
- Tagus 6-Lane Project (EA: 06-36024; Tul-99-PM 30.6/35.2) proposes to widen the existing 4-lane freeway facility to a 6-lane facility from Prosperity Avenue OC (PM: 30.578) to 1.2 mile south of Avenue 280 OC (PM: 36.41). This project is in construction and scheduled for completion by September 2023.
- Bardsley Ave interchange operational improvements project (EA: 06-1C300; Tul-99-PM 28.2/28.9), proposes to install traffic signals at the ramp intersections. This project is currently in Project Initiation Document phase.

Within the vicinity of this project, the following projects were completed:

- A pavement-focused rehabilitation project (EA: 06-0P170; Tul-99-PM 25.0/27.6) was completed in 2015 to cold plane 0.35' of existing pavement and replace with 0.25' Rubberized Hot Mix Asphalt Type Gap Graded (RHMA-G) and 0.20' Hot Mix Asphalt (HMA) and repaired localized areas of distressed Portland Concrete Cement (PCC) panels.
- An overlay project (EA: 06-0J390; Tul-99-PM 27.6/33.3) was completed in 2008 to cold plane 0.25' of existing pavement and replace with 0.25' HMA in the SB Lane #2 and NB Lane #1. Alongside, the project resurfaced the entire roadbed width with a layer of a 0.08' RHMA (Open Graded).

Regional Planning

The 2018 Regional Transportation Plan and Sustainable Communities Strategy (2018 RTP/SCS), prepared by the Tulare County Association of Governments (TCAG), which covers the years 2018-2042, has included widening to a 6-lane freeway and the proposed work to the interchange on Paige Avenue.

Local Planning

Per the City of Tulare Adopted General Plan, dated October 7, 2014, the city shall coordinate with Caltrans in regard to freeway improvements and interchange design coordination within the City of Tulare. Currently, there are two interchange improvements anticipated for the 20-year horizon at Paige Avenue and Agri Center (International Agri-Center Way).

4C. Traffic

Current and Forecasted Traffic

Locations	*2029 ADT*	*2039 ADT*	*2049 ADT*	*Peak-Hour Directional Volume percentage*	*Truck Design Hourly Volume percentage*
SR 99 (PM 25.2/27.6)	71,500	88,500	110,000	59%	12%
SR 99 (PM 27.6/30.6)	83,000	102,500	127,000	59%	12%
NB On/Off Ramps from Avenue 200	1,100	1,450	1,900	100%	12%
SB On/Off Ramps from Avenue 200	1,450	1,650	1,950	100%	12%
NB Off ramp to International Agri-Center Way	1,800	3,200	5,700	100%	12%
NB loop Onramp to International Agri-Center Way	1,050	1,900	3,350	100%	12%
NB Slip On ramp from International Agri-Center Way	1,200	2,100	3,800	100%	12%
SB Off ramp to International Agri-Center Way	2,800	5,000	9,000	100%	12%
SB loop Onramp to International Agri-Center Way	1,300	2,300	4,150	100%	12%
NB Off-Ramp to Paige Avenue	2,650	3,000	3,400	100%	12%
NB On-Ramp from Paige Avenue	4,950	5,500	6,100	100%	12%
SB Off-Ramp to Paige Avenue	4,250	4,000	3,750	100%	12%
SB On-Ramp from Paige Avenue	3,450	3,000	2,600	100%	12%
NB Off-Ramp to Bardsley Avenue	1,700	2,150	2,700	100%	12%
NB On-Ramp from Bardsley Avenue	5,500	5,800	6,200	100%	12%
SB Off-Ramp to Bardsley Avenue	3,550	4,000	4,450	100%	12%

SB On-Ramp from Bardsley Avenue	2,150	2,300	2,450	100%	12%
NB Off-Ramp to SR 137/Tulare Avenue	2,150	2,550	3,050	100%	12%
NB On-Ramp from SR 137/Tulare Avenue	4,300	5,200	6,200	100%	12%
SB Off-Ramp to SR 137/Tulare Avenue	3,500	4,250	5,200	100%	12%
SB On-Ramp from SR 137/Tulare Avenue	2,000	2,300	2,650	100%	12%
NB Off-Ramp to Prosperity Avenue (Hillman Street)	7,200	7,900	8,600	100%	12%
NB On-Ramp from Prosperity Avenue (Hillman Street)	2,100	2,400	2,750	100%	12%
SB On-Ramp from Prosperity Avenue	4,850	5,200	5,500	100%	12%

Operational Analysis

Two Operational Analysis were conducted, one for the mainline SR 99 and the other for the ramp improvements at the Paige Avenue interchange. For SR 99 mainline, the analysis was conducted based on traffic counts and future traffic forecasts which included existing weekday peak hour traffic volumes, anticipated construction completion year of 2029, and a design year of 2049. The analysis took into consideration that the interchange being constructed by the Tulare Interchange Project (EA: 06-0U880; Tul-99-PM 26.3/27.6) will be completed by year 2029. The Highway Capacity Software (HCS) was utilized to conduct the LOS analysis for ramp-freeway junctions (merge/diverge) and freeway segments. The results of the LOS analysis for the proposed improvements are shown below:

Locations	***Existing***	***2029 LOS***	***2049 LOS***
No-Build NB SR 99 (PM 25.4/30.6)	C-D	D-E	E-F
No-Build SB SR 99 (PM 25.4/30.6)	B-C	C-E	F
Proposed Improvements NB SR 99 (PM 25.4/30.6)	-	B-D	C-D
Proposed Improvements SB SR 99 (PM 25.4/30.6)	-	B-C	C-D

Without improvements, the SR 99 merge/diverge traffic operations will be mostly at acceptable levels and will continue to do so though the year 2029. The NB Off-Ramp to Prosperity

Avenue (Hillman Street) will degrade from an existing LOS D to an unacceptable LOS E in year 2029. However, by year 2049 the SR 99 merge/diverge traffic operations will all degrade to unacceptable LOS E and F during the peak hours. The mainline freeway segments of SR 99 are currently operating at acceptable LOS during peak hours and will continue to do so through the year 2029 with no improvements. However, by year 2049, the freeway mainline will have insufficient capacity to accommodate the forecasted traffic demand and vehicle delay will significantly increase.

For Paige Ave interchange, an operational analysis was conducted with roundabouts at the ramp terminals, and two additional roundabouts at the adjacent intersections (Blackstone/Paige and Laspina/Paige).

The analysis was also based on the configuration assumptions that, improvements at the International Agri-Center Way interchange (Reference EA – 06-0U880) are assumed to be completed and constructed. This project is proposing a new interchange on SR 99 at Commercial Avenue and one auxiliary lane to SR 99 in both directions between Commercial Avenue Interchange and Paige Avenue Interchange.

The future traffic forecasts were prepared by District 6 Technical Planning Branch. The data includes weekday peak hour traffic volumes for anticipated Construction Completion Year 2029, Year 2039, and Design Year 2049 conditions within the study area.

The study used a Level of Service (LOS) analysis to describe operational conditions. The Sidra Intersection 8 software was utilized to analyze the LOS for the roundabouts.

The following are recommended lane configurations to maintain an acceptable level of service based on Year 2049 conditions:
Roundabout at NB ramp terminal:

- One circulating lane on the northbound (NB)and southbound (SB) directions, and two circulating lanes on the eastbound (EB)and westbound (WB) directions
- EB approach: 1 shared left to NB 99 on-ramp/through lane, and 1 through lane
- WB approach: 1 through lane, and 1 shared through/right-turn lane to NB 99 on-ramp
- NB approach: 1 shared left/through lane, and 1 right-turn lane

Roundabout at SB ramp terminal:

- One circulating lane on the NB and SB directions, and two circulating lanes on the EB and WB directions
- EB approach: 1 through lane, and 1 shared through/right-turn lane to SB 99 on-ramp
- WB approach: 1 shared left to SB 99 on-ramp/through lane, and 1 through lane
- NB approach: 1 shared left/through lane, and 1 right-turn lane

Roundabout at Paige Avenue/Laspina Street:

- Two circulating lane on all directions

- EB approach: 1 shared left/through lane, 1 through lane, and 1 right- turn bypass
- WB approach: 1 shared left/through lane, 1 through lane, and 1 right- turn bypass
- NB approach: 1 left-turn lane, 1 through lane, and 1 right-turn bypass
- SB approach: 1 shared left/through lane, 1 through lane, and 1 right- turn bypass

Roundabout at Paige Avenue/Blackstone Street:

- One circulating lane on the northbound bound direction, and two circulating lanes on the eastbound, westbound, and southbound directions
- EB approach: 1 shared left/through lane, and 1 shared through/right- turn lane
- WB approach: 1 shared left/through lane, 1 through lane, and 1 right- turn bypass
- NB approach: 1 shared left/through lane, 1 right-turn to EB Paige, and 1 direct access lane to SB 99 (allow vehicle traffic to directly access to SB 99 on-ramp).
- SB approach: 1 shared left/through lane, and 1 shared through/right- turn lane

The table below summarize intersection LOS during the AM and PM peak hour conditions based on the intersection geometries described as above:

Intersection	Traffic Control	LOS in 2029		LOS in 2039		LOS in 2049	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
NB ramp terminal	Roundabout	A	A	A	A	B	B
SB ramp terminal	Roundabout	A	A	A	A	B	A
Paige Avenue and Laspina Street	Roundabout	A	A	A	A	C	B
Paige Avenue and Blackstone Street	Roundabout	A	A	B	B	D	D

Since the operational analysis assumed that International Agri-Center Way interchange will be completed and operational by 2029, an analysis of the freeway weaving section between Paige Avenue and International Agri-Center Way was conducted. The International Agri-Center Way interchange project (EA: 06-0U880) will construct one auxiliary lane in each direction between International Agri-Center Way interchange and the existing Paige Avenue interchange. The results of the weaving analysis are shown below:

Direction	*Weaving Section*	*Segment Length*	*2049 LOS (20 Yr)*	
		(feet)	*AM*	*PM*
NB	International Agri-Center Way to Paige Avenue	551	B	C
SB	Paige Avenue to International Agri-Center Way	370	C	C

The results of the analysis of the weaving sections indicate that they will operate at LOS B/C in year 2049. Due to the short weaving segment length and higher truck percentage at these interchanges, it was recommended to install ramp metering on the on-ramps, which will be incorporated. Ramp metering reduces overall freeway congestion by managing the amount of traffic entering the freeway and breaking up platoons that make it difficult to merge onto the freeway.

Collision Analysis

The collision rates for the most recent three-year period (1/1/2017 to 12/31/2019) for the 5.4-mile segment of SR 99 mainline is shown below:

Location	*Actual (Collisions per Million Vehicle-Miles)*			*Statewide Average (Collisions per Million Vehicle-Miles)*		
	Fatal	*F+I*	*Total*	*Fatal*	*F+I*	*Total*
NB Mainline SR 99 (PM 25.2/30.6)	0.00	0.15	0.71	0.006	0.28	0.80
SB Mainline SR 99 (PM 25.2/30.6)	0.012	0.11	0.46	0.006	0.28	0.80

Abbreviations: F+I – Fatal plus injury collisions, MVM – Million Vehicle-Miles

This table shows that the actual F+I and Total collision rates, for both directions, are relatively lower when compared with the statewide average collision rates for a similar freeway segment with comparable traffic volumes. During the most recent 36-month study period along SR 99, within these project limits, Traffic Accident Surveillance and Analysis System (TASAS) Table B reported 121 and 81 collisions in the northbound and southbound segments, respectively.

The Table B reported 0 fatal, 24 injury, and 97 property-damage only collisions along the NB segment of the freeway. A review of the collision data for the NB segment reveals that the types-of-collisions are mostly distributed between *Rear-End* (36%), *Sideswipe (22%),* and *Hit Object* (26%). These three types of collisions account for 84% of the total 121 collisions. The collision data also reveals that the primary collision factors are mostly distributed between *Improper Turn (24%), Speeding (52%),* and *Other Violations (15%).* These three primary collision factors account for 91% of the total 121 collisions. It was reported that 113 of the total 121, or 93%, collisions occurred during no unusual roadway conditions. Thirty-seven of the total 121 collisions (31%) occurred during dark or low-light conditions.

The Table B reported 2 fatal, 19 injury, and 60 property-damage only collisions along the SB segment of the freeway. A review of the collision data for the SB segment reveals that the types-of-collisions are mostly distributed between *Rear-End* (33%), *Sideswipe (28%),* and *Hit*

Object (26%). These three types of collisions account for 88% of the total 81 collisions. The collision data also reveals that the primary collision factors are mostly distributed between *Improper Turn (28%), Speeding (30%),* and *Other Violations (24%).* These three primary collision factors account for 82% of the total 81 collisions. All but 7 of the total 81 collisions occurred with a dry road surface. Twenty-eight of the total 81 collisions (35%) occurred during dark or low-light conditions.

The collision rates for the most recent three-year period (1/1/2017 to 12/31/2019) for the 19 ramps, within the project limits, is shown below:

Location	***Actual (Collisions per Million Vehicles)***			***Statewide Average (Collisions per Million Vehicles)***		
	Fatal	***F+I****	***Total***	***Fatal***	***F+I****	***Total***
NB Off-Ramp to Avenue 200	0.00	0.00	0.00	0.006	0.39	1.25
SB On-Ramp from Avenue 200	0.00	0.00	0.00	0.007	0.21	0.61
NB On-Ramp from Avenue 200	0.00	0.00	0.00	0.007	0.21	0.61
SB Off-Ramp to Avenue 200	0.00	0.68	2.06	0.006	0.39	1.25
NB Off-Ramp to Paige Avenue	0.00	0.00	1.25	0.006	0.39	1.25
NB On-Ramp from Paige Avenue	0.00	0.00	1.27	0.007	0.21	0.61
SB On-Ramp from Paige Avenue	0.00	0.00	0.40	0.007	0.21	0.61
SB Off-Ramp to Paige Avenue	0.00	0.59	2.36	0.006	0.39	1.25
NB Off-Ramp to Bardsley Avenue	0.00	0.00	1.28	0.008	0.39	1.03
SB On-Ramp from Bardsley Avenue	0.00	0.00	0.86	0.002	0.23	0.63
NB On-Ramp from Bardsley Avenue	0.00	0.00	0.39	0.002	0.23	0.63
SB Off-Ramp to Bardsley Avenue	0.00	0.32	1.60	0.008	0.39	1.03
NB Off-Ramp to SR 137	0.00	0.54	2.15	0.026	0.38	1.01
NB On-Ramp from SR 137	0.285	0.57	1.71	0.003	0.12	0.45
SB On-Ramp from SR 137	0.00	0.00	0.00	0.003	0.12	0.45
SB Off-Ramp to SR 137	0.00	0.38	1.13	0.026	0.38	1.01
NB Off-Ramp to Hillman Street	0.00	0.00	0.14	0.005	0.32	0.92
SB On-Ramp from Prosperity Avenue	0.00	0.00	0.20	0.007	0.21	0.61
NB On-Ramp from Hillman Street	0.00	0.00	0.00	0.007	0.21	0.61

Abbreviations: F+I – Fatal plus injury collisions, MV – Million Vehicles

At three of the four ramps at the Avenue 200 interchange (NB Off-Ramp, SB On-Ramp, and NB On-Ramp), the Table B reported 0 collisions during the most recent 36-month study period. With no collisions at the three ramps, the actual F+I and Total collision rates are lower when compared with the statewide average collision rates for similar ramp configurations with comparable traffic volumes.

At the SB Off-Ramp to Avenue 200, the Table B reported a total of 3 collisions which can be further categorized into 0 fatal, 1 injury, and 2 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are slightly higher when compared with the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the three collisions could be described as a *Hit Object* type-of-collision with a primary collision factor of *Speeding.* All collisions occurred during clear weather, day light, and with a dry roadway surface.

At the NB Off-Ramp to Paige Avenue, the Table B reported a total of 3 collisions which can be further categorized into 0 fatal, 0 injury, and 4 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are consistent with the statewide average collision rates for similar ramp configurations with comparable traffic volumes. This indicates that the number of collisions is what will typically be expected. A review of the collision data reveals that the types-of-collisions are distributed between *Sideswipe (33%), Broadside (33%),* and *Hit Object* (33%). The collision data also reveals that the primary collision factors involved *Influence of Alcohol (33%), Other Violations (33%),* and *Unknown (33%).* All collisions occurred during clear weather with a dry roadway surface. All but 1 of the total 3 collisions occurred during dark or low-light conditions.

At the NB On-Ramp from Paige Avenue, the Table B reported a total of 4 collisions which can be further categorized into 0 fatal, 0 injury, and 3 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are higher when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the types-of-collisions are distributed between *Head-On (25%), Rear-End (25%), Broadside (25%),* and *Hit Object* (25%). The collision data also reveals that the primary collision factors involved *Failure to Yield (50%) and Speeding (50%).* All collisions occurred during day lighting with no dark or low-light conditions. All but 1 of the total 4 collisions occurred during cloudy weather 2ith a wet roadway surface.

At the SB On-Ramp from Paige Avenue, the Table B reported a total of 2 collisions which can be further categorized into 0 fatal, 0 injury, and 2 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are slightly lower when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the types-of-collisions are distributed between *Hit Object (50%) and Other (50%)*. The collision data also reveals that the primary collision factors involved *Improper Turn (50%) and Not Stated (50%).* One of the 2 collisions occurred during clear weather, day lighting, and with a dry roadway surface. The other collision was unstated as to the conditions of the collision.

At the SB Off-Ramp to Paige Avenue, the Table B reported a total of 12 collisions which can be further categorized into 0 fatal, 3 injury, and 9 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are higher when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the types-of-collisions are distributed between *Hit Object (83%) and Overturn (17%)*. The collision data also reveals that the primary collision factors involved *Influence of Alcohol (25%), Improper Turn (8%),* and *Speeding (67%).* All but 1 of the total 12 collisions occurred dark or low-light conditions; and all but 2 of the collisions occurred with a wet roadway surface. Two and one of the total 12 collisions occurred with cloudy and rainy weather conditions, respectively.

At the NB Off-Ramp to Bardsley Avenue, the Table B reported a total of 2 collisions which can be further categorized into 0 fatal, 0 injury, and 2 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are slightly higher when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the types-of-collisions are distributed between *Head-On (50%) and Broadside (50%)*. The collision data also reveals that the primary collision factor for the two collisions involved *Failure to Yield.* All collisions occurred during clear weather, day light, and with a dry roadway surface.

At the SB On-Ramp from Bardsley Avenue, the Table B reported a total of 2 collisions which can be further categorized into 0 fatal, 0 injury, and 2 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are slightly higher when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the types-of-collisions are distributed between *Sideswipe (50%) and Rear-End (50%)*. The collision data also reveals that the primary collision factors involved *Improper Turn (50%) and Speeding (50%).* One, or 50%, of the collisions occurred during clear weather, day light, and with a dry roadway surface. The other collision occurred during rainy weather, dark lighting, and with a wet roadway surface.

At the NB On-Ramp from Bardsley Avenue, the Table B reported a total of 2 collisions which can be further categorized into 0 fatal, 0 injury, and 2 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are lower when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the types-of-collisions are distributed between *Hit Object (50%) and Auto-Pedestrian (50%)*. The collision data also reveals that the primary collision factors involved *Failure to Yield (50%) and Other Than Driver (50%).* All but one of the two collisions occurred dark lighting; and all but one occurred with a wet roadway surface. Both collisions occurred during clear weather conditions.

At the SB Off-Ramp to Bardsley Avenue, the Table B reported a total of 5 collisions which can be further categorized into 0 fatal, 1 injury, and 4 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are slightly higher when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the types-of-collisions are distributed between *Sideswipe (20%), Head-On (40%) and Broadside (40%)*. The collision data also reveals that the primary collision factors involved *Failure to Yield (60%) and Speeding (40%).* All collisions occurred during clear weather with a dry roadway surface. All but one of the total 5 collisions occurred day lighting.

At the NB Off-Ramp to SR 137 (or Tulare Avenue), the Table B reported a total of 4 collisions which can be further categorized into 0 fatal, 1 injury, and 3 property-damage only collisions

during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are higher when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the types-of-collisions are distributed between *Head-On (25%), Sideswipe (25%), Hit Object (25%), and Overturn (50%)*. The collision data also reveals that the primary collision factors involved *Influence of Alcohol (50%), Failure to Yield (25%), and Speeding (25%).* Two of the collisions occurred during dark or low lighting conditions. All but one collision occurred clear weather conditions; and all collisions occurred with a dry roadway surface.

At the NB On-Ramp from SR 137 (or Tulare Avenue), the Table B reported a total of 6 collisions which can be further categorized into 1 fatal, 1 injury, and 4 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are higher when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the types-of-collisions are distributed between *Rear-End (50%), Hit Object (33%), and Overturn (17%)*. The collision data also reveals that the primary collision factor for all 6 collisions involved *Speeding.* Four of the total 6 collisions occurred with a wet roadway surface. Two of the total 6 collisions occurred during dark lighting conditions. Three and one of the total 6 collisions occurred with cloudy and raining weather conditions, respectively.

At SB On-Ramp from SR 137 (or Tulare Avenue), the Table B reported 0 collisions during the most recent 36-month study period. With 0 collisions at the ramp, the actual F+I and Total collision rates are lower when compared with the statewide average collision rates for similar ramp configurations with comparable traffic volumes.

At the SB Off-Ramp to SR 137 (or Tulare Avenue), the Table B reported a total of 3 collisions which can be further categorized into 0 fatal, 1 injury, and 2 property-damage only collisions during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are consistent with the statewide average collision rates for similar ramp configurations with comparable traffic volumes. This indicates that the number of collisions is what will typically be expected. A review of the collision data reveals that the types-of-collisions are distributed between *Sideswipe (33%), and Broadside (67%)*. The collision data also reveals that the primary collision factors involved *Failure to Yield (67%), and Unknown (33%).* Two of the collisions occurred during dark or low lighting conditions. All but one collision occurred during clear weather, day light, and with a dry roadway surface.

At the NB Off-Ramp to Hillman Street, the Table B reported one collision which was categorized as a property-damage only collision during the most recent 36-month study period. The actual F+I and Total collision rates for this ramp are lower when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the collision could be described as a *Hit Object* type-of-collision with a primary collision factor of *Speeding.* The collision occurred during cloudy weather, day light, and with a wet roadway surface.

At the SB On-Ramp from Prosperity Avenue, the Table B reported one collision which was categorized as a property-damage only collision during the most recent 36-month study period. The actual F+I and Total collision rates, for this ramp, are lower when compared to the statewide average collision rates for similar ramp configurations with comparable traffic volumes. A review of the collision data reveals that the collision could be described as a *Broadside* type-of-collision with a primary collision factor of *Other Violations.* The collision occurred during rainy weather, day light, and with a wet roadway surface.

At NB On-Ramp from Hillman Street, the Table B reported 0 collisions during the most recent 36-month study period. With 0 collisions at the ramp, the actual F+I and Total collision rates are lower when compared with the statewide average collision rates for similar ramp configurations with comparable traffic volumes.

5. ALTERNATIVES

5A. Build Alternative for SR 99 6-lane widening

The build alternative is the preferred alternative. This alternative will add a flexible pavement lane and shoulder in the median, in each direction, and rehabilitate the existing lanes between the beginning of the project PM 25.20 and Paige Ave PM 27.60.

Proposed Engineering Features

SR-99, Mainline

Pavement: Widen the existing 4-lane freeway to a 6-lane freeway by constructing an inside 12-foot-wide Hot Mix Asphalt (HMA) concrete pavement lane. Inside shoulder width will be mostly 8-foot-wide, except near overcrossing structures, where the inside shoulder width will vary from 3.5-foot to 8-foot. This reduction in shoulder width is required to pass under the existing bridges that have limited span width. The inside lane pavement design life is 20-year. Between PM 25.20 and 27.60 rehabilitate the existing lanes by replacing the asphalt concrete layer with 0.20’ RHMA and 0.30’ HMA.

Median: Replace existing thrie beam barriers with concrete median barrier, except for a section of SR-99 between Stations 613+00 and 634+00. Since this section of SR-99 is inside the Bates Slough floodplain, thrie beam barrier will be used as median barrier. HQ Traffic Operations Liaison and District-6 Maintenance Engineer have reviewed the need for the use of thrie beam barrier and provided their approval.

Side slope: Maintain 2:1 side slope in cut slope sections and varying 2:1 to 4:1 side slope in fill sections. Provide trapezoidal or V-shaped drainage ditch adjacent to fill sections to convey storm water runoff from the widened mainline pavement.

Maintenance Vehicle Pullouts (MVP): Construct new MVP along SB SR 99, near Bardsley Ave, Tulare Ave and Prosperity Ave pumping plants. Construct retaining walls at these locations to widen the pavement for the pullout. Construct one additional MVP along Blackstone Ave, adjacent to Prosperity Ave pumping plant. Survey the existing Right way fence location near Tulare Ave pumping plant, and reset the fence along State R/W. Place paved access path to Tulare Ave pumping plant from Sierra Avenue, if the R/W fence is reset.

Drainage Improvements: Construction of the new inside lanes will remove the existing dirt median and the median drainage facilities. Provide new drainage inlets and grated line drains along the new median to remove storm water. Replace existing cross culverts (about 50) with new reinforced concrete pipe culverts. Provide additional drainage basins to collect stormwater. Reconstruct Bardsley Ave storage tank under SB lanes to increase capacity.

R/W Security Fence Wall: Six segments of security fence walls (prefabricated concrete panel or masonry block wall) are proposed on both sides of SR 99, near Tulare Ave and Cross Avenue to prevent encampments inside State R/W. The walls are about 8'-high. At the request of Tulare City Parks Division, wrought iron fence walls are proposed at the connection points to Tulare pedestrian overcrossing.

Landscaping: On-ramp lane widening, Southbound Lane realignment between PM 25.62 and 26.35, and soundwall and security fence wall construction will impact the existing landscaping, trees, shrubs, landscape irrigation systems. Improvements at Paige Ave interchange will require extensive landscaping work. A split-off landscape project is proposed to reestablish the impacted elements after this project is completed.

Lighting, ITS Elements and Signs: The proposed lighting work will include LED replacements and light head replacements per latest Lighting Design Manual at various ramps within the project limits. All signs, new or existing within the limits of the project, shall include retroreflective sheeting complying with American Society for Testing and Materials D4956-13 (ASTM) Type XI, with the exception of white background signs. All striping shall be incorporated with enhanced wet-night visibility.

There are various existing ITS elements within the project limits that will require modification. In addition, several new ITS elements are proposed.

Other Improvements: Realign the existing SB lanes parallel to the existing NB lanes between PM 25.62 and 26.35. Replace all existing guardrails with Manual for Assessing Safety Hardware (MASH) -compliant Midwest Guardrail Systems.

Ramp Improvements

There are 19 existing ramps within the project limits. Four more new ramps will be completed with the International Agri-Center Way interchange project. This widening project proposes the improvements listed in the following paragraphs.

Ramp Widening and Metering

Per Caltrans' Deputy Directive (DD) 35-R-1 on Ramp Metering, provisions for ramp metering shall be included in any project that proposes additional capacity, modification of an existing interchange, or construction of a new interchange within the freeway corridors identified in the Ramp Metering Development Plan (RMDP).

At present, none of the existing onramps within the project limits are equipped with ramp metering. The 2017 RMDP has identified 8 onramps to have ramp metering installed. Per the Ramp Meter Design Manual (RMDM), High-Occupancy vehicle (HOV) preferential lanes are to be provided wherever ramp meters are installed. In addition, the current design standards require a 300-foot auxiliary lane at the end of the ramp, before ramp merger begins.

Based on the above requirements, the following onramps will be widened to 2-lane, one general purpose and one HOV lane, and equipped with ramp metering and CHP enforcement area:

NB On-Ramp from Paige Ave
SB On-Ramp from Paige Ave
NB On-Ramp from Bardsley Ave
SB On-Ramp from Bardsley Ave
NB On-Ramp from Tulare Ave (SR 137)

Ramp metering is not feasible at the following onramps for reasons listed below. A fact sheet for exception to ramp metering policies will be prepared for approval.

Location	Reason
NB onramp from Hillman St	Prosperity Ave OC span is not wide enough to construct 300-foot ramp auxiliary lane.
SB onramp from Merritt Ave/Blackstone Ave	Not enough R/W available for 2-lane widening.
SB onramp from Tulare Ave	Tulare Ave OC span is not wide enough to construct 300-foot ramp auxiliary lane.

The SB onramp from Merritt Ave/Blackstone Ave is not long enough to meet the current design standards. A 500-foot-long auxiliary lane will be added at the end of this onramp to assist the merging maneuver.

5B. Reconstruct Paige Ave Interchange

This project will reconfigure the existing Paige Avenue interchange to a tight diamond interchange configuration and provide the following improvements to streamline traffic operations in the surrounding area.

Ramps: Remove existing ramps and construct new ramps on revised alignment to form a tight diamond interchange configuration. The on and off ramps will begin/end at Paige Ave Roundabouts. Provide ramp metering and CHP enforcement area for onramps. Reconstruct

the access path from Paige Ave to the Tulare Inn mobile home park. Construct a 1240-foot-long soundwall along the east side of northbound onramp.

Paige Avenue: Provide 4-lanes (2-lanes in each direction) and 8-foot outside shoulder on Paige Ave between Blackstone Ave and Laspina Street intersection with a 10-foot-wide raised median. On the west side of Blackstone Ave, extend the 4-lane just past the entrance to Flying J gas station before tapering back to existing 2-lane configuration. On the east side of Laspina street, extend the 4-lane for about 550-foot before tapering back to existing 2-lane configuration.

Paige Ave and local road intersections: Remove the existing signals at Blackstone Ave and Laspina Street intersections and convert the signalized intersections to roundabouts with two circulating lanes. Roundabout dimensions: Inscribed circle diameter 190-foot, central island diameter 74', truck apron 20-foot-wide, Circulating lanes width 18-foot and 20-foot.

The Blackstone Ave roundabout will have bypass lanes for traffic from NB Blackstone Ave to SB-99 onramp, and from WB Paige Ave to NB Blackstone Ave. About a 300-foot-long, and 6-foot-high retaining wall will be required on the southwest corner of the Blackstone Ave roundabout to minimize impact to the Flying J gas station.

The Laspina street roundabout will be similar in size and have bypass lanes for all right turning traffic.

Remove the existing signalized intersection at the NB on/off ramp terminal. Maintain access to the Tulare Inn mobile home park. However, access to the mobile home park will be limited to right-in and right-out.

Paige Ave Bridge Options: Two options were considered for the bridge and ramp configuration for Paige Ave.

Option-1, Four Roundabout configuration with Paige Ave overcrossing bridge:

This Option proposed a total of 4 similar sized roundabouts along Paige Ave at the intersections of Blackstone Ave, southbound ramps, northbound ramps, and Laspina Street, with a new overcrossing bridge structure for Paige Ave. With this Option, Paige Ave will cross over SR 99, similar to the present crossing. This option requires forming approximately 24-foot-high embankment for each ramp to connect to the Paige Ave. Vehicles entering and exiting SR 99 will have to ascend over these ramps, cross the bridge, and come down to reach Blackstone or Laspina Street.

Pedestrians and bicyclists on Paige Ave will also have to go over the bridge to get to the other side.

Option-2, Four Roundabout configuration with Paige Ave undercrossing bridge:

This Option is a variation of Option-1. This Option proposed to construct Paige Ave at existing ground level and elevate SR 99 to cross over Paige Ave with an undercrossing bridge. Newly formed embankment along SR 99 will raise the profile of the freeway over Paige Ave. The four-roundabout configuration will remain the same as discussed in Option-1, except that all the four roundabouts will be located on ground level Vehicles exiting SR 99 don't need to climb over ramp embankment as with Option-1.

Pedestrians and bicyclists travelling between Blackstone and Laspina Street will travel at ground level instead of going over 24-foot-high bridge and coming down.

The benefits of this Option are,

1) About 20% lower imported borrow to form interchange embankment
2) Pedestrian and bicycle facilities crossing SR 99 will be located on ground level
3) Slightly smaller footprint of the interchange
4) Lower level of emission from vehicles using the ramps.

The R/W impact for the two options will remain approximately the same.

However, with Option-2, the new embankment that needs to be formed to elevate SR 99 over Paige Ave will encroach into the existing floodplain created by the Bates Slough. Mitigation measures for this encroachment will be considered in the next project phase.

Preferred Option

Option-2 received favorable remarks in the public hearing. In a PDT meeting on October 5th, 2023, attended by Caltrans staff, Tulare County Association of Governments and City of Tulare staff, Option-2 was selected as the preferred option considering its benefits over Option-1.

Rejected Option, Three Roundabout configuration with Paige Ave overcrossing bridge:

This Option considered constructing one larger roundabout as an integral part of the Paige Ave overcrossing bridge, to which the NB and SB on/off ramps will connect to. Roundabout dimensions: Inscribed circle diameter about 300-foot, circulating lane width of 13-foot.

This Option will have only 3 roundabouts on Paige Ave. All the traffic between the freeway and the local streets (Blackstone Ave, or Laspina Street) will have to negotiate through only two (2) roundabouts instead of the three (3) roundabouts proposed with the first two options. Besides, the larger size ramp intersection roundabout will make it easier for trucks to enter and exit from the freeway ramps.

However, this option was rejected for the following reasons: The larger inscribed circle diameter (300') required for this roundabout will increase the fastest path vehicle speed and negatively impact the speed consistency through the roundabout. For the roundabout to safely operate, the fastest path speed shall be between 25 to 30 miles per hour. In addition, the construction cost of the roundabout bridge required is about 30% higher than a regular bridge.

Blackstone Ave improvements: On the north side of the proposed roundabout, Blackstone Ave will have 2-lanes in each direction, with a center left turn lane until the entrance to the Southern California Edison facility. Beyond that the lanes will be tapered to match existing lane configuration. The existing ramps from Blackstone Ave will be closed for public traffic. The business entry/exit from and to the existing ramps will be closed.

On the south side of the proposed roundabout, Blackstone Ave will have 2-lanes in each direction, with a center left turn lane until the first business entrance on either side. Beyond this the lanes will be tapered to conform to existing lane configuration.

Laspina Street improvements: On the north side of the proposed roundabout, Laspina street will have 2-lanes in each direction, with a 360-foot-long splitter island in the middle. Beyond that the lanes will be tapered to match existing lane configuration.

On the south side of the proposed roundabout, Laspina street will have 2-lanes in each direction, with a 370-foot-long splitter island in the middle. Beyond that the lanes will be tapered to match existing lane configuration.

Shared use path: Provide 10-foot-wide shared use path for bicycle and pedestrian use around all the roundabouts, and on both sides of Paige Ave between Blackstone Ave and Laspina Street. Provide a 5-foot-wide landscape buffer between the travel lanes and the shared use path around the roundabouts.

Landscaping: The proposed improvements near Paige Ave interchange will require extensive landscape and erosion control work.

Tulare Irrigation District canal: The proposed improvements at Paige Ave interchange will require that the canal be either realigned to the west side of SR 99 or conveyed through a long box culvert along the existing alignment. Currently negotiations are underway with Tulare irrigation district to identify the better option. Canal realignment will require acquisition of additional Right of Way.

For realignment option, the existing SR-99/TID canal crossing will be relocated to the north by about 850-foot. After crossing the highway through a new box culvert, the canal will follow a southwesterly alignment before joining the original alignment on the east side of Blackstone Ave. The existing box culvert under Blackstone Ave will be either replaced or extended out to accommodate the new roundabout. A 25-foot-wide maintenance access path for the canal will be provided from Blackstone Ave.

The existing box culvert under SR-99 will be removed. The proposed NB onramp will be placed over the existing canal alignment.

Construction Impacts: Paige Ave undercrossing structure work will require the closure of Paige Ave between Blackstone Ave and Laspina Street for a period of nine months. During the closure period, traffic will be detoured through International Agri-Center Way interchange. This new interchange is anticipated to be completed in year 2024. Embankment work for elevating Route 99 over Paige Ave would require freeway traffic detour. Blackstone Ave and Laspina Street roundabout construction will require limited traffic movements and/or temporary closure of the intersections. Business access from Blackstone Ave may be interrupted intermittently. A shuttle service to help pedestrian and bicycle will be considered in the next phase.

The conceptual construction staging plan is as follows:

a) Construct all the Paige Ave interchange ramps without roundabouts. Connect the NB on and offramps. Similarly, connect SB on and off ramps. Detour freeway traffic on to the respective ramps.
b) Form the embankment for SR 99 and construct the Paige Ave undercrossing structure.
c) After completing the new bridge and embankment segment, place the freeway traffic back on to SR 99.
d) Complete work on ramps, Paige Ave and the roundabouts.

Detailed traffic detour plan and lane closure plans for the Paige Ave improvements will be finalized in the next project phase.

Drainage Basins: This project will increase impervious area. Construct new drainage basins to collet increased storm water flow from the Paige Ave and SR-99. See table below for additional details on the basins:

Basin #	Location	Approximate L x W	Top Surface Area, SFT	Depth, Ft
1	Southeast corner of S K Street and SR-99	150’ x 170’	15,000	10’
2	PM 25.9, West of SR-99	800’ x 150’	116,250	15’
3	Southeast corner of Paige Ave and SR-99	800’ x 350’	273,700	12’
4	Northeast corner of Paige Ave and SR-99	500’ x 100’	51,000	10’
5	Southwest corner of Paige Ave and SR-99	325’ x 85’	30,000	6’

Nonstandard Design Features

Build-alternative will require an approval of the Design Standard Decisions Document (DSDD) for nonstandard design features that would be completed in the next project phase. The project proposes standard geometric features along the mainline and ramps where feasible. However, to minimize the impact to existing local businesses, residents, environmental impacts and significant project cost increase, standard geometric features at some locations cannot be achieved. Therefore, the build alternative requires an approval of the DSDD for the following mandatory design features:

1) Nonstandard Vertical Clearance under OC structures.

   This project proposes to maintain the existing vertical clearance at the following structures over SR 99. This will result in nonstandard vertical clearance. Table below summarizes the locations and the nonstandard clearance.

Structure	Required Vertical Clearance	Existing Clearance	
		NB	SB
Ave 200 OC	16.5-foot	15’-0”	15’-2”
Bardsley Ave OC	16.5-foot	15’-0”	15’-1”
Tulare Ave OC	16.5-foot	15’-0”	15’-5”
Tulare Pedestrian OC	18.5-foot	16’-1”	16’-5”
Prosperity Ave OC	16.5-foot	15’-4”	15’-5”

2) Nonstandard Superelevation
   This project proposes to maintain the existing horizontal curve radius and superelevation rate on all the existing on and offramps at Prosperity Ave, Tulare Ave, Bardsley Ave and Ave 200 interchanges. This will create nonstandard superelevation rate for curves in the ramp alignment.

3) Nonstandard Median Width
   The Existing median width is about 42-foot. The proposed freeway widening by adding one inside lane in each direction will reduce the available median width to about 18-foot. Highway Design manual 305.1(2)*a* requires a minimum median width of 22-foot. This will create nonstandard median width.

4) Nonstandard Left Shoulder Width
   The proposed freeway widening by adding one inside lane in each direction and median concrete barrier will restrict the available space for the left shoulder width to 8’, Near and under the following existing OC structures the inside shoulder width will vary as follows:

Structure	Required left shoulder width	Proposed left shoulder width	
		NB	SB
Bardsley Ave OC	10-foot	Varies 8' to 2.5'	Var 8' to 2.3'
Tulare Ave OC	10-foot	Varies 8' to 4.2'	Var 8' to 4.0'
Tulare Pedestrian OC	10-foot	Varies 8' to 5.3'	Var 8' to 5.7'
Cross Ave OC	10-foot	Varies 8' to 7.0'	Var 8' to 7.3'
Prosperity Ave OC	10-foot	Varies 8' to 5.2'	Var 8' to 5.3'

5) Nonstandard deceleration length prior to first curve on Offramps.
This project proposes to maintain the existing nonstandard deceleration length before the first curve, at the following Offramps: NB offramp to Ave-200, NB offramp to Tulare Ave and SB Offramp to Tulare Ave.

6) Nonstandard stopping sight distance
This project proposes to maintain the existing nonstandard stopping sight distance at the following vertical curve locations.

Vertical Curve Station	Required minimum Stopping sight distance	Existing Stopping sight distance
772+50 to 778+50	750-foot	677-foot
788+00 to 794+00	750-foot	608-foot
799+50 to 804+00 (Sag)	750-foot	424-foot*

*Headlight Sight distance

The following table summarizes the Design Standards Risk Assessment:

Nonstandard Design	Probability for nonstandard Design approval	Justification for probability rating
Nonstandard vertical clearance under overcrossing bridge structure	High	Structure replacement cost $5 million per bridge. Nonstandard vertical clearance approved for other projects in the vicinity
Nonstandard superelevation	Medium	Additional R/W acquisition cost
Nonstandard median width	High	Additional R/W acquisition and construction cost
Nonstandard left shoulder	High	Additional R/W acquisition, construction cost, and environmental impact

Nonstandard deceleration length	High	Additional R/W acquisition cost
Nonstandard stopping sight distance	High	Additional R/W acquisition and construction cost

High-Occupancy Lanes: No high-occupancy lanes for the mainline are proposed in this project. See topic "Ramp Widening and Metering," for a list of onramps proposed for HOV lanes.

Ramp Metering: For a discussion on Ramp Metering see topic "Ramp Widening and Metering."

California Highway Patrol (CHP) Enforcement Areas

Provide CHP enforcement area for ramp metering at onramps. For the list of onramps with CHP enforcement area, see section "Ramp Widening and Metering."

Park-and-Ride Facilities

There is no park-and-ride facility within this project limits. The nearest park-and-ride facility along SR 99 is near Delano Airport at approximately PM 54.5 in Kern County. No new park-and-ride facility is proposed in this project.

Utility and Other Owner Involvement

Based on preliminary permit search and field reviews, there are existing electric overhead (OH) lines and underground (UG) pipelines present within the project limits. The existing underground utilities such as telecommunication lines, water and sewer lines, electric and gas lines will be protected in place during construction. At locations where there is conflict with proposed construction work, the overhead/underground lines will be relocated.

The Paige Avenue interchange reconstruction will require the relocation of existing overhead and underground facilities. The existing Tulare City storm drain basin on the north-east quadrant of the Paige Avenue interchange will be relocated in coordination with the City of Tulare. Another Tulare City storm drain basin on the southeast corner of the interchange will be combined with a proposed larger size basin to receive storm water from the Paige Ave interchange area.

The proposed embankment for the northbound onramp and the southbound offramp will cover over the Tulare Irrigation District (TID) canal. Currently negotiations are underway with TID to relocate the canal alignment to the west side of the highway. Construction of soundwalls and right-of-way security fence walls near Tulare Ave, and the proposed drainage basins will also cause conflict with existing overhead and underground utilities. All the conflicts will be identified in the next project phase to take the appropriate action.

The utility companies' rights have not been established, and the utility company share of relocation cost is unknown at this point. To be conservative in the estimate, relocations are figured at 100% State liability. After potholing and actual liabilities are determined, a new R/W datasheet will be prepared.

Railroad Involvement

There are no railroads facilities within the project limits, therefore there is no railroad involvement.

Highway Planting

Construction activities will require the removal of existing trees, shrubs and other vegetation and irrigation components. Any vegetation or irrigation that is damaged or removed from within the State Right-of-Way (R/W) will be replaced. All highway planting will be programmed in conjunction with and funded from this roadway construction project. It will be designed and constructed under a separate expenditure authorization. The preliminary cost for planting work includes the cost for irrigation equipment and facilities. The project must be under construction within two years of acceptance of this project. A minimum 3-year plant establishment period will be included to facilitate the success of the highway planting. Any planting and irrigation requested by TCAG in addition to replacement planting will need to be maintained by the City or County for a specific amount of time period.

Erosion Control

All areas disturbed during the construction of this project will require erosion control. The District Landscape Architect will provide a final permanent erosion control plan for the disturbed areas that will not be paved in the final design phase. The permanent erosion controls will consist of compost, straw, hydro mulch and hydroseed. Seed mix for the hydroseed will be native and draught tolerant species appropriate for the arid climate.

Final soil stabilization will be achieved through the implementation of permanent perennial vegetation or the application of long-term, non-degradable materials to cover 100% of the disturbed soil areas. Upon project completion, the site is not expected to pose any additional sediment discharge risk than it did prior to the commencement of construction activity. The project uses 70% Final Cover Method for documenting non-vegetative final stabilization. DSA will be covered with long-term, non-degradable (inert) materials and a seed mix of grasses that will provide permanent long-term erosion control.

Slopes will be rounded to reduce concentrated flow. In cut sections, the existing cut slope of 2:1will be maintained. The funding for erosion control will be separate from the funding for any highway planting requirements which is included in the preliminary cost estimate.

Noise Barriers

A Noise Study Report (NSR) was conducted to evaluate noise impacts and abatement measures under the requirements of Title 23, Part 772 of the Code of Federal Regulations. Under Title 23 CFR 772.11, noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. Based on the evaluation, three soundwalls are proposed in this project. The first wall is 815-foot-long between E Kern Ave and Sierra Ave, along State R/W adjacent to SB SR 99. Wall height varies from 8' to 12'. The second wall is 775-foot-long wall adjacent to Tulare mobile home park, on the north side of Tulare Ave. Wall height varies from 8' to 14'. Both walls will be placed 4' inside of State right of way.

The third soundwall, 1,240-foot-long and 12-foot-high, will be constructed along the new northbound onramp from Paige Ave. This wall is anticipated to provide noise attenuation for 12 homes on the east side of the onramp.

Nonmotorized and Pedestrian Features

Pedestrian and nonmotorized vehicle access are not permitted onto the SR 99 mainline. The proposed improvements at Paige Ave interchange will construct roundabouts at the ramp terminals and local road intersections, and widen Paige Ave. This will incorporate complete street elements such as a 10-foot-wide shared-use path around the perimeter of the proposed roundabouts, American with Disabilities Act (ADA) compliant curb ramps and marked crosswalks. The proposed shared-use path will extend along Paige Ave, on both sides, between Blackstone Ave and La Spina Street.

Needed Roadway Rehabilitation and Upgrading

The existing mainline consists of composite pavement, with asphalt concrete pavement over crack-seated concrete pavement. The ramps are asphalt concrete pavement. The Tulare City Rehabilitation project (EA 06-0W9100) will rehabilitate the mainline and ramp pavement between PM 27.6 and PM 30.6. This freeway widening project (EA 06-48950) will rehabilitate the existing freeway and ramp pavements between PM 25.2 and PM 27.6. In addition, the on-ramps listed under section "Ramp Widening and Metering" will be widened to 2 lanes.

Needed Structure Rehabilitation and Upgrading

There are six overcrossing and one pedestrian overcrossing structures within the project limits. This project will replace the existing Paige Ave OC structure. No work is planned on any other structures.

The existing Paige Ave overcrossing structure was constructed in year 1953, with two12-foot-wide lanes, 2-foot shoulders, and a 4-foot sidewalk on the south side only. The vertical clearance above the highway is 15-foot. With the proposed Paige Ave interchange improvements, rehabilitating the existing bridge is not a viable option for the following reasons:

1) The existing vertical clearance does not meet current design standards. Widening the existing bridge will further reduce the vertical clearance.
2) The Paige Ave profile required to accommodate the proposed improvements does not match with the existing bridge profile.
3) The existing bridge configuration is not conducive to have roundabouts on either side.

Cost Estimates

For the viable alternative, the following are the current year (2023) and construction year (2028) cost estimate. The structure cost estimate is for Option-2.

	Current Year 2023	Construction Midpoint 2028
Roadway	$108.47 million	$133.34 million
Structure	$19.53 million	$24.0 million
Right of Way	$31.5 million	$38.2 million
Total Capital Outlay Cost	159.5 million	195.6 million

The above costs do not include support cost. See Attachment D, for the detailed cost estimate.

Right-of-Way Data

The current estimated right of way costs is $31.47 million See Attachment-E for the completed R/W Data Sheet for this project.

5C. Rejected Alternatives

Alternative 1 – Widen to 6F and Construct Auxiliary Lane

Alternative 1 proposed to widen the existing 4-lane freeway to a 6-lane freeway by constructing an inside lane in both directions, and a NB auxiliary lane between Bardsley Avenue and Prosperity Avenue. The initial study of Alternative 1 indicated right-of-way impact on 40-50 parcels, modification of 3 structures, and increase in construction, R/W, and support cost. Environmental considerations included the need for a Section 4(f) analysis and mitigation for any work to the Tulare POC and a Community Impact Assessment (CIA). During a PDT meeting held on August 26, 2019, with TCAG and the City of Tulare, it was agreed to withdraw Alternative 1.

Alternative 2 – Widen to 8-Lane Freeway

Alternative 2 proposed to widen the existing 4-lane freeway to an 8-lane freeway by constructing an inside and outside lane in both directions. The initial study of Alternative 2 indicated that there will be impact on approximately 200-250 right-of-way parcels, reconstruction of all structures and interchanges, and the project construction, R/W, and support cost increase. Environmental considerations included Section 4(f) analysis and mitigation for any work to the Tulare POC, removal/relocation of static aircraft monuments

and a Community Impact Assessment (CIA). During a PDT meeting held on August 26, 2019, with TCAG and the City of Tulare, it was agreed to withdraw Alternative 2.

Alternative 4 – No Build

No Build Alternative will result in an unsatisfactory LOS on the SR 99 mainline beyond year 2029 and no improvement to traffic circulation at the Paige Avenue Interchange. Increased congestion on the freeway will adversely impact traffic safety. The No Build Alternative will not satisfy the purpose and need of the project.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

There are several potentially hazardous material/waste sites within project boundaries. The Preliminary Site Investigation (PSI) was performed in May - June 2022, addressed total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs) at Paige Avenue Truck Stop gas station; TPH, Oil and Grease, and heavy metals at Gutierrez Tire; and TPH and Oil and Grease at Roche Bulk Oil; asbestos-containing materials (ACM) and/or lead-based paint (LBP) on Tulare Main Canal, six concrete box culverts, and the Budget Inn motel; and lastly, aerially-deposited lead (ADL) in surface soils adjacent to the freeway.

Total petroleum hydrocarbons, volatile organic compounds, oil, and grease, and/or heavy metals

Lab results for Paige Ave Truck Stop, Gutierrez Tire, and Roche Bulk Oil indicate that the sites were not significantly impacted by total petroleum hydrocarbons, volatile organic compounds, Oil and Grease, or heavy metals. However, considerable soil staining was noted at Gutierrez Tire and Roche Bulk Oil, but contamination seems to be limited to the surface. Special handling and disposal may be required. The hazardous waste risk associated with these sites is low.

Asbestos-containing materials and lead-based paint

At Budget Inn motel, fifty-eight samples were collected of suspect material. Asbestos-containing materials (any material containing greater than 1% asbestos) were detected in samples of (non-friable) roof sealant and (friable) acoustical ceiling spray.

Seven LBP chip samples were collected of suspect paints from the exterior of the Budget Inn motel. The interior paint was inspected and found to be in good condition. Paint from the south exterior trim and southeast overhang would be classified as State and Federal hazardous wastes.

A total of 14 ACM samples were collected from the concrete box culverts and Tulare Main Canal; asbestos was not detected.

A bridge survey was completed in December 2017 for the Paige Ave Overcrossing; asbestos was not detected. Lead was not detected at hazardous levels in the paint samples collected during the survey.

Aerially deposited lead

A PSI was conducted in the unpaved shoulders of SR 99 for PM 26.3/27.7 in December 2017. The results indicated that the soil excavated on the southbound shoulder from the surface to a depth of 3 feet or shallower would be considered non-regulated/non-hazardous soil.

However, soil on the northbound shoulder from the surface to a depth of 3 feet had higher concentrations. Proper handling and disposal of soil material would depend on site-specific construction/excavation activities.

Soil from 0.0 - 3.0 ft or shallower (for all areas sampled) would be considered non-regulated/non-hazardous and could be reused on-site, relinquished to the contractor, or disposed of as non-regulated soil.

Soil from 0.0 - 3.0 ft or shallower (for NB/SB shoulders and/or ramps) would be considered non-regulated/non-hazardous and could be reused on-site, relinquished to the contractor, or disposed of as non-regulated soil.

Soil from 0.0 – 1.0 ft (for median area) could be reused on-site provided all agreement conditions are met, or the soil could be disposed of at a Class I landfill as a California hazardous waste. The underlying soil (1.5 – 3.0 ft in the median) had total lead and soluble lead 95% UCLs of 9.7 mg/kg and 0.6 mg/l, respectively. Depending on construction activities, soil from 0.0 - 2.0 ft or from 0.0 – 3.0 ft, if excavated and handled as a whole, would be considered non-regulated/non-hazardous and could be reused on-site, relinquished to the contractor, or disposed of as non-regulated soil.

Paleontological Resources

Grading, excavation, and other ground disturbance activities within the project area have the potential to impact scientifically significant nonrenewable fossils. Applicable excavations are defined as ground disturbance activities extending into previously undisturbed portions of the Modesto and Riverbank Formations (i.e., not previously backfilled materials) at depths greater than 1 foot below the original grade. These areas include, but are not limited to, construction of the new lanes in the median, reconstruction of existing lanes, excavation of side slopes in depressed areas, the reconfigured Paige Avenue Interchange, including new overcrossing and roundabouts, Tulare Main Canal relocation, excavation of new retention basins, new pumping stations, and excavation for soundwalls, retaining walls, and right-of-way walls or fencing.

6B. Value Analysis

Since this project is over the project cost threshold of $25 million, a Value Analysis (VA) is required and will be conducted in the next phase. Recommendations from the VA will be incorporated where appropriate.

6C. Resource Conservation

Most of the roadway and drainage basin excavation material will be used to form embankment for Paige Ave interchange ramps and Paige Ave widening. The existing median thrie beam barrier and guardrail segments removed from the project can be recycled. Rubberized Hot Mix Concrete will be used in pavement structural section, to recycle used tires.

The following measures will be incorporated into the project to conserve energy during construction: Idling is limited to five minutes for delivery and dump trucks and other diesel-powered equipment (with some exceptions), Schedule truck trips outside of peak morning and evening commute hours. Encourage improved fuel efficiency from construction equipment by maintaining equipment in proper working condition, right sizing the equipment for the job, and by using equipment with new technologies. The construction schedule will require lane closures for a longer period of time than in the past to reduce necessary mobilization efforts. Encourage recycled water for construction.

Along Paige Avenue, the shared paths for pedestrians, bicyclists, and other users of non-motorized transport may reduce vehicle miles traveled by cars within the local area. The roundabouts will reduce or eliminate stopping and starting at those intersections, thus reducing vehicle emissions.

6D. Right-of-Way Issues

Right-of-Way Required

The project will require acquisition (full and partial) of approximately 58 parcels varying in zoning from agricultural, commercial, industrial, miscellaneous, and residential. Most of the acquisition is for Paige Avenue interchange improvements, Tulare Irrigation District Canal realignment and the Bardsley Avenue northbound on-ramp widening. Soundwall and R/W security wall construction near Tulare Ave interchange will require temporary construction easement from about 20 parcels.

The Right of Way Lead Time will require a minimum of 34 months after the Right of Way unit receives the certified appraisal maps, utility conflict plans, necessary environmental clearance, and applicable freeway agreements. However, the current project schedule would allow only about 27 months to complete this task due to the conditions set forth on the expenditure of the Trade Corridor Enhancement Program (TCEP) funds. A 12-month extension may be requested to use the fund. This need to be resolved in the next project phase.

All the R/W acquisition and mitigation costs has been incorporated into the Right-of-Way Data Sheet, see Attachment E.

Relocation Impact Studies

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, also referred to as "The Uniform Act," was enacted with the purpose to provide uniform and equitable treatment of people displaced from their homes, businesses, or farms by federal and federally assisted programs.

A field review of the proposed project was conducted to determine the potential impact on the residential and nonresidential units. The field review shows there is no significant impact to owners, tenants, businesses, or persons in possession of real property to be acquired who will qualify for relocation assistance benefits or entitlements under the Uniform Relocation Assistance and Real Property Act of 1970. An analysis of the real estate market indicates there is, and will be in the foreseeable future, adequate property for sale or lease to accommodate the impacted single-family residences and businesses on this project.

Due to the proposed improvements, there are 15 full acquisition parcels in this project that include three improved commercial parcels, three vacant commercial parcels, three miscellaneous/government used parcels (two of them are operating as a canal), and six vacant residential zoned parcels. The improved parcels will be compensated for loss of goodwill, and provided with relocation assistance, demolition, and clearance funds. The remaining parcels include partial acquisitions, and temporary construction easements. Three improved industrial parcels include relocation assistance for personal property moves.

Right of Way Use Agreement Areas

There will be very limited excess right of way available within project limits to have future right of way use agreements. The proposed project is also not located in an area having potential for future airspace leases.

6E. Environmental Compliance

The environmental document for this project is an Environmental Impact Report pursuant to the California Environmental Quality Act and an Environmental Assessment pursuant to the National Environmental Policy Act. This level of document is based on the increase in vehicle miles traveled and greenhouse gas emissions caused by adding capacity.

Based on the vehicle miles traveled analysis, this project would increase vehicle miles traveled by 19,759,200, after the deductions for truck vehicle miles traveled. As such, mitigation measures must be considered. Vehicle miles traveled mitigation can be achieved through modification of the project to reduce the amount of vehicle miles traveled or by providing public transportation improvements.

As mitigation measure, this project would incorporate public transportation improvement programs using cooperative agreements with regional transit agencies. Programs include new vanpool and increasing frequency for local transit routes. For a detailed discussion on vehicle miles traveled analysis and mitigation measures, see Attachment-J.

The table below summarizes the proposed funding and subsequent vehicle miles traveled reductions for the mitigation measures listed above.

Proposed Mitigation	Proposed Funding Amount	Annual Vehicle Miles Traveled Reduction
Tulare County Regional Transit Agency Vanpool Program. Five years of funding.	$432,000	9,926,280
Increase frequency on Tulare County Area Transit Route 20. Five years of funding.	$1,500,000	4,505,600
Increase frequency on Tulare County Transit Route 40. Five years of funding.	$1,500,000	3,379,200
Increased frequency on Tulare County Transit Route 11x. Five years of funding.	$1,250,000	2,956,800
Funding and annual vehicle miles traveled reduction totals for mitigation measures listed above.	$4,682,000	20,767,880

6F. Air Quality Conformity

Tulare County is in attainment status for both the State and Federal Carbon Monoxide Ambient Air Standards; therefore, an analysis is not needed.

6G. Title VI Considerations

Title VI of the Civil Rights Act of 1964 states:

"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, will be included in this project.

6H. Noise Abatement Decision Report

General

This section represents the Noise Abatement Decision Report (NADR) which,

• Is an evaluation of the reasonableness and feasibility of incorporating noise abatement measures into this project,

• Constitutes the preliminary decision on noise abatement measures to be incorporated into the Draft Environmental Document (DED) ; and
• Is required for Caltrans to meet the conditions of *Title 23 Code of Federal Regulations*, Part 772 in accordance with the Federal Highway Administration noise standards.

Results of the Noise Study Report
The Noise Study Report (NSR) for this project was prepared by Allam Alhabaly and approved by Ken Romero, on May 20, 2021. A subsequent study for NB onramp from Paige Ave was completed in June 2023, and an addendum to the original study was issued on June 15, 2023.

The Noise Study Report identified the following four locations that could benefit from Noise abatement measures:

Location 1 - Along the State R/W along SB SR 99 just south of the SR 137/Tulare Avenue Separation Structure for an approximate length of 815 feet. This will provide noise attenuation of 5 dB or more for 5 residences at a maximum height of 12 feet.

Location 2 - Along the State R/W along SB Off-Ramp to SR 137/Tulare Avenue for an approximate length of 775 feet. This will provide noise attenuation of 5 dB or more for 9 residences at the mobile home park at a maximum height of 10 feet.

Location 3 - Along the Edge of Shoulder (ES) of the NB Off-Ramp to SR 137/Tulare Avenue for an approximate length of 540 feet. This will provide noise attenuation of 5 dB or more for 3 residences at a maximum height of 12.

Location 4 - Along the Edge of Shoulder (ES) of the NB On-Ramp from Paige Ave for an approximate length of 1240 feet. This will provide noise attenuation of 5 dB or more for 12 residences at a maximum height of 12.

For additional information see Attachment-H. The following table summarizes the noise barrier evaluation from NSR.

The cost reasonableness of noise abatement measure for each location was determined by calculating a cost allowance that is considered to be a reasonable amount of funds to spend on the abatement. This reasonable allowance is then compared to the engineer's cost estimate for the abatement.

The following section presents the engineer's review and recommendation on the proposed height and reasonableness for each feasible and proposed soundwall for the Build Alternative. For a detailed discussion please see "Noise Abatement Decision Report," Attachment-H.

Summary of Abatement Key Information						
Barrier	Height (ft)	Acoustically Feasible?	Number of Benefited Residences	Total Reasonable Allowance	Estimated Construction Cost	Cost Less than Allowance?
SW1	8-12	Yes	5	$535,000	$552,000*	Yes
SW2	8-14	Yes	9	$963,000	$545,000	Yes
SW3	8-12	Yes	3	$321,000	$407,000	No
SW4	12	Yes	12	$1,284,000	$1,035,000	Yes

* Estimated construction cost is slightly above reasonable allowance. In the next project phase, after refining the soundwall design and cost estimate, if the construction cost estimate for these walls is found to be considerably higher than the reasonable cost allowance, the PDT will consider the appropriate action.

6I. Life-Cycle Cost Analysis

As per the Life-Cycle Cost Analysis (LCCA) Procedures Manual, dated 2013, a Life-Cycle Cost is required for this project. The LCCA for this project was completed in October 2021. See Attachment I for additional information. The following paragraph summarizes the alternatives considered and the results.

Mainline:

The following three alternatives for the mainline No.1 lane were analyzed:

Alternative 1. 20-year rigid Continuously Reinforced Concrete Pavement (CRCP) (Laterally Supported/Widen Slab) over Hot Mix Asphalt Base with a Flexible Shoulder.

Alternative 2. 40-year rigid Continuously Reinforced Concrete Pavement (CRCP) (Laterally Supported/Widen Slab) over HMA Base with a Flexible Shoulder.

Alternative 3. 40-year flexible Rubberized Hot Mix Asphalt over Hot Mix Asphalt over Class 2 Aggregate Base. Same section for lanes and shoulder.

The results of the LCCA for Lane 1 determined that Alternative 2, a 40-year rigid Continuously Reinforced Concrete Pavement (CRCP) (Laterally Supported/Widen Slab) over HMA Base with a flexible pavement shoulder has the lowest Life-Cycle Cost of the three proposed alternatives. However, due to project funding constraints, the PDT decided to rehabilitate the existing freeway and ramp lanes for a 20-year design life. This widening project will add 20-year design life flexible pavement for the third lane in each direction.

Ramps:
Since the traffic volume on NB offramp to Prosperity Ave is the highest when compared to other ramps in this project, Life Cycle cost analysis was performed for that ramp to represent all other ramps in the project.

The four alternatives analyzed for the ramp are as follows:

Alternative 1. 20-year rigid Jointed Plain Concrete Pavement (JPCP) over Hot Mix Asphalt Base.

Alternative 2. 40-year rigid Jointed Plain Concrete Pavement (JPCP) over Hot Mix Asphalt Base.

Alternative 3. 20-year flexible Rubberized Hot Mix Asphalt over Hot Mix Asphalt over Class 2 Aggregate Base.

Alternative 4. 40-year flexible Rubberized Hot Mix Asphalt over Hot Mix Asphalt over Class 2 Aggregate Base.

The results of the LCCA for the ramp determined that Alternative 2, a 40-year rigid Jointed Plain Concrete Pavement (JPCP) over HMA Base has the lowest Life-Cycle Cost of the four proposed alternatives.

However, due to project funding constraints this project will rehabilitate existing ramp pavement. Any ramp widening or proposed new ramps will use flexible pavement with 20-year design life.

6J. Reversible Lanes

Assembly Bill 2542 amended California Streets and Highways code to require, effective January 1, 2017, that Caltrans or a regional transportation planning agency demonstrate that reversible lanes were considered when submitting a capacity-increasing project or a major street or highway lane realignment project to the California Transportation Commission for approval.

Reversible traffic lanes add capacity to the peak traffic direction of the highway and decrease congestion by borrowing capacity from the other (off-peak) direction. Reversing lanes reduces congestion during morning and evening commute hours. Postpone the need to add capacity through conventional lane additions.

The following table shows the construction year (2029) peak hour traffic volume for the NB and SB directions of SR 99 within project limits. Comparison of the NB and SB peak traffic volume shows no substantial difference in traffic volume between the two directions. Reversible lanes are beneficial only in locations where there is substantial difference in traffic

volume exists in the opposite directions. So, after consultation with District Traffic Operations, reversible lane option was not considered as a viable alternative for this project.

Traffic direction	AM peak hour volume	PM peak hour volume
Northbound SR 99	2,304	2,874
Southbound SR 99	2,460	2,510

OTHER CONSIDERATIONS AS APPROPRIATE

Public Hearing Process

Compliance with the public hearing process is required for Category 3 projects. The purpose of the hearing process is to obtain public comment and to ensure that transportation decisions are consistent with the goals and objectives of federal, State, and local entities.

Caltrans held various public hearing meetings during the circulation of the draft environmental document. The draft environmental documents were circulated for public comments for period of 45 days. Public comments were taken into consideration before the PDT recommended the preferred alternative.

Route Matters

Freeway Agreements and New Connections: A freeway agreement completed on November 20, 2021, for the section of SR 99 between PM 25.0 and 31.8, 0.5 mile south of Rankin Road and Cartmill Ave, includes Paige Ave interchange. As such, no superseding freeway agreement is required.

Route Adoptions: Not applicable to this project.

Relinquishments: Paige Ave improvements, TID canal realignment and Bardsley Ave NB onramp widening will require R/W acquisition. After project completion, R/W area outside the Paige Ave interchange access control limits will be relinquished to City of Tulare or Tulare County. The acquired land for TID canal realignment will be relinquished to Tulare Irrigation District. Any excess land outside the access control area for the Bardsley Ave onramp will be relinquished to the City of Tulare.

Permits

The following permits, licenses, agreements, and certifications are required for project construction:

Agency	Permits, Licenses, Agreements, and Certifications	Status
California Department of Fish and Wildlife	1600 Streambed Alteration Agreement	To be applied for during the Plans, Specifications, and Estimates phase of the project.
Central Valley Regional Water Quality Control Board	Waste Discharge Requirement Fee	To be applied for during the Plans, Specifications, and Estimates phase of the project.
Tulare County Regional Transit Agency	Cooperative Agreement	To be obtained before the start of construction.
Tulare County Area Transit	Cooperative Agreement	To be obtained before the start of construction.

Cooperative Agreement

A Cooperative agreement is required with the Tulare County Association of Governments (TCAG) for this project. This agreement will be completed in the next phase before the start of Right of Way acquisition.

Other Agreements

This project will require both a maintenance and drainage agreement between the Caltrans and City of Tulare.

Transportation Management Plan

Preliminary traffic impacts and mitigation for this project have been outlined in the Transportation Management Plan Data Sheet (TMP Data Sheet). The TMP includes provisions for public information, motorist information strategies, COOZEEP, and construction strategies. Costs associated with the traffic impact mitigation measures listed in the TMP Data Sheet have been included in this project cost estimate.

A TMP for this project is required and should be requested when the design is complete enough to determine specific traffic impacts, but yet early enough to make design changes/additions required for traffic mitigation. Lane requirement charts and detailed TMP will be provided during PS&E stage. Lane closures are not allowed when the traffic volume is beyond the capacity of the remaining lanes. Nighttime work outside peak hours is anticipated for this project.

Two lanes in each direction will be maintained for most part of the mainline construction work. One lane may be closed periodically during nighttime hours during stage construction work. Temporary freeway closure is required for erecting and removing false work to construct Paige Ave bridge.

Construction of Paige Ave interchange and the roundabouts will require closure of existing Paige Ave between Blackstone Street and Laspina Street. The proposed detour is through the International Agri-Center Way interchange. Provisions in the form of shuttle service or other means will be provided for pedestrians and bicyclists using existing Paige Ave. Blackstone and Laspina Streets may be closed at Paige Ave during nighttime hours to construct roundabouts.

Detailed planning and coordination with the local agencies will be conducted as design is further developed in the PS&E phase.

Stage Construction

The SR 99 mainline construction will primarily use the following 3 construction stages.

Stage-1: Shift the NB and SB traffic towards outside shoulders, and construct inside lanes and median barrier. Use K-rail to protect construction area in all the stages.

Stage-2: Shift SB traffic on the newly constructed inside lanes and rehabilitate SB lanes.

Stage-3: Shift SB traffic back to the newly constructed SB lanes. Repeat the operation with NB traffic, and complete NB lanes construction.

Construct Paige Ave improvements concurrent with SR 99 mainline construction work. See topic, "Construction Impacts" under section 5B for Stage construction for Paige Ave.

Accommodation of Oversize Loads

SR 99 is a part of the National Network allowed by the STAA route. This project will not alter the Oversize Load access along SR 99. During construction efforts will be taken to maintain access to oversize loads.

Graffiti Control

Tulare county is not considered to be one of the graffiti-prone counties. However, for ease of maintenance, anti-graffiti coating may be applied to the proposed retaining wall, soundwalls and the R/W security fence wall.

Asset Management

This project's primary performance includes satellite assets under drainage, TMS, roadside safety, traffic safety, and mobility. This project's performance objectives are consistent with the Transportation Asset Management Plan, Ten-Year SHOPP Plan, and the Pipeline Performance commitments.

Complete Streets

Within the project limits, SR 99 is a controlled access highway. Neither bicycles nor pedestrians are permitted highway access. In addition, there are no facilities for bicycles or pedestrians within the limits of the project. However, Paige Avenue interchange improvements will incorporate complete street elements such as a shared-use path around the perimeter of the proposed roundabouts and on both sides of Paige Ave. ADA-compliant curb ramps and marked crosswalks will be provided for pedestrian and bicycle safety. A Complete Streets Decision Document (CSDD) is not required for this project since this project was programmed before the date of CSDD implementation.

In addition to the onsite improvements on Paige Avenue, between Blackstone Avenue and Laspina Street, Caltrans is coordinating with project stakeholders to implement additional sidewalks to reduce the gaps between existing sidewalks and connect adjacent residential developments. They are located:

- East of the Paige Avenue and Laspina St intersection, sidewalks will extend on both sides of Paige Avenue to connect to existing sidewalks on the east for approximately 900 feet.
- North of Paige Avenue and Laspina Street intersection, a sidewalk will connect to the existing sidewalk on the west side of Laspina Street. On the east side of Laspina street, an 800 feet long sidewalk will connect to the existing sidewalk. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.
- South of the Paige Avenue and Laspina Street intersection, sidewalk will be placed on both sides of Laspina Street for approximately 800 feet.
- On the north and south sides of the Blackstone Street and Paige Avenue intersection, sidewalks will connect to existing sidewalks.
- At the westside of Blackstone Street and Paige Avenue Intersection, the existing sidewalk on the southside of Paige Avenue to K Street will extend for approximately 2,500 feet. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.

Climate Change Consideration

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. These climatological changes are attributable to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels. GHG emissions from transportation projects can be divided into those produced during State highway operation and those produced during project construction. This project will generate Construction & Maintenance Green House Gas (GHG) Emissions.

Construction Emission: Construction-related GHG emissions for this project were calculated using the Caltrans Construction Emissions Tool (CAL-CET) model. The amount of construction emissions is estimated to be 5,569 tons of CO_2 emitted over the 400 working days of project construction.

Highway Operational Emission: The amount of carbon dioxide emissions generated during the baseline year 2018 is 140,298 tons per year. Because the earliest year for which SAFE factors were developed was 2021, this factor could not be incorporated into the modeling for the 2018 existing conditions (baseline).

In the year 2029, if the project is not built the carbon dioxide emissions are modeled to be 141,728 metric tons per year, which is 1,430 metric tons more CO_2 emissions than for the baseline year. With the SAFE factor applied, the 2029 No Build alternative carbon dioxide emissions will be 150,643 metric tons per year, 10,345 tons more than for the baseline year.

Assuming the proposed project is open to traffic in 2029, for the Build Alternative, the EMFAC 2017 model calculated the CO_2 emissions to be 183,371 metric tons per year, which is an increase of 43,073 metric tons of carbon dioxide emissions over the baseline year. With the SAFE factor applied, CO2 emissions for the opening year will be 194,905 metric tons per year, which is 54,607 more metric tons of emissions than for the Baseline Year.

Carbon dioxide emissions modeled for the No Build alternative for the design year 2049 are 158,335 tons per year, which is 18,037 more tons per year than the baseline year. With the SAFE factor incorporated into the modeling, these emissions will be 178,411.878 metric tons per year which is 38,114 more metric tons of CO2 than for the baseline year of 2018.

For the Build Alternative in the design year 2049 CO_2 emissions will be 201,329 tons per year, which is 61,031 more metric tons of CO_2 emissions than for the baseline year. Applying the SAFE factor, carbon dioxide emissions were modeled to be 226,904.843 metric tons, which is approximately 86,607 more metric tons of CO2 emissions than for the baseline year 2018.

1. MT CO2e Unmitigated GHG Emission
2. MT CO2e Proposed Mitigated GHG Emission, a 28.8% reduction in GHG emissions due to alternative construction and maintenance techniques.

Disclaimer: The resulting GHG emission calculation was obtained using the Federal Highway Administration (FHWA) Carbon Estimator Tool. This is an estimate using data inputs in the PA&ED phase, before details about specific facility dimensions, materials and construction practices are known. The tool may not be appropriate to inform engineering analysis and pavement selection. This term mitigation relates only to the limited number of items used in the FHWA Infrastructure Carbon Estimator (ICE) tool as GHG reduction measures and does

not necessarily reflect all measures that could be included in the development process to reduce greenhouse gas emissions. Nor does the use of the word mitigation apply to the CEQA or NEPA process/ determination for the proposed project.

After meeting with the local community, the Project Development Team proposed to enhance the proposed greenhouse gas mitigation by building sidewalks and vegetative barriers along the following locations:

- East of the Paige Avenue and Laspina St intersection, sidewalks will extend on both sides of Paige Avenue to connect to existing sidewalks on the east for approximately 900 feet.
- North of Paige Avenue and Laspina Street intersection, a sidewalk will connect to the existing sidewalk on the west side of Laspina Street. On the east side of Laspina street, an 800 feet long sidewalk will connect to the existing sidewalk. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.
- South of the Paige Avenue and Laspina Street intersection, sidewalk will be placed on both sides of Laspina Street for approximately 800 feet.
- On the north and south sides of the Blackstone Street and Paige Avenue intersection, sidewalks will connect to existing sidewalks.
- At the westside of Blackstone Street and Paige Avenue Intersection, the existing sidewalk on the southside of Paige Avenue to K Street will extend for approximately 2,500 feet. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.

Vegetative barriers are recognized methods of mitigating greenhouse gas emission, criteria air pollutants and extreme heat. See Sections 2.1.7 and 3.3.4 of the Final Environmental Document.

Broadband and Advance Technologies

A proposed project EA 06-1F280 will install broadband middle mile network along this section of Route 99. This project is expected to be in construction during the 2023-24 fiscal year. No broadband related work is included in this project.

Floodplain

The project is located on Flood Insurance Rate Map (FIRM) numbers 06107C1264E, 06107C1262E, and 06107C1275E on Panels 1264, 1262, and 1275 of 2550 for City of Tulare and Tulare County unincorporated areas with effective dates of June 16, 2009. The two FEMA designated zones within the project limits are Other Flood Areas Zone X (Shaded), and Other Areas Zone X.

Between PM 27.0 and PM 27.4, Bates Slough is a FEMA floodplain designated as Zone X (Shaded). The southern leg of the proposed Paige Avenue/Laspina Street roundabout and the south ends of the proposed Paige Avenue Northbound offramp and Southbound on-ramp will encroach on the Bates Slough floodplain. Appropriate measures will be taken to mitigate any negative impacts.

The existing Avenue 200 Southbound off-ramp and on-ramp are within the FEMA floodplain designated as Zone X (Shaded). The proposed rehabilitation work on the ramps should not affect the floodplain since the elevation and alignment of the ramps will remain the same.

While the proposed project does encroach into a FEMA designated Other Flood Areas Zone X (Shaded), the risks associated with the implementation of the proposed project are not significant. The project as proposed does not constitute a significant floodplain encroachment as defined in the Code of Federal Regulations, Title 23, Section 650.105(q).

Stormwater

This project involves Disturbed Soil Area (DSA) of 98 acres. This project will require the preparation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will be developed by the contractor and submitted to the Caltrans resident engineer for review and acceptance prior to the start of construction. The SWPPP incorporates the applicable temporary construction site BMPs for the project, intended to reduce or eliminate pollutants inside the construction site storm water runoff. This project will increase New Net Impervious (NNI) area by 34 acres. An increase in volume and/or velocity of stormwater runoff is expected due to an increase of new impervious surface. The proposed new drainage features will accommodate the change in runoff volume and velocity.

This project is required to consider permanent treatment BMPs. However, this project proposes to construct or place new drainage features that are considered as Treatment BMPs. The proposed new features are, five new drainage basins within the proposed State R/W, upgrade existing drainage systems with flared end section and rock slope protection, storage tank capacity increase for Bardsley Ave pumping stations and side ditch reconstruction.

7. FUNDING, PROGRAMMING, AND ESTIMATE

Funding

This project is eligible for federal-aid funding. For a list of additional funding sources see section below.

Programming

The project is programmed in the 2020 STIP to be delivered in the 2025/2026 fiscal year. The current construction capital and right of way costs are estimated at $128.00 and $31.47 million respectively. The escalated construction capital and right of way costs are $157.35 and $38.25 million respectively.

Fund Source	Fiscal Year Estimate								
20.XX.075.600	Prior	22/23	23/24	24/25	25/26	26/27	27/28	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support	$4,150								$4,150
PS&E Support			$6,370						$6,370
Right-of-Way Support			$5,371[1]						$5,371
Construction Support						$14,000[2]			$14,000
Right-of-Way			$38,252[1]						$38,252
Construction						$157,345			$157,345
Total	$4,150		$49,993			$171,345			$225,488

Notes:

1) The right of way components are funded through the 2022 Trade Corridor Enhancement Program (TCEP) which was adopted in June 2023.
2) The construction components are anticipated to be funded from a combination of programming. This could include the regional and interregional portion of the State Transportation Improvement Program (STIP), Tulare County sales tax measure funds and the 2024 TCEP cycle and Multimodal Project Discretionary Grant3.

*The support to capital cost ratio is 20.5%. The escalation rate is 3.5% for capital costs. An escalation rate of 3.2% in FY 19/20 through 21/22 and 2% each year afterward for all support costs. Right of way capital is escalated at 5%.

Estimate: See Attachment D for detailed cost estimate.

8. DELIVERY SCHEDULE

Project Milestones		***Milestone Date (Month/Day/Year)***	***Milestone Designation (Target/Actual)***
PROGRAM PROJECT	M015	6/30/2018	6/30/2018
BEGIN ENVIRONMENTAL	M020	7/24/2019	7/24/2019
CIRCULATE DPR & DED INTERNALLY	M060	12/16/2022	1/6/2023
APPROVE DPR	M100	2/14/2023	2/14/2023
CIRCULATE DPR & DED EXTERNALLY	M120	3/1/2023	3/1/2023
APPROVE FED	M160	11/13/2023	11/13/2023
PA & ED	M200	12/14/2023	12/14/2023
R/W REQUIREMENTS	M224	1/15/2024	1/15/2024
REGULAR R/W	M225	6/14/2024	6/14/2024
PS&E TO DOE	M377	12/26/2025	12/26/2025
DRAFT STRUCTURE PS&E	M378	12/16/2025	12/16/2025

RIGHT OF WAY CERTIFICATION	M410	6/15/2026	6/15/2026
READY TO LIST	M460	6/30/2026	6/30/2026
HEADQUARTERS ADVERTISE	M480	10/13/2026	10/13/2026
AWARD	M495	1/05/2027	1/05/2027
APPROVE CONTRACT	M500	02/02/2027	02/02/2027
CONTRACT ACCEPTANCE	M600	10/01/2029	10/01/2029
END PROJECT EXPENDITURES	M800	11/2/2030	11/2/2030
FINAL PROJECT CLOSEOUT	M900	11/3/2031	11/3/2031

9. RISKS

The PDT has prepared a risk register that identifies risks to carry forward to the PS&E phase. The project risk register, Attachment F, is based on utilizing a qualitative risk analysis approach to rank the risks into high, medium, and low risk categories based on their probability of occurrence and their impact on the project objectives such as schedule, cost, right of way impact, and quality. Some of the critical risks are listed below:

Design: Blackstone Street intersection is only 730-foot from SR 99. There is limited space available around the Paige Ave/Blackstone Street intersection for project construction. Construction of Blackstone Street and Paige Ave roundabouts, utility relocation in that area and TID canal realignment, altogether may pose unexpected design or constructability challenges in the next phase when detailed design is performed. This design complexity may delay project schedule, require additional right of way, and increase project cost.

Right of Way: Unexpected R/W acquisition delays could delay project construction. Sufficient R/W lead time is not provided in the project delivery schedule. There is a risk that the right of way capital estimate will continue to increase and may exceed the identified funding. Design unit will continue to analyze right of way requirements to determine if parcels could be reduced or eliminated. If in the event that the right of way estimate exceeds the budget, then Caltrans will coordinate with the local agency to secure additional funding. Caltrans will enter into (or amend) a cooperative agreement with the local agency for any locally generated funds that are designated to cover the right of way capital budget shortfall.

Utility Relocation: Current Tulare Irrigation District (TID) canal alignment is in conflict with Paige Ave interchange proposal. Negotiations are underway with TID to realign the canal. Unforeseen outcome of the negotiations may impact project schedule and cost negatively. In addition, Southern California Edison powerline relocation needs to be finalized. This could trigger additional environmental evaluations that could delay the project or increase utility relocation cost.

Environmental: As a result of project excavation, paleontological resources could be discovered. If the number of fossils exceed the number of fossils assumed to be discovered, this would lead to a delay in the construction schedule and an increase in construction costs.

10. EXTERNAL AGENCY COORDINATION

The project requires the coordination with the following agencies:

- California Department of Fish and Wildlife
- Federal Highway Administration (FHWA)
- Tulare Irrigation District
- City of Tulare
- Central valley Regional Water Quality Control Board

Caltrans and the FHWA will work in partnership to deliver the Federal-aid Highway Program (FAHP) to deliver projects in accordance with Federal requirements. Section 106 of Title 23, United States Code (Section 106), authorizes the State to assume specific project approvals. Caltrans is to assume the FHWA's Title 23 responsibilities for design; PS&E; contract awards; and inspections, with respect to Federal-aid projects on the NHS if both Caltrans and FHWA determine that assumption of responsibilities is appropriate.

11. PROJECT REVIEWS

Review	Name	Date
Scoping team field review	I. Perez, P. Chander, J. Zarate, B. Gutierrez, J. Torres, M. Peton, J. Castillo, J. Wang, W. Kronman, F. Gonzalez F. Deharo, M. Maggi	1/12/2021
District Program Advisor	Jay Baird	2/1/2023
Right of Way	Jon Russel, Sara Blum	2/3/2023
HQ Project Delivery Coordinator	Paul Genaro	9/21/2021
Project Manager	Eric Karlson	5/26/2021
District Safety Review	Albert Lee	3/28/2019
Constructability Review	Brenda Felder	2/15/2022
PEER Review	Mark Bretz, Jun Xu	11/28/2023

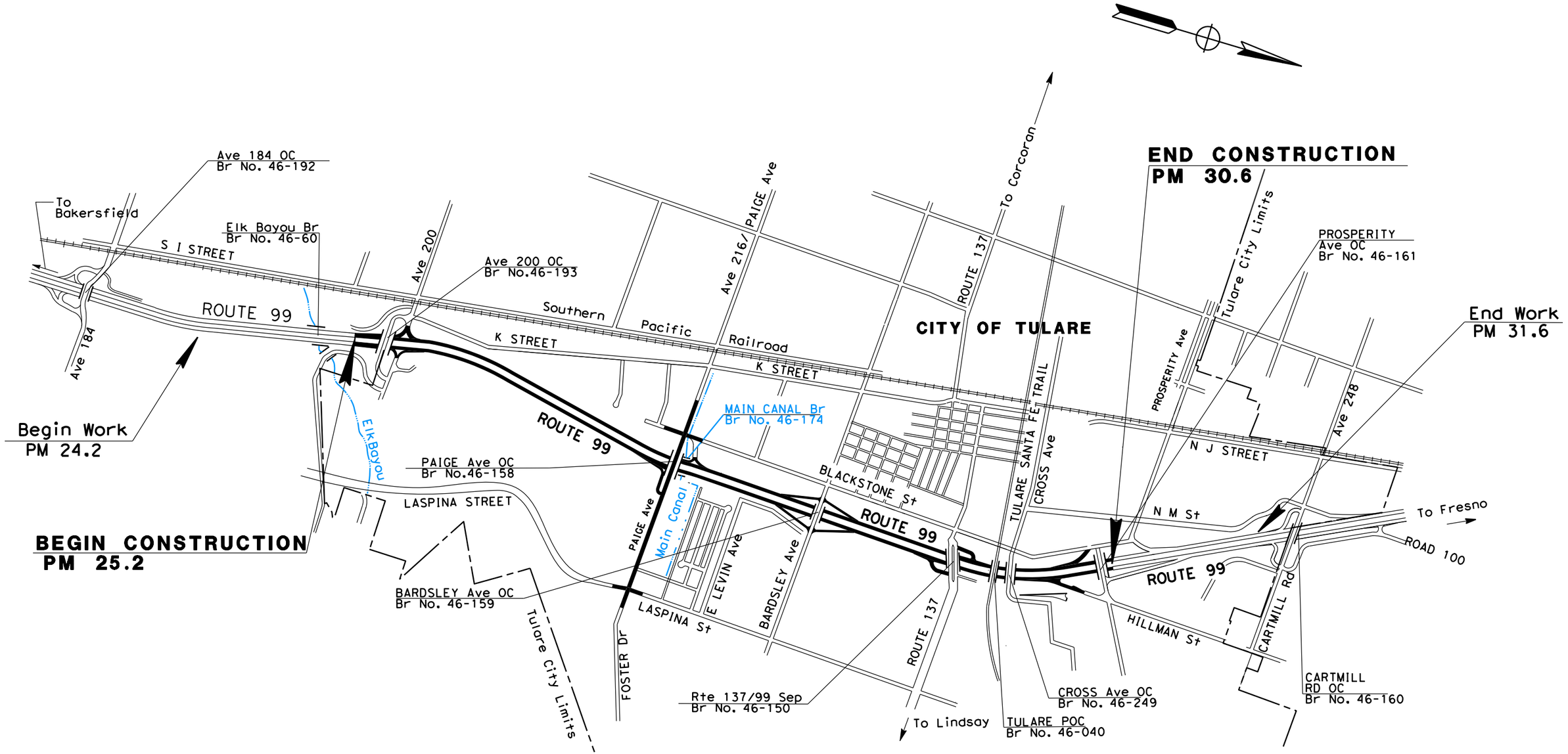
12. PROJECT PERSONNEL

Mike Dennison	Project Manager	(559) 383-5715
Irene Lee	Design Manager	(559) 383-5220
Peter Chander	Project Engineer	(559) 401-9415
Javier Huerta	Construction Manager	(559) 651-8319
Javier Almaguer	Environmental Manager	(559) 287-9320
Sara Blum	Right of Way Manager	(559) 383-5194

Tom Overstreet	Survey Manager	(559) 445-6572

13. ATTACHMENTS

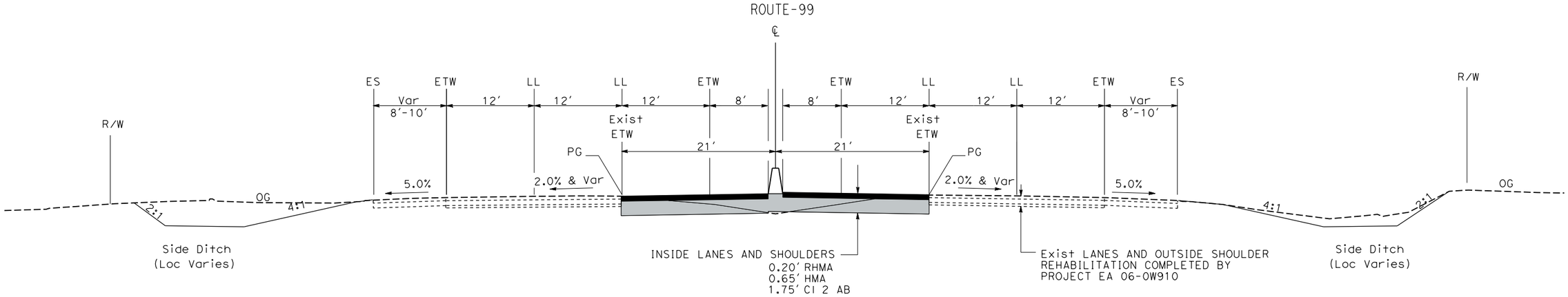
A. Location Map
B. Typical Cross Section
C. Project Strip Map
D. Project Cost Estimate
E. Right-of-Way Data Sheet
F. Risk Register
G. Stormwater Data Report – Signed Cover Sheet
H. Noise Abatement Decision Report / Noise Study Report
I. Life Cycle Cost Analysis
J. Environmental Document



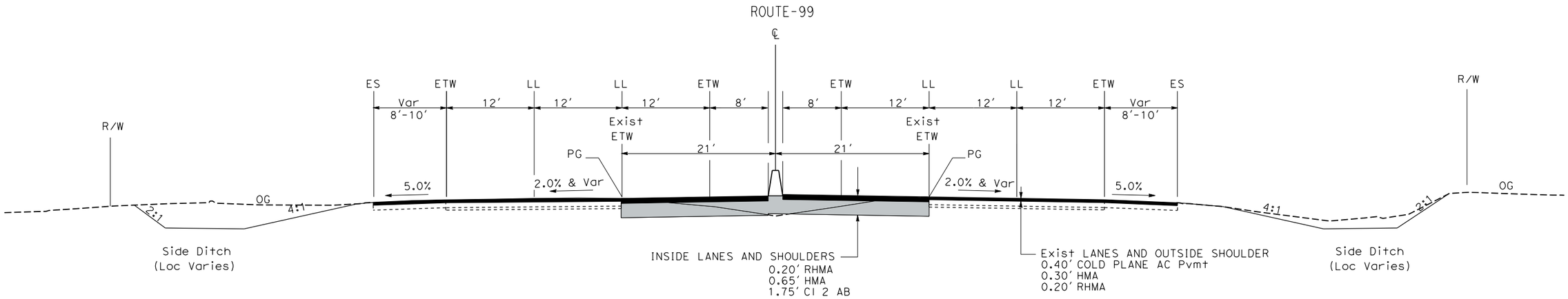
LOCATION MAP

ATTACHMENT A

NO SCALE



PM 27.60 TO 30.60



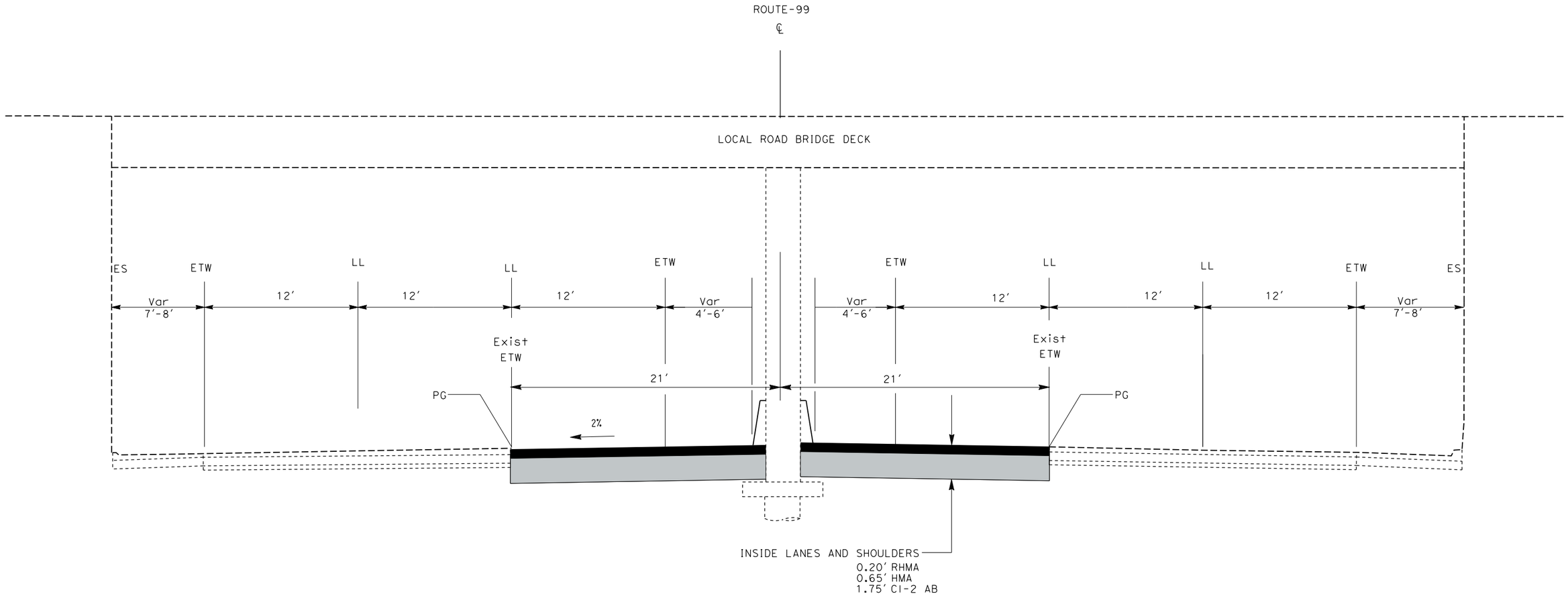
PM 25.20 TO 27.60

ROUTE-99 WIDENING

ATTACHMENT B

TYPICAL CROSS SECTIONS

NO SCALE



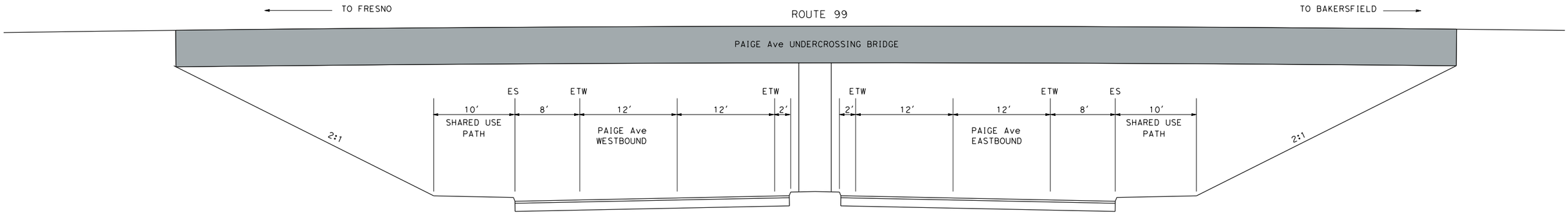
UNDER Exist OVERCROSSINGS

ROUTE-99 WIDENING

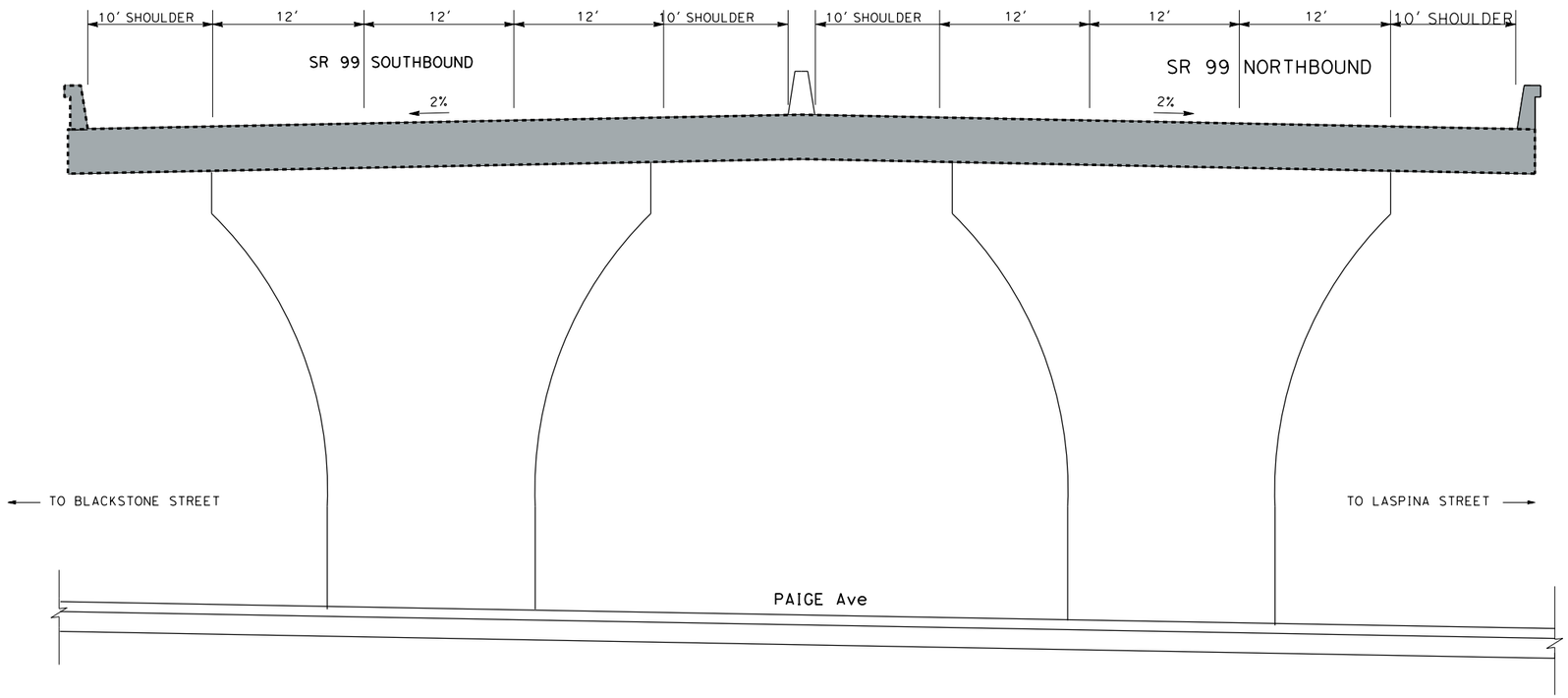
ATTACHMENT B Sheet 2 of 3

TYPICAL CROSS SECTIONS

NO SCALE



PAIGE Ave UNDER ROUTE 99



ROUTE 99 ABOVE PAIGE Ave

ATTACHMENT B Sheet 3 of 3

TYPICAL CROSS SECTIONS PAIGE Ave

NO SCALE

ATTACHMENT-C

LEGEND

- CUT/FILL LINE
- EXIST RIGHT OF WAY LINE
- SIDE DITCH FLOW LINE
- SOUND WALL
- R/W SECURITY FENCE WALL
- CONCRETE MEDIAN BARRIER
- PROPOSED TREE REMOVAL
- PROPOSED R/W LINE
- TEMPORARY CONSTRUCTION EASEMENT
- AFFECTED PARCELS

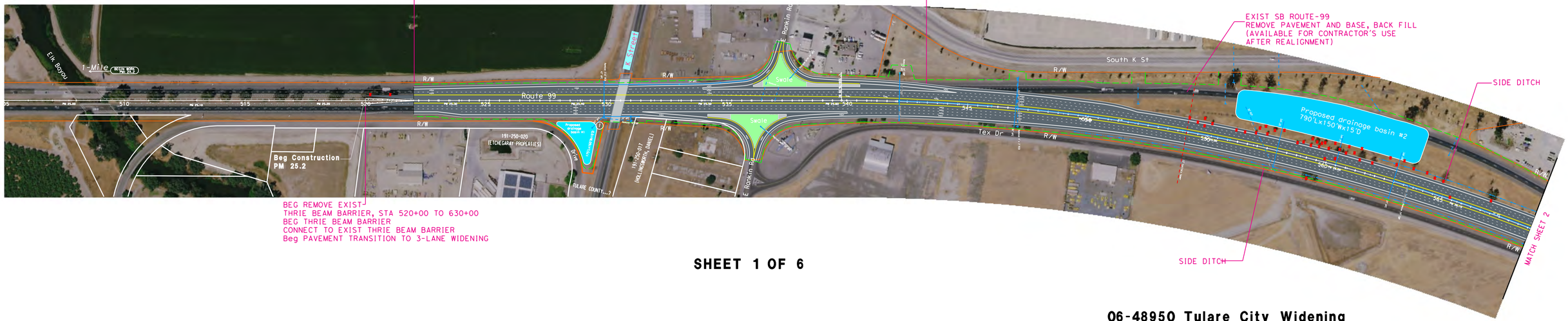
Zoom-in 100% Or More

END PAVEMENT TRANSITION
BEG INSIDE LANE AND Shld
END THRIEBEAM BARRIER
CONNECT TO CONC MEDIAN BARRIER
BEG CONC MEDIAN BARRIER
BEG EXISTING PAVEMENT REHAB

RESURFACE ALL RANKIN RD
ON/OFF RAMS

BEG SB REALIGNMENT

EXIST SB ROUTE-99
REMOVE PAVEMENT AND BASE, BACK FILL
(AVAILABLE FOR CONTRACTOR'S USE
AFTER REALIGNMENT)



BEG REMOVE EXIST
THRIE BEAM BARRIER, STA 520+00 TO 630+00
BEG THRIE BEAM BARRIER
CONNECT TO EXIST THRIE BEAM BARRIER
Beg PAVEMENT TRANSITION TO 3-LANE WIDENING

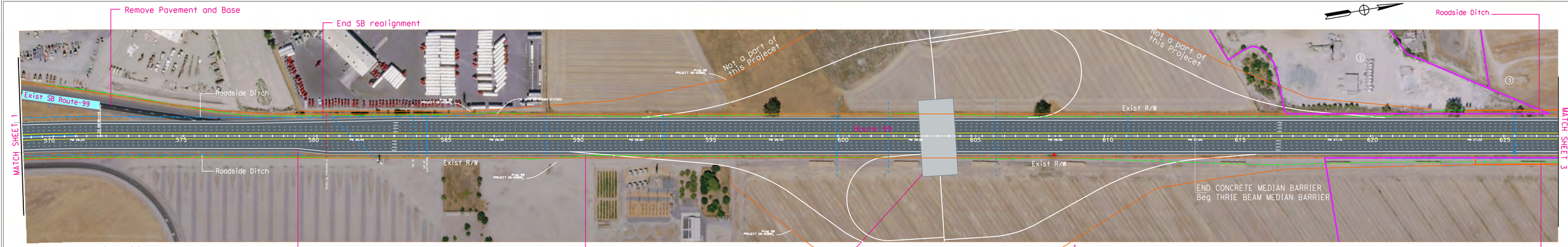
SHEET 1 OF 6

06-48950 Tulare City Widening

Preliminary Plans

Tul Route-99, PM 25.20 - 30.60

Last Update: December 30, 2022



SHEET 2 OF 6

06-48950 Tulare City Widening

Tul Route-99, PM 25.20 - 30.60

MATCH SHEET-4

NB Onramp
2-Lane, Ramp Meter,
CHP area, 300' Aux Lane

SOUNDWALL

25'-wide access path for TID Canal

TID Canal Realignment

Drainage Basin #4

Paige Ave

Drainage Basin #5

Blackstone Ave

Drainage Basin #3

Mobile Home Park

Laspina St

SB Onramp
2-Lane, Ramp Meter,
CHP area, 300' Aux Lane

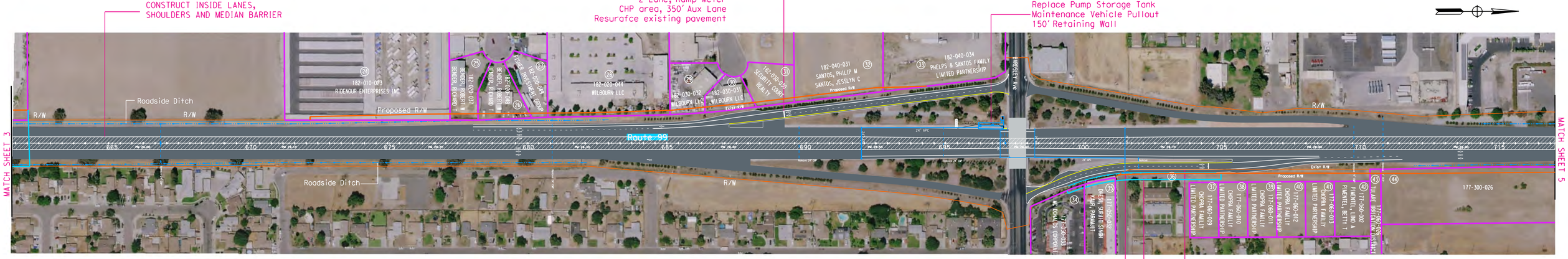
MATCH SHEET-2

Paige Ave Interchange
Paige Ave Undercrossing
With 4-Roundabout Option
(UNDER CROSSING STRUCTURE)

Tul Route-99, PM 25.20 - 30.60

06-48950 Tulare City Widening

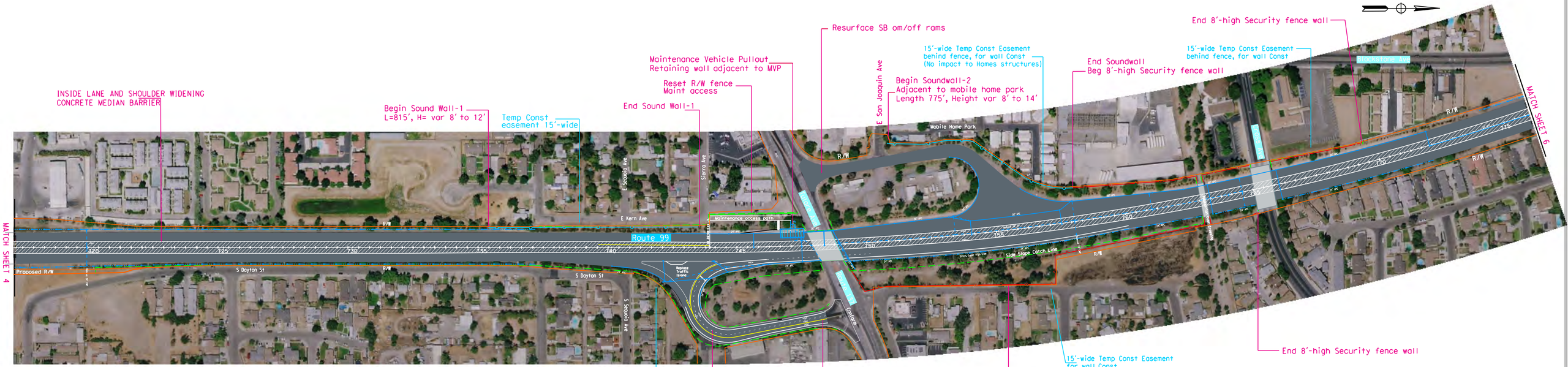
SHEET 3B OF 6



SHEET 4 OF 6

06-48950 Tulare City Widening

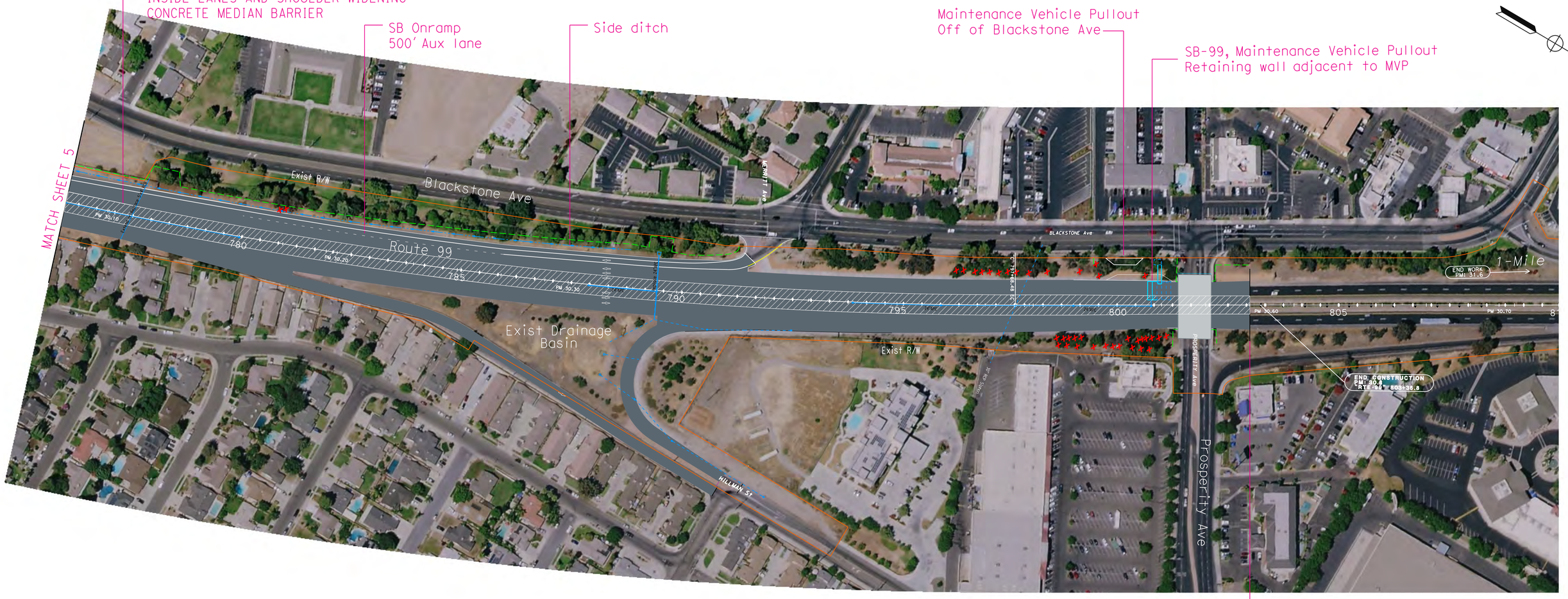
Tul Route-99, PM 25.20 - 30.60



SHEET 5 OF 6

06-48950 Tulare City Widening

Tul Route-99, PM 25.20 - 30.60



06-48950 Tulare City Widening

SHEET 6 OF 6

Tul Route-99, PM 25.20 - 30.60

PROJECT

PLANNING COST ESTIMATE©

ATTACHMENT- D

EA: 06-48950 Project ID: 618000011

EA: 06-48950

Project ID: 618000011

District-County-Route: 06-TUL-99

PM: 25.2 - 30.6

Type of Estimate : Project Approval and Environmental Document PA&ED Cost Estimate

Program Code : STIP

Project Limits : 0.2 mile south of Ave 200 OC to 0.1 mile north of Properity Ave OC

Project Description: Freeway Widening and Interchange Reconstruction

Scope : Widen freeway from 4 to 6-lane, Widen on-ramps and reconstruct Paige Ave interchange.

Alternative : Alternative # 3

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	$ 108,470,000	$ 133,337,325
TOTAL STRUCTURES COST	$ 19,530,000	$ 24,007,357
SUBTOTAL CONSTRUCTION COST	$ 128,000,000	$ 157,344,682
TOTAL RIGHT OF WAY COST	$ 31,468,600	$ 38,250,202
TOTAL CAPITAL OUTLAY COSTS	**$ 159,469,000**	**$ 195,595,000**
PA/ED SUPPORT	$ 4,150,000	$ 4,150,000
PS&E SUPPORT	$ 6,125,000	$ 6,370,000
RIGHT OF WAY SUPPORT	$ 5,100,000	$ 5,371,000
CONSTRUCTION SUPPORT	$ 12,950,000	$ 14,000,000
TOTAL SUPPORT COST	**$ 28,325,000**	**$ 29,891,000**
TOTAL PROJECT COST	**$ 188,000,000**	**$ 226,000,000** *

Programmed Amount

	Month	Year
Date of Estimate (Month/Year)	12	2023
Estimated Construction Start (Month/Year)	5	2027
Number of Working Days =		360
Estimated Mid-Point of Construction (Month/Year)	3	2028
Estimated Construction End (Month/Year)	12	2028
Number of Plant Establishment Days		270

Estimated Project Schedule

PID Approval	
PA/ED Approval	12/14/2023
PS&E	12/26/2025
RTL	6/30/2026
Begin Construction	5/1/2027

Reviewed by District O.E. or Cost Estimate Certifier

Office Engineer / Cost Estimate Certifier	Date	Phone
	xx/xx/xxxx	(xxx) xxx-xxxx

Approved by Project Manager

Project Manager	Date	Phone
Michael W. Dennison	12/29/2023	(559) 383-5175

I. ROADWAY ITEMS SUMMARY

	Section		Cost
1	**Earthwork**	$	7,175,000
2	**Pavement Structural Section**	$	26,311,400
3	**Drainage**	$	16,010,500
4	**Specialty Items**	$	8,155,000
5	**Environmental**	$	5,355,100
6	**Traffic Items**	$	9,739,500
7	**Detours**	$	-
8	**Minor Items**	$	3,637,400
9	**Roadway Mobilization**	$	6,110,800
10	**Supplemental Work**	$	3,915,300
11	**State Furnished**	$	2,491,600
12	**Time-Related Overhead**	$	5,420,100
13	**Total Roadway Contingency**	$	14,148,300
	TOTAL ROADWAY ITEMS	**$**	**108,470,000**

Estimate Prepared By :	Peter Chander	18-Nov-23	559-401-9415
	Name and Title	Date	Phone
Estimate Reviewed By :	Irene Lee	30-Nov-23	559-383-5220
	Name and Title	Date	Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

EA: 06-48950 Project ID: 618000011

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
190101	Roadway Excavation	CY	249,400	x	20.00	=	$	4,988,000
19010X	Roadway Excavation (Insert Type) ADL	CY		x		=	$	-
19801X	Imported Borrow	CY	32,700	x	40.00	=	$	1,308,000
194001	Ditch Excavation	CY	5,900	x	25.00	=	$	147,500
190151	Channel Excavation	CY	10,700	x	45.00	=	$	481,500
193013	Structure Backfill (Retaining Wall)	CY		x		=	$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		=	$	-
17010X	Clearing & Grubbing	LS	1	x	200,000.00	=	$	200,000
100100	Develop Water Supply	LS	1	x	50,000.00	=	$	50,000
19801X	Imported Borrow	CY/TON		x		=	$	-
21012X	Duff	ACRE/SQFT		x		=	$	-
XXXXXX	Some Item	Unit		x		=	$	-

TOTAL EARTHWORK SECTION ITEMS	**$**	**7,175,000**

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
401050	Jointed Plain Concrete Pavement	CY	7,800	x	355.00	=	$	2,769,000
400050	Continuously Reinforced Concrete Pavement	CY	0	x		=	$	-
390132	Hot Mix Asphalt (Type A)	TON	97,210	x	105.00	=	$	10,207,050
26020X	Class 2 Aggregate Base	TON/CY	108,030	x	75.00	=	$	8,102,250
250401	Class 4 Aggregate Subbase	CY		x	30.00	=	$	-
414240	Isolation Joint Seal (Asphalt Rubber)	LF		x		=	$	-
414241	Isolation Joint Seal (Silicone)	LF		x		=	$	-
280010	Rapid Strength Concrete Base	CY		x		=	$	-
410096	Drill and Bond (Dowel Bar)	EA		x		=	$	-
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON	31,950	x	155.00	=	$	4,952,250
391006	Asphalt Binder (Geosynthetic Pavement Interlayer)	TON		x		=	$	-
290201	Asphalt Treated Permeable Base	CY		x		=	$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		=	$	-
397005	Tack Coat	TON	90	x	800.00	=	$	72,000
377501	Slurry Seal	TON		x		=	$	-
374493	Polymer Asphaltic Emulsion (Seal Coat)	TON		x		=	$	-
370001	Sand Cover (Seal)	TON		x		=	$	-
731530	Minor Concrete (Textured Paving)	CY		x		=	$	-
731502	Minor Concrete (Miscellaneous Construction)	CY		x		=	$	-
39407X	Place Hot Mix Asphalt Dike (Insert Type)	LF	10,000	x	2.00	=	$	20,000
398100	Remove Asphalt Concrete Dike	LF		x		=	$	-
420201	Grind Existing Concrete Pavement	SQYD		x		=	$	-
398300	Remove Base and Surfacing	CY		x		=	$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		=	$	-
41800X	Remove Concrete Pavement	SQYD/CY		x		=	$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		=	$	-
398200	Cold Plane Asphalt Concrete Pavement	SQYD	50,100	x	3.50	=	$	175,350
846046	6" Rumble Strip (Asphalt Concrete Pavement)	STA		x		=	$	-
846049	6" Rumble Strip (Concrete Pavement)	STA		x		=	$	-
846051	12" Rumble Strip (Asphalt Concrete Pavement)	STA	246	x	40.00	=	$	9,840
846052	12" Rumble Strip (Concrete Pavement)	STA	80	x	45.00	=	$	3,600
420102	Groove Existing Concrete Pavement	SQYD		x		=	$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		=	$	-
390136	Minor Hot Mix Asphalt	TON		x		=	$	-
XXXXXX	Some Item	Unit		x		=	$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	**$**	**26,311,400**

EA: 06-48950 Project ID: 618000011

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
71013X	Remove Culvert	EA/LF	7,440	x	45.00	=	$	334,800
710144	Remove Concrete Box Culvert	EA	291	x	500.00	=	$	145,500
710370	Sand Backfill	CY		x		=	$	-
71010X	Abandon Culvert	EA/LF		x		=	$	-
510XXX	RCB Culvert, Dbl 12'x6'	L	485	x	3,696.00	=	$	1,792,560
510094	Structural Concrete Drainage Inlet	EA	550	x	2,300.00	=	$	1,265,000
14274	Culvert rapid set slurry - Cement backfill	CY	1,500	x	400.00	=	$	600,000
510502	Minor Concrete (Minor Structure)	CY		x		=	$	-
731627	Minor Concrete (Curb, Sidewalk, and Curb Ramp)	CY	1,180	x	800.00	=	$	944,000
650018	24" Concrete Pipe Culvert	LF	22,250	x	175.00	=	$	3,893,750
650022	30" Concrete Pipe Culvert	LF	4,360	x	250.00	=	$	1,090,000
65XXXX	36" Reinforced Concrete Pipe	LF	1,622	x	275.00	=	$	446,050
6811XX	XX" Plastic Pipe (Edge Drain)	LF		x		=	$	-
6901XX	XX" Corrugated Steel Pipe Downdrain (0.XXX" Thi	LF		x		=	$	-
7006XX	42" Concrete pipe Culvert	LF	210	x	300.00	=	$	63,000
7032XX	48" Concrete pipe Culvert	LF	35	x	450.00	=	$	15,750
7050XX	XX" Steel Flared End Section	EA		x		=	$	-
703233	Grated Line Drain	LF	9,200	x	350.00	=	$	3,220,000
72XXXX	Rock Slope Protection (Type and Method)	LS	1	x	50,000.00	=	$	50,000
72901X	Rock Slope Protection Fabric (Insert Class)	SQYD		x		=	$	-
721420	Concrete (Ditch Lining)	CY		x		=	$	-
XXXXXX	Replace Bardsley Ave Storage tank	LS	1	x	2,000,000.00	=	$	2,000,000
750001	Miscellaneous Iron and Steel	LB		x		=	$	-
XXXXXX	FES, Miscl I&S,Remove DI & Exist FES	LS	1	x	150,000.00	=	$	150,000

TOTAL DRAINAGE ITEMS $ 16,010,500

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost	
520103	Bar Reinforced Steel (Retaining Wall)	LB		x		=	$	-	PRSM quantity input for Look Ahead report.
5100XX	Structural Concrete	CY		x		=	$	-	PRSM quantity input for Look Ahead report.
510060	Retaining Wall, Paige Ave and Tulare Ave MVP	LS	1	x	1,404,550.00	=	$	1,404,550	PRSM quantity input for Look Ahead report.
520107	Bar Reinforcing Steel, RCB	LB		x		=	$	-	PRSM quantity input for Look Ahead report.
080050	Progress Schedule (Critical Path Method)	LS	1	x	10,000.00	=	$	10,000	
582001	Sound Wall (Masonry Block), Paige onramp	LS	1	x	1,250,000.00	=	$	1,250,000	
720008	Remove Slope Paving	SQYD		x		=	$	-	
803020	Remove Fence	LF	7,450	x	5.00	=	$	37,250	
070030	Lead Compliance Plan	LS	1	x	10,000.00	=	$	10,000	
141120	Treated Wood Waste	LS	1	x	75,000.00	=	$	75,000	
839775	Remove Barrier	LF	50	x	35.00	=	$	1,750	
839752	Remove Guardrail	LF	53,430	x	12.00	=	$	641,160	
731508	Minor Concrete (Exposed Aggregate) slope pave	SQFT		x		=	$	-	
800360	Chain Link Fence (Type CL-6)	LF	3,000	x	25.00	=	$	75,000	
731627	Minor Concrete(Curb,Sidewalk, Curb ramp)	CY	1,180	x	750.00	=	$	885,000	
8320XX	Midwest Guardrail System (Insert Type)	LS	6,820	x	50.00	=	$	341,000	
839644	Concrete Barrier (Type 60MF)	LF	960	x	400.00	=	$	384,000	
839642	Concrete Barrier (Type 60MC)	LF	10,090	x	110.00	=	$	1,109,900	
839521	Cable Railing	LF		x		=	$	-	
839566	Terminal System (Type CAT)	EA		x		=	$	-	
839584	Alternative In-line Terminal System	EA	5	x	5,000.00	=	$	25,000	
839585	Alternative Flared Terminal System	EA		x		=	$	-	
4906XX	XX" Cast-In-Drilled-Hole Concrete Piling	LF		x		=	$	-	
8396XX	Crash Cushion (Insert Type)	EA		x		=	$	-	
839640	Concrete Barrier (Type 60M)	LF	17,150	x	100.00	=	$	1,715,000	
832070	Veg Control (Minor concrete)	SQYD	2,630	x	60.00	=	$	157,800	
511035	Architectural Treatment	SQFT		x		=	$	-	
780460	Anti-Graffiti Coating	SQFT		x		=	$	-	
200114	Rock Blanket	SQFT		x		=	$	-	
4730XX	Asbestos Compliance Plan	LS	1	x	3,000.00	=	$	3,000	
83954X	Transition Railing (Type WB-31)	EA	4	x	5,500.00	=	$	22,000	
780440	Prepare and Stain Concrete	SQFT		x		=	$	-	
839561	Rail Tensioning Assembly	EA		x		=	$	-	
83958X	End Anchor Assembly (SFT)	EA	5		1,500.00		$	7,500	

TOTAL SPECIALTY ITEMS $ 8,155,000

Effective immediately, districts must input estimated item quantities in blue text above in the PRSM database for the pay items listed in the Design Memo, dated April 9, 2018, when Project Report is approved (Milestone 200). Link to Desgin Memo.

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost	
	Biological Mitigation (on-site)	LS		x		=	$	-	
	Paleontological Mitigation (on site)	LS	1	x	425,000.00	=	$	425,000	
130670	Temporary Reinforced Silt Fence	LF		x		=	$	-	
						Subtotal Environmental Mitigation	*$*		*425,000*

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost	
20XXXX	Highway Planting	LS	1	x	300,000.00	=	$	300,000	
20XXXX	Irrigation System	LS	1	x	1,000,000.00	=	$	1,000,000	
204099	Plant Establishment Work	LS	1	x		=	$	-	
20XXXX	Follow-up Landscape Project	LS	1	x	300,000.00	=	$	300,000	
206405	Remove Irrigation Facility	LS		x		=	$	-	
204096	Maintain Existing Planted Areas	LS	1	x	20,000.00	=	$	20,000	
206400	Check and Test Existing Irrigation Facilities	LS	1	x	15,000.00	=	$	15,000	
21011X	Imported Topsoil	CY/TON		x		=	$	-	
200114	Rock Blanket	SQFT	75,665	x	18.00	=	$	1,361,970	
200122	Weed Germination	SQYD		x		=	$	-	
XX	Concrete slope paving	LS	1	x	250,000.00	=	$	250,000	
2087XX	XX" Conduit (Use for Irrigation x-overs)	LF		x		=	$	-	
20890X	Extend X" Conduit (Use for Extension of Irrigation	LF		x		=	$	-	
						Subtotal Landscape and Irrigation	*$*		*3,246,970*

5C - EROSION CONTROL

Item code		Unit	Quantity		Unit Price ($)			Cost	
211111	Permanent Erosion Control Establishment Work	LS		x		=	$	-	
210010	Move-In/Move-Out (Erosion Control)	EA	8	x	1500.00	=	$	12,000	
210350	Fiber Rolls	LF		x		=	$	-	
210360	Compost Sock	LF		x		=	$	-	
2102XX	Rolled Erosion Control Product (Insert Type)	SQFT		x		=	$	-	
21025X	Bonded Fiber Matrix	SQFT/ACRE		x		=	$	-	
210300	Erosion Control(Hydromulch&Hydroseed)	SQFT	200,000	x	2.00	=	$	400,000	
210420	Straw	SQFT		x		=	$	-	
210430	Hydroseed	SQFT		x		=	$	-	
210610	Compost	CY		x		=	$	-	
210630	Incorporate Materials	SQFT							
						Subtotal Erosion Control	*$*		*412,000*

5D - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost	
130300	Prepare SWPPP	LS	1	x	20,000.00	=	$	20,000	
130560	Temporary Soil Binder	SQYD	104,000	x	0.35	=	$	36,400	
130100	Job Site Management	LS	1	x	250,000.00	=	$	250,000	
130330	Storm Water Annual Report	EA	1	x	4,000.00	=	$	4,000	
130310	Rain Event Action Plan	EA	16	x	500.00	=	$	8,000	
130320	Storm Water Sampling and Analysis Day	EA	38	x	250.00	=	$	9,500	
130520	Temporary Hydraulic Mulch	LS	1	x	100,000.00	=	$	100,000	
130550	Temporary Hydroseed	SQYD		x		=	$	-	
130505	Move-In/Move-Out (Temporary Erosion Control)	EA		x		=	$	-	
130640	Temporary Fiber Roll	LF	40,000	x	7.00	=	$	280,000	
130900	Temporary Concrete Washout	LS		x		=	$	-	
130710	Temporary Construction Entrance	EA		x		=	$	-	
130680	Temporary Silt Fence	LF	40,000	x	4.00	=	$	160,000	
130620	Temporary Drainage Inlet Protection	EA	100	x	200.00	=	$	20,000	
130730	Street Sweeping	LS	1	x	83,200.00	=	$	83,200	
	Other Items	LS	1		300,000.00		$	300,000	
						Subtotal NPDES	*$*		*1,271,100*

			$	**5,355,100**
		TOTAL ENVIRONMENTAL		

Supplemental Work for NPDES

066595	Water Pollution Control Maintenance Sharing*	LS		x		=	$	-	
066596	Additional Water Pollution Control**	LS	1	x	125,000.00	=	$	125,000	
066597	Storm Water Sampling and Analysis***	LS		x		=	$	-	
XXXXXX	Some Item	LS		x		=	$	-	
						Subtotal Supplemental Work for NDPS	*$*		*125,000*

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
870200	Lighting System (roundabouts)	LS	1	x	1,100,000.00	=	$	1,100,000
870300	Sign Illumination System	LS		x		=	$	-
870400	Signal and Lighting System	LS		x		=	$	-
870510	Ramp Metering System (5 onramps)	LS	5	x	190,000.00	=	$	950,000
87181X	Interconnection Conduit and Cable	LF/LS		x		=	$	-
5602XX	Furnish Sign Structure (Insert Type)	LB		x		=	$	-
5602XX	Install Sign Structure (Insert Type)	LB		x		=	$	-
4980XX	XX" CIDHC Pile (Sign Foundation)	LF		x		=	$	-
87011X	Inductive Loop Detector	EA/LS		x		=	$	-
870600	TrafficCount Station	LS	19	x	15,000.00	=	$	285,000
56804X	Remove Sign Structure	EA/LS		x		=	$	-
XXXXX	Changeable Message Sign	LS	1	x	210,000.00	=	$	210,000
XXXXX	Modify Existing lighting systems for ramps	LS	1	x	400,000.00	=	$	400,000
XXXXX	Modify Vehicle Classification Station	LS	1	x	30,000.00	=	$	30,000
86XXXX	Fiber Optic Conduit System	LS		x		=	$	-
XXXXX	Camara system for roundabouts	LS	1	x	50,000.00	=	$	50,000

Subtotal Traffic Electrical $ *3,025,000*

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
820840	Roadside Sign - One Post	EA		x		=	$	-
XXXX	Road signs, OH signs, Markers, Delineators	LS	1	x	1,385,000.00	=	$	1,385,000
5602XX	Furnish Sign Structure (Insert Type)	SQFT		x		=	$	-
820890	Install Sign Panel on Existing Frame	SQFT		x		=	$	-
846020	Remove Painted Traffic Stripe	LS	1	x	148,610.00	=	$	148,610
141102	Remove Yellow Painted Traffic Stripe (Hazardous	LF		x		=	$	-
846025	Remove Painted Pavement Marking	SQFT		x		=	$	-
820250	Remove Road signs, OH signs, Markers, Delineators	LS	1	x	75,940.00	=	$	75,940
820530	Reset Roadside Sign	EA		x		=	$	-
820610	Relocate Roadside Sign	EA		x		=	$	-
8101XX	Delineator (Insert Class)	EA		x		=	$	-
840502	Thermoplastic Traffic Stripe (Enhanced Wet Night	LF		x		=	$	-
846012	Thermoplastic Crosswalk and Pavement Marking (Enhanced Wet Night Visibility)	SQFT		x		=	$	-
120090	Construction Area Signs	LS	1	x	180,600.00	=	$	180,600
84XXXX	Permanent Pavement Delineation	LS	1	x	866,100.00	=	$	866,100

Subtotal Traffic Signing and Striping $ *2,656,250*

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price ($)			Cost
128650	Portable Changeable Message Sign	LS	1	x	$ 82,000	=	$	82,000
	Press release, media alerts, brochures	LS	1		$ 29,000		$	29,000

Subtotal Traffic Management Plan $ *111,000*

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)			Cost
120198	Portable Changeable Message Sign (PCMS)	EA	1	x	222,600.00	=	$	222,600
12016X	Channelizer (Insert Type)	EA		x		=	$	-
120116	Type II Barricade	EA		x		=	$	-
120120	Type III Barricade	EA		x		=	$	-
XXX	Temporary Radar Speed Feedback Sign System	LS	1	x	297,600.00	=	$	297,600
120100	Traffic Control System	LS	1	x	225,000.00	=	$	225,000
129110	Temporary Crash Cushion	EA		x		=	$	-
XXX	Temporary Barrier and crash cushions	LS	1	x	2,900,600.00	=	$	2,900,600
120149	Temporary Pavement Marking (Paint)	SQFT		x		=	$	-
120152	Temporary Pavement Marking (Tape)	LS	1	x	121,400.00	=	$	121,400
XXX	Traffic Handling Items	LS	1	x	180,000.00	=	$	180,000

Subtotal Stage Construction and Traffic Handling $ *3,947,200*

TOTAL TRAFFIC ITEMS **$ 9,739,500**

SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)			Cost
190101	Roadway Excavation	CY	0	x	25.00	=	$	-
19801X	Imported Borrow	CY/TON		x		=	$	-
390132	Hot Mix Asphalt (Type A)	TON	0	x	90.00	=	$	-
26020X	Class 2 Aggregate Base	CY/TON	0	x	45.00	=	$	-
250401	Class 4 Aggregate Subbase	CY		x		=	$	-
130620	Temporary Drainage Inlet Protection	EA		x		=	$	-
129000	Temporary Railing (Type K)	LF		x		=	$	-
128601	Temporary Signal System	LS		x		=	$	-
120149	Temporary Pavement Marking (Paint)	SQFT		x		=	$	-
80010X	Temporary Fence (Insert Type)	LF		x		=	$	-
XXXXXX	Some Item	LS		x		=	$	-

TOTAL DETOURS **$** **-**

SUBTOTAL SECTIONS 1 through 7 $ 72,746,500

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items						
ADA Items			0.3%	$	181,866	
8B - Bike Path Items						
Bike Path Items			0.0%	$	-	
8C - Other Minor Items						
Other Minor Items			3.0%	$	2,182,395	
Total of Section 1-7	$ 72,746,500	x	5.0%	=	$	3,637,325

TOTAL MINOR ITEMS **$** **3,637,400**

SECTIONS 9: ROADWAY MOBILIZATION *

Item code								
999990	Total Section 1-8	$	76,383,900	x	8%	=	$	6,110,712

TOTAL ROADWAY MOBILIZATION **$** **6,110,800**

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)			Cost
066670	Payment Adjustments For Price Index Fluctuations	LS	2,146	x	500.00	=	$	1,073,218
066094	Value Analysis	LS	1	x	10,000.00	=	$	10,000
066070	Maintain Traffic	LS	1	x	288,000.00	=	$	288,000
066919	Dispute Resolution Board	LS	1	x	22,500.00	=	$	22,500
066921	Dispute Resolution Advisor	LS	1	x	5,000.00	=	$	5,000
066015	Federal Trainee Program	LS	1	x	20,000.00	=	$	20,000
066610	Partnering	LS	1	x	70,000.00	=	$	70,000
066204	Remove Rock and Debris	LS		x		=	$	-
066222	Locate Existing Crossover	LS	1	x	10,000.00	=	$	10,000
XXXXXX	Some Item	Unit		x		=	$	-

*Cost of **NPDES** Supplemental Work specified in Section 5D* = $ 125,000

Total Section 1-8 $ 76,383,900 3% = $ 2,291,517

TOTAL SUPPLEMENTAL WORK **$** **3,915,300**

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066105	Resident Engineers Office	LS	1	x	463,900.00	=	$463,900
066063	Traffic Management Plan - Public Information	LS	1	x	0.00	=	$0
066901	Water Expenses	LS		x		=	$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	$0
066841	Traffic Controller Assembly	LS		x		=	$0
066840	Traffic Signal Controller Assembly	LS		x		=	$0
066062	COZEEP Contract	LS	1	x	500,000.00	=	$500,000
066838	Reflective Numbers and Edge Sealer	LS		x		=	$0
066065	Tow Truck Service Patrol	LS		x		=	$0
066916	Annual Construction General Permit Fee	LS		x		=	$0
XXXXXX	Conduct Paleo Mitigation	LS	1	x	200,000.00	=	$0
	Total Section 1-8	$	76,383,900		2%	= $	1,527,678

TOTAL STATE FURNISHED $2,491,600

SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization $90,333,900 (used to calculate total TRO)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price ($)		Cost
090100	Time-Related Overhead	WD	360	X	$15,056	=	$5,420,100

TOTAL TIME-RELATED OVERHEAD $5,420,100

SECTION 13: ROADWAY CONTINGENCY*

Risk Amount from Risk Register	(for Known Risks)				0%		
Additional or Residual Contingency	(for Unknown/Undefined Risks)				15%		$14,148,255
Total Section 1-12	$	94,321,700	x	**15%**		=	$14,148,255

TOTAL CONTINGENCY* $14,148,300

EA: 06-48950 Project ID: 618000011

II. STRUCTURE ITEMS

	Bridge 1		Bridge 2		Bridge 3
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	**Paige Ave OC**		**Soundwall & R/W Wall**		**Bardsley NB Onramp RW**
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$150		$0		$0
COST OF EACH	**$8,000,000**		**$2,950,000**		**$3,000,000**

DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0		$0		$0
COST OF EACH			**$0**		**$0**

TOTAL COST OF BRIDGES		**$13,950,000**
TOTAL COST OF BUILDINGS		**$0**
Time-Related Overhead	10%	**$1,395,000**
STRUCTURES MOBILIZATION	10%	**$1,395,000**
STRUCTURES CONTINGENCY*	25%	**$4,185,000**
TOTAL COST OF STRUCTURES		**$19,530,000**

Estimate Prepared By: Juan Torres — 8/12/21

XXXXXXXXXXXXXXXX ------ Division of Structures — Date

EA: 06-48950 Project ID: 618000011

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way Data Sheet.

				Current Value Future Use		***Escalated Value***
A)	A1)	Acquisition, including Excess Land, Fees, Damages, Goodwill	$	17,757,070	$	21,583,830
	A2)	Acquisition of Offsite Mitigation	$	6,035,145	$	484,837
	A3)	Railroad Acquisition	$	0	$	0
B)	B1)	Utility Relocation (State Share)	$	5,577,500	$	6,779,486
	B2)	Potholing (Design Phase)	$	0	$	0
C)	Utility - Advance Engineering Estimate (Encumber with State Only Funds)		$	0	$	0
D)	RAP and/or Last Resort Housing		$	0	$	0
E)	Clearance & Demolition		$	895,313	$	1,088,258
F)	Relocation Assistance (RAP and/or Last Resort Housing Costs)		$	962,500	$	1,169,925
G)	Title and Escrow		$	241,008	$	292,947
H)	Environmental Review		$	0	$	0
I)	Condemnation Settlements	0%	$	0	$	0
J)	Design Appreciation Factor	0%	$	0	$	0
K)	Utility Relocation (Construction Cost)		$	0	$	0

L)	**TOTAL RIGHT OF WAY ESTIMATE**	**$31,468,600**
M)	**TOTAL R/W ESTIMATE: Escalated**	**$38,250,202**
N)	**RIGHT OF WAY SUPPORT**	**$5,371,000**

Support Cost Estimate Prepared By	David Sherman Project Coordinator[1]	Phone
Utility Estimate Prepared By	Jenna FauntLeRoy Utility Coordinator[2]	Phone
R/W Acquisition Estimate Prepared By	Nicole Olsen Right of Way Estimator[3]	Phone

Note: Items G & H applied to items A + B

[1] When estimate has Support Costs only [2] When estimate has Utility Relocation [3] When R/W Acquisition is required

STATE OF CALIFORNIA CALIFORNIA STATE TRANSPORTATION AGENCY

ATTACHMENT-E

Memorandum

To: Christopher Gardner

Attn: Peter Chandler

Ernie Penuna

From: **Department of Transportation**
Division of Right of Way Central Region

Date: 8/23/2022

File: **CD** 06 **EA** 489500 **Alt** Alt3 Rev3
Co TUL **RTE** 99

DESCRIPTION:
Convert 4F to 6F or 8F

Subject: **RIGHT OF WAY DATA SHEET**

We have completed an estimate of the right of way costs for the above-referenced project based on the Right of Way Data Sheet Request Form dated 1/24/2022

The following assumptions and limiting conditions were identified:

Parcels

APN 177-060-026, APN 182-230-048, and APN 182-190-038 are owned by Tulare Irrigation District and are currently operating the Main Tulare Canal on these parcels. The project proposes to move the pipeline for the canal underground per design, the estimator assumes future use of these parcels will be limited due to the project. Hazardous waste sites were evident, and a study was completed. It is assumed that these parcels will have continued access both during and after construction. This datasheet is estimated at a time in which the effects of COVID-19 pandemic are not fully known and may require re-evaluation at a time in which more information is present on the potential effects on the market. The mitigation for VMT was updated from the $2,000,000 on previous version of the datasheet for this alt to the current amount $4,682,000. All other detail remained the same.

Utility

Utility Conflicts Noted: Engineer states on the revised DS request of utility conflicts and is now requesting 400 potholes. It is recommended that conflict plans be provided to the utility owners as soon as possible to query their relocation requirements and projected expenses. Noting that Freeway Master Contracts may come into play and utility companies' rights have not been established, liability determination is unknown. To be conservative in the estimate, relocations are figured at 100% State liability. If after potholing and actual liabilities are determined, and or any additional potholing is required and or any new utilities discovered in conflict, then a new datasheet request should be requested. Tulare Irrigation District (TID) review fee of $50,000 as a placeholder, unknown actual cost to relocate 2,500+- feet of the canal. This datasheet is estimated at a time in which the effects of the COVID-19 pandemic are not fully known and may require re-evaluation at a time in which more information is present on the potential effects on the market.

Right of Way Lead Time will require a minimum 34 months after we receive Certified Appraisal Maps and/or Utility Conflict Plans, obtained necessary environmental clearance and applicable freeway agreements have been approved.

Recommended for approval by: David Sherman

DAVID SHERMAN
Senior Right of Way Agent
(559) 383-5188

General Description of R/W and Excess Lands Required (zoning, use, major improvements, critical or sensitive parcels, etc.):

This project is in the City of Tulare on State Route 99, beginning just south of Ave 200 overcrossing at PM 25.4 and ending just south of Prosperity overcrossing at PM 30.6. The project proposes to widen the existing 4-lane highway to a 6-lane highway within the project area, this will relieve congestion, reduce delays, and increase safety within the City of Tulare. At Paige Ave interchange the project proposes to replace the existing interchange with a tight diamond interchange, and at the ramp terminals two multi-lane hybrid roundabouts will be constructed. This alternative also proposes to construct two roundabouts at the adjacent intersections on Paige Ave. This estimate is for Alt 3 revision #3 only. The project has a total of 58 parcels impacted. There are 15 Full acquisitions on this estimate that include three improved commercial parcels, three vacant commercial parcels, three misc/govt used parcels two of them are operating as a canal, and six vacant residential zoned parcels. The improved parcels include loss of goodwill, RAP and demo and clearance money. The project also is affecting a Mini Storage that runs parallel to SR 99, this parcel includes RAP, loss of goodwill, and demo and clearance money. The remaining parcels include partial acquisitions, and temporary construction easements. Three improved industrial parcels include RAP for personal property moves. It is assumed that all improvements will be worked around on the parcels that require only temporary construction easements, further information is needed to determine impact on improvements. There are no outdoor advertising signs on this project.

General Description of Utility Involvement:

06-48950 Alt #3-Rev3 Datasheet. This project is in the City of Tulare on State Route 99, beginning just south of Ave 200 overcrossing at PM 25.4 and ending just south of Prosperity overcrossing at PM 30.6. The project proposes to widen the existing 4-lane highway to a 6-lane highway within the project area, this will relieve congestion, reduce delays, and increase safety within the City of Tulare. At Paige Ave interchange the project proposes to replace the existing interchange with a tight diamond interchange, and at the ramp terminals, two multi-lane hybrid roundabouts will be constructed. This alternative also proposes to construct two roundabouts at the adjacent intersections on Paige Ave. Numerous OH Poles, Fiber Optics, Telecom, and Cable TV lines, Gas Facilities, Electrical Transmission and Distribution, Local Agency Water and Sewer facilities, and Tulare Irrigation District Canal appear in conflict as shown on the verification plans.

General Description of Railroad Involvement:

No railroad facilities will be affected.

06-48950 **CO/RTE/PM-PM: TUL/99/25.5-30.6** **Request Date: 1/24/2022**

ALT: Alt3 Rev3 **Revised Date:**

Right Of Way Cost Estimate	Current Year	Contingency Rate	Escalation Rate	Escalated Year
	2022	25%	5%	2026
Acquisition:	$17,757,070	25%	5%	**$21,583,830**
Mitigation:	$6,035,145	25%	5%	**$7,335,756**
State Share of Utilities:	$5,577,500	25%	5%	**$6,779,486**
Expert Witness:	$0	25%	5%	**$0**
Relocation Assistance:	$962,500	25%	5%	**$1,169,925**
Demolition and Clearance:	$895,313	25%	5%	**$1,088,258**
Title and Escrow:	$241,008	25%	5%	**$292,947**
Ad Signs:	$0	25%	5%	**$0**
Total Current Value:	$31,468,536			**$38,250,202**

If RW Cost Est fields are blank, Costs = $0

NOTE: above estimate includes railroad engineering in the amount of: $0.00

Estimated Construction Contract Work (CCW): 0 R/W LEAD TIME/Mo. 34

Estimated Pothole Date: 1/31/2022

Cost Break Down	
Pot Hole	400,000
# Pot Holes	400
Mitigation	
Land	0
Bank	4,782,000
Permit Fees	46,116

Parcel Area

Total R/W Required:	43.81
Total Excess Area:	0

Parcel Data

# of Parcel Type X:	0	
# of Parcel Type A: less than $10,000 non-complex	23	
# of Parcel Type B: more than $10,000 non-complex	19	
# of Parcel Type C: complex, special valuation	0	
# of Parcel Type D: most complex/time consuming	16	# of Duals Needed: 0
Totals:	58	**Totals:** 0

of Excess Parcels: 0

Misc R/W Work

# of RAP Displacements:	7
# of Clearance/Demos:	5
# of Const Permits:	0
# of Condemnations:	0

RR Involvement

Railroad Facilities or Right of Way Affected?	NA
Const/Maint Agreement:	NA
Service Contract Count:	0
Right of Entry:	NA
Clauses:	NA
Estimated Lead-time:	None

Utilities

10 Companies to be potholed

10 Companies for Verification

10 Companies for Utility Relocations

JUA/CCUAs are not needed

Is there a significant effect on assessed valuation: No

Were any previously unidentified sites with hazardous waste or material found: Yes

Are RAP displacements required: Yes

of single family: 0 # of muliti-family: 0 # of business/nonprofit: 7 # of farms: 0

Sufficient replacement housing will be available without last resort housing: N/A

Are material borrow or disposal sites required: Yes

Are there potential relinquishments or abandonments: No

Are there any existing or potential airspace sites: No

Are environmental mitigation parcels required: Yes

Data for evaluation provided by:

Estimator:	Nicole Olsen / Sandra Sifuente	1/24/2022
Railroad Liaison Agent:	Sandra Sifuentes	10/18/2021
Utility Relocation Coordinator:	Geoffrey Greene	11/16/2021

I have personally reviewed this Right of Way Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.

Nicholas G Dumas

Date

ENTERED PMCS 8/23/2022

BY: N Beebe Pence

NICHOLAS G. DUMAS
Office Chief, District 6 Right of Way

Mitigation and Compliance Cost Estimate (MCCE)

PART 1 - PROJECT INFORMATION

DIST-CO-RTE: 06 - TUL - 099 **PM/PM:** 25.200/30.600

EA/Project Number: 06-48950_ / 0614000040

Project Name: Tulare Six-lane and Paige Avenue Interchange Improvement Project

Form Completed by: Rebecca Ashjian

Project Manager: GARDNER, CHRISTOPHER L **Phone:** (559) 243-3588

Date: 8/17/2022

MCCE Phase prepared for: DED

PART 2 - ENVIRONMENTAL COMMITMENTS FOR PERMANENT IMPACTS

Environmental Commitments for Alternative:

Commitment	Design $	FY	Ac/Crd	ROW $ Planned	FY	ROW $ Actual	Pd	Construction $	FY
Hazardous Waste									
PSI	$155,000	21/22					☐		
Lead Compliance Plan							☐	$2,500	25/26
Asbestos Compliance Plan							☐	$3,000	25/26
Paleontological									
Prepare Paleo Mitigation Plan	$12,000	25/26					☐		
Conduct Paleo Mitigation							☐	$425,000	25/26
Other									
VMT Mitigation				$4,682,000	26/27		☐		
Greenhouse Gas Mitigation				$100,000	23/24		☐		
Studies -VMT -Consultant	$48,466	20/21					☑		
Studies VMT - Consultant	$69,582	20/21					☑		

PART 3 - PERMITS AND AGREEMENTS

Permit/Agreement	ROW $ Planned	FY	ROW $ Actual	Pd	Construction $	FY
CEQA Review	$3,539.25	22/23		☐		
1600	$5,748.75	24/25		☐		
NOI/NOT (Stormwater)				☐	$26,322	26/27
Report of Waste Discharge	$36,828	24/25		☐		
TOTAL $285,048	$4,828,116				$456,822	

EA/Project ID: 06-48950_/0614000040

Approved by:

Chelsea Starr	Chelsea Starr	8/22/22
Environmental Branch Chief (Print Name)	Signature	Date

If Right of Way Capital is needed:

Sara Blum	Sara Blum	8/23/22
Right-of-Way Office Chief (Print Name)	Signature	Date

If cultural and biology mitigation totals more than $500,000:

Jennifer H. Taylor	Jennifer H. Taylor	8/22/2022
Environmental Office Chief (Print Name)	Signature	Date

Submitted to PM on:_____ **Initial**___

Comments (explanation and risk management plan attached)

VMT mitigation: Funding towards Tulare County vanpool programs and increase frequency on transit routes

WDR: Fees based on an estimated 2.00 acres of impacts. As of 2021 fees are: $2,066 initial application fee, Catergory A fee (fill and excavation discharges) $34,762, and $1,736 annual fee.

1600: No riparian veg removal and no mitigation anticipated.

Updated PSI cost.

Updated CEQA Review cost 8/17/22

Updated 1600 permit cost. Changed the FY year for the waste discharge.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION • DISTRICT 6

Attachment - F

RISK REGISTER CERTIFICATION FORM

PPM-0001 District 6 Capital Project (REV 2/13/2023)

The risk register is to be approved and signed-off by the Deputies listed below for all scalability levels. By signing this form, you are certifying that you have reviewed the risks documented in the register and agree that they have been managed to the extent possible by the PDT.

Project ID / District-EA	0614000040/06-48950
Project Description	In and near the City of Tulare, from 0.2 mile south of Avenue 200 Overcrossing to 0.1 mile north of Prosperity Avenue Overcrossing
Capital Cost (Con + R/W)	$210,252,000
Project Manager / Risk Manager	Michael Dennison/Marlo Carlos

☐ Risk Register Certification not required per PDD-09R1
Check box if Scalability Level 0 (Minor B) or 1 (Minor A project or a Major project within the Minor A project cost limits) and the PM has determined certification is not required. Submit this form with PID, PA&ED, and PS&E submittal as applicable.

Project Manager Signature _____ Date: _____

PID M010 (Required)

Project Manager	Date:	
MICHAEL NAVARRO Deputy District Director (DDD), Planning	Date:	
BRIAN EVERSON DDD, Design	Date:	
NABEELAH ABI-RACHED DDD, Program/Project/Asset Management	Date:	

PA&ED M200 (Required)

Michael Dennison Project Manager	Date:	11/28/2023
PHILIP VALLEJO DDD, Environmental	Date:	11/30/2023
for HUMBERTO ALMAGUER DDD, Design	Date:	12/28/23
NABEELAH ABI-RACHED for DDD, Program/Project/Asset Management	Date:	12/28/23

RTL M460 (Required)

Project Manager	Date:	
BRIAN EVERSON DDD, Design	Date:	
HARPREET BINNING DDD, Construction	Date:	
MARIA TOLES DDD, Right of Way	Date:	
PHILIP VALLEJO DDD, Environmental	Date:	
NABEELAH ABI-RACHED Program/Project/Asset Management	Date:	

Risk Register for 06-48950, Tulare City Widening

Form v3.3 last modified 10/30/2018 CB

Risk Checkpoint:	PA&ED
Date:	11/28/2023
Project Nickname:	Tulare City Widening
EA:	06-48950
Co-Rt, Post Miles:	Tul - 99- 25.2/30.6
Project Manager:	Michael Dennison
FY & Program (SHOPP or STIP):	2025 (STIP)
Capital Costs:	$196,252k
Support Costs:	$29,891k
Total Costs:	$226,143k
RTL Target:	6/30/2026

Phase	Cost Contingency Range $k			Schedule Contingency Range (Wkg Days)		
	Optimistic	PERT	Pessimistic	Optimistic	PERT	Pessimistic
0-PA&ED	$15	$30	$38	121	84	98
1-PS&E	$0	$0	$0	0	0	0
2-RW Sup	$0	$0	$0	0	0	0
3-Con Sup	$18	$28	$35	20	32	41
Support Contingency	$33	$58	$73	141	116	139
9-RW Cap	$0	$0	$0	0	0	0
4-Con Cap	$17	$68	$148	15	25	40
Capital Contingency	$17	$68	$148	15	25	40
Total Contingency	$49	$126	$220	156	141	179

Risk Identification								Risk Assessment			Risk Response				Quantifying "Red" (High P & I) Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Owner	Updated	Impacted Phase	Calculated Contingency	Support (hours) Capital Cost $k	Schedule (Days)
Retired	1	Threat	Environmental	Scope Change	As a result of a change in scope, additional environmental studies may be necessary, resulting in an increase to project cost and schedule.	There will be no changes to project scope.	Project scope changes.	2-Low (11-30%)	1 - Very Low (Insignificant)	2	Mitigate	Minimize changes during PAED, during additional hours and cost for environmental compliance, perform regular reviews monthly.	Environmental	2/21/2023	0-PA&ED Sup	$11k	O 300 hours ML 450 hours P 600 hours	O 10 ML 20 P 30
								20%	1 - Very Low (Insignificant)	2						4	PERT 450 hours	PERT 20
															0-PA&ED Sup	$2k	O 20 hours ML 50 hours P 90 hours	O 30 ML 45 P 50
																9	PERT 52 hours	PERT 44
Active	2	Threat	Environmental	Paleontological resources	As a result of project excavation, paleontological resources could be discovered. If the number of fossils exceeded the number of fossils assumed to be discovered, this would lead to a delay in the construction schedule and an increase in construction costs.	The number of fossils expected to be discovered will not exceed the number assumed to be discovered.	Paleontological resources are discovered during construction.	2-Low (11-30%)	4 - Moderate ($10,009k - $20,015k	8	Mitigate	1.Divert excavation from area of discovery 2.Assess fossil discovery 3.Prepare 042-funded amendment for time and cost increases associated with mitigation	Environmental	10/19/2020	3-Con Sup	$10k	O 200 hours ML 400 hours P 500 hours	O 50 ML 75 P 100
								20%	4 - Moderate (1-3 months)	8						15	PERT 384 hours	PERT 75
															4-Con Cap	$25k	O $50k ML $100k P $300k	O 50 ML 75 P 100
																15	PERT $125k	PERT 75
Active	3	Threat	Environmental	Migratory Birds, Nesting Raptors, Nesting Swanson's Hawk, Burrowing Owls or Swallows	As a result of finding migratory birds, nesting raptors, nesting Swanson's hawk, Burrowing owls, or Swallows within the project limits, monitoring, exclusionary devices, and avoidance buffers may be required, resulting in increases to project schedule and cost.	Assuming migratory birds, nesting raptors, nesting Swanson's hawk, Burrowing owls, or Swallows will not be present in the project area.	Nesting Swanson's hawk, nesting raptors, migratory birds, Burrowing owls or swallows are found in the project area.	2-Low (11-30%)	2 - Low (<$539k)	4	Mitigate	During PAED phase, determine additional hours and costs for biological compliance.	Environmental	9/25/2020	0-PA&ED Sup	$11k	O 200 hours ML 450 hours P 600 hours	O 50 ML 60 P 80
								20%	4 - Moderate (1-3 months)	8						13	PERT 434 hours	PERT 62
															3-Con Sup	$16k	O 500 hours ML 600 hours P 800 hours	O 40 ML 60 P 85
																13	PERT 617 hours	PERT 61
Active	4	Threat	Environmental	Nesting Swanson's Hawk or State Listed Species	As a result of a nesting Swanson's hawk or state listed species occurring adjacent to or within the action area, a 2081 Incidental Take Permit may be required, which would lead to increases in cost (approximately $30,000) and schedule.	Assuming there will be no nesting Swanson's hawk or state listed species adjacent to or within the action area.	Nesting Swanson's hawk or state listed species are found adjacent to or within the action area.	1-Very Low (1-10%)	2 - Low (<$539k)	2	Mitigate	During PAED phase, determine additional costs.	Environmental	9/25/2020	3-Con Sup	$2k	O 50 hours ML 150 hours P 450 hours	O 45 ML 65 P 80
								5%	8 - High (3-6 months)	8						4	PERT 184 hours	PERT 65
															4-Con Cap	$12k	O $50k ML $200k P $550k	O 20 ML 30 P 40
																2	PERT $234k	PERT 30
Retired	5	Threat	Environmental	Habitat for Listed or Special-Status Species	As a result of finding suitable habitat for listed species or special-status species, additional environmental surveys may be required, resulting in increases in project schedule and cost.	Assuming there will be no suitable habitat for listed species or special-status species in the project area.	Suitable habitat for listed species or special-status species are found in the project area.	2-Low (11-30%)	1 - Very Low (Insignificant)	2	Mitigate	During PAED phase, determine additional hours and costs for biological surveys, Refine cost and schedule as necessary.	Environmental	2/21/2023	0-PA&ED Sup	$3k	O 65 hours ML 85 hours P 125 hours	O 500 ML 200 P 300
								20%	4 - Moderate (1-3 months)	8						54	PERT 89 hours	PERT 267
															4-Con Cap	$31k	O $20k ML $150k P $300k	O 20 ML 30 P 90
																8	PERT $154k	PERT 39
Retired	6	Threat	Environmental	Permits to Enter	As a result of the inability to obtain access to land (private PTEs and/or private land - ARPA, etc.) in an adequate timeframe, a delay in PA&ED studies may occur, which would lead to a delay in project schedule and an increase in project support cost.	Assuming there will be no delay in obtaining access to land.	Right of Way fails to obtain access to private and/or public land within the target timeframe.	1-Very Low (1-10%)	1 - Very Low (Insignificant)	1	Accept	PAED studies would be delayed until access is obtained.	Environmental	2/21/2023	0-PA&ED Sup	$3k	O 200 hours ML 400 hours P 650 hours	O 60 ML 70 P 125
								5%	2 - Low (<1 month)	2						4	PERT 409 hours	PERT 78
Active	7	Threat	Right of Way	Schedule	As a result of the TCEP funding requirements, there is a time constraint as to when the funds need to be used. So right of way would need to be delivered 10 months sooner than what is shown in the R/W data sheet of 34 months.	The schedule for R/W cert is 24 months not 34 months	If we are successful in the TCEP funding then we will need to meet the new deadline.	5-Very High (>70%)	2 - Low (<$10,045k)	10	Accept	1. Work with right of way to try and meet the schedule. 2. When the time comes apply for a time extension for timely use of funds.	Project Manager	2/21/2023	9-RW Cap	$85k	O $50k ML $100k P $150k	O 30 ML 50 P 70
								85%	16 - Very High (>6 months)	80						43	PERT $100k	PERT 50
															2-RW Sup	$20k	O 100 hours O 200 hours O 400 hours	O 30 ML 60 P 90
																51	PERT 217 hours	PERT 60
Active	8	Threat	Right of Way	Easements	As a result of obtaining more information in the PA&ED phase, easements may be needed, which will result in R/W capital increase and schedule delays.	No additional easements will be required.	In the PAED phase, design determines an easement is required	2-Low (11-30%)	2 - Low (<$539k)	4	Mitigate	Design to determine early the required easements and request from RW as soon as design gets to know. Communicate early with row division to acquire easements necessary to build the required components.	Design	9/25/2020	0-PA&ED Sup	$1k	O 10 hours ML 35 hours P 50 hours	O 20 ML 100 P 150
								20%	4 - Moderate (1-3 months)	8						19	PERT 34 hours	PERT 95
															2-RW Sup	$1k	O 10 hours ML 25 hours P 50 hours	O 50 ML 100 P 150
																20	PERT 27 hours	PERT 100
Active	9	Threat	Utilities	Unexpected Utilities	As a result of existing utilities within the project limit, unexpected utilities may be found when potholing takes place which may require utility relocation that will result in cost and schedule impact.	Some unforeseen or undocumented utilities may be encountered when potholing.	when potholing is complete	2-Low (11-30%)	2 - Low (<$539k)	4	Mitigate	Potholing early and modify the design to try to avoid utility relocation	Design	9/25/2020	1-PS&E Sup	$6k	O 100 hours ML 200 hours P 400 hours	O 50 ML 70 P 90
								20%	4 - Moderate (1-3 months)	8						14	PERT 217 hours	PERT 70
															9-RW Cap	$54k	O $300k ML $200k P $500k	O 60 ML 90 P 120
																18	PERT $267k	PERT 90
																$284k	O $500k	

Risk Identification								Risk Assessment			Risk Response				Quantifying "Red" (High P & I) Level Risks			
Status	**ID #**	**Type**	**Category**	**Title**	**Risk Statement**	**Current status / assumptions**	**Risk Trigger**	**Probability (P)**	**Cost Impact Schedule Impact (I)**	**Cost Score Schedule Score (PxI)**	**Strategy**	**Response Actions**	**Risk Owner**	**Updated**	**Impacted Phase**	**Calculated Contingency**	**Support (hours) Capital Cost $k**	**Schedule (Days)**
Active	10	Threat	Design	Nonstandard design exception	As a result of a design exception not being approved for nonstandard features proposed / required which would lead to an increase in right of way capital / construction capital and support cost.	Design exceptions are expected to be approved.	Design exception is rejected.	2-Low (11-30%)	1 - Very Low (Insignificant)	2	Mitigate	Design to start on DSDD, identify all nonstandard features early. Keep open communication with Patricia Scrivner to ensure on time concurrence.	Design	9/25/2020	4-Con Cap		ML $1,500k P $2,000k PERT $1,417k	
								20%	1 - Very Low (Insignificant)	2					1-PS&E Sup	$6k 12	O 100 hours ML 200 hours P 400 hours PERT 217 hours	O 30 ML 60 P 90 PERT 60
Retired	11	Threat	Environmental	VMT	As a result of new VMT requirement, Increase in mitigation may be required which will result in added schedule scope and cost.	No additional mitigation is required..	VMT analysis/results shows induced traffic is significant and mitigation is necessary.	2-Low (11-30%)	2 - Low (<$906k)	4	Mitigate	Environmental division will review consultant report when approved and recommend an action to mitigate.	Environmental	11/27/2023	0-PA&ED Sup	$2k 8	O 30 hours ML 60 hours P 120 hours PERT 65 hours	O 20 ML 40 P 60 PERT 40
								20%	2 - Low (<1 month)	4							
Retired	12	Threat	Environmental	Hazardous Waste	As a result of hazardous waste preliminary site investigations not conducted on parcels of concern due to project scope changes, discovery of contamination on these parcels may occur, which would impact schedule, cost, and ROW acquisition.	Contamination is not present at existing haz waste sites for which PSIs were conducted.	Project scope changes.	2-Low (11-30%)	4 - Moderate ($10,009k - $20,015k	8	Accept	Minimize project changes. Conduct hazardous waste studies if necessary.	Environmental	11/27/2023				
								20%	8 - High (3-6 months)	16								
Retired	13	Threat	Funding	FTIP	As a result of funds for R/W and Construction not being listed in the FTIP, FHWA will not provide an air conformity determination; therefore, the FED cannot be approved which will delay PA/ED.	It is assumed that TCAG will secure funding by FED.	No R/W or Construction funding identified in the 2021 FTIP.	4-High (51-70%)	1 - Very Low (Insignificant)	4	Escalate	Remind sponsoring partner that the project cannot be approved until funding is secured. PM to explore funding opportunities in the ITIP/STIP.	Project Manager	11/28/2021	0-PA&ED Sup		O ML P	O ML P
								60%	8 - High (3-6 months)	32								
Retired	14	Threat	Environmental	Large number of comments or magnitude of comments on DED	As a result of either a lot of individual comments and/or the magnitude of comments it may not be possible to complete the FED within the compressed schedule required to obtain TCEP funding. If more months are required to attain PA&ED the project sponsor would have to wait for the next funding cycle to reapply, or obtain the funding needed from another source.	It is assumed that comments on the DED will be minor	Large amount of comments, or major comments on the DED requiring design changes or additional environmental studies	3-Moderate (31-50%)	4 - Moderate ($10,009k - $20,015k	12	Accept	Do the work necessary to prepare an FED that is legally defense able. This may require adding more months to the schedule.	Environmental	11/27/2023				
								40%	8 - High (3-6 months)	24								
Active	15	Threat	Design	Paige Ave Issue	As a result of Blackstone Ave intersection being very close (730') to Route-99. This could cause unexpected design issues during the final design in PS&E phase, resulting in unforeseen design standard exceptions.	We'll budget for support hours in the PS&E phase to resolve these issues or prepare Design Standard Decision Document	Final design in PS&E phase	2-Low (11-30%)	2 - Low (<$10,008k)	4	Accept	Consider preparing DSDD, if all design standards can not be met.	Design	11/13/2021	1-PS&E Sup	$3k 3	O 80 hours ML 120 hours P 160 hours PERT 120 hours	O 10 ML 15 P 20 PERT 15
								20%										
Active	16	Threat	Structure Design	Paige Ave OC	As a result of performance analysis for roundabouts, there might be a need to change the proposed bridge configuration.	One of the three proposed configuration could meet all requirements	Roundabout performance analysis	1-Very Low (1-10%)	2 - Low (<$10,008k)	2	Accept	Adjust structure design to meet requirements	Design & Structure Design	11/13/2021	1-PS&E Sup	$1k 1	O 80 hours ML 120 hours P 160 hours PERT 120 hours	O 10 ML 15 P 20 PERT 15
								5%										
Active	17	Threat	Design	Project Cost Estimate	As a result of economic conditions contract unit prices used for cost estimate may change.	Unit price is based on recently awarded project bid price	Change project cost	2-Low (11-30%)	2 - Low (<$10,008k)	4	Accept	Monitor bid item unit price for future projects, and update estimate as necessary	Design	11/14/2021	1-PS&E Sup		O ML P	O ML P
								20%										
Active	18	Threat	Utilities	Tulare Irrigation District (TID) Canal	Current TID canal alignment is in conflict with Paige Ave interchange proposal. Negotiations are underway with TID to realign the canal. Unforeseen outcome of the negotiations may impact project schedule and cost negatively.	TID is expected to agree with Caltrans proposal to realign the canal.	TID specifies their requirements.	2-Low (11-30%)	2 - Low (<$10,008k)	4	Accept	Negotiate with TID for a mutually acceptable terms	UEWG	11/14/2021	1-PS&E Sup		O ML P	O ML P
								20%										
Active	19	Threat	Utilities	Aerial and underground utilities	As a result of utility relocations will be finalized only in PS&E phase. Some of the relocation plans may trigger the need for a supplemental EIR.	The relocations identified so far should not require a supplemental EIR	When all relocations are finalized	2-Low (11-30%)	2 - Low (<$10,008k)	4	Accept	Finalize relocations as early as possible	UEWG	11/14/2021	1-PS&E Sup		O ML P	O ML P
								20%										
Active	20	Threat	Construction	Unexpected buried manmade objects	Project involves substantial excavation. Unexpected findings of buried manmade objects may delay construction work schedule and increase cost	Buried objects have been identified Based on As-Builts	During construction	2-Low (11-30%)	2 - Low (<$10,008k)	4	Accept	Remove buried objects with Change order	Design	11/14/2021	4-Con Cap		O ML P	O ML P
								20%										

Risk Identification								Risk Assessment			Risk Response				Quantifying "Red" (High P & I) Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Owner	Updated	Impacted Phase	Calculated Contingency	Support (hours) Capital Cost $k	Schedule (Days)
Active	21	Threat	Design	Paige Ave Roundabouts	As a result the complexity on Paige Ave requiring 4 roundabouts in succession, and an interchange, outside expertise may be needed for the detailed design.	Preliminary design is completed.	Availability of in-house expertise	3-Moderate (31-50%)	2 - Low (<$10,008k)	6	Accept	Identify experienced in-house staff available to work on this portion. If there is a shortage, give this portion to consultants who specialize in roundabouts.	Design	11/14/2021	1-PS&E Sup		O ML P	O ML P
								40%										
Active	22	Threat	Design	Drainage	As a result of the final drainage design, impacts on areas outside R/W, requiring temporary construction easements and supplemental EIR may occur.	Preliminary design is completed.	Final drainage design	2-Low (11-30%)	2 - Low (<$10,008k)	4	Accept	Finalize drainage design as early as possible in the PS&E phase to reduce schedule impact.	Design	11/14/2021				
								20%										
Active	23	Threat	Design	Traffic Handling	As a result of the Rte-99 profile correction to meet design standards which requires up to 6' excavation. Replacing a pump house storage box under the freeway would require 10' of excavation. Unexpected traffic handling issues for these work might require temporary detour through City streets, or temporary freeway closure.	Preliminary traffic handling design is completed.	Final traffic handling plans	1-Very Low (1-10%)	2 - Low (<$10,008k)	2	Accept	Finalize traffic handling plans as early as possible in PS&E phase, and make alternative arrangements	Design	11/14/2021				
								5%										
Active	24	Threat	Design	Bardsley Ave, NB Onramp widening & retaining wall	As a result of a 2-lane ramp widening and shoulder widening which would require 20'-wide R/W acquisition from Tulare City street. Retaining wall construction would require driving soil nail under a commercial building and the City street. Tulare City, or the building owner may not agree to this proposals.	Current proposal acceptable to affected parties	Right of way appraisal	2-Low (11-30%)	2 - Low (<$10,008k)	4	Accept	Alternative design for retaining wall is under consideration. If Tulare City doesn't agree for partial city street acquisition ramp widening will be dropped.	Design	11/14/2021				
								20%										
Active	25	Threat	Design	Sound wall and R/W security wall	As a result of the construction of these walls, it may cause unexpected changes in design which could impact Environmental, Right of way and utility units.	All potential impacts have been analyzed.	Final design	2-Low (11-30%)	2 - Low (<$10,008k)	4	Accept	In PS&E phase, review and check construction methods with structure design to avoid potential impact.	Design	11/14/2021				
								20%										
Retired	26	Threat	Environmental	Scope Change	As a result of a change in scope, additional environmental studies may be necessary, resulting in an increase to project cost and schedule.	There will be no changes to project scope.	Project scope changes.	2-Low (11-30%)	1 - Very Low (Insignificant)	2	Mitigate	Minimize changes during PAED, determine additional hours and cost for environmental compliance, perform regular reviews monthly.	Environmental	2/21/2023	0-PA&ED Sup	$11k	O 300 hours ML 450 hours P 600 hours	O 10 ML 20 P 30
									1 - Very Low (Insignificant)	2					0-PA&ED Sup	4	PERT 450 hours	PERT 20
								20%								$2k	O 20 hours ML 50 hours P 90 hours	O 30 ML 45 P 50
																9	PERT 52 hours	PERT 44
Active	27	Threat	Utilities	Southern California Edison Relocations	As a result of SCE Transmission Pole in conflict with Paige Ave interchange proposal, complications in the relocation process, may impact project cost and schedule.	SCE will need to relocate transmission lines.	Any delays or complications in the utility relocation process.	2-Low (11-30%)	2 - Low (<$10,045k)	4	Accept	Right of Way Utility Coordinator, Design, and UEW will work with SCE to determine the conflicts and work through the relocation process.	ROW/UEW	9/20/2023				
									2 - Low (<1 month)	4								
								20%										
Active	28	Threat	Right of Way	Condemnation	As a result of any unhappy property owners, condemnation may be required to acquire the property, which may impact cost and schedule.	Acquisitions will consider the condensed schedule when determining when condemnation should be started.	Any unhappy property owners who do not wish to negotiate.	2-Low (11-30%)	2 - Low (<$10,045k)	4	Accept	Right of Way will inform Design of any possible issues that can assist negotiations to move forward so that a review can be conducted. The Acquisition agent will also consider the condensed schedule to determine when condemnation should begin.	ROW	9/20/2023				
									2 - Low (<1 month)	4								
								20%										
Active	29	Threat	Funding	TCEP Funding	As a result of the single source of funding being TCEP funds, billing for condemnation, utility relocations and Loss of Goodwill may occur past funding allocation deadlines, which would lead to not have funding to make payments.	RW will consider the condensed schedule and attempt to minimize delays to meet the funding allocation deadlines.	Any condemnation or utility bills are received past the funding allocation deadlines.	4-High (51-70%)	8 - High ($20,090k - $40,178k)	32	Accept	Work with headquarters to determine other sources of funding.	Project Manager	10/19/2023				
									8 - High (3-6 months)	32								
								60%										
Active	30	Threat	Right of Way	Loss of Goodwill	As a result of the acquistions impacted by the project Loss of Goodwill claims are anticiapted, TCEP funding constraints will lead to no available funds to pay loss of goodwill claims	It is assumed that the project will have loss of goodwill claims submitted	Any business owners loss of goodwill claim submitted post TCEP funding expiration	4-High (51-70%)	8 - High ($20,090k - $40,178k)	32	Accept	Right of Way will inform the PM once any indication of a loss of goodwill claim is anticiapted. Project should consider funding availability to meet the payments of these claims	Project Manager & ROW	10/19/2023				
									16 - Very High (>6 months)	64								
								60%										
Active	31	Threat	Right of Way	Utilities	As a result of the project impacts Utility relocations are unavoidable, TCEP funding constrainsts will lead to Final Billing payments defaulting.	It is assumed that Utility Agreements will be executed with Utility Companies Impacted by the project	Any utility companies final billling invoices submitted post TCEP funding expiration	4-High (51-70%)	8 - High ($20,090k - $40,178k)	32	Accept	Right of way will work with HQ and research the possibility of clauses in the Utility Agreements that direct the billing to be paid prior to TCEP funding expiration. Project should consider funding availability to meet the payments of these agreements.	Project Manager & ROW	10/19/2023				
									16 - Very High (>6 months)	64								

Risk Identification								Risk Assessment			Risk Response				Quantifying "Red" (High P & I) Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Owner	Updated	Impacted Phase	Calculated Contingency	Support (hours) Capital Cost $k	Schedule (Days)
								60%										
Active	32	Threat	Right of Way	Appraisal Map	As a result of the expedited R/W schedule due to TCEP funding constraints, preparation of maps may extend longer than the schedule allows.	It is assumed that the mapping will be delivered in the current allotted timeframe.	Any delays to M224 or unexpected revisions.	3-Moderate (31-50%)	2 - Low (<$11,307k)	6	Accept	Right of Way Engineering to inform Design and PM if delays or revisions occur and work to achieve the scheduled timeline.	Right Of Way Engineering	11/28/2023				
									4 - Moderate (1-3 months)	12								
								40%										
Active	33	Threat	Right of Way	Local Funds	As a result of increased costs for R/W Capital, funding may exceed the current programmed amount.	It is assumed that R/W costs will be within the programmed amount and delivered within the scheduled timeframe.	Increase costs for land acquisitions and utility relocations.	3-Moderate (31-50%)	8 - High ($22,615k - $45,229k)	24	Accept	Design will work closely with R/W to reduce impacts to adjacent properties and utilities to the fullest extent feasible. If R/W cost increase above programmed amount, Project Manager will work with Local Agency to acquire additional funds.	Project Manager, Design & ROW	12/29/2023				
									8 - High (3-6 months)	24								
								40%										

Dist-County-Route: 06-Tul-99
Post Mile Limits: 25.2/30.6
Type of Work: Freeway widening and reconstruction
Project ID (EA): 0614000040 (06-489500)
Program Identification: 20.XX.025.700 STIP
Phase: ☐ PID ☒ PA/ED ☐ PS&E

Regional Water Quality Control Board(s): Central Valley Region (5-Fresno)

Total Disturbed Soil Area: 162.0 acres PCTA: Exempt

Alternative Compliance (acres): NA ATA 2 (50% Rule)? Yes ☐ No ☒

Estimated Const. Start Date: 3/15/2026 Estimated Const. Completion Date:10/15/2027

Risk Level: RL 1 ☒ RL 2 ☐ RL 3 ☐ WPCP ☐ Other: _____

Is MWELO applicable? Yes ☐ No ☒

Is the Project within a TMDL watershed? Yes ☐ No ☒

TMDL Compliance Units (acres): N/A

Notification of ADL reuse (if yes, provide date): Yes ☐ Date:_____ No ☒

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E only.

Peter Chander — 10/2/21

Peter Chander, Registered Project Engineer — Date

I concur with the Construction water pollution control strategy and selected temporary BMPs in this report:

David Troop — 10/15/2021

David Troop, *District Construction SW Coordinator* — *Date*

I have reviewed the stormwater quality design issues and find this report to be complete, current, and accurate:

Eric Karlson — 10/14/21

Eric Karlson, *Project Manager* — *Date*

Rene Sanchez — 10/15/21

Rene Sanchez, *Designated Maintenance Representative* — *Date*

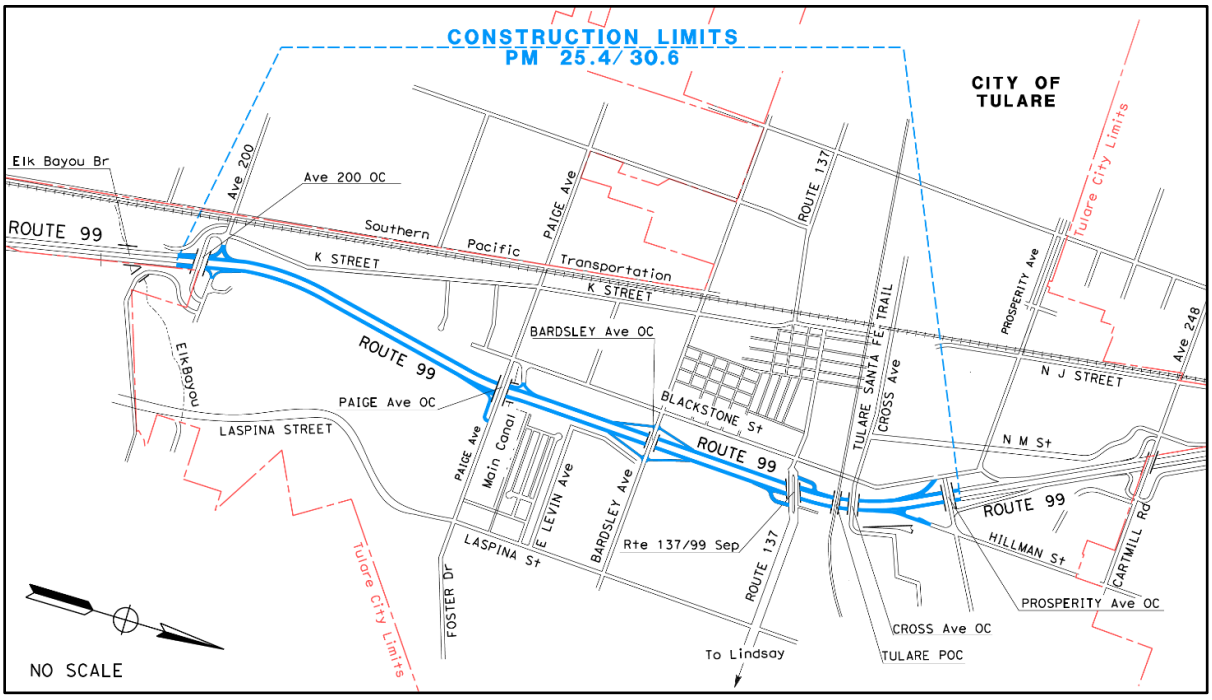
10/26/21

Brad Cole, *Designated Landscape Architect Representative* — *Date*

[Stamp Required at PS&E only]

Mazin Al Ali — 10/28/2021

Mazin H Al Ali, *District/Regional Design SW Coordinator or Designee* — *Date*



Noise Abatement Decision Report

This report is in reference of the Noise Study Report prepared for this project on May 24, 2021 and an addendum issued on June 15, 2023 to the 2021 Noise report.

On State Route 99 in Tulare County

From 0.4 mile south of Avenue 200 to 0.1 mile north of Prosperity Avenue

District 06-TUL-99-PM 25.2/PM 30.6

EA: 06-48950 & Project ID: 0614000040

July 2023

Caltrans

Noise Abatement Decision Report

Noise Study Report Dated October 22, 2020 and the addendum

dated June 15 , 2023

On State Route 99

Between south of Avenue 200 to north of Prosperity Avenue

06-Tul-99-PM 25.2/30.6

EA: 06-48950

July 2023

Approved By: _____ Date: 07/31/2023

Irene Lee, Senior Transportation Engineer
Central Region Project Development
District 06/Design I

This Noise Abatement Decision Report has been prepared under the direction of the following registered civil engineer. The registered civl engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Peter Chander _____ 7/27/23

Peter Chander. *DATE*
REGISTERED CIVIL ENGINEER



List of Abbreviated Terms

AB	Aggregate Base
AS	Aggregate Subbase
Benefited receptor	A dwelling unit or other equivalent land use expected to receive a noise reduction of at least 5 dBA from the proposed abatement measure
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CRCP	Continously Reinforced Concrete Pavement
dB	Decibels
dBA	A-weighted sound pressure level
EB	Eastbound
ED	Environmental Document
ES	Edge of Shoulder
FHWA	Federal Highway Administration
HMA	Hot Mix Asphalt
HDM	Highway Design Manual
HOV	High Occupancy Vehicle
ITS	Intelligent Transportation System
JPCP	Jointed Plain Concrete Pavement
$L_{eq(h)}$	A-weighted, energy average sound level during a 1-hour period (Equivalent Sound Level over one hour)
MASH	Manual for Assessing Safety Hardware
MBGR	Metal Beam Guard Railing
MGS	Midwest Guardrail System
mph	miles per hour
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NB	Northbound
NE	Northeast
NSR	Noise Study Report
Noise reduction design goal	7 dB of noise reduction at one or more benefited receptors.
OC	Overcrossing
PDS	Project Development Support
PM	Post Mile
PP	Pumping Plant

Protocol	Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects
Reasonable allowance	A single dollar value—a reasonable allowance per benefited receptor
RCB	Reinforced Concrete Box
RCP	Reinforced Concrete Pipe
R/W	Right-of-Way
R1	Receiver 1
R2	Receiver 2
R3	Receiver 3
R4	Receiver 4
R5	Receiver 5
R6	Receiver 6
SB	Southbound
SR	State Route
STIP	State Transportation Improvement Plan
TeNS	Caltrans' Technical Noise Supplement
TNM 2.5	FHWA Traffic Noise Model Version 2.5
TCE	Temporary Construction Easement
4F	Four-Lane Freeway
6F	Six-Lane Freeway

1. Introduction

The Noise Abatement Decision Report (NADR) presents the preliminary noise abatement decision as defined in the Caltrans Traffic Noise Analysis Protocol (Protocol). This report has been appoved by a Calfornia licensed professional civil engineer. The noise study report (NSR) for this project was prepared by Allam Alhabaly on May 24, 2021, and approved by Ken Romero, Senior Transportation Engineer. Another noise study was performed in June 2023 to evaluate noise impact along the Northbound onramp from Paige Ave. This resulted in an addendum dated June 15, 2023 for the original NSR.

1.1. Noise Abatement Assessment Requirements

Title 23, Code of Federal Regulations (CFR), Part 772 of the Federal Highway Administration (FHWA) standards (23 CFR 772) and the Caltrans Traffic Noise Analysis Protocol (Protocol) require that noise abatement be considered for projects that are predicted to result in traffic noise impacts. A traffic noise impact is considered to occur when future predicted design-year noise levels with the project "approach or exceed" Noise Abatement Criteria (NAC) defined in 23 CFR 772 or when the predicted design-year noise levels with the project substantially exceed existing noise levels. A predicted design-year noise level is considered to "approach" the NAC when it is within 1 dB of the NAC. A substantial increase is defined as being a 12-dB increase above existing conditions.

23 CFR 772 requires that noise abatement measures that are reasonable and feasible and are likely to be incorporated into the project be identified before adoption of the final Environmental Document (ED).

The Protocol establishes a process for assessing the reasonableness and feasibility of noise abatement. Before publication of the draft ED, a *preliminary noise abatement decision* is made. The preliminary noise abatement decision is based on the *feasibility* of evaluated abatement and the *preliminary reasonableness determination.* Noise abatement is considered to be acoustically feasible if it is predicted to provide noise reduction of at least 5 dBA at an impacted receptor. Other nonacoustical factors relating to geometric standards (e.g., sight distances), safety, maintenance, and security can also affect feasibility.

The overall reasonableness of noise abatement is determined by the following three factors:

- the viewpoints of benefited receptors,
- the cost of noise abatement, and

- the noise reduction design goal.

The preliminary reasonableness determination reported in this document is based on the noise reduction design goal and the cost of abatement. The viewpoints of benefited receptors are deterined by a survey that is normally conducted during the public review period for the project ED.

Caltrans' noise reduction design goal is that a barrier must be predicted to provide at least 7 dB of noise reduction at one or more benefited receptors. The cost reasonableness of abatement is deterined by calculating a cost allowance that is considered to be a reasonable amount of money to spend on abatement. This *reasonble allowance* is then compared to the engineer's cost estimate for the abatement. If the engineer's cost estimate is less than the allowance and the abatement will provide at least 7 dB of noise reduction at one or more benefited receptors, then the preliminary determination is that the abatement is reasonable. If the cost estimate is higher than the allowance or if the design goal cannot be achieved, the preliminary determination is that abatement is not reasonable.

The NADR presents the preliminary noise abatement decision based on acoustical and nonacoustical feasibility factors, the design goal, and the relationship between noise abatement allowances and the engineer's cost estimate. The NADR does not present the final decision regarding noise abatement; rather, it presents key information on abatement to be considered throughout the environmental review process, based on the best available information at the time the draft ED is published. The final overall reasonableness decision will take this information into account, along with the results of the survey of benefited receptors conducted during the environmental review process.

At the end of the public review process for the ED, the final noise abatement decision is made and is indicated in the final ED. The preliminary noise abatement decision will become the final noise abatement decision unless compelling information received during the environmental review process indicates that it should be changed.

1.2. Purpose of the Noise Abatement Decision Report

The purpose of the NADR is to:

- summarize the conclusions of the NSR relating to acoustical feasibility, the design goal, and the reasonable allowances for abatement evaluated,
- present the engineer's cost estimate for evaluated abatement,
- present the engineer's evaluation of nonacoustical feasibility issues,
- present the preliminary noise abatement decision, and
- present preliminary information on secondary effects of abatement (impacts on cultural resources, scenic views, hazardous materials, biology, etc.).

The NADR does not address noise barriers or other noise-reducing treatments required as mitigation for significant adverse environmental effects identified under the California Environmental Quality Act (CEQA).

1.3. Project Description

Route 99 Widening and rehabilitation:

This State Transportation Improvements (STIP) project is on State Route (SR) 99 in Tulare County, beginning just south of the Avenue 200 Overcrossing (OC) [Tul-99-PM 25.433; Br No. 46-193] at Post Mile (PM) 25.1 and ending just north of the Prosperity Avenue OC [Tul-99-PM 30.578; Br No. 46-161] at PM 30.6. SR 99 is currently a 4-lane divided freeway throughout the limits of this project. The posted speed limit along this segment is 70 miles per hour (mph). Demand for this facility is increasing due to the regional population growth and recent development in the area. The proposed development work and potentiality of urban and regional growth would increase the traffic volume, which would likely add to the operational deficiencies that currently exist. The project proposes to widen the existing 4-lane freeway (4F) to a 6-lane freeway (6F) by constructing one lane in each direction in the existing median of SR 99. It would also replace the bridge on Paige Ave with a 4-lane bridge and modify the existing ramps at the interchange. Other work includes rehabilitating the existing pavement on the mainline and ramps, constructing a concrete median barrier, upgrading existing drainage systems, upgrading roadside signs, upgrading Intelligent Transportation Systems (ITS) elements, installing ramp metering, rehabilitating existing lighting systems, and realigning a segment of southbound (SB) lanes.

Paige Ave interchange reconstruction:

Remove the existing on and off ramps at the Paige Avenue interchange and construct new two-lane ramps creating a tight diamond interchange. Replace the 2-lane Paige Avenue OC bridge with 4-lane bridge in a overcrossing or undercrossing configuration.

Widen Paige Ave to 4-lane and construct roundabouts at the intersection of Blackstone Street, SB and NB ramp terminals, and Lapina Street. Improve Blackstone Street and Laspina Street in the surrounding intersection area.

Cul-de-sac the existing SB on/off ramp just past the entrance to the Mobil gas station, and the existing NB on/off ramp just past the entrance to the mobile home park.

Realign or extend the double 12'x6' Reinforced Concrete Box (RCB) culvert for the Tulare Main Canal to accommodate the Paige Ave ramp improvements

1.4. Affected Land Uses

Per the NSR, field investigations were conducted on September 13 and October 4, 2020 to identify land uses that could be subject to traffic noise impacts due to the proposed improvements. Also the field investigation was conducted to identify frequent human outdoor use areas in residential receptors that could be subject to traffic noise impacts and to consider the physical setting of the freeway alignment relative to those areas. Land uses within the project limits were categorized as defined in the Activity Category of Table 4-1 in the NSR. As stated in the Caltrans 2011 Protocol, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at multi-family residences.

Land use within the vicinity of the project limits is urban. Land uses designated for the project/noise abatement criteria are as follows:

- Residences and mobile home communities (Activity Category B).
- Hotels, restaurants, offices and service stations (Activity Category E).
- Agriculture fields, light industrial facilities, truck stops and warehousing (Activity Categories F). There are no Abatement Criteria for Activity Categories F. Noise levels are recorded in the noise report for informational use only.

The land uses within the project limits and their representative receivers are divided in segments and described in detail in the following section based on roadway topography with respect to the identified receivers.Therefore, nine short-term field measurements were selected and collected to represent a total of 40 potentially impacted receiver locations within the limits of this project. The nine receiver locations are described in Section 2 below.

2. Results of the Noise Study Report

Noise measurements were conducted during the field investigation by Caltrans Environmental staff at selected locations to evaluate the existing noise environment. It is important to note that noise measurements were done in conformance with the Caltrans' Technical Noise Supplement (TeNS) and with the guidelines outlined in the Federal Highway Administration's "Measuring of Highway-Related Noise," FHWA-DP-96-046. A total of 9 short-term noise measurements were collected for the NSR and were broken into segments based on the roadway topography. The 9 receiver locations were utilized and modeled to represent a total of 40 potentilly impacted receiver locations, which can be seen in Appendix B. The segemnts and their respective receiver locations (9 field-measured locations) are as follows:

Segment 1 - PM 25.0 to Paige Avenue

SR 99, within this segment, is on flat terrain. Land uses within this segment on both sides of SR 99 consist of a mobile homes community, light industry and manufacturing facilities and a truck stop.

- Receiver 1 (R1) - 900 E. Rankin Avenue
  - Country Estates Manuacuerd Home Community, located west of SR 99
  - Activity Category B land use
  - First-row mobile homes are set back approximately 350 feet from the Edge of Shoulder (ES) of SR 99
- Receiver 2 (R2) - Agriculture field
  - Agriculture site near 4157 S. Laspina Street, located east of SR 99
  - Activity Category F land use
  - Receiver was placed 100 feet from the edge of the traveled way of SR 99

Segment 2 - Paige Avenue to Bardsley Avenue

SR 99, within this segment, is on flat terrain. Land uses within this segment of SR 99 consist of single-family residences located on the east side of SR 99 and small businesses and warehouses located on the west side of SR 99.

- Receiver 3 (R3) - 1678 S. Dayton Street

  - Single-Family Residence, located east of SR 99
  - Activity Category B land use
  - Home is set back approximately 39 feet from the Right-of-Way (R/W) fence and represents the first-row residential units east of SR 99
- Receiver 4 (R4) - 1442 S. Blackstone Street
  - Commercial/Industrial establishment, located west of SR 99
  - Activity Category F land use
  - Receiver is set back approximately 64 feet from the R/W fence

Segment 3 - Bardsley Avenue to Cross Avenue

SR 99, within this segment, is depressed at the structures. Land uses within this segment along both side of SR 99 consist of single- and multi-family residences, a mobile home community, and office.

- Receiver (R5) - 1216 E. Sequoia Avenue
  - Single-family residence, located west of SR 99
  - Activity Category B land use
  - Home is set back approximately 54 feet from the ES of SR 99 and represents the first-row single-family homes west of SR 99 between Bardsley Avenue and Cross Avenue
- Receiver (R6) - 320 N. Blackstone Street
  - Tulare Mobile Home Park, located west of SR 99
  - Activity Category B land use
  - The first-row mobile homes are set back approximately 140 feet from the ES of SR 99

Segment 4 - Cross Avenue to PM 30.4 (Approximately 350 feet south of Prosperity Avenue)

SR 99, within this segment, is depressed at the structures. Land uses within this segment along both side of SR 99 consist of multi-family residences ad duplexes with no outdoor area for outdoor gatherings, Tulare Church fo Christ, and First Church of God with no outdoor area for outdoor gatherings, offices and hotels.

- Receiver (R7) - 1225 E. Hillman Street
  - Fairfield Inn & Suites-Hotel, located east of SR 99
  - Activity Category E land use
  - The hotel swimming pool (place of gathering) is set back approximately 200 feet from the from the ES of SR 99
- Receiver (R8) - 500 N. Blackstone Street

  - Tulare Church of Christ, located west of SR 99
  - Activity Category C land use
  - The church has one location in the back for frequent gathering and a playground for kids. The location in back of the church is shielded by the church structure and set back approximately 425 feet from the R/Wfence
- Receiver (R9) - 833 N. Blackstone Street
  - First Church of God, located west of SR 99
  - Activity Category C land use
  - The church has no outdoor location for frequent gathering, but the church hall is set back approximately 101 feet from the R/W fence

Traffic volumes for the year 2017, as obtained from District 6 Planning, were inputted into FHWA Traffic Noise Model Version 2.5 (TNM 2.5) with existing roadway conditions according to the methodology described in Section 4.4.1.3 of the TeNS to determine existing noise levels. The model input and output data for the existing noise levels are included in Appendix B of the NSR. The existing noise levels for studied receivers within the project limits vary from 43 dBA and 72 dBA. It is anticipated that the noise level would be slightly increased ranging from 45 to 76 dBA with the project at the Design Year 2047. Without the project, the noise level will remain as is.

Modeling results for segment 1 indicate that the predicted traffic noise levels (Leq[h]) for the design-year with the proposed improvements do not approach or exceed the NAC; therefore noise abatement is not proposed for this segment. Modeling results for segment 2 indicate that the predicted traffic noise levels (Leq[h]) for the design-year with the proposed improvements mostly do not approach or exceed the NAC; however there is only location which was found to exceed the NAC threshold of 67 dBA for the evalsated land use. Upon a field investigation, it was determined no locations would benefit from a soundwall as noise abatement. Therefore noise abatement is not proposed for segment 2. Modeling results for segment 3 indicate that the predicted traffic noise levels (Leq[h]) for the design-year with the proposed improvements mostly do not exceed the NAC or do not have an associated NAC for the respective land use; however there were a few locations which were found to exceed the NAC threshold for the evaluated land use. Therefore noise abatement must be considered at the locations which exceeded the NAC. Modeling results for segment 4 indicate that the predicted traffic noise levels (Leq[h]) for the design-year with the proposed improvements either do not exceed the NAC or have no outdoor area for outdoor gatherings; therefore noise abatement is not proposed for this segment.

In accordance with 23 CFR 772, noise abatement is considered where traffic noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Potential noise abatement measures identified in the Protocol were considered in the NSR; however, because of the constrained configuration, abatement in the form of soundwalls is the only abatement measure considered to be feasible. Per NSR, three soundwalls are proposed for this project at locations where the design year build noise levels exceed the NAC. Soundwalls were proposed for residences within segment 3.

The noise attenuation for this project proposes three soundwalls which are as follows:

- **Soundwall 1 (SW1)** - Along the State R/W along NB SR 99 just south of the SR 137/Tulare Avenue Separation Structure for an approximate length of 855 feet
    - Proposed for heights ranging from 8 feet and 16 feet
    - SW1 needs to be at least 10 feet tall to provide required noise attenuation of 5 db and meet the required design goal attenuation of 7 dB
    - The height recommendation for the proposed soundwall is 12 feet in order to break the line of sight of an 11.5-foot truck stack

- **Soundwall 2 (SW2)** - Along the State R/W along SB Off-Ramp to SR 137/Tulare Avenue for an approximate length of 800 feet
    - Proposed for heights ranging from 8 feet and 16 feet
    - SW1 needs to be at least 10 feet tall to provide to the required design goal attenuation of 7 dB
    - The height recommendation for the proposed soundwall is 10 feet in order to break the line of sight of an 11.5-foot truck stack

- **Soundwall 3 (SW3)** - Along the ES of the NB Off-Ramp to SR 137/Tulare Avenue for an approximate length of 565 feet
    - Proposed for heights ranging from 8 feet and 14 feet
    - SW1 needs to be at least 12 feet tall to provide required noise attenuation of 5 db and meet the required design goal attenuation of 7 dB
    - The height recommendation for the proposed soundwall is 12 feet in order to break the line of sight of an 11.5-foot truck stack

- **Soundwall 4 (SW4)** - Along the ES of the NB On-Ramp from Paige Avenue for an approximate length of 1,240 feet
    - Proposed for heights ranging from 10 feet and 14 feet

- SW4 needs to be at least 12 feet tall to provide required noise attenuation of 5 db and meet the required design goal attenuation of 7 dB
- The height recommendation for the proposed soundwall is 12 feet in order to break the line of sight of an 11.5-foot truck stack

Refer to attachment - A for the locations of proposed soundwalls with an aerial background. The Caltrans acoustical design goal must be met for a noise barrier to be considered reasonable. The design goal is that the soundwall must be predicted to provide at least 7 dB of noise reduction at one or more benefitted receivers. Also, the estimated cost to build the noise barrier should be equal to or less than the total cost allowance of benefitted receiverscalculated for the barrier to be considered reasonable from a cost perspective. Table 1 below summarizes the barrier evaluation from NSR and NSR addendum dated June 15, 2023.

Summary of Barrier Evaluation from Noise Study Report

Barrier	*Location*	*PM*	*Height (feet)*	*Acoustically Feasible?*	*Number of Benefited Residences*	*Design Goal Achieved?*	*Reasonable Allowance per Residence*	*Total Reasonable Allowance*
SW1	R/W	29.28 to 29.52	8	No	0	No	N/A	0
			10	Yes	5	Yes	$107,000	$535,000
			12	Yes	5	Yes	$107,000	$535,000
			14	Yes	5	Yes	$107,000	$535,000
			16	Yes	5	Yes	$107,000	$535,000
SW2	R/W	29.76 to 29.84	8	No	5	No	N/A	$535,000
			10	Yes	6	Yes	$107,000	$642,00
			12	Yes	6	Yes	$107,000	$642,000
			14	Yes	6	Yes	$107,000	$642,000
			16	Yes	6	Yes	$107,000	$642,000
SW3	R/W	29.36 to 29.43	8	No	1	No	N/A	N/A
			10	No	1	No	$107,000	$107,000
			12	Yes	2	Yes	$107,000	$214,000
			14	Yes	2	Yes	$107,000	$214,000
			16	Yes	2	Yes	$107,000	$214,000
SW4	Shoulder	27.6 to 27.7	10	Yes	10	No	$107,000	$1,070,000
			12	Yes	12	Yes	$107,000	$1,284,000
			14	Yes	12	Yes	$107,000	$1,284,000

Preliminary Noise Abatement Decision.

3.1. Summary of Key Information

Noise abatement is considered to be acoustically feasible if it is predicted to provide noise reduction of at least 5 dBA at an impacted receptor. From the NSR, the proposed soundwall height is 10’ for SW 2 and 12' for SW1, SW3 and SW 4 would be considered to be acoustically feasible.

The engineer’s cost estimate include costs required to construct the soundwall such as soundwall (masonry block), spread footing, cast-in-drilled-hole piles, bar reinforcing steel, and anti-graffitti coating. The cost also reflects 10% contingency. The wall lengths incoporated into the engineer's estimate differ slightly from those mentioned in the NSR. The lengths for SW1, SW2, and SW3 which were considered in the estimate are 815 feet, 775 feet, and 565 feet, respecitvely. Table 2 summarizes the reasonableness of the proposed feasible barriers with regards to construction cost and the ability to meet the required noise attenuation of 5 db and meet the required design goal attenuation of 7 dB. The construction cost for 10’ and 12’ uniform height walls, and a variable 8’ to 12’- high walls are also shown. Since the roadway level is lower than the groundlevel at the soundwalls, the variable height walls are designed to give an effective coverage that of a 12’-high soundwall.

Table 2. Summary of Abatement Key Information

Barrier	*Height (feet)*	*Acoustically Feasible?*	*Number of Benefited Residences*	*Design Goal Achieved?*	*Total Reasonable Allowance*	*Estimated Construction Cost*	*Cost Less Than Allowance?*
SW1	10	Yes	5	Yes	$535,000	$582,000	No
	12	Yes	5	Yes	$535,000	$677,000	No
	14	Yes	5	Yes	$535,000	-	No
	Variable 8’-12’	Yes	5	Yes	$535,000	**$552,00**	No
SW2	10	Yes	6	Yes	$642,000	$553,000	Yes
	12	Yes	6	Yes	$642,000	$646,000	No
	14	Yes	6	Yes	$642,000	$734,000	No
	Variable 8’-14’	Yes	6	Yes	$642,000	**$545,000**	Yes
SW3	10	No	1	No	$107,000	$453,000	No
	12	Yes	2	Yes	$214,000	$498,000	No
	Variable 8’-12’	Yes	2	Yes	$214,000	**$421,000**	No
SW4	12	Yes	12	Yes	$1,284,000	$1,035,500	Yes
	14	Yes	12	Yes	$1,284,000	$1,175,000	No

3.2. Non-acoustical Factors Relating to Feasibility

Site Condition: All the soundwalls are generally adjacent to roadway cut sections, and the roadway level is lower than the ground level along the soundwall line. Since the roadway profile varies with respect to that of the ground level at the soundwalls, a variable height soundwall is feasible at all the 3 locations. The walls will be constructed 4' inside of R/W line where the site condtion is flat on both sides of the wall. Preliminary geotechnical site condition review suggests spread footing for all the soundwalls. SW3 may require a combination of spread footing and pile foundation. The backside of the wall will be placed 4' inside of R/W line so as to keep the spread footing inside State R/W. Temporary Construction Easement (TCE) is required during construction The property use adjacent to these proposed soundwalls include single-family residence and mobile home park. Preliminary investigation shows that no utility relocation is required for soundwall construction.

Geometric Standards: Construction of the soundwalls will not adversley impact any of the highway geometric standards.

Maintenance: The front side of the walls are accesible from the roadway side. The backside is accesible through access gates in the walls. 4' clear width is available on the back side, between the wall and the R/W fence.

3.3. Preliminary Recommendation and Decision

The preliminary noise abatement decision presented in this report is based on preliminary project alignments and profiles, which may be subject to change. As such, the physical characteristics of noise abatement described herein also may be subject to change. If pertinent parameters change substantially during the final project design, the preliminary noise abatement decision may be changed or eliminated from the final project design. A final decision to construct noise abatement will be made upon completion of the project design.

The preliminary noise abatement decision presented in this section will be included in the draft environmental document, which will be circulated for public review.

The following section presents the engineer's review and recommendation on the proposed height and reasonableness for each feasible and proposed soundwall for the Build Alternative.

Soundwall SW1:

SW1 is a 815-foot-long and is located 4' inside of the state R/W line on the southwest corner of the Tulare Ave interchange. (see attachment - A and B). The NSR recommends placing a 12' uniform height soundwall in order to break the line of sight of an 11.5-foot truck stack, and to meet the 7-dB noise reduction design goal. The total reasonable allowance for this soundwall benefiting the 5 residences, based on $107,000 per residence, is $535,000.

The engineer's construction cost estimate for a uniform 12' high soundwall is $677,000 which is higher than the reasonable allowance. So, a variable height soundwall was considered for this location since the roadway profile is lower than the existing ground profile at the soundwall. Based on the profile difference (see attachment - B), it was determined that a variable height, 8' to 12'-high, soundwall would provide the effective coverage that of a 12'-high soundwall, and meet the required design goal attenuation of 7 dB at this location.

The estimated total construction cost for an 8' to 12' variable-height soundwall on spread footing is $552,000, which is about 3% more than the total reasonable allowance.

Preliminary Recommendation: It is recommended to construct an 8- to 12-foot-high masonry soundwall for this location. The recommended heights of the soundwall are shown in attachment - B.

Soundwall SW2:

SW2 is 775-foot-long and is located 4' inside of the state R/W line, on the northwest corner of the Tulare Ave interchange. (see attachment - A and C). The NSR recommends placing a 12' uniform height soundwall in order to break the line of sight of an 11.5-foot truck stack, and to meet the 7-dB noise reduction design goal. The total reasonable allowance for this soundwall benefiting the 5 residences, based on $107,000 per residence, is $535,000.

The engineer's construction cost estimate for a uniform 12' high soundwall is $646,000 which is higher than the reasonable allowance. So, a variable height soundwall was considered for this location since the roadway profile is lower than the existing ground profile at the soundwall. Based on the profile difference (see attachment - C), it was determined that a variable height, 8' to 14'-high, soundwall would provide the effective coverage that of a 12'-high soundwall, and meet the required design goal attenuation of 7 dB at this location. A 150'-long, 14'-high wall is required at the beginning, since the roadway profile is about 1' highr than the existing ground level at the soundwall.

The estimated total construction cost for an 8' to 14' variable-height soundwall on spread footing is $545,000, which is about 2% more than the total reasonable allowance.

Preliminary Recommendation: It is recommended to construct an 8- to 14-foot-high masonry soundwall for this location. The recommended heights of the soundwall are shown in attachment - C.

Soundwall SW3:

SW3 is 525-foot-long and is located 4' inside of the state R/W line, on the southeast corner of the Tulare Ave interchange. The NSR recommends placing a 12' uniform height soundwall in order to break the line of sight of an 11.5-foot truck stack, and to meet the 7-dB noise reduction design goal. The total reasonable allowance for this soundwall benefiting the 3 residences, based on $107,000 per residence, is $321,000.

The engineer's construction cost estimate for a uniform 12' high soundwall is $499,000 which is higher than the reasonable allowance. So, a variable height soundwall was considered for this location since the roadway profile is lower than the existing ground profile at the soundwall. Based on the profile difference (see attachment - D), it was determined that a variable height, 8' to 12'-high, soundwall would provide the effective coverage that of a 12'-high soundwall, and meet the required design goal attenuation of 7 dB at this location. A section of

The estimated total construction cost for an 8' to 12' variable-height soundwall on a combination of spread footing/CIDH pile foundation is $397,736, which is about 24% more than the total reasonable allowance.

Preliminary Recommendation: A 8- to 12-foot-high masonry soundwall has been found to be acoustically feasible but the construction cost exceeds the reasonable allowance. Therefore, it is recommended not to construct SW3.

Soundwall SW4:

SW4 is 1240-foot-long and is located along the outside shoulder of the proposed northbound onramp from Paige Ave. The NSR recommends placing a 12' uniform height soundwall in order to break the line of sight of an 11.5-foot truck stack, and to meet the 7-dB noise reduction design goal. The total reasonable allowance for this soundwall benefiting the 12 residences, based on $107,000 per residence, is $1,284,000.

The engineer's construction cost estimate for a uniform 12' high soundwall is $1,035,000.which is lower than the reasonable allowance. So, a 12' height soundwall is considered for this location.

Preliminary Recommendation: Construct a 12-foot-high masonry soundwall along the outside shoulder.

Recommendation Summary						
Soundwall	Height (ft)	Acoustically Feasible?	Number of Benefited Residences	Total Reasonable Allowance	Estimated Construction Cost	Reasonable? (7-dB Noise Reduction and Cost < Allowance?))
SW1	8-12	Yes	5	$535,000	$552,000	Yes
SW2	8-14	Yes	9	$963,000	$545,000	Yes
SW3	8-12	Yes	3	$321000	$397,736	No
SW4	12	Yes	12	$1,284,000	$1,035,000	Yes

4. Secondary Effects of Abatement

The noise abatement recommended in the preliminary noise abatement decision may have the potential to result in secondary effects on cultural resources, scenic views, hazardous materials, biology, or other resources. As mentioned in Section 3.2, constructing the recommended soundwalls at the R/W line may require TCEs to be acquired, which may also come with secondary effects. The final overall reasonableness decision will investigate secondary effects due to the insallation of noise abatement when the final noise abatement decision is made and will be incororated into the final ED.

5. References

- Noise Study Report – Tulare City Widening Project - Dated May 24, 2021 [Prepared By: Allam Alhabaly, Caltrans Central Region Environmental Engineering Branch]
- A Memorandum Dated June 5, 2018 – An Addendum To the 2018 Noise Study Report [From: Ken Romero, Caltrans Central Region Environmental Engineering Branch]
- 23 CFR Part 772, 2011. Procedures for Abatement of Highway Traffic Noise and Construction Noise, 23 Codes of Federal Regulations, Part 772, July.
- Caltrans, 2015 Highway Design Manual, Chapter 1100 Highway Traffic Noise.

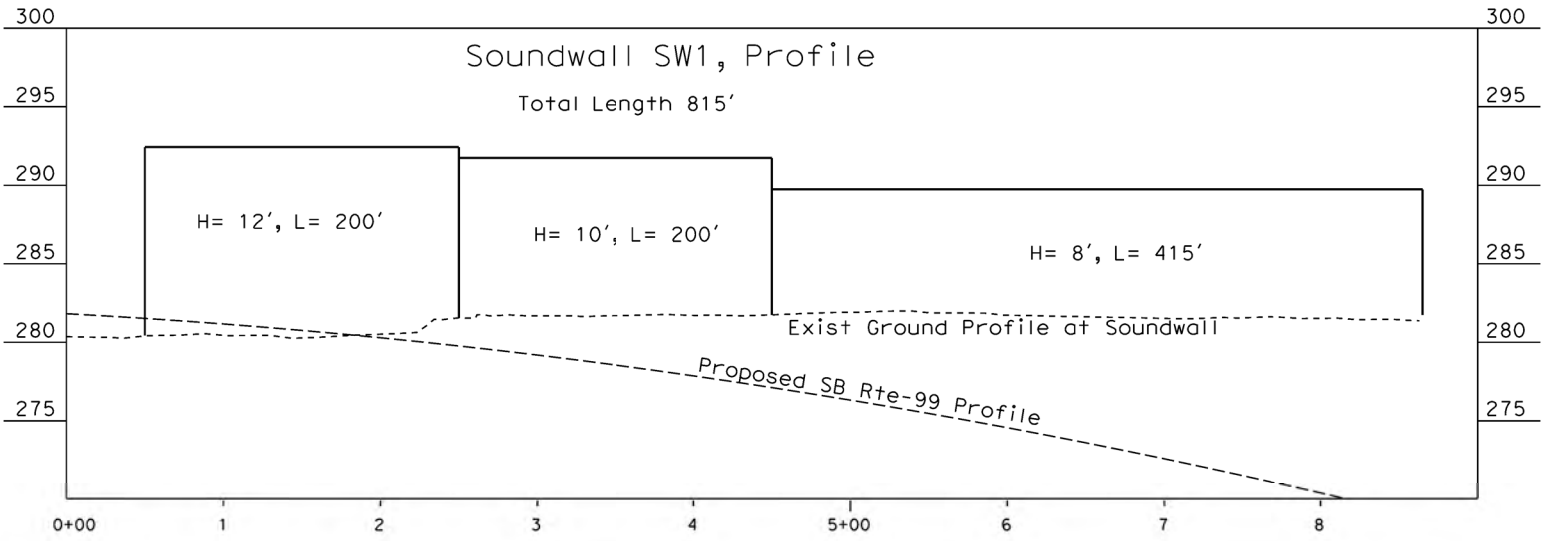


Attachment A

Soundwall Location

Attachment B

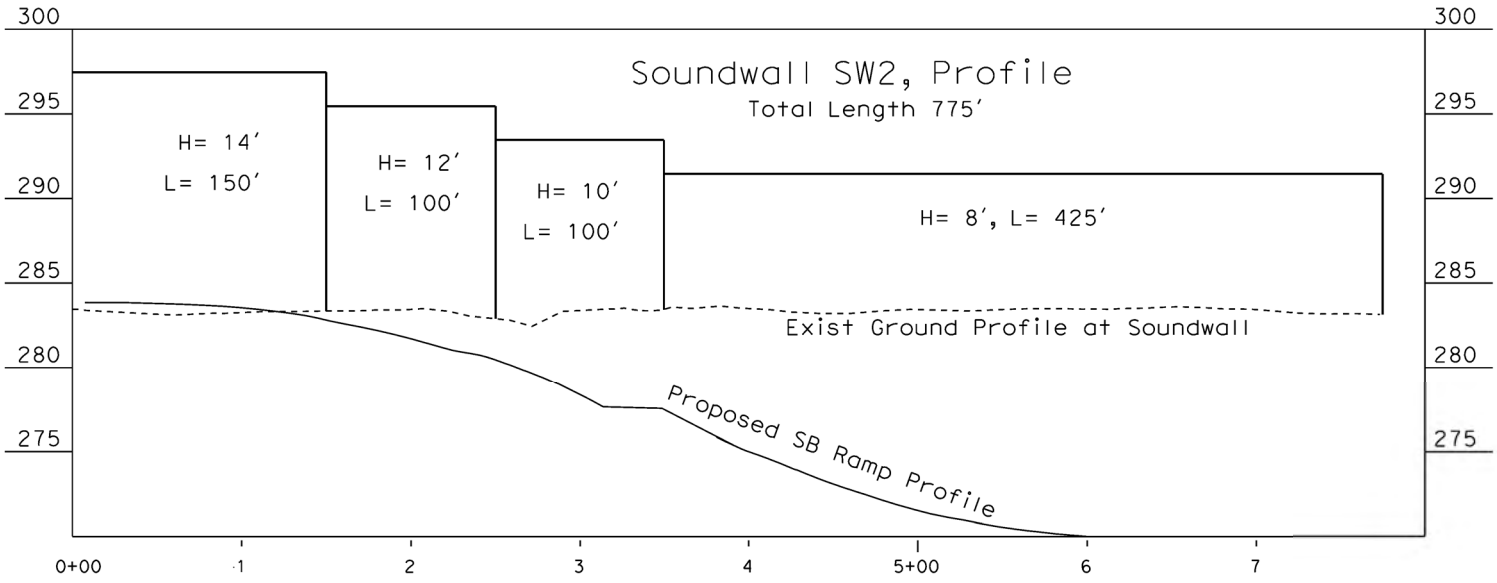
SW1 Profile





Attachment C

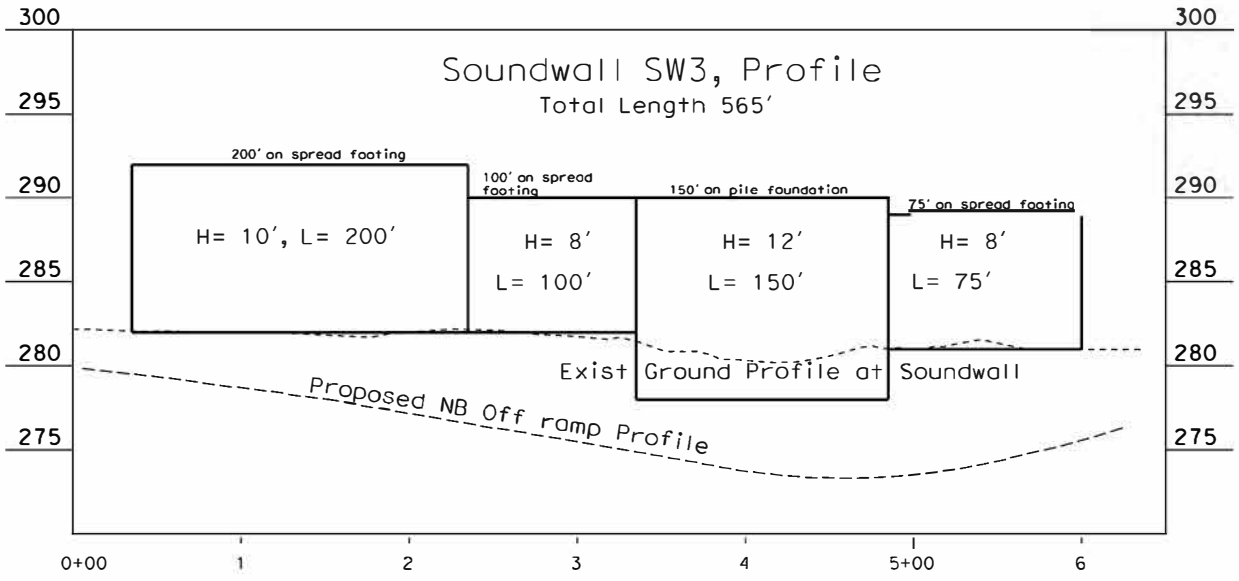
SW2 Profile



Soundwall SW2, L= 775'



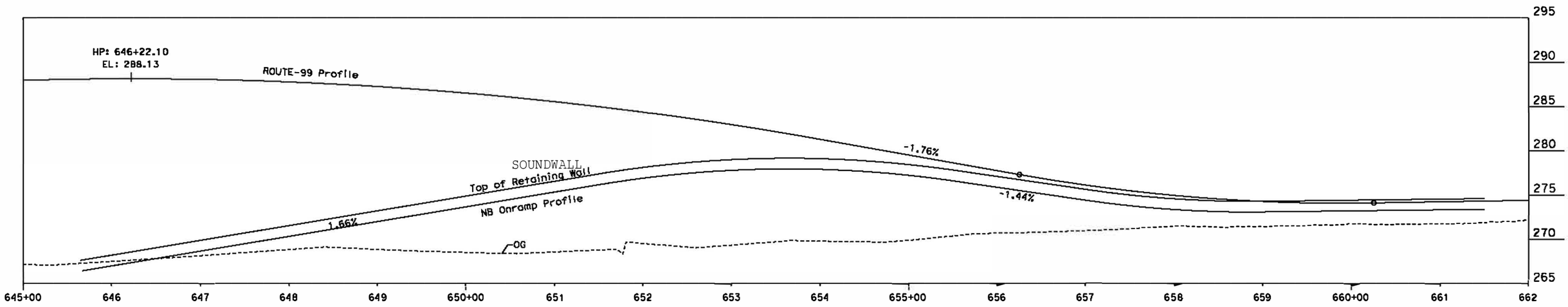




Attachment D

SW3 Profile





Soundwall Profile

Attachment A2
Soundwall Location

Cost Estimate for 10'-high soundwall

Sound Wall-1 (SW Corner)	Height	Length	Footing Cover	Footing width	Additional Exc Width	Str Exc CY	Str Conc CY	Str Bkfl CY	Total Rebar weight for footing lb	Sound wall Area SQFT	Str Exc 192038 $60	Str Bkfl 193014 $66	Rebar 520105 $3	Str Conc 510061 $600	SW Masonry 582001 $35	Anti-Graffiti Coat 780460 $3/SQFT
	10	815	1	5	2	423	151	272		8965						53790
Total		815				423	151	272	9232	**8965**	**$25,356**	**$17,930**	**$27,695**	**$90,556**	**$313,775**	**$53,790**
Total Cost + 10% Contigency	**$582,012**															
Sound Wall-2 (NW Corner)																
	10	775	1	5	2	402	144	258		8525						51150
Total		**775**				**402**	**144**	**258**	**8779**	**8525**	$24,111	$17,050	$26,336	$86,111	$298,375	$51,150
Total Cost + 10% Contigency	**$553,447**															
Sound Wall-3 (SE Corner)																
	10	415	1	5	2	215	77	138		4565						27390
Total		**565**				**215**	**77**	**138**	**4701**	**4565**	$12,911	$9,130	$14,103	$46,111	$159,775	$27,390
Total Cost + 10% Contigency	**$449,057**															

Cost Estimate for 12'-high soundwall

Sound Wall-1 (SW Corner)	Height	Length	Footing Cover	Footing width	Additional Exc Width	Str Exc CY	Str Conc CY	Str Bkfl CY	Total Rebar weight for footing lb	Sound wall Area SQFT	Str Exc 192038 $60	Str Bkfl 193014 $66	Rebar 520105 $3	Str Conc 510061 $600	SW Masonry 582001 $35	Anti-Graffiti Coat 780460 $3/SQFT
	12	815	1	5.75	2	468	174	294		10595						63570
Total		815				468	174	294	9863	**$10,595**	**$28,072**	**$19,424**	**$29,589**	**$104,139**	**$370,825**	**$63,570**
Total Cost + 10% Contigency	**$677,181**															
Sound Wall-2 (NW Corner)																
	12	775	1	5.75	2	445	165	280		10075						60450
Total		**775**				**445**	**165**	**280**	**9897**	**$10,075**	$26,694	$18,471	$29,690	$99,028	$352,625	$60,450
Total Cost + 10% Contigency	**$645,654**															
Sound Wall-3 (SE Corner)																
	12	415	1	5.75	2	238	88	150		5395						32370
Total		**565**				**238**	**88**	**150**	**5300**	**$5,395**	$14,294	$9,891	$15,899	$53,028	$188,825	$32,370
Total Cost + 10% Contigency	**$498,433**															

Attachment E, Cost Estimate for Variable Height Soundwall

Sound Wall-1 (SW Corner)	Height	Length	Footing Cover	Footing width	Additional Exc Width	Exc width	Footing Depth	Exc Depth	Str Exc CY	Str Conc CY	Str Bkfl CY	Total Rebar weight for footing lb	Sound wall Area SQFT	Str Exc 192038 $60	Str Bkfl 193014 $66	Rebar 520105 $3	Str Conc 510061 $600	SW Masonry 582001 $35	Anti-Graffiti Coat 780460 $3/SQFT
	12	200	1	5.75	2	7.75	1	2	115	43	72		2600						15600
	10	200	1	5	2	7	1	2	104	37	67		2200						13200
	8	415	1	4	2	6	1	2	184	61	123		3735						22410
Total		815							403	141	262	8404	**8535**	**24178**	**17282**	**25211**	**84667**	**298725**	**51210**
Total Cost + 10% Contigency	**551,400**																		
Sound Wall-2 (NW Corner)																			
	14	150	1	6.5	2	8.5	1	2	94	36	58		2250						13500
	12	100	1	5.75	2	7.75	1	2	57	21	36		1300						7800
	10	100	1	5	2	7	1	2	52	19	33		1100						6600
	8	425	1	4	2	6	1	2	189	63	126		3825						22950
Total		**775**							**393**	**139**	**254**	**8149**	**8475**	23556	16744	24446	83333	296625	50850
Total Cost + 10% Contigency	**545,110**																		
Sound Wall-3 (SE Corner)																			
	12	150	Soundwall on barrier/pile. See estimate below																
	10	200	1	5	2	7	1	2	104	37	67		2200						13200
	8	175	1	4	2	6	1	2	78	26	52		1575						9450
Total		**525**							**181**	**63**	**119**	**3833**	**3775**	10889	7822	11500	37778	132125	22650
Total Cost + 10% Contigency	**397,736**																		

Noise Study Report

Tulare City Widening Project

Tulare County, California

District 06-TUL-99

TUL-99-PM 25.0/30.6

EA: 06-48950 & Project ID: 0614000040

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S.C. 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

May 2021



Noise Study Report

Tulare City Widening Project

Tulare County, California

District 06-TUL-99

TUL-99-PM 25.0/30.6

EA: 06-48950 & Project ID: 0614000040

May 2021

Prepared By: Allam Alhabaly Date: 5/24/2021

Allam Alhabaly, Transportation Engineer

Phone Number: 559-383-5262

Office Name: Central Region Environmental Engineering Branch

District/Region: District 6/Central Region

Approved By: Ken Romero Date: 5/24/2021

Ken Romero, Senior Transportation Engineer

Phone Number: 559-593-5891

Office Name: Central Region Environmental Engineering Branch

District/Region: District 6/Central Region

Caltrans

For individuals with sensory disabilities, this document is 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: Ken Romero, Central Region Environmental Engineering Branch, 855 M Street, Suite 200, Fresno, California 93721; (559) 445-6417 Voice, or use the California Relay Service TTY number: (559) 488-4067.

Executive Summary

The purpose of this Noise Study Report (NSR) is to evaluate traffic noise impacts and possible abatement measures under the requirements of Title 23, Part 772 of the Code of Federal Regulations (Title 23 CFR 772) "Procedures for Abatement of Highway Traffic Noise." Title 23 CFR 772 provides procedures for preparing operational and construction noise studies as well as evaluating noise abatement considered for federal and federal-aid highway projects. According to Title 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards.

The project proposes to widen the existing four-lane freeway to a six-lane freeway by constructing one lane in each direction in the existing median of State Route 99. The project will take place on State Route 99 in Tulare County between post miles 25.0 and 30.6.

The project area within the above post miles contains a mix of residential single-family homes and mobile home parks (Activity Category B), hotels, offices and service stations (Activity Category E), and warehouses, agriculture fields and industrial sites (Activity Category F). The topography of the project area at the above locations is fairly level and at grade within the project limits. However, State Route 99 is depressed at most residential locations near post mile 27.6 north of Paige Avenue.

Most residences visited during the field work on September 13, 2020 and October 4, 2020, have barking dogs and other noise-generating equipment, such as lawn mowers and agriculture/farming equipment that would contaminate a noise measurement. Therefore, 9 short-term field measurements were collected to represent a total of 40 potentially impacted receiver locations between the above project post miles:

R1: 900 E. Rankin Avenue, Tulare (Country Estates Manufactured Home Community).

R2: Agriculture field, Tulare (agriculture site near 4157 S. Laspina Street).

R3: 1678 S. Dayton Street, Tulare (Single-Family Residence).

R4: 1442 S. Blackstone Street, Tulare (Industrial).

R5: 1216 E. Sequoia Avenue, Tulare (Single-Family Residence).

R6: 320 N. Blackstone Street, Tulare (Tulare Mobile Home Park).

R7: 1225 E. Hillman Street, Tulare (Fairfield Inn & Suites-Hotel).

R8: 500 N. Blackstone Street, Tulare (Tulare Church of Christ).

R9: 833 N. Blackstone Street, Tulare (First Church of God).

All noise measurements were conducted using a Brüel and Kjaer model 2238 sound level meter. Traffic was counted during each short-term measurement near the measurement site and classified by vehicle type (e.g., autos, medium trucks, heavy trucks). The purpose

of the field noise measurements was to calibrate the Traffic Noise Model (TNM) 2.5 model so that the prediction of future noise levels could be made more accurately.

Level of Service (LOS) C and design year 2047 traffic information were used to predict future traffic noise levels and analyze the noise impact at the receivers' locations.

As shown in Tables B-1 the existing noise levels for the 40 studied receivers vary between 43 dBA and 72 dBA. The design year (with the project) noise levels for the studied receivers vary between 45 dBA and 76 dBA.

In determining traffic noise impacts, consideration is given to residential exterior areas where frequent human use occurs that would benefit from a lowered noise level. In general, an area of frequent human use is an area where people are exposed to traffic noise for an extended period of time on a regular basis.

Three soundwalls are proposed for this project as follows:

Soundwall (SW1): This soundwall is proposed on the right of way to provide noise attenuation for the 5 residences represented by R5 and located along the west side right of way of State Route 99 between Kern and Sierra Avenues. It extends approximately 220 feet south of Kern Avenue to cover the house location of the fifth receiver represented by R10 at 1229 E. Kern Avenue.

SW1 will provide noise attenuation of 5 db or more for only 5 residences at a maximum height of 12 feet.

Total wall allowance at maximum proposed height: $535,000.

Soundwall (SW2): This soundwall is proposed on the right of way to provide noise attenuation for the 9 residences and swimming pool location represented by R6 at the Tulare Mobile Home Park located along the west side right of way of State Route 99 between Tulare Street and Santa Fe Trail.

SW2 will provide noise attenuation of 5 db or more for only 6 residences at the mobile home park at a maximum height of 10 feet.

Total wall allowance at maximum proposed height: $642,000.

Soundwall (SW3): This soundwall is proposed on the edge of shoulder of the northbound off-ramp south of Sierra Avenue. SW3 is intended to provide noise attenuation for the 3 residences represented by R7 and located along the off-ramp and between Sierra Avenue and Kern Avenue.

SW3 will provide noise attenuation of 5 db or more for only 2 residences at a maximum height of 12

Total wall allowance at maximum proposed height: $214,000.

All soundwalls will be discussed further in Chapter 7 of this report.

Construction noise control will conform to the provisions in Section 14-8.02 "Noise Control" of the Standard Specifications. The noise level from the contractor's operations, between the hours of 9:00 p.m. and 6:00 a.m., must not exceed 86 dBA Leq at a distance of 50 feet. All equipment must be fitted with adequate mufflers and operated according to the manufacturers' specifications. Construction noise varies greatly depending on the construction process, type and condition of equipment used, as well as layout of the construction site. Temporary construction noise impacts would be unavoidable in areas immediately adjacent to the proposed project alignment.

Compliance with the construction hours per Caltrans' Standard Special Provisions (SSP) will be required, during night hours (between 9:00 p.m. and 6:00 a.m.), to minimize construction noise impacts on sensitive land uses adjacent to the project site.

National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) Consideration

Section 7 of the Caltrans Noise Protocol explains in detail how Caltrans' policies and procedures apply (23 Code of Federal Regulations [CFR] 772). It also explains how traffic noise impacts are evaluated under NEPA and CEQA. Based on Section 7 of the Protocol, this Noise Study Report contains existing noise levels and future predicted noise levels for the Future Build and Future No-Build conditions. All data, analysis, and information required to satisfy the needs of NEPA and/or CEQA have been provided in this Noise Study Report. This allows the produced data to be used under NEPA and CEQA during the environmental phase of the project.

Table of Contents

Page

Chapter 1. Introduction 1
1.1. Purpose of the Noise Study Report 1
1.2. Project Purpose and Need 1
1.2.1. Purpose 1
Chapter 2. Project Description 2
2.1. Build Alternative 2
2.2. No-Build (No-Action) Alternative 8
Chapter 3. Fundamentals of Traffic Noise 10
3.1. Sound, Noise, and Acoustics 10
3.2. Frequency 10
3.3. Sound Pressure Levels and Decibels 10
3.4. Addition of Decibels 10
3.5. A-Weighted Decibels 11
3.6. Human Response to Changes in Noise Levels 12
3.7. Noise Descriptors 13
3.8. Sound Propagation 13
3.8.1. Geometric Spreading 13
3.8.2. Ground Absorption 14
3.8.3. Atmospheric Effects 14
3.8.4. Shielding by Natural or Human-Made Features 14
Chapter 4. Federal Regulations and State Policies 15
4.1. Federal Regulations 15
4.1.1. Title 23 CFR 772 15
4.2. State Regulations and Policies 16
4.2.1. Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects 16
4.2.2. Section 216 of the California Streets and Highways Code 17
Chapter 5. Study Methods and Procedures 18
5.1. Methods for Identifying Land Uses and Selecting Noise Measurement and Modeling Locations 18
5.2. Field Measurement Procedures 18
5.2.1. Short-Term Measurements 19
5.2.2. Long-Term Measurements 20
5.3. Traffic Noise Levels Prediction Methods 20
5.3.1. Traffic Noise Levels 20
5.4. Methods for Identifying Traffic Noise Impacts and Consideration of Abatement 21
Chapter 6. Existing Noise Environment 23
6.1. Existing Land Uses 23
6.1.1. Segment 1 between post mile 25.0 and Paige Avenue 23
6.1.2. Segment 2 between Paige Avenue and Bardsley Avenue 23
6.1.3. Segment 3 between Bardsley Avenue and Cross Avenue 24
6.1.4. Segment 4 between Cross Avenue and post mile 30.4 (approximately 350 feet south of Prosperity Avenue) 24
6.2. Short-Term Monitoring 25
6.2.1. Long-Term Monitoring 26

6.2.2. Traffic Noise Model Calibration 26
6.2.3. Existing Noise Levels 27
Chapter 7. Future Noise Environment, Impacts, and Considered Abatement 28
7.1. Future Noise Environment and Impacts 28
7.1.1. Segment 1 between post mile 25.0 and Paige Avenue 28
7.1.2. Segment 2 between Paige Avenue and Bardsley Avenue 29
7.1.3. Segment 3 between Bardsley Avenue and Cross Avenue 30
7.1.4. Segment 4 between Cross Avenue and post mile 30.4 (approximately 350 feet south of Prosperity Avenue) 32
7.2. Preliminary Noise Abatement Analysis 34
Chapter 8. Construction Noise 38
Chapter 9. References 42
Appendix A Traffic Data 43
Appendix B Predicted Future Noise Levels and Noise Barrier Analysis 47
Appendix C Supplemental Data and Field Notes 51
Appendix D Model TNM 2.5 Output Tables 52
Appendix E Receiver Locations 53

List of Figures

Page
Figure 2-1. Project Vicinity Map 9

List of Tables

Page
Table 3-1. Typical A-Weighted Noise Levels 12
Table 4-1. Activity Categories and Noise Abatement Criteria 16
Table 6-1 Short-Term Noise Measurement Results 26
Table 6-2. Model Calibration 26
Table 7-1. Summary of Reasonableness Determination–Soundwall SW1 35
Table 7-3. Summary of Reasonableness Determination–Soundwall SW2 36
Table 7-2. Summary of Reasonableness Determination–Soundwall SW3 37
Table 8-1. Construction Equipment Noise 39

List of Abbreviated Terms

Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
dB	Decibels
EA	Environtment Assessment
EIR	Environmental Impact Report
ED	Environmental Document
FHWA	Federal Highway Administration
HOV	High Occupancy Vehicle
Hz	Hertz
kHz	Kilohertz
L_{dn}	Day-Night Level
L_{eq}	Equivalent Sound Level
$L_{eq(h)}$	Equivalent Sound Level over one hour
L_{max}	Maximum Sound Level
LOS	Level of Service
L_n	Percentile-Exceeded Sound Level
µPa	micro Pascals
mph	miles per hour
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NEPA	National Environmental Policy Act
NSR	Noise Study Report
PDS	Project Development Support
Protocol	Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SPL	sound pressure level
SR	State Route
TeNS	Caltrans' Technical Noise Supplement
TNM 2.5	FHWA Traffic Noise Model Version 2.5
TRIP	Thomas Roads Improvement Program
VPH	Vehicles per hour

Chapter 1. Introduction

1.1. Purpose of the Noise Study Report

The purpose of this Noise Study Report (NSR) is to evaluate noise impacts and abatement measures under the requirements of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) "Procedures for Abatement of Highway Traffic Noise." For this, 23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. According to 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards. Compliance with 23 CFR 772 provides compliance with the noise impact assessment requirements of the National Environmental Policy Act (NEPA).

The Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects (Protocol) (Caltrans 2011) provides Caltrans policy for implementing 23 CFR 772 in California. The Protocol outlines the requirements for preparing Noise Study Reports. Noise impacts associated with this project under the California Environmental Quality Act (CEQA) are evaluated separately in the Tulare City Widening environmental document.

1.2. Project Purpose and Need

1.2.1. Purpose

The purpose of the project is to relieve traffic congestion along State Route 99 from Avenue 200 to Prosperity Avenue, improve freight movement along this segment of the State Route 99 trade corridor, and improve access to local trucking-related facilities and the neighboring industrial area.

Chapter 2. Project Description

This chapter describes the proposed action and the design alternative that was developed to meet the identified need for the project, while avoiding or minimizing environmental impacts. Figure 2-1 shows the project location and project limits.

2.1. Build Alternative

The project proposes to widen the existing four-lane freeway to a six-lane freeway by constructing one lane in each direction in the existing median of State Route 99. It would also modify the existing ramps at the Paige Avenue interchange.

The project work would include reconstructing the existing median by constructing a concrete median barrier, 10-foot shoulder, and inside 12-foot-wide lane. In addition, the existing pavement on the freeway and ramps would be rehabilitated, the side slopes would be modified, a segment of southbound lanes would be realigned, and the ramps at Paige Avenue interchange would be modified.

State Route 99 Main Line

Median

- The thrie beam guardrails (metal beam guard rails) in the median would be removed
- Oleanders and trees in the median would be removed
- An inside 12-foot-wide Continuously Reinforced Concrete Pavement (CRCP) lane would be constructed in both directions
- the northbound and southbound lanes would be separated by Type 60 concrete barrier
- the inside shoulder (between the new inside lane and the Type 60 concrete barrier) would be 8 feet wide.

Existing Lanes, outside shoulders and side slopes

- The four existing lanes would be replaced with Continuously Reinforced Concrete Pavement
- Where the existing outside shoulders are now 8 feet wide, they would be widened to make a uniform 10-foot-wide standard shoulder
- Where the freeway is depressed (below grade), from PM 28.4 to PM 28.86, PM 29.34 to PM 30.1, and from PM 30.33 to PM 30.78 the side slopes would be cut back by 2 feet to 15 feet to allow for the widening, except under Bardsley Ave OC, Tulare Ave OC, and Prosperity Ave OC.

  - The side slopes would be widened under the following structures (no structural work would be involved): Avenue 200 OC (PM: 25.433; Br No. 46-193) by approximately 2' per side
  - Tulare POC (PM: 29.848; Br No. 46-040) by approximately 5.5' per side
  - Cross Ave OC (PM: 29.893; Br No. 46-249) by approximately 5.5' per side

- The profile of the freeway would be lowered under the overcrossings (except Prosperity Avenue) to meet the minimum structure clearance requirement over the freeway
  - At Avenue 200 (K Street), Paige Avenue, Tulare Avenue, Tulare Pedestrian Overcrossing, and Cross Avenue the roadway would be lowered by 2 feet
  - To increase sight distance, the highway crest vertical curves would be lowered by up to 6 feet near Bardsley Avenue and Tulare Avenue
- The existing stormwater storage tanks for Bardsley Avenue and Tulare Avenue pumping stations will either be reconstructed or replaced due to lowering of the roadway profile and structural section.
- Three maintenance vehicle pullouts would be constructed along the side of the freeway adjacent to the existing pumping stations, requiring construction of retaining walls.

Ramps

- The pavement of existing ramps would be rehabilitated to achieve a minimum of 20 years design life
- Ramp metering would be added at these interchanges:
  - Paige Avenue (northbound and southbound onramps)
  - Bardsley Avenue (northbound and southbound onramps)
  - Tulare Avenue (State Route 137) (northbound onramps)
- A second lane would be added to the northbound Bardsley Avenue and Tulare Avenue onramp
  - Along the widened Bardsley Avenue onramp, the existing retaining wall would be removed and a new retaining wall approximately 915 feet long would be constructed. A narrow strip of right-of-way would need to be acquired from vacant land.
- A second lane would be added to the southbound Bardsley onramp

- A narrow strip of land would need to be acquired from 9 parcels including vacant land, auto and truck-related businesses, and a mini-storage facility.

Soundwalls

Three soundwalls are proposed:

- Soundwall 1 would run along the west (southbound) side of the freeway inside Caltrans right of way between Kern and Sierra avenues.
- Soundwall 2 would be located within Caltrans right of way next to Tulare Mobile Home Park.
- Soundwall 3 would be located on the edge of the shoulder of the northbound freeway offramp to Tulare Avenue (State Route 137). It would extend from Kern Avenue past Sequoia Avenue, ending before Sierra Avenue.

Walls or Security Fences

Eight-foot-high walls or security fencing would be installed inside Caltrans right of way at the following locations

- On the west side of the freeway, walls or fencing would extend from the north end of the soundwall by Tulare Mobile Home Park to the Tulare Pedestrian Overcrossing, between the pedestrian overcrossing and Cross Avenue Overcrossing, and northwards from Cross Avenue for 400 feet.
- On the east side of the freeway, from the Tulare Avenue Overcrossing, a wall or fence would be constructed to include the existing Caltrans basin, extending northwards along Caltrans right of way to the Tulare Pedestrian Overcrossing. Short segments of wall or fence at the northeast corner of this overcrossing and at Cross Avenue Overcrossing would connect to existing privately-owned concrete block walls.

Types of walls or fencing under consideration are either concrete panel walls, or concrete block walls similar to a soundwall, or wrought iron security fencing that curves downwards at the top

Realign southbound lanes

Realign the existing southbound lanes to adjoin the existing northbound lanes north of Ave 200 Overcrossing, a distance of about three-quarters of a mile (post miles 25.62 to 26.35) to eliminate a non-standard curve.

Drainage Basins along Freeway

A new drainage basin is proposed within the triangular area bounded by the northbound freeway lanes, Hosfield Drive, and the Avenue 200 Overcrossing approach (K Street).

Another new basin is proposed to be located north of Avenue 200 Overcrossing within the area where the southbound freeway lanes would be realigned.

Other work throughout the project limits

All of the existing guard rails would be replaced with Midwest Guardrail System components to meet current safety standards

All existing roadway signs would be replaced with retroreflective sheeting Type XI signs to meet current safety standards

The existing lighting with the project limits would be upgraded

Intelligent Transportation System (ITS) elements of traffic monitoring systems would be added, and some existing components would be removed and replaced

- 1 existing closed-circuit TV (CCTV)
- 1 proposed changeable message sign (CMS)
- 19 existing traffic census systems (TCS)
- 2 existing traffic census systems/vehicle detection station (TCS/VDS)
- 2 proposed vehicle detection systems (VDS)

Overside drains and asphalt dikes would be replaced.

New roadside ditches would be constructed in areas where the freeway is not depressed.

New drainage ditches would be constructed in the areas where the side slopes of the freeway would be cut back. Approximate locations are from post mile 25.74 to 26.53, post mile 27.16 to 27.27, post mile 27.85 to 28.31, post mile 28.9 to 29.38, and post mile 30.06 to 30.38 (southbound side only). Drainage ditches would be sized to accept the increased impervious surface area of the new lanes and shoulders.

Replace existing metal and nonreinforced culverts (approximately 30) with new drainage systems

Landscape trees and shrubs would be removed from the sides of the freeway in order to construct the project.

A landscape replacement project will be done after this project is completed.

Temporary Construction Easements

Temporary construction easements are expected to be needed to build soundwalls, for relocation of the Tulare Canal, and for sidewalk construction.

Paige Avenue Interchange

A tight diamond interchange is proposed. The existing on and off ramps at the Paige Avenue interchange would be removed and replaced with new ramps that would lead to and from two multi-lane roundabouts. The on-ramps would have two lanes.

- The existing southbound on/off ramp would be cul-de-saced just past the entrance to the Mobil gas station.
- The existing northbound on/off ramp would be cul-de-saced at the entrance to Tulare Inn Mobile Home Park.
- The existing signal on Paige Avenue just west of Laspina Street would be removed.
- A Southern California Edison electric power line that runs along the north side of Paige Avenue would need to be relocated.

Roundabouts

The two signalized intersections adjacent to the Paige Avenue interchange (Blackstone Street/Paige Avenue and Laspina Street/Paige Avenue) would be replaced with roundabouts.

All four roundabouts would be 190-foot diameter multi-lane roundabouts. Each roundabout would have a center diameter of 114 feet, consisting of a 74-foot-diameter raised central island bordered by a 20-foot-wide truck apron. The outside lane and inside lane widths would 20 feet and 18 feet wide, respectively. Ten-foot-wide paved paths, for shared pedestrian and bicycles use, would be included in each roundabout, and would extend east and west along Paige Avenue. A 5-foot-wide landscaped buffer would separate these paths from the roadway in the roundabouts, and also along approaching and departing lanes on Paige Avenue, Blackstone Street, and Laspina Street.

- At the Blackstone Street roundabout, street access to and from adjacent businesses would be limited to right-in, right-out turns only.
- A 6-foot-high retaining wall would be constructed at the southwest side of the Blackstone Street roundabout.
- At the Laspina Street roundabout, access to and from Paige Avenue from the Tulare Inn Mobile Home Park would be changed to right-in, right-out turns only. Access to and from Manzanita Street to Laspina Street would also become right-in, right-out only.

Paige Avenue Overcrossing

The existing structure would be demolished and replaced with a 98-foot-wide, 224-foot-long bridge. The overcrossing would have a 6-foot-wide raised median, 2-foot-wide inside shoulders, two 12-foot-wide lanes in each direction, and 2-foot-wide outside shoulders. A 2-foot-wide concrete barrier would separate vehicular traffic from 10-foot-wide shared-use paths for pedestrians and bicycles.

Tulare Main Canal

Caltrans proposes to relocate the existing State Route-99/Tulare Main Canal crossing just north of Paige Avenue. This relocation is necessary to meet the vertical clearance standards for State Route 99 under the proposed replacement Paige

Avenue overcrossing. A new reinforced concrete box culvert would be constructed approximately 875 feet north of the existing canal crossing.

The new culvert would connect to the canal segment running east to west between Aspen Avenue and Brea Avenue. After crossing under the freeway, the Tulare Canal would then turn southwest, paralleling the new southbound offramp until joining the existing canal at the east side of Paige Avenue and Blackstone Street intersection. The existing 130-foot-long reinforced concrete box culvert crossing under Blackstone Street would be replaced with a new 600-foot-long box culvert, on a parallel alignment 10 feet to the north. The longer, realigned culvert section is needed to accommodate the proposed roundabout at the Blackstone Street and Paige Ave intersection. The existing canal west of this box culvert would be reconstructed for about 470 feet before joining the existing canal alignment.

The existing canal segment that runs north to south between the northbound freeway lanes and Tamarack Street, under the freeway, and west to Blackstone Street would be removed.

Drainage Basins

A new drainage basin is proposed just east of the northbound Paige Avenue offramp to accommodate the drainage needs of the modified interchange. Construction of this basin would require acquisition of new right of way.

Construction of the new northbound onramp from Paige Avenue would require the removal of a City of Tulare drainage basin which drains the streets between Paige Avenue, the Tulare Main Canal and Laspina Street. A replacement basin is proposed along the north side of Paige Avenue, east of the new onramp. This basin would require acquisition of new right of way from one parcel for construction.

Detour

At this time, it is expected that, during the period of reconstruction of the Paige Avenue interchange, that Paige Avenue would be closed to traffic. A detour would reroute traffic coming from and to the freeway via the new Commercial Ave Interchange, to be constructed between Paige Avenue and Avenue 200, which would be opened for traffic by the time this project is in construction.

Project Construction

The project is currently scheduled to begin construction in 2029 and to continue until 2032.

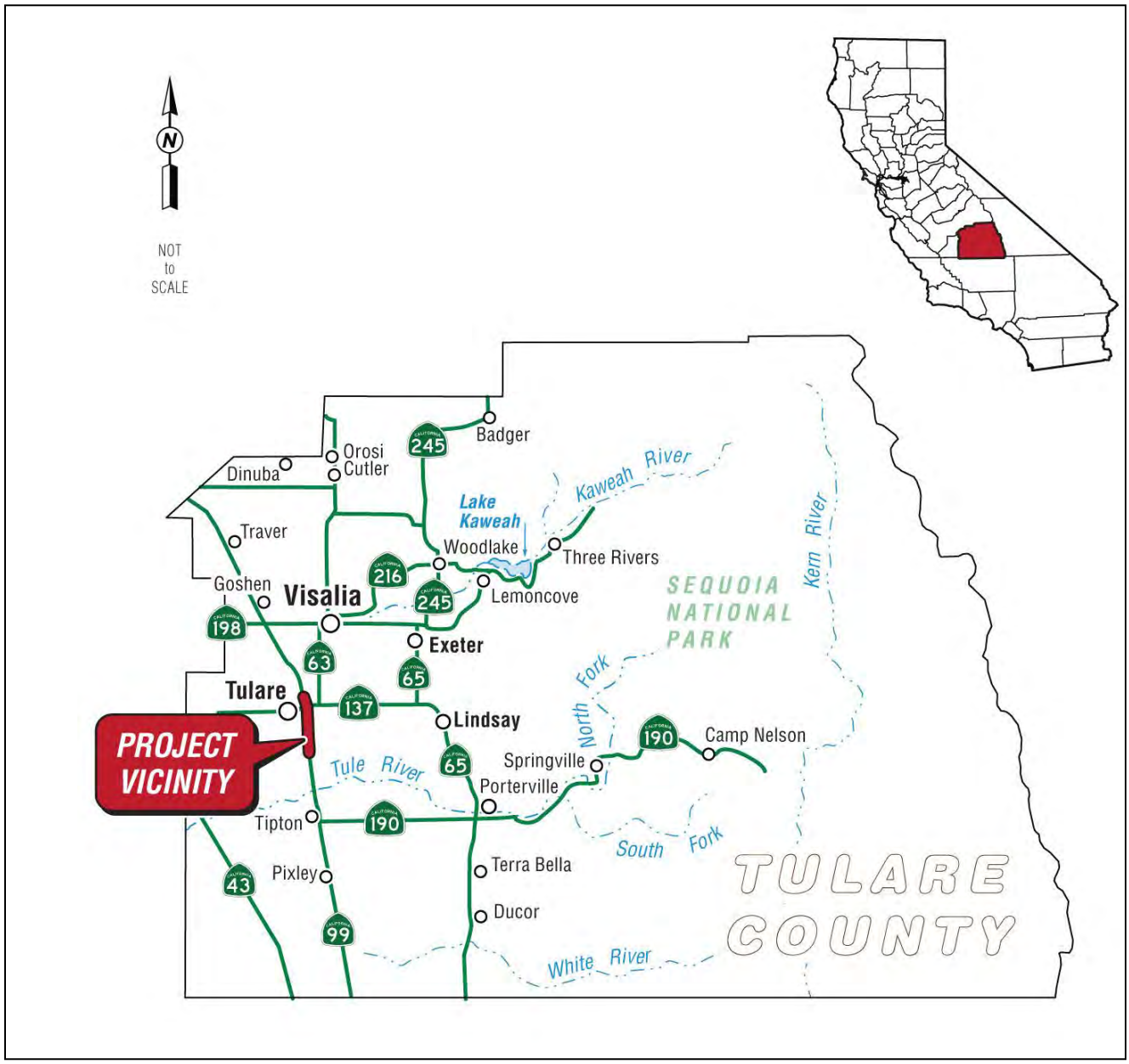
It is anticipated that construction would be done in five stages and take 400 working days to complete. Approximately 150 nights of work are expected. Activities would include working on resurfacing outside shoulders under temporary lane closures, constructing a cross-median detour, setting up k-rails (temporary concrete barriers), shifting k-rails to change temporary traffic lanes, and removing the temporary cross-median detour.

2.2. No-Build (No-Action) Alternative

The No-Build Alternative would not meet the purpose and need for the project which is to relieve forecast traffic congestion, improve truck freight movement, and improve truck access to the industrial area of the City of Tulare.

If this project is not approved, another proposed project—the Tulare City Rehabilitation project (EA 06-0W910)—may be approved and constructed. That project would repave the existing lanes and ramps and replace the existing guardrails within the same project limits as this project. However, the pavement rehabilitation project would not meet the purpose and need for this project, stated above.

Figure 2-1. Project Vicinity Map



Chapter 3. Fundamentals of Traffic Noise

The following is a brief discussion of fundamental traffic noise concepts. For a detailed discussion, please refer to Caltrans' Technical Noise Supplement (TeNS) (Caltrans, September 2013), a technical supplement to the Protocol, that is available on the Caltrans Web site (http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept2013A.pdf).

3.1. Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

3.2. Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

3.3. Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascal's (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 µPa. Because of this huge range of values, sound is rarely expressed in terms of µPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 µPa.

3.4. Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces an

SPL of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

3.5. A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-weighted levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with highway-traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted decibels or dBA.

Table 3-1 describes typical A-weighted noise levels for various noise sources.

Table 3-1. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	**— 70 —**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**— 60 —**	
		Large business office
Quiet urban daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: Caltrans, 2009.

3.6. Human Response to Changes in Noise Levels

As discussed above, doubling sound energy results in a 3-dB increase in sound. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable by the average person.

3.7. Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor; some are substantial. Some noise levels occur in regular patterns; others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in traffic noise analysis:

- **Equivalent Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level ($L_{eq}[h]$) is the energy average of A-weighted sound levels occurring during a one-hour period, and is the basis for noise abatement criteria (NAC) used by Caltrans and the Federal Highway Administration.

- **Percentile-Exceeded Sound Level (L_n):** L_n represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10% of the time, and L_{90} is the sound level exceeded 90% of the time).

- **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specified period.

- **Day-Night Level (L_{dn}):** L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m.

- **Community Noise Equivalent Level (CNEL):** Similar to L_{dn}, CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m., and a 5-dB penalty applied to the A-weighted sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m.

3.8. Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

3.8.1. Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 decibels for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 decibels for each doubling of distance from a line source.

3.8.2. Ground Absorption

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water,), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 decibels per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 decibels per doubling of distance for a line source.

3.8.3. Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

3.8.4. Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the highway and receiver is rarely effective in reducing noise because vegetation does not create a solid barrier.

Chapter 4. Federal Regulations and State Policies

This report focuses on the requirements of Title 23 Code of Federal Regulations 772, as discussed below.

4.1. Federal Regulations

4.1.1. Title 23 CFR 772

Title 23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. Under Title 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects. The Federal Highway Administration defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type III project is a federal or federal-aid highway project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis.

Type I projects include those that create a completely new noise source, as well as those that increase the volume or speed of traffic or move the traffic closer to a receiver. Type I projects include the addition of an interchange, high-occupancy vehicle (HOV) lane, high-occupancy toll (HOT) lane, ramp, or truck-climbing lane to an existing highway, or the addition of an auxiliary lane, except for when an auxiliary lane is a turning lane, or restriping existing pavement for the purpose of adding a through-traffic lane or auxiliary lane, or the addition of a new substantial alteration of a weigh station, rest stop, ride share lot, or toll plaza. Projects unrelated to increased noise levels, such as lighting, signing, and landscaping projects would be considered Type III.

Under Title 23 CFR 772.11, noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. In such cases, Title 23 CFR 772 requires that the project sponsor "consider" noise abatement before adoption of the final National Environmental Policy Act document. This process involves identification of noise abatement measures that are reasonable, feasible, and likely to be incorporated into the project, and of noise impacts for which no apparent solution is available.

Traffic noise impacts, as defined in Title 23 CFR 772.5, occur when the predicted noise level in the design year approaches or exceeds the Noise Abatement Criteria (NAC) specified in Title 23 CFR 772, or a predicted noise level substantially exceeds the existing noise level (a "substantial" noise increase). Title 23 CFR 772 does not specifically define the terms "substantial increase" or "approach"; these criteria are defined in the Protocol, as described in the next subsection.

Table 4-1 summarizes NAC corresponding to various land use activity categories. Activity categories and related traffic noise impacts are determined based on the actual land use in a given area.

Table 4-1. Activity Categories and Noise Abatement Criteria

Activity Category	Activity $L_{eq}[h]$[1]	Evaluation Location	Description of Activities
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67	Exterior	Residential.
C[2]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	--	--	Undeveloped lands that are not permitted (without building permits)

[1] The $L_{eq}(h)$ activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibels (dBA).

[2] Includes undeveloped lands permitted for this activity category.

Source: 23 CFR Part 772, 2011

In identifying noise impacts, primary consideration is given to exterior areas of frequent human use. In situations where there are no exterior activity areas, or where the exterior activities occur far from the roadway or physically shielded in a manner that prevents an impact on exterior activities, the interior criterion (Activity Category D) is used as the basis for determining a noise impact.

4.2. State Regulations and Policies

4.2.1. Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects

The Protocol specifies the policies, procedures, and practices to be used by agencies that sponsor new construction or reconstruction of federal or federal-aid highway projects. The NAC specified in the Protocol are the same as those specified in Title 23 CFR 772.

The Protocol defines a noise increase as substantial when the predicted noise levels with project implementation exceed existing noise levels by 12 dB. The Protocol also states that a sound level is considered to approach an NAC level when the sound level is within 1 dB of the NAC identified in Title 23 CFR 772 (e.g., 66 dBA is considered to approach the NAC of 67 dBA, but 65 dBA is not).

The Technical Noise Supplement (TeNS) to the Protocol provides detailed technical guidance for the evaluation of highway traffic noise. This includes field measurement methods, noise modeling methods, and report preparation guidance.

4.2.2. Section 216 of the California Streets and Highways Code

Section 216 of the California Streets and Highways Code relates to the noise effects of a proposed freeway project on public and private elementary and secondary schools. Under this code, a noise impact occurs if, as a result of a proposed freeway project, noise levels exceed an $L_{eq}(h)$ of 52 dBA in the interior of public or private elementary or secondary classrooms, libraries, multipurpose rooms, or spaces. This requirement does not replace the "approach or exceed" NAC criterion for FHWA Activity Category C for classroom exteriors, but it is a requirement that must be addressed in addition to the requirements of Title 23 CFR 772.

If a project results in a noise impact under this code, noise abatement must be provided to reduce classroom noise to a level that is at or below an $L_{eq}(h)$ of 52 dBA. If the noise levels generated from freeway and non-freeway sources exceed an $L_{eq}(h)$ of 52 dBA prior to the construction of the proposed freeway project, then noise abatement must be provided to reduce the noise to the level that existed prior to construction of the project.

Chapter 5. Study Methods and Procedures

5.1. Methods for Identifying Land Uses and Selecting Noise Measurement and Modeling Locations

A field noise analysis was conducted to identify land uses within the project limits and also to identify frequent human outdoor use areas in residential receptors that could be subject to traffic noise impacts and to consider the physical setting of the freeway alignment relative to those areas. Land uses in the project area were categorized as defined in the Activity Category of Table 4-1. As stated in the Caltrans 2011 Protocol, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at multi-family residences.

As mentioned above, land use around existing State Route 99 and within the designated post miles of the project is urban. Land uses designated for the project/noise abatement criteria as follows:

- Residences and mobile home communities (Activity Category B/67 dB).
- Hotels, restaurants, offices and service stations (Activity Category E/72 dB).
- Agriculture fields, light industrial facilities, truck stops and warehousing (Activity Categories F). There are no Abatement Criteria for Activity Categories F. Noise levels are recorded in the noise report for informational use only.

5.2. Field Measurement Procedures

Noise measurements were conducted at selected locations to evaluate the existing noise environment. The purpose of field measurements is to calibrate the noise model and to be familiar with the project area and topography. Noise measurements were conducted in conformance with the TeNS and with the guidelines outlined in the Federal Highway Administration's "Measuring of Highway-Related Noise," FHWA-DP-96-046. The following is a brief description of the measurement procedures used for this project:

- Microphones were placed approximately 5 feet above the ground and were positioned more than 10 feet from any wall or building to prevent reflections or unrepresentative shielding of the noise.
- Sound level meters were calibrated before and after each set of measurements.
- Following the calibration of equipment, a windscreen was placed over the microphone.
- Results of the short-term noise measurements were recorded on data sheets in the field. This information is provided in Appendix B.

- During the short-term noise measurements, any noise contaminations such as local traffic, barking dogs, etc. were noted.
- Traffic was counted for model calibration measurements. Vehicle types were separated into three vehicle groups: automobiles, medium trucks (2-axle with 6-wheels but not including dually pick-up trucks), and heavy trucks (3 or more axle vehicles). Traffic data is provided in Appendix A.
- Wind speed, temperature, humidity, and sky conditions were observed and documented during the short-term noise measurements. This information is provided in Appendix C.

Instruments used for the noise measurements included the following:

- Brüel & Kjær model 2238.
- Acoustic Field Calibrators – Brüel & Kjær 4231 constant pressure microphone calibrators.
- Wind Monitor/Temperature and Humidity Gauge.

Noise measurement dates and times, noise measurement data, meteorological data, and measurement locations are noted on the noise measurement field forms provided in Appendix C.

5.2.1. Short-Term Measurements

A total of 9 short-term noise measurements were collected for this noise study in September 13 and October 4, 2020 using a Brüel & Kjær model 2238 sound level meter. The short-term noise measurements were taken at the following nine locations:

R1: 900 E. Rankin Avenue, Tulare (Country Estates Manufactured Home Community).

R2: Agriculture field, Tulare (agriculture site near 4157 S Laspina Street).

R3: 1678 S. Dayton Street, Tulare (Single-Family Residence).

R4: 1442 S. Blackstone Street, Tulare (Industrial).

R5: 1216 E. Sequoia Avenue, Tulare (Single-Family Residence).

R6: 320 N. Blackstone Street, Tulare (Tulare Mobile Home Park).

R7: 1225 E. Hillman Street, Tulare (Fairfield Inn & Suites-Hotel).

R8: 500 N. Blackstone Street, Tulare (Tulare Church of Christ).

R9: 833 N. Blackstone Street, Tulare (First Church of God).

Each measurement duration lasted for 10 minutes, and traffic counts were taken during each measurement. Short-term monitoring was conducted at or adjacent to Activity Category B (Residential).

The short-term measurement locations are identified in Appendix E, and street addresses are listed in Table 6-1 of Section 6.0, "Existing Noise Environment." Noise measurement field notes along with site photographs are provided in Appendix C.

Field staff attended the noise meter during the 10-minute measurement period when dominant noise sources were observed, identified, and logged. Using this approach, other non-traffic noise sources, such as local traffic and barking dogs, which potentially could contribute significantly to measured noise levels, would be identified. The calibration of the meter was checked before and after the measurement by Brüel & Kjær 4231 calibrators.

Temperature and humidity were recorded manually during the short-term monitoring session using Brooklyn portable Thermometer, CT #640585. The temperature was approximately 75-98°F with a relative humidity of 31-47%. Wind speeds were recorded using Wind Speed Indicator, CT #91-01296. During the short-term measurements, the wind was calm and wind speeds did not show above 2m/s.

5.2.2. Long-Term Measurements

Long-term measurements were not taken because peak hour traffic volumes were obtained from District 6 Planning.

5.3. Traffic Noise Levels Prediction Methods

5.3.1. Traffic Noise Levels

The Federal Highway Administration Traffic Noise Model Version 2.5 (TNM 2.5) was used for the noise computations (FHWA, 2004). TNM 2.5 is a computer model based on two Federal Highway Administration reports: FHWA-PD-96-009 and FHWA-PD-96-010 (FHWA 1998a, 1998b). TNM 2.5 inputs are based on a three-dimensional grid created for the study area to be modeled. All roadway, barrier, terrain lines, and receptor points are defined by their x, y, and z coordinates. The x and y coordinates are obtained through exporting data from microstation dgn files into the TNM 2.5 model. The z coordinates are determined and inputted in the model after extracted from profile grade plans provided by Design.

Roadways and barriers are coded into TNM 2.5 as line segments defined by their end points. Receptors, defined as single points, are typically located at frequent outdoor use areas such as residences, schools, and recreational areas. In general, receivers are modeled at a height of 5 feet above ground elevation.

The TNM 2.5 computer program requires inputs of traffic volumes, speeds, and vehicle types to determine the noise levels generated by traffic. Three vehicle types were input into the model: cars, medium trucks, and heavy trucks. The propagation path between the source and receiver is modeled in TNM 2.5 by specifying special terrain features, rows of houses or building structures, and existing walls. Propagation of noise can be further specified by selecting ground types such as hard soil, loose soil, pavement, lawn, and field grass. The lawn option was chosen as the overall ground type for this study because

the existing ground type between receivers and existing and proposed roadways is vegetated.

Traffic noise is a function of traffic type, volume, and speed. Generally, noise increases with increased speed and with higher volumes of traffic. However, at much higher volumes, travel speed decreases (in stop-and-go conditions), so the worst-case noise levels are experienced when there is an optimum balance between the volume and speed. To determine noise impacts, the worst-case traffic noise occurs when traffic is operating under level of service (LOS) C conditions. Under these conditions, traffic is heavy, but remains free flowing. Based on information from District 6 Planning, typical morning peak noise hours for this project are between 8:00 and 9:00 a.m. The volume on any lane is a function of its traffic type (mainline and ramp) for LOS C conditions. Appendix A presents the traffic volumes and traffic distribution per direction of travel for the existing (2019), future no-build and project-build (design year 2047).

To validate the accuracy of the model calculations, TNM 2.5 was used to compare measured traffic noise levels to modeled noise levels at field measurement locations. For each receptor, traffic volumes counted during the short-term measurement periods were normalized to 1-hour volumes. These normalized volumes were assigned to the corresponding project area roadways to simulate the noise source strength at the roadways during the actual measurement period. Modeled and measured sound levels were then compared to determine the accuracy of the model and if additional adjustment of the model was necessary.

5.4. Methods for Identifying Traffic Noise Impacts and Consideration of Abatement

Traffic noise impacts are considered to occur at receiver locations where predicted design-year traffic noise levels are at least 12 dB greater than existing noise levels, or where predicted design year traffic noise levels approach or exceed the NAC for the applicable activity category. Where traffic noise impacts are identified, noise abatement must be considered for reasonability and feasibility as required by Title 23 CFR 772 and the Protocol.

According to the Protocol, abatement measures are considered acoustically feasible if a minimum noise reduction of 5 dB at impacted receptor locations is predicted with implementation of the abatement measures. In addition, barriers should be designed to intercept the line-of-sight from the exhaust stack of a truck to the first tier of receivers, as suggested by the Highway Design Manual, Chapter 1100. Other factors that affect feasibility include topography, access requirements for driveways and ramps, presence of local cross streets, utility conflicts, train crossings, and safety considerations. The overall reasonableness of noise abatement is determined by considering factors such as the noise reduction design goal; cost of noise abatement; viewpoints of benefitted receivers (including property owners and tenants); environmental impacts of abatement construction; input from the public and local agencies; and social, legal, and technological factors.

The Protocol also defines the procedure for applying an acoustical design goal to all noise abatement. Caltrans' acoustical design goal is that a barrier must be predicted to provide at least 7 dB of noise reduction at one or more benefitted receivers (i.e., receivers that receive at least 5 dB of noise reduction from a noise barrier). For a wall to be considered reasonable, the 7-dB design goal must be achieved at one or more benefitted receivers. This design goal applies to any receiver and is not limited to impacted receivers.

The Protocol further defines the procedure for assessing reasonableness of noise barriers from a cost perspective. The cost-per-residence allowance for each benefited receiver for the current year, 2019, is $107,000. Total allowances for each soundwall are normally calculated by multiplying the cost allowance-per-residence by the number of benefited residences.

Chapter 6. Existing Noise Environment

6.1. Existing Land Uses

Field investigations were conducted on September 13 and October 4, 2020 to identify land uses that could be subject to traffic noise impacts from the proposed project. The land uses within the project limits and their representative receivers are divided in segments and described in detail in the following section based on roadway topography with respect to the identified receivers.

6.1.1. Segment 1 between post mile 25.0 and Paige Avenue

State Route 99 is on flat terrain in this segment with respect to the represented receivers. Land uses within this segment on both sides of State Route 99 consist of a mobile homes community, light industries and manufacturing facilities and a truck stop. The following receivers were selected to represent this segment:

Receiver 1 (R1)

This receiver is on the west side of State Route 99 at 900 E. Rankin Avenue and represents Country Estates Manufactured Home Community—Activity Category B land use. The first-row mobile homes are set back approximately 350 feet from the edge of shoulder of State Route 99. There is an existing 11-foot-high soundwall located between the mobile homes community and State Route 99 along K Street and wrapping around the mobile homes. This soundwall is 36 feet from the first line of mobile homes and provides noise protection from traffic on State Route 99 and traffic on K Street.

Receiver 2 (R2)

This receiver is on the east side of State Route 99 and represents an agricultural field—Activity Category F land use. The receiver was placed 100 feet from the edge of the traveled way of State Route 99. There are no abatement criteria for this Activity Category, and the noise level measurement was reported at this receiver for informational purposes only.

6.1.2. Segment 2 between Paige Avenue and Bardsley Avenue

State Route 99 is on flat terrain in this segment with respect to the represented receivers. Land uses within this segment consist of single-family residences located on the east side of State Route 99, and small businesses and warehouses located on the west side of State Route 99. The following receivers were selected to represent this segment:

Receiver 3 (R3)

This receiver is a single-family residence located on the east side of State Route 99 at 1678 S. Dayton Street—Activity Category B land use. The house is set back approximately 39 feet from the right of way fence and represents the first-row residential units east of State Route 99. The units represented by Receiver 3 are a combination of single-family residences and multi-family residences. No locations for frequent gatherings are facing State Route 99 that would benefit from noise abatement.

The noise level measurement at this receiver will assist in determining future noise level impacts for the residences represented by this receiver as a result of implementing the proposed improvements to State Route 99 near this location.

Receiver 4 (R4)

This receiver is a commercial/industrial establishment (Elements Design Center) located on the west side of State Route 99 at 1442 S Blackstone Street—Activity Category F land use. The receiver is set back approximately 64 feet from the right of way fence. There are no impact criteria for Activity Category F land uses, and the noise levels for this activity category are included in the noise report for reporting purposes only.

The noise level measurement at this receiver will assist in determining future noise level impacts.

6.1.3. Segment 3 between Bardsley Avenue and Cross Avenue

State Route 99 is depressed at some locations within this segment with respect to the representative receivers. Land uses within this segment on both sides of State Route 99 consist of single- and multi-family residences, a mobile homes community and offices. The following receivers were selected to represent this segment:

Receiver 5 (R5)

This receiver is a single-family residence located on the west side of State Route 99 at 1216 E. Sequoia Avenue—Activity Category B land use. The house is set back approximately 54 feet from the edge of shoulder of State Route 99 and represents the first-row single-family homes west of State Route 99 between E. Beardsley Avenue and E. Sierra Avenue. The noise level measurement at this receiver will assist in determining future noise level impacts for the residences represented by this receiver as a result of implementing the proposed improvements to State Route 99 near this location.

Receiver 6 (R6)

This receiver is a mobile home unit located on the west side of State Route 99 at 320 N. Blackstone Avenue—Activity Category B land use and represents Tulare Mobile Home Park. The first-row mobile homes are set back approximately 140 feet from the edge of shoulder of State Route 99. The noise level measurement at this receiver will assist in determining future noise level impacts as a result of implementing the proposed improvements to State Route 99 near this location.

6.1.4. Segment 4 between Cross Avenue and post mile 30.4 (approximately 350 feet south of Prosperity Avenue)

State Route 99 is depressed at some locations within this segment with respect to the representative receivers. Land uses on both sides of State Route 99 within this segment consist of multi-family residences and duplexes with no outdoor locations for outdoor gatherings, Tulare Church of Christ and First Church of God with no locations for

outdoor gatherings, offices and hotels. The following receivers were selected to represent this segment:

Receiver 7 (R7)

This receiver is located on the east side of State Route 99 at 1225 E. Hillman Street and represents a hotel (Fairfield Inn & Suites)—Activity Category E land use. The hotel swimming pool (place of gathering) is set back approximately 200 feet from the from the edge of shoulder of State Route 99. The noise level measurement at this receiver will assist in determining future noise level impacts as a result of implementing the proposed improvements to State Route 99 near this location.

Receiver 8 (R8)

This receiver is located on the west side of State Route 99 at 500 N. Blackstone Street and represents a church (Tulare Church of Christ)—Activity Category C land use. The church has one location in the back for frequent gathering and a playground for kids. The location in back of the church is shielded by the church structure and set back approximately 425 feet from the right of way fence. The noise level measurement at this receiver will assist in determining future noise level impacts as a result of implementing the proposed improvements to State Route 99 near this location.

Receiver 9 (R9)

This receiver is located on the west side of State Route 99 at 833 N. Blackstone Street and represents a church (First Church of God)—Activity Category C land use. The church has no outdoor location for frequent gathering, but the church hall is set back approximately 101 feet from the right of way fence. The noise level measurement at this receiver will assist in determining future noise level impacts as a result of implementing the proposed improvements to State Route 99 near this location.

As required by the Protocol, noise abatement is considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses mainly on locations with defined outdoor use areas, such as residential backyards, common use areas at multi-family residences, parks, and pool areas of hotels/motels.

6.2. Short-Term Monitoring

On October 4, 2020, a total of nine short-term (10-minute) noise measurements were taken at the above identified receivers. Traffic volumes were counted during the measurement. Free-flow traffic, where traffic is moving freely at a steady pace (peak hour traffic volumes), occurred around 10:00 a.m. See Table 6-1.

Table 6-1 Short-Term Noise Measurement Results

Receiver No.	Street Address, City	Land Use[1]	Noise Level Meter Distance from RW (ft)	Meas. Date	Start Time	Duration, Min.	Meas. L_{eq}, dBA[2]
R1	900 E Rankin Avenue, Tulare	RES	36	9/13/2020	10:19 AM	10:00	56
R2	Agriculture field, Tulare	AG	100	9/13/2020	10:40 AM	10:00	60
R3	1678 S Dayton Street, Tulare	RES	39	10/4/2020	11:20 AM	10:00	70
R4	1442 S Blackstone, Tulare	COM	64	10/4/2020	11:50 AM	10:00	68
R5	1216 E Sequoia Avenue, Tulare	RES	54	9/13/2020	11:34 AM	10:00	61
R6	320 N Blackstone Avenue, Tulare	RES	41	9/13/2020	12:27 PM	10:00	69
R7	1225 E Hillman Street, Tulare	MOT	152	9/13/2020	1:06 PM	10:00	61
R8	500 N Blackstone Street, Tulare	REL	101	10/4/2020	10:40 AM	10:00	61
R9	833 N Blackstone Street, Tulare	REL	425	10/4/2020	10:10 AM	10:00	53

Notes: RES: Residential/Mobile homes, AG: Agriculture, MOT: Hotel/Motel; COM: industrial/commercial, REL: Religious/Places of worship

6.2.1. Long-Term Monitoring

Long-term monitoring was not conducted on the site visit for this project. Long-term measurements typically characterize the 24-hour distribution of sound at the measurement site and can be used to determine the peak noise hour on a project. Noise peak hour and the traffic peak hour were obtained from District 6 Planning.

6.2.2. Traffic Noise Model Calibration

The results of the model run were compared to the measured ambient noise levels to ensure the accuracy of TNM 2.5. Correction factors known as K-factors would be applied to each of the modeled receptor locations so that the monitored and modeled noise levels are the same. Table 6-2 shows the measured ambient noise level, the modeled noise level using traffic counts and measured vehicle speeds during noise measurement, and the K-factors at the measurement location.

Table 6-2. Model Calibration

Receiver No.	Street Address, City	Measured Noise Level (dBA Leq)	Modeled/calculated Noise Level (dBA Leq)	K-Factor (dB)
R1	900 E Rankin Avenue, Tulare	56	58	2
R2	Agriculture field, Tulare	60	63	3
R3	1678 S Dayton Street, Tulare	70	69	1
R4	1442 S Blackstone, Tulare	68	71	3
R5	1216 E Sequoia Avenue, Tulare	61	64	3
R6	320 N Blackstone Avenue, Tulare	68	66	2
R7	1225 E Hillman Street, Tulare	61	64	3
R8	500 N Blackstone Street, Tulare	61	63	2
R9	833 N Blackstone Street, Tulare	53	55	2

K-Factor = correction factor
L_{eq} = equivalent continuous sound level

Table 6-2 compares measured and modeled noise levels at each measurement location. The predicted sound levels are within 3 dB of the measured sound levels and are thus considered to be in reasonable agreement with the measured sound levels. Therefore, no calibration of the model was necessary.

6.2.3. Existing Noise Levels

Traffic volumes for the year 2017, as obtained from District 6 Planning, were inputted into TNM 2.5 with existing roadway conditions according to the methodology described in Section 4.4.1.3 of the TeNS to determine existing noise levels. The model input and output data for the existing noise levels are included in Appendix B. The existing noise levels for studied receivers within the project limits vary from 43 dBA and 72 dBA.

Chapter 7. Future Noise Environment, Impacts, and Considered Abatement

7.1. Future Noise Environment and Impacts

This noise study was conducted to determine the future traffic noise impacts at receptors in the vicinity of the proposed project. Potential long-term noise impacts associated with project operations are solely from traffic noise. Traffic noise was evaluated for the worst-case traffic condition. Using TNM 2.5 noise model, the four receptor locations were evaluated in the model.

Table B-1 in Appendix B summarizes traffic noise levels for the studied receivers and lists the existing, design-year No-Build Alternative condition and the design-year Build Alternative.

The following is a detailed discussion for the future noise impacts and attenuation measures recommended:

7.1.1. Segment 1 between post mile 25.0 and Paige Avenue

Modeling results in Table B-1 indicate that predicted traffic noise levels (Leq[h]) for the design-year with-project conditions at this segment do not approach or exceed the NAC for the following land uses:

- Activity Category B (represented by R1): As stated above, there is an 11-foot soundwall at this mobile home park community. The noise level for the design year build alternative at R1 is 62 dBA. This noise level would not approach or exceed the NAC specified in 23 CFR 772 for the designated land use, and the design-year noise levels at R1 would not substantially exceed the existing noise level for the designated land use.
- Activity Category B (represented by R41, R42 and R43): These receivers represent different locations at the Tulare Inn Mobile Home Park located at 1401 E Paige Ave, see sheet 2 of 4 in Appendix E. R41 receiver represents the first row of mobile homes located on the east side of State Route 99 and south of the proposed roundabouts at the intersection of Paige Avenue and State Route 99. R41 is currently set back approximately 600 feet from the edge of traveled way of State Route 99 and also protected from the freeway noise by the building structure of Budget Inn Hotel. In addition, Budget Inn Hotel does not have areas of frequent human use that could benefit by noise abatement. R42 and R43 represent the first row of the mobile homes facing Laspina Avenue. These receivers are set back approximately 85 feet and 125 feet from the edge of travelled way of the southbound traffic on Laspina Avenue. Currently there is an existing wall on top of a fill surrounding the Tulare Inn Mobile Homes. The noise level for the design year build alternative at receivers R41, R42 and R43 are as shown in Table B, are 62 dBA, 62 dBA and 61 dBA respectively. The design year noise levels are below the NAC for Activity Category B land use. The

existing wall lowers noise below the NAC therefore, no wall was considered at this location.

- Activity Category F (represented by R2-industrial/commercial): The noise level for the design year build alternative at R2, as shown in Table B, is 75 dBA. As stated above, there are no noise impact criteria for land uses associated with this Activity Category per Table 4-1.

Based on the above results, noise abatement is not proposed at this segment.

7.1.2. Segment 2 between Paige Avenue and Bardsley Avenue

Table B-1 in Appendix B summarizes the traffic noise modeling results within this segment for existing conditions and design-year conditions with and without the project. Predicted design-year traffic noise levels with the project are compared with existing conditions as well as with design-year no-build conditions. The comparison with existing conditions is included in the analysis to identify traffic noise impacts under 23 CFR 772. The following is a discussion of traffic noise impacts on receivers within this segment:

- Activity Category B (represented by R3): This receiver is for a single-family residence at 1678 S. Dayton Street and represents the first row of 5 homes located on east side of State Route 99 between E. Levin and E. Walnut Avenues. The noise level for the design year build alternative at R3, as shown in Table B-1, is 74 dBA. The design year noise level at this receiver is above the NAC threshold of 67 dBA for this land use. However, the field visit to this site location revealed no locations for frequent gathering at these homes that would benefit from a soundwall as an abatement measure at this location (refer to Appendix C). No abatement is recommended for this location.
- Activity Category F (represented by R4-industrial/commercial): This receiver is for an industrial site (Elements Design Center) located on the west side of State Route 99 and set back approximately 200 feet from southbound State Route 99. The noise level for the design year build alternative at R4, as shown in Table B-1, is 76 dBA. As stated above, there are no noise impact criteria for land uses associated with this Activity Category per Table 4-1.
- Activity Category B (represented by R11): This receiver is for a single-family residence at 1173 S. Spruce Street and represents the first row of 17 homes located on the east side of State Route 99 between E. Bardsley and E. Walnut Avenues. The noise level for the design year build alternative at R11, as shown in Table B-1, is 61 dBA. The design year noise level at this receiver is below the NAC threshold of 67 dB. No abatement is recommended for this location.
- Activity Category B (represented by R17): This receiver is for a single-family residence at 1703 S. Spruce Street and represents the first row of 19 homes located on the east side of State Route 99 between E. Levin and E. Walnut Avenues. The noise level for the design year build alternative at R17, as shown in Table B-1, is 65 dBA. The design year noise level at this receiver is below the NAC threshold of 67 dBA. No abatement is recommended for this location.

- Activity Category B (represented by R18): This receiver is for a single-family residence at 1875 S. Laguna Street and represents the first row of 13 single-family residences and 3 multi-family residences located on the east side of State Route 99 between E. Levin Avenue and the Tulare Canal. There is an existing wall approximately 10-12 feet high between the residences and northbound State Route 99. The noise level for the design year build alternative at R18, as shown in Table B-1, is 64 dBA. The design year noise level at this receiver is below the NAC threshold of 67 dBA. No abatement is recommended for this location.
- Activity Category B (represented by R19): This receiver is for a single-family residence at 2259 S. Tamarack Street and represents the first row of 12 single-family residences located on the east side of State Route 99 just north of Paige Avenue. The noise level for the design year build alternative at R19, as shown in Table B-1, is 71 dBA. The homes represented by this receiver back up to the Tulare Canal. According to the 2018 NADR prepared for this area, abatement in the form of soundwall was found not feasible from a design perspective due to the conflict with the soundwall foundation and the canal. Refer to the 2018 NADR prepared for the Tulare Interchange Project. No abatement is recommended for this location.

7.1.3. Segment 3 between Bardsley Avenue and Cross Avenue

Table B-1 in Appendix B summarizes the traffic noise modeling results within this segment for existing conditions and design-year conditions with and without the project. Predicted design year traffic noise levels with the project are compared with existing conditions as well as with design year no-build conditions. The comparison with existing conditions is included in the analysis to identify traffic noise impacts under 23 CFR 772. The following is a discussion of traffic noise impacts on receivers within this segment:

- Activity Category B (represented by R5): This receiver is for a single-family residence at 1216 E. Sequoia and represents the first row of 5 residences located on the west side of State Route 99 just south of Sierra Avenue. The noise level for the design year build alternative at R5, as shown in Table B-1, is 70 dBA. The design year noise level at this receiver is above the NAC threshold of 67 dBA. Since the noise level at R5 exceeds the NAC, noise abatement must be considered at this location. Refer to section 7-2 for more details.
- Activity Category B (represented by R6, R29 through R37): These receivers are for Tulare Mobile Home Park at 320 N. Blackstone Street located on the west side of State Route 99. The receivers' locations represent the first row of 9 mobile homes and the park swimming pool. The mobile homes at the first row are set back at distances ranging from approximately 130 and 350 feet from the edge of shoulder of southbound State Route 99. Table B-1 shows that the design year build noise levels for R6 and R30 exceed the NAC of 67 dBA. Since the noise level at R6 and R30 exceed the NAC, noise abatement must be considered at this location. Refer to section 7-2 for more details.
- Activity Category B (represented by R12): This receiver is for a single-family residence at 757 S. Spruce Street and represents the first row of 11 residences located

on the east side of State Route 99 north of Bardsley Street. The noise level for the design year build alternative at R12, as shown in Table B-1, is 62 dBA. The design year noise level at this receiver is below the NAC threshold of 67 dBA. No abatement is recommended for this location.

- Activity Category B (represented by R13): This receiver is for a single-family residence at 468 S. Dayton Street located on the east side of State Route 99 and represents the first row of 13 single-family residences and 13 multi-family units between E. Alpine Avenue and E. Kern Avenue. The noise level for the design year build alternative at R13, as shown in Table B-1, is 72 dBA. The design year noise level at this receiver is above the NAC threshold of 67 dBA, but there are no locations for outdoor frequent gathering at these residences that are facing State Route 99 and would benefit from a noise abatement. No abatement is recommended for this location.
- Activity Category B (represented by R20): This receiver is for a multi-family residence located on the west side of State Route 99 at 498 S. Blackstone Street and represents the first row of 8 units. These multi-family units have no locations for outdoor gathering activities, so the receiver was placed outside the unit to measure the outdoor noise level. Furthermore, there is an existing 7-foot-tall wall surrounding the units. The noise level for the design year build alternative at R20, as shown in Table B-1, is 70 dBA. The indoor noise level for this receiver with the windows closed will be 25 dB below the outside noise level (45 dBA). Therefore the intdoor design year noise level at this receiver is below the threshold for the interior noise abatement criteria of 52 dBA. No abatement is recommended for this location.
- Activity Category B (represented by R21): This receiver is for an apartment building unit at 1100 Martin Luther King Jr Avenue and represents the first row of 8 units in the first floor. The units are facing the highway and have high solid wall balconies overlooking the parking garages; see photos in Appendix C. In addition, there is an existing 8-foot wall between the apartments and State Route 99. The receiver was placed at the sports field (common gathering location at the apartments). and set back approximately 250 feet from the southbound edge of the traveled way of State Route 99. The noise level for the design year build alternative at R20, as shown in Table B-1, is 63 dBA. The design year noise level at this receiver is below the NAC threshold of 67 dBA. No abatement is recommended for this location.
- Activity Category F (represented by R22-industrial/commercial): This receiver is for an industrial/commercial site at 976 S. Blackstone Street located on the west side of State Route 99 just north of Bardsley Street. The noise level for the design year build alternative at R22, as shown in Table B-1, is 70 dBA. As stated above, there are no noise impact criteria for land uses associated with this Activity Category per Table 4-1.
- Activity Category B (represented by R23): This receiver is for a quadraplex unit at 908 S. Dayton Street located on the east side of State Route 99 north of Bardsley Street. The noise level for the design year build alternative at R23, as shown in Table B-1, is 64 dBA. The design year noise level at this receiver is below the NAC threshold of 67 dBA. No abatement is recommended for this location.

- Activity Category B (represented by R24): This receiver is for a single-family residence located at 877 S. Spruce Street and represents the first row of 6 residences located on the east side of State Route 99 between Stockham and Alpine Avenues. The noise level for the design year build alternative at R24, as shown in Table B-1, is 60 dBA. The design year noise level at this receiver is below the NAC threshold of 67 dBA. No abatement is recommended for this location.
- Activity Category B (represented by R27): This receiver is for a single-family residence at 1282 E. Sequoia located on the east side of State Route 99 and represents the first row of 3 single-family residences between E. Kern Avenue and E. Sierra Avenue. The noise level for the design year build alternative at R27, as shown in Table B-1, is 75 dBA. The design year noise level at this receiver is above the NAC threshold of 67 dBA. Since the noise level at R27 exceeds the NAC, noise abatement must be considered at this location. Refer to section 7-2 for more details.
- Activity Category B (represented by R28): This receiver is for a multi-family unit at 400 S. Blackstone Street and represents the first row of 20 first-floor units located on the west side of State Route 99. The unit's windows are facing away from State Route 99There is an existing 7-foot wall between the first units and State Route 99; see photos in Appendix C. The receiver was placed at the swimming pool location (common gathering locations for activities) and set back approximately 300 feet from the southbound edge of the shoulder of State Route 99. The noise level for the design year build alternative at R28, as shown in Table B-1, is 61 dBA.). The wall attenuation can be increased by raising the wall height if desired. No abatement is recommended for this location.

7.1.4. Segment 4 between Cross Avenue and post mile 30.4 (approximately 350 feet south of Prosperity Avenue)

Table B-1 in Appendix B summarizes the traffic noise modeling results within this segment for existing conditions and design year conditions with and without the project. Predicted design year traffic noise levels with the project are compared with existing conditions as well as with design year no-build conditions. The comparison with existing conditions is included in the analysis to identify traffic noise impacts under 23 CFR 772. The following is a discussion of traffic noise impacts on receivers within this segment:

- Activity Category E (represented by R7-Fairfield Inn hotel): This receiver represents the swimming pool location (place for frequent gathering) at the Fairfield Inn and Suites at 1225 Hillman Street and set back approximately 220 feet from the edge of the shoulder of the northbound State Route 99. The noise level for the design year build alternative at R7, as shown in Table B-1, is 70 dBA. The design year noise level at this receiver is below the NAC threshold of 72 dBA designated for this land use. No abatement is recommended for this location.
- Activity Category C (represented by R8): This receiver is located on the west side of State Route 99 at 500 N. Blackstone Street (Tulare Church of Christ). There are no locations for frequent activity gatherings, but the receiver was placed outside the church building to record the outside noise level at the church. The noise level for the

design year build alternative at R8, as shown in Table B-1, is 68 dBA. This noise level is representative of the outside noise level at this location, but the interior noise level at the church with windows closed would be 43 dBA (25 dB less than outside noise level). This noise level is below the NAC interior noise level of 52 dBA designated for this land use. Furthermore, as stated above, since there are no locations outside the church building for frequent gatherings that would benefit from a noise abatement, no abatement is recommended at this location.

- Activity Category C (represented by R9): This receiver is located on the west side of State Route 99 at 833 N. Blackstone Street (First Church of God). The receiver was placed outside the church building at a gathering location, as recommended by the church minister. The receiver location is set back approximately 425 feet from the chain-link fence adjacent to the southbound lanes of State Route 99. The noise level for the design year build alternative at R9, as shown in Table B-1, is 60 dBA. The design year noise level at this receiver is below the NAC threshold of 67 dBA. No abatement is recommended for this location.
- Activity Category B (represented by R14): This receiver is for a multi-family residence located on the east side of State Route 99 at 731 N. Lynora Street and represents 32 multi-family residence units located along the east side of northbound State Route 99. R14 is set back approximately 60 feet from the edge of the shoulder of northbound State Route 99. The noise level for the design year build alternative at R14, as shown in Table B-1, is 67 dBA. There is currently an existing 7-foot wall protecting the residences from the highway traffic noise and providing a 5-dB noise reduction (noise level at R14 without wall attenuation is 72 dBA). The wall attenuation can be increased by raising the wall height if desired. No abatement is recommended for this location.
- Activity Category E (represented by R15-offices): This receiver represents offices located on the west side of State Route 99 at 947 N. Blackstone Street and set back approximately 185 feet from the edge of traveled way of southbound State Route 99. The noise level for the design year build alternative at R15, as shown in Table B-1, is 71 dBA. The design year noise level at this receiver is approaching the designated NAC of 72 dBA for this land use, but there are no outdoor defined locations for frequent gathering that would benefit from a noise abatement (see Appendix C). No abatement is recommended for this location.
- Activity Category E (represented by R16-Quality Inn hotel): This receiver represents the swimming pool location (place for frequent gathering) at the Quality Inn hotel at 1010 E. Prosperity Avenue and set back approximately 130 feet from the edge of the shoulder of northbound State Route 99. The noise level for the design year build alternative at R16, as shown in Table B-1, is 67 dBA. The design year noise level at this receiver is below the NAC threshold of 72 dBA designated for this land use. No abatement is recommended for this location.
- Activity Category B (represented by R38): This receiver is for a multi-family residence located on the west side of State Route 99 at 600 N. Blackstone Street and represents 8 multi-family residence units located along the west side of southbound State Route 99. R38 is set back approximately 70 feet from the edge of the shoulder

of southbound State Route 99. The noise level for the design year build alternative at R38, as shown in Table B-1, is 67 dBA. There is currently an existing 7-foot wall protecting the residences from the highway traffic noise and providing a 6-dB noise reduction (noise level at R38 without wall attenuation is 73 dBA). The wall attenuation can be increased by raising the wall height if desired. No abatement is recommended for this location.

7.2. Preliminary Noise Abatement Analysis

In accordance with 23 CFR 772, noise abatement is considered where traffic noise impacts are predicted in areas of frequent human use that would benefit from a lowered noise level. Potential noise abatement measures identified in the Protocol include the following:

- Constructing noise barriers
- Using traffic management measures to regulate types of vehicles and speeds
- Avoiding the impact by using design alternatives, such as altering the horizontal and vertical alignment of the project
- Acquiring property to serve as a buffer zone
- Acoustically insulating public use or nonprofit institutional structures

These abatement options have been considered; however, because of the constrained configuration, abatement in the form of soundwalls is the only abatement measure considered to be feasible.

Three soundwalls are proposed for this project at locations where the design year build noise levels exceed the NAC. Soundwalls were proposed for residences within segment 3. A reasonable cost allowance was calculated for the proposed soundwalls. Table B-1 in Appendix B shows the existing noise level as well as predicted future noise level at the receiver location for the proposed soundwall with heights ranging from 8 to 16 feet. When soundwalls are placed on the edge of the shoulder of the highway, the soundwall maximum height cannot exceed 14 feet, according to Caltrans Design Manual, Chapter 1100, which limits the maximum height of the soundwall to 14 feet (measured from the pavement surface at the face of the safety shape barrier) when located 15 feet or less from the edge of the traveled way.

The Caltrans acoustical design goal must be met for a noise barrier to be considered reasonable. The design goal is that a barrier must be predicted to provide at least 7 dB of noise reduction at one or more benefitted receivers. Also, the estimated cost to build the noise barrier should be equal to or less than the total cost allowance of benefitted receivers calculated for the barrier to be considered reasonable from a cost perspective. The cost calculations of the noise barrier should include all items appropriate and necessary for construction of the barrier, such as traffic control, drainage modification, retaining walls, and other items.

Construction cost estimates are not provided in this Noise Study Report but are presented in the Noise Abatement Decision Report (NADR). The NADR is produced by Design and is prepared using information from the Noise Study Report, other relevant environmental studies, and design considerations, which are compiled into a single, comprehensive document before public review of the project. The NADR is prepared by the project engineer after completion of the Noise Study Report. The NADR includes noise abatement construction cost estimates that have been prepared and signed by the project engineer based on site-specific conditions. Construction cost estimates are compared to reasonableness allowances in the NADR to identify which wall configurations are reasonable from a cost perspective.

Soundwall minimum heights and locations that provide feasible abatement are shown in Table B-1 in Appendix B. The soundwalls are described below:

Soundwall (SW1)

This soundwall is proposed on the right of way to provide noise attenuation for the 5 residences represented by R5 and located along the west side right of way of State Route 99 between Kern and Sierra Avenues. It extends approximately 220 feet south of Kern Avenue to cover the house location of the fifth receiver represented by R10 at 1229 E. Kern Avenue.

SW1 is proposed for heights ranging between 8 feet and 16 feet and would extend from approximately northing and easting coordinates: 1959455.5, 6464659.5 to northing and easting coordinates: 1958599.5, 6464658.4 for an approximate total length of 855 feet.

Table 7-1 shows SW1 needs to be at least 10 feet high to provide the required attenuation of 5 dB and meet the required design goal attenuation of 7 dB. The height recommendation for the proposed soundwall is 12 feet in order to break the line of sight of an 11.5-foot truck stack.

The estimated cost allowance per benefitted residence, in this case R5, is based on a cost allowance of $107,000 according to the most recent update for the year 2019 as stated on the Caltrans website for Noise and Vibration.

Table 7-1. Summary of Reasonableness Determination–Soundwall SW1

Barrier I.D.: SW1 Critical Receptor (R5)	8-Foot Height	10-Foot Height	12-Foot Height	14-Foot Height	16-Feet
Number of Benefitted Units	0	5	5	5	5
Insertion Loss*	5	7	8	9	10
Reasonable Allowance Per Benefitted Receiver	N/A	$107,000	$107,000	$107,000	$107,000
Total Reasonable Allowance	$0	$535,000	$535,000	$535,000	$535,000

*insertion loss is for the representative receiver (R5).

Soundwall (SW2)

This soundwall is proposed along the right of way to provide noise attenuation for the 9 residences (R6 and R30-R37) and the swimming pool location (R29) at the Tulare Mobile Home Park located along the west side right of way of State Route 99 between Tulare Street and Santa Fe Trail.

SW2 is proposed for heights ranging between 8 feet and 16 feet and would be placed on the right of way extending from approximately northing and easting coordinates: 1960909.6, 6464522.0 to northing and easting coordinates: 1960178.3, 6464348.5 for an approximate total length of 800 feet.

Table 7-3 shows SW2 at a height of 12 feet will provide noise attenuation for only 5 residences including the swimming pool location at the mobile home park. SW2 will need to be at least 12 feet to meet the required design attenuation of 7 dB and break the line of sight of an 11.5-foot truck stack. Table 7-3 also shows that SW2 will provide noise attenuation for only 6 residences at the mobile home park at the height of 12 feet.

The estimated cost allowance per benefitted residence, in this case R6, is based on a cost allowance of $107,000 according to the most recent update for the year 2019 as stated on the Caltrans website for Noise and Vibration.

Table 7-3. Summary of Reasonableness Determination–Soundwall SW2

Barrier I.D.: SW2 Critical Receptor (R6)	8-Foot Height	10-Foot Height	12-Foot Height	14-Foot Height	16-Foot Height
Number of Benefitted Units	2	4	5	5	5
Insertion Loss*	6	6	7	7	7
Reasonable Allowance Per Benefitted Receiver	$107,000	$107,000	$107,000	$107,000	$107,000
Total Reasonable Allowance	$214,000	$428,000	$535,000	$535,000	$535,000

*insertion loss is for the representative receiver (R6).

Soundwall (SW3)

This soundwall is proposed on the edge of the shoulder of the northbound off-ramp south of Sierra Avenue. SW3 is intended to provide noise attenuation for the 3 residences represented by R27, R39 and R40 and located along the off-ramp and between Sierra Avenue and Kern Avenue.

SW3 is proposed for heights ranging between 8 feet and 14 feet and would extend from northing and easting coordinates: 1959379.5, 6464973.1 to northing and easting coordinates: 1958868.6, 6464797.7 for an approximate total length of 360 feet.

SW3 at maximum wall height of 12 feet will be able to attenuate noise levels for only 2 residences represented by R27 and R39.

Table 7-2 shows SW3 needs to be at least 12 feet high to provide the required attenuation of 5 dB and meet the required design goal attenuation of 7 dB. The wall height of 12 feet is also recommended to break the line of sight of an 11.5-foot truck stack.

The estimated cost allowance per benefitted residence, in this case R27 and R39, is based on a cost allowance of $107,000 according to the most recent update for the year 2019 as stated on the Caltrans website for Noise and Vibration.

Table 7-2. Summary of Reasonableness Determination–Soundwall SW3

Barrier I.D.: SW3 Critical Receptor (R27)	8-Foot Height	10-Foot Height	12-Foot Height	14-Foot Height	16-Feet
Number of Benefitted Units	1	1	2	2	2
Insertion Loss (dB)*	5	6	8	9	9
Reasonable Allowance Per Benefitted Receiver	N/A	$107,000	$107,000	$107,000	$107,000
Total Reasonable Allowance	N/A	$107,000	$214,000	$214,000	$214,000

*insertion loss is for the representative receiver (R27).

Chapter 8. Construction Noise

Construction time for this project is anticipated to last for 350 days. Approximately 150 nights of work are expected. Activities would include working on resurfacing outside shoulders under temporary lane closures, constructing a cross-median detour, setting up k-rails (temporary concrete barriers), shifting k-rails to change temporary traffic lanes, and removing the temporary cross-median. The current schedule is for the project to begin construction in September 2024 and to continue until 2027. Since night work is anticipated within residential areas, Form SSP 14-8.02 needs to be completed to show the type of work anticipated and the nighttime hours of work. See attachment A.

During the construction phases of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction.

Table 8-1 lists the type of construction equipment typically used for similar projects. As indicated, equipment involved in construction is expected to generate noise levels ranging from 80 to 95 dBA at a distance of 50 feet. Noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance.

Construction noise varies greatly depending on the construction process, type and condition of equipment used, as well as layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Construction noise estimates are approximate because of the lack of specific information available at the time of the assessment. Temporary construction noise impacts would be unavoidable at areas located immediately adjacent to the proposed project alignment.

The noise level requirement specified herein will apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the contractor.

Table 8-1. Construction Equipment Noise

Noise Source	50-Foot Maximum Noise Level (L_{max}) dBA[2 3]
Air Compressor (portable)4	89
Air Compressor (stationary)	89
Auger, Drilled Shaft Rig	89
Backhoe	90
Bar Bender	85
Chain Saw	88
Compactor	85
Concrete Mixer (small trailer)	68
Concrete Mixer Truck	89
Concrete Pump Trailer	84
Concrete Vibrator	81
Crane, Derrick	90
Crane, Mobile	85
Dozer (Bulldozer)	90
Excavator	92
Forklift	86
Front End Loader	90
Generator	87
Gradall	85
Grader	89
Grinder	82
Impact Wrench	85
Jack Hammer	88
Paver	92
Pavement Breaker	85
Pneumatic Tool	88
Pump	80
Roller	83
Sand Blaster	87
Saw, Electric	80
Scraper	91
Shovel	90
Tamper	88
Tractor	90
Trucks (Under Load)	95
Water Truck	94
Other Equipment with Diesel	88

The project area is mainly rural, and construction noise will be controlled under and will conform to the provisions in Section 14-8.02, “Noise Control,” of the Standard Specifications.

There are a number of measures that can be taken to minimize noise intrusion without placing unreasonable constraints on the construction process or substantially increasing costs. These include noise monitoring to ensure that contractors take all reasonable steps to minimize impacts when near sensitive areas; noise testing and inspection of equipment to ensure that all equipment on the site is in good condition and effectively muffled; and an active community liaison program. A community liaison program would keep

residents informed about construction plans so they can plan around periods of particularly high noise or vibration levels and would provide a conduit for residents to express any concerns or complaints.

The following are possible control measures that can be implemented to minimize noise disturbances at sensitive areas during construction:

- All equipment shall have sound-control devices no less effective than those provided on the original equipment. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine should be operated on the job site without an appropriate muffler.
- Construction methods or equipment that will provide the lowest level of noise impact (for example, avoid impact pile driving near residences and consider alternative methods that are also suitable for the soil condition) should be used.
- Idling equipment shall be turned off.
- Truck loading, unloading, and hauling operations shall be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest possible extent.

The contractor will be required to adhere to the following administrative noise control measures:

- Once details of the construction activities become available, the contractor shall work with local authorities to develop an acceptable approach to minimize interference with the business and residential communities, traffic disruptions, and the total duration of the construction.
- Good public relations shall be maintained with the community to minimize objections to unavoidable construction impacts. Frequent activity updates of all construction activities shall be provided. A construction noise monitoring program to track sound levels and limit the impacts shall be implemented.
- In case of construction noise complaints by the public, the Resident Engineer shall coordinate with the construction manager, and the specific noise-producing activity may be changed, altered, or temporarily suspended, if necessary.

It is possible that certain construction activities could cause intermittent localized concern from vibration in the project area. During certain construction phases, processes such as earth moving with bulldozers, the use of vibratory compaction rollers, demolitions, or pavement braking may cause construction related vibration impacts such as human annoyance or, in some cases, building damages. There are cases where it may be necessary to use this type of equipment in close proximity to residential buildings.

The following are procedures that can be used to minimize the potential impacts from construction vibration:

- Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).
- The owner of a building close enough to a construction vibration source that damage to that structure due to vibration is possible would be entitled to a pre-construction building inspection to document the pre-construction condition of that structure.
- Conduct vibration monitoring during vibration-intensive activities.

A combination of the mitigation techniques for equipment vibration control as well as administrative measures, when properly implemented, can be selected to provide the most effective means to minimize the effects of construction activity.

Application of the mitigation measures will reduce the construction impacts; however, temporary increases in vibration would likely occur at some locations.

Chapter 9. References

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FHWA, 2004. U.S. Department of Transportation, FHWA Traffic Noise Model, TNM 2.5, Report No. FHWA–PD–96–010, Revision No. 1, April 14.

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Appendix A Traffic Data

This appendix contains tables presenting the traffic data for the year 2018 existing conditions, design year 2049 build and no-build project conditions.

Replace the 2nd paragraph of section 14-8.02 with:

Noise from job site activities must not exceed 86 dBA Lmax at 50 feet from the job site from __9:00__ p.m. to __6:00__ a.m., except the following activities may exceed this noise restriction during the hours and on the days shown in the following table:

Noise Restriction Exceptions

Activity	Hours		Days	
	From	To	From	Through

Do not operate construction equipment or run equipment engines from 7:00 p.m. to 7:00 a.m. or on Sundays at the job site except to:

1. Service traffic-control facilities
2. Service construction equipment

Add to section 14-8.02:

Furnish 1 Type 1 sound-level meter and 1 acoustic calibrator for the Department to use until Contract acceptance to monitor noise.

The sound-level meter must:

1. Be calibrated and certified by the manufacturer or an independent acoustical laboratory before delivery to the Department
2. Be capable of taking measurements using the A-weighting network and the slow-response settings
3. Have a microphone fitted with a windscreen
4. Be recalibrated annually by the manufacturer or an independent acoustical laboratory

Provide training in noise monitoring to 1 Department employee designated by the Engineer. The person delivering the training must be trained in noise monitoring.

The Department returns the equipment to you at Contract acceptance.

TULARE CITY WIDENING FORECAST

06-TUL-99
PM 25.4/30.6
EA 06-489500
0614000040
1/27/2021

Southbound			Rankin Rd Drive IC (Ave 200)				Commercial Drive IC					Paige Ave IC				Bardsley Ave IC				Tulare Ave IC				Prosperity Ave IC			
		Mainline	SB On Ramp	Mainline	SB Off Ramp	Mainline	SB Slip On Ramp	SB Loop On Ramp	Mainline	SB Off Ramp	Mainline	SB On Ramp	Mainline	SB Off Ramp	Mainline	SB On Ramp	Mainline	SB Off Ramp	Mainline	SB On Ramp	Mainline	SB Off Ramp	Mainline	SB On Ramp	Mainline	SB Off Ramp	Mainline
2018	ADT	27,560	1,050	26,510	1,200	27,710					27,710	4,000	23,710	4,500	28,210	2,030	26,180	3,110	29,290	1,689	27,601	2,794	30,395	4,502	25,893	3,692	29,585
	AM Peak	1,725	65	1,660	110	1,770					1,770	135	1,635	255	1,890	155	1,735	190	1,925	124	1,801	158	1,959	233	1,726	227	1,953
	PM Peak	1,675	80	1,595	95	1,690					1,690	135	1,555	220	1,775	110	1,665	200	1,865	124	1,741	248	1,989	349	1,640	293	1,933
2029 Alt 1 & 3	ADT	36,524	1,363	35,162	1,459	36,621	1,919	1,291	33,411	2,791	36,202	3,455	32,748	4,232	36,980	2,169	34,810	3,580	38,390	2,007	36,383	3,487	39,870	4,857	35,013	4,568	39,581
	AM Peak	2,460	107	2,353	140	2,493	147	105	2,242	234	2,475	195	2,280	309	2,589	194	2,395	238	2,633	165	2,468	198	2,665	253	2,412	280	2,693
	PM Peak	2,510	106	2,405	119	2,524	147	105	2,273	227	2,499	177	2,322	246	2,568	158	2,411	259	2,670	165	2,504	312	2,816	375	2,441	363	2,805
2029 No Build	ADT	36,958	1,686	35,272	1,386	36,658						4,925	31,733	6,079	37,812	2,383	35,429	3,591	39,020	2,007	37,013	3,487	40,500	4,857	35,643	4,568	40,211
	AM Peak	2,476	135	2,341	118	2,458						284	2,174	505	2,679	205	2,475	245	2,720	165	2,555	198	2,752	253	2,499	280	2,779
	PM Peak	2,541	152	2,389	133	2,523						277	2,246	376	2,622	200	2,421	255	2,677	165	2,512	312	2,823	375	2,449	363	2,812
2039 Alt 1 & 3	ADT	45,743	1,666	44,076	1,708	45,784	4,051	2,725	39,008	5,892	44,900	2,987	41,913	3,993	45,907	2,298	43,609	4,024	47,632	2,316	45,317	4,268	49,584	5,160	44,424	5,502	49,926
	AM Peak	3,193	149	3,044	168	3,212	309	221	2,682	493	3,175	255	2,920	360	3,281	231	3,049	284	3,334	196	3,138	239	3,377	263	3,114	332	3,446
	PM Peak	3,345	131	3,214	142	3,356	309	221	2,826	479	3,305	219	3,086	271	3,357	205	3,152	316	3,468	196	3,272	374	3,646	405	3,241	436	3,677
2039 No Build	ADT	46,183	2,324	43,859	1,563	45,421						5,814	39,607	7,624	47,231	2,719	44,512	4,046	48,558	2,316	46,242	4,268	50,510	5,160	45,349	5,502	50,851
	AM Peak	3,219	205	3,014	122	3,137						437	2,700	761	3,461	275	3,186	310	3,496	196	3,300	239	3,539	263	3,276	332	3,608
	PM Peak	3,410	228	3,182	169	3,351						417	2,934	532	3,466	292	3,174	300	3,474	196	3,277	374	3,651	405	3,246	436	3,682
2049 Alt 1 & 3	ADT	55,011	1,970	53,041	1,957	54,998	6,183	4,159	44,656	8,993	53,649	2,519	51,129	3,755	54,884	2,427	52,457	4,468	56,925	2,676	54,249	5,204	59,454	5,464	53,990	6,644	60,634
	AM Peak	3,985	191	3,795	197	3,991	472	337	3,182	753	3,935	315	3,620	412	4,032	269	3,764	331	4,094	227	3,867	291	4,158	283	3,875	405	4,280
	PM Peak	4,180	156	4,024	165	4,189	472	337	3,380	731	4,111	260	3,851	295	4,146	251	3,895	373	4,268	227	4,041	457	4,498	425	4,073	530	4,602
2049 No Build	ADT	55,409	2,962	52,446	1,739	54,185						6,703	47,482	9,169	56,651	3,055	53,596	4,501	58,097	2,676	55,421	5,204	60,625	5,464	55,161	6,644	61,805
	AM Peak	3,963	280	3,684	131	3,815						592	3,223	1,019	4,242	301	3,941	353	4,293	227	4,066	291	4,357	283	4,074	405	4,479
	PM Peak	4,281	300	3,982	209	4,191						570	3,621	691	4,312	384	3,928	362	4,290	227	4,063	457	4,520	425	4,095	530	4,624

TULARE CITY WIDENING FORECAST

06-TUL-99
PM 25.4/30.6
EA 06-489500
0614000040
1/27/2021

Northbound		Mainline	Rankin Rd Drive IC (Ave 200) NB Off Ramp	Mainline	Rankin Rd Drive IC (Ave 200) NB On Ramp	Mainline	Commercial IC NB Off Ramp	Commercial IC NB Loop On Ramp	Mainline	Commercial IC NB Slip On Ramp	Mainline	Paige IC NB Off Ramp	Mainline	Paige IC NB On Ramp from WB	Future NB Loop On Ramp from EB	Mainline	Bardsley IC NB Off Ramp	Mainline	Bardsley IC NB On Ramp	Mainline	Tulare Ave IC NB Off Ramp	Mainline	Tulare Ave IC NB On Ramp	Mainline	Prosperity Ave NB Off Ramp	Mainline	Prosperity Ave NB On Ramp	Mainline	Prosperity Ave NB On Ramp	Mainline
2018	ADT	28,540	800	27,740	720	28,460						2,300	26,160	3,300		29,460	1,340	28,120	5,230	33,350	1,789	31,561	3,540	35,101	6,569	28,532	1,801	30,333	1,910	32,243
	AM Peak	1,455	55	1,400	60	1,460						110	1,350	210		1,560	70	1,490	400	1,890	115	1,775	264	2,039	410	1,629	149	1,778	113	1,891
	PM Peak	2,240	100	2,140	70	2,210						210	2,000	290		2,290	100	2,190	370	2,560	136	2,424	237	2,661	530	2,131	138	2,269	154	2,423
2029 Alt 1 & 3	ADT	37,578	1,058	36,521	1,113	37,634	1,779	1,047	36,901	1,176	38,077	2,672	35,405	3,763		39,167	1,803	37,364	5,557	42,922	2,173	40,749	4,306	45,055	7,220	37,834	2,107	39,942	2,273	42,215
	AM Peak	2,304	89	2,214	75	2,289	244	122	2,167	112	2,278	165	2,114	280		2,394	105	2,289	419	2,708	135	2,573	321	2,894	448	2,446	174	2,620	134	2,754
	PM Peak	2,874	122	2,752	92	2,844	244	122	2,722	112	2,834	280	2,554	324		2,878	155	2,723	444	3,167	165	3,002	290	3,292	580	2,712	164	2,876	185	3,062
2029 No Build	ADT	37,747	965	36,781	854	37,635						3,609	34,026	4,295	1,291	39,611	1,767	37,844	5,332	43,176	2,173	41,004	4,306	45,310	7,220	38,089	2,107	40,197	2,273	42,470
	AM Peak	2,289	100	2,189	100	2,289						267	2,022	244	105	2,370	117	2,253	419	2,672	135	2,537	321	2,858	448	2,410	174	2,584	134	2,718
	PM Peak	2,867	140	2,727	117	2,844						330	2,514	298	174	2,986	190	2,796	433	3,229	165	3,064	290	3,354	580	2,774	164	2,938	185	3,124
2039 Alt 1 & 3	ADT	46,729	1,308	45,421	1,506	46,926	3,756	2,209	45,380	2,482	47,862	3,025	44,836	4,199		49,036	2,255	46,780	5,860	52,641	2,586	50,054	5,188	55,242	7,831	47,411	2,416	49,827	2,686	52,513
	AM Peak	3,155	124	3,030	89	3,119	516	258	2,862	236	3,097	219	2,878	348		3,226	139	3,087	436	3,523	166	3,357	383	3,740	489	3,251	195	3,446	155	3,601
	PM Peak	3,489	144	3,345	114	3,459	516	258	3,201	236	3,437	348	3,089	355		3,444	209	3,235	515	3,750	196	3,554	342	3,896	631	3,265	185	3,450	216	3,666
2039 No Build	ADT	46,718	1,124	45,595	981	46,576						4,920	41,656	5,261	2,725	49,642	2,183	47,459	5,426	52,885	2,586	50,298	5,188	55,486	7,831	47,655	2,416	50,071	2,686	52,757
	AM Peak	3,126	145	2,981	138	3,119						432	2,688	276	222	3,186	165	3,022	436	3,458	166	3,292	383	3,675	489	3,186	195	3,381	155	3,536
	PM Peak	3,475	181	3,294	164	3,458						451	3,007	304	367	3,678	282	3,396	493	3,889	196	3,693	342	4,035	631	3,404	185	3,589	216	3,805
2049 Alt 1 & 3	ADT	55,930	1,559	54,370	1,899	56,269	5,733	3,372	53,908	3,788	57,697	3,378	54,318	4,636		58,954	2,708	56,246	6,163	62,410	3,052	59,358	6,225	65,583	8,542	57,041	2,775	59,816	3,151	62,967
	AM Peak	4,006	159	3,847	103	3,950	787	393	3,557	360	3,916	274	3,643	416		4,059	174	3,885	454	4,339	197	4,142	456	4,597	540	4,057	226	4,283	186	4,469
	PM Peak	4,104	165	3,939	135	4,074	787	393	3,680	360	4,040	416	3,624	387		4,011	264	3,747	586	4,333	227	4,106	415	4,520	692	3,828	216	4,044	247	4,291
2049 No Build	ADT	55,690	1,282	54,408	1,109	55,517						6,231	49,286	6,227	4,159	59,672	2,598	57,074	5,519	62,593	3,052	59,541	6,225	65,766	8,542	57,224	2,775	59,999	3,151	63,151
	AM Peak	3,961	192	3,769	180	3,950						596	3,354	307	337	3,998	212	3,786	454	4,239	197	4,042	456	4,498	540	3,958	226	4,183	186	4,369
	PM Peak	4,082	220	3,862	212	4,074						570	3,504	311	562	4,377	375	4,003	553	4,556	227	4,329	415	4,744	692	4,051	216	4,267	247	4,514

Table A-1. Traffic Data calculations (PM 25. /27.6)

Future Build Traffic volumes (2049) PM 25.4/27.6				
Trucks	DHV	vehicles	MT	HT
NB SR 99 (per lane)				
381	1380	999	140	241
SB SR 99 (per lane)				
389	1410	1114	96	293

Future No-Build Traffic volumes (2049) PM 25.4/27.6				
Trucks	DHV	vehicles	MT	HT
NB SR 99 (per lane)				
552	2000	1448	203	349
SB SR 99 (per lane)				
552	2000	1580	137	415

Existing Traffic volumes (2018) PM 25.4/27.6				
Trucks	DHV	vehicles	MT	HT
NB SR 99 (per lane)				
319	1156	913	79	240
SB SR 99 (per lane)				
249	902	713	62	187

DHV: Design hour volume
HT: Heavy trucks (3+ axels)
MT: Medium trucks

Table A-2. Traffic Data calculations PM (27.6/30.6)

Future Build Traffic volumes (2049) PM 27.6/30.6				
Trucks	DHV	vehicles	MT	HT
NB SR 99 (per lane)				
331	1380	999	122	210
SB SR 99 (per lane)				
338	1410	1114	84	255

Future No-Build Traffic volumes (2049) PM 27.6/30.6				
Trucks	DHV	vehicles	MT	HT
NB SR 99 (per lane)				
480	2000	1448	176	304
SB SR 99 (per lane)				
480	2000	1580	119	361

Existing Traffic volumes (2018) PM 27.6/30.6				
Trucks	DHV	vehicles	MT	HT
NB SR 99 (per lane)				
277	1156	913	69	209
SB SR 99 (per lane)				
216	902	713	54	163

DHV: Design hour volume
HT: Heavy trucks (3+ axels)
MT: Medium trucks

Appendix B Predicted Future Noise Levels and Noise Barrier Analysis

This appendix contains one or more tables summarizing the traffic noise modeling results for existing and design-year conditions with and without the project.

Table B-1. Predicted Future Noise and Barrier Analysis

Receiver I.D.	Barrier ID. and Location	Land Use	Number of Dwelling Units	Address	Existing Noise Level Leq(h), dBA	SR 99 Future Worst-Hour Noise Levels - L_{eq}(h), dBA																									
						Design Year Noise Level without Project L_{eq}(h), dBA	Design Year Noise Level with Project L_{eq}(h), dBA	Design Year Noise Level with Project minus Existing Conditions L_{eq}(h), dBA	Design Year Noise Level without Project minus Existing Conditions L_{eq}(h), dBA	Design Year Noise Level with Project Minus No Project Conditions L_{eq}(h), dBA	Activity Category (NAC)	Impact Type	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receptors (NBR)																	
													8 feet			10 feet			12 feet			14 feet			16 feet				
													L_{eq}(h)	I.L.	NBR	L_{eq}(h)	I.L.	NBR	L_{eq}(h)	I.L.	NBR	L_{eq}(h)	I.L.	NBR	L_{eq}(h)	I.L.	NBR		
R1		MH	20	900 Rankin Ave, Tulare	59	62	62	3	3	0	B (67)	None	Existing soundwall at this location																	
R2		AG	N/A	Agriculture field south of Paige of Paige Ave, Tulare	72	75	75	3	3	0	F	None																	
R3		RES	5	1678 S Dayton Ave, Tulare	71	74	**74**	3	3	0	B (67)	A/E	No outdoor gathering location																	
R4		COM	1	1442 S Blackstone Ave, Tulare	70	73	**74**	4	3	1	F	None																	
R5	SW1	RES	4	1216 E Sequoia Ave, Tulare	71	74	**75**	4	3	1	B (67)	A/E	70	5	1	68	7	4	67	8	4	66	9	4	65	10	4
R10	SW1	RES	1	1229 E Kern Avenue, Tulare	72	75	**76**	4	3	1	B (67)	A/E	73	3	0	70	6	1	69	7	1	68	8	1	67	9	1
R6	SW2	MH	1	320 N Blackstone St, Tulare	67	70	**70**	3	3	0	B (67)	A/E	63	7	1	62	8	1	62	8	1	61	9	1	61	9	1
R29	SW2	MH	1	320 N Blackstone St Tulare (Swimming Pool-R6 Park)	60	63	63	3	3	0	B (67)	None	59	4	0	58	5	1	58	5	1	57	6	1	57	6	1
R30	SW2	MH	1	320 N BLACKSTONE ST TULARE (First Row Unit-R6 Park)	65	68	68	3	3	0	B (67)	A/E	61	7	1	61	7	1	60	8	1	60	8	1	59	9	1
R31	SW2	MH	1	320 N BLACKSTONE ST TULARE (First Row Unit-R6 Park)	62	64	64	2	2	0	B (67)	None	60	4	0	59	5	1	59	5	1	59	5	1	58	6	1
R32	SW2	MH	1	320 N BLACKSTONE ST TULARE (First Row Unit-R6 Park)	62	64	64	2	2	0	B (67)	None	60	4	0	59	5	1	58	6	1	58	6	1	57	7	1
R33	SW2	MH	1	320 N BLACKSTONE ST TULARE (First Row Unit-R6 Park)	60	62	62	2	2	0	B (67)	None	59	3	0	59	3	0	58	4	0	58	4	0	58	4	0
R34	SW2	MH	1	320 N Blackstone St Tulare (First Row Unit-R6 Park)	61	63	63	2	2	0	B (67)	None	57	6	1	56	7	1	55	8	1	55	8	1	54	9	1
R35	SW2	MH	1	320 N BLACKSTONE ST TULARE (First Row Unit-R6 Park)	59	62	62	3	3	0	B (67)	None	59	3	0	59	3	0	58	4	0	58	4	0	58	4	0
R36	SW2	MH	1	320 N BLACKSTONE ST TULARE (First Row Unit-R6 Park)	59	62	62	3	3	0	B (67)	None	59	3	0	59	3	0	58	4	0	58	4	0	58	4	0
R37	SW2	MH	1	320 N BLACKSTONE ST TULARE (First Row Unit-R6 Park	59	62	62	3	3	0	B (67)	None	59	3	0	59	3	0	59	3	0	58	4	0	58	4	0

R7		MOT	1	1225 E Hillman St, Tulare	67	69	70	3	2	1	E (72)	None															
R8		CH	1	500 N Blackstone St, Tulare	55	58	59	4	3	1	C (67)	None															
R9		CH	1	833 N Blackstone St, Tulare	57	60	60	3	3	0	D (52)	None															
R11		RES	17	1173 S Spruce St, Tulare	56	59	60	4	3	1	B (67)	None															
R12		RES	11	757 S Spruce St, Tulare	59	62	62	3	3	0	B (67)	None															
R13		RES	13	468 S Dayton St, Tulare	69	72	**72**	3	3	1	B (67)	A/E	No outdoor gathering location														
R14		RES	32	731 N Lynora St, Tulare	64	67	**67**	3	3	0	B (67)	A/E	Existing wall at this location														
R15		Office	1	947 N Blackstone St, Tulare	67	70	**71**	4	3	1	E (72)	A/E	No outdoor gathering location														
R16		MOT	1	1010 E Prosperity Ave, Tulare	63	66	67	3	3	1	E (72)	None															
R17		RES	19	1703 S Spruce St, Tulare	62	65	65	3	3	0	B (67)	None															
R18		RES	16	1875 S Laguna St, Tulare	64	65	**65**	1	1	0	B (67)	None															
R19		RES	12	2259 S Tamarack St, Tulare	65	68	**68**	3	3	0	B (67)	A/E	Abatement not feasible at this location (2018 NADR)														
R28		RES	20	400 S Blackstone St, Tulare	58	61	61	3	3	0	B (67)	None															
R21		RES	8	1100 Martin Luther King Jr Ave Tulare	60	62	63	3	2	1	B (67)	None															
R22		COM	1	976 S Blackstone St, Tulare	65	68	70	5	3	2	F	None															
R23		RES	1	908 S Dayton St, Tulare	61	64	64	3	3	0	B (67)	None															
R24		RES	6	877 S Spruce St, Tulare	58	60	60	2	2	0	B (67)	None															
R25		COM	1	1330 E Tulare Ave, Tulare	66	69	69	3	3	0	F	None															
R26		RES	7	1301 E Academy Ave, Tulare	64	60	**61**	2	3	0	B (67)	None															
R27	SW3	RES	1	1282 E Sequoia Ave, Tulare	72	74	**75**	3	2	1	B (67)	A/E	70	5	1	69	6	1	67	8	1	66	9	1	66	9	1
R39	SW3	RES	1	1293 E Sequoia Ave, Tulare	71	74	**74**	3	3	0	B (67)	A/E	72	2	0	72	2	0	70	4	1	69	5	1	68	6	1
R40	SW3	RES	1	339 S Dayton Ave, Tulare	71	74	**74**	3	3	0	B (67)	A/E	73	1	0	73	1	0	72	2	0	72	2	0	71	3	0
R20		APT	8	498 S Blackstone St, Tulare	43	45	45	2	2	0	B (52)	None	Existing wall at this location														
R38		RES	8	600 N Blackstone St, Tulare	63	67	**67**	4	4	0	B (67)	A/E	Existing wall at this location														
R41		RES	7	1401 E Paige Ave, Tulare	59	61	**62**	2	2	1	B (67)	None	Existing wall at this location														
R42		RES	5	1401 E Paige Ave, Tulare	57	62	**62**	5	5	0	B (67	None	Existing wall at this location														
R43		RES	3	1401 E Paige Ave, Tulare	57	61	**61**	4	4	0	B (67	None	Existing wall at this location														

Note: A/E= Future noise conditions approach or exceed the noise abatement criteria; N/A: not applicable
COM: commercial/Industrial; MOT: motel/hotel; RES: residences; APT: Apartment buildings
Bold: noise impacts above noise abatement criteria
I.L: Insertion Loss
NBR: Number of benefitted residences

Appendix C Supplemental Data and Field Notes

This appendix contains field measurements and photos of field measurement locations.

Receptor #: R1

Project: 06-48950 EA: Date: 9/13/20

Site Location: 900 E Rankin Ave Owner's name(Optional): MH No. of Units Impacted X

Field Staff: Allam Alhadad And:

SLM Model:------ 2238 Mediator----- SLM Brand:------ Bruel&Kjaer------SLM Serial Number:----------

Field Cal. Initial:-----94----- Field Cal. Final:-----94-----

No.	START TIME	STOP TIME	DURATION	CLOUD COVER CLASS
1	10:19			Class 1- Heavily overcast
				Class 2- Lightly overcast (sun obscured 20 to 80% of time)
2				Class 3- Sunny (sun essentially unobscured 80% of time)
				Class 4- Clear night (less than 50% cloudy cover)
3				Class 5- Overcast night (50% or more cloud cover)

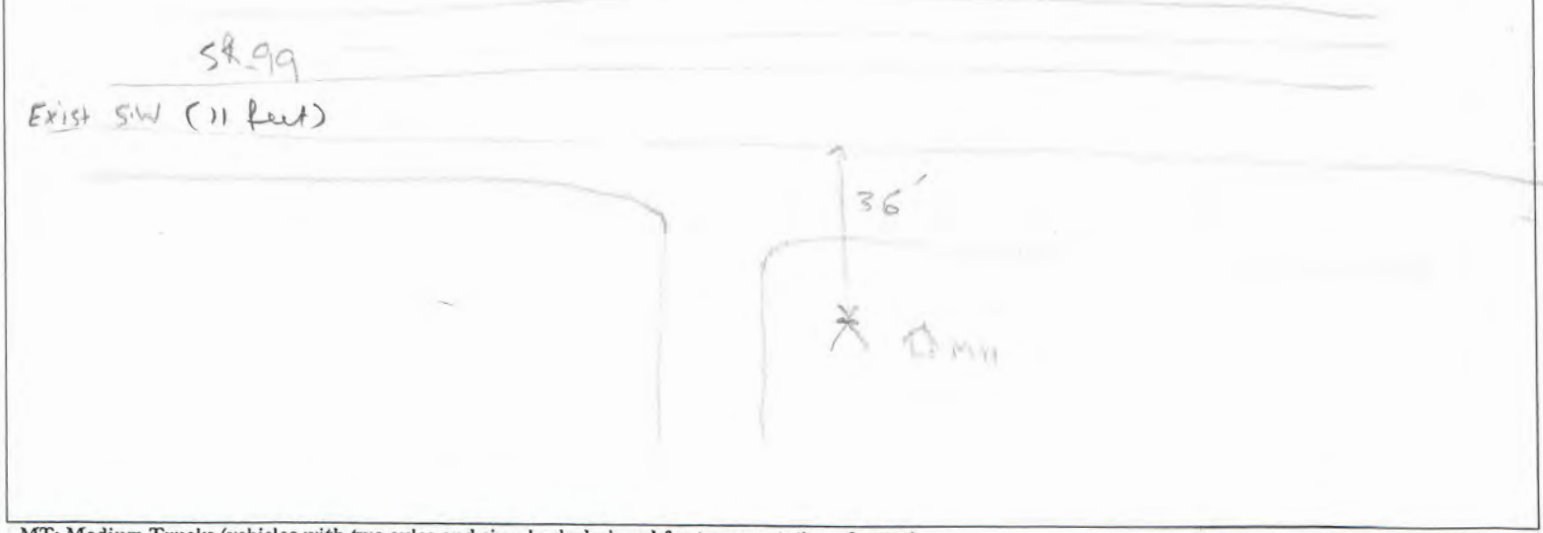
Weather Data	Readings	Comments
Temperature:	98 °F	There is an existing SW for MH.
Wind speed/Direction:	m/s 2	
Humidity:	40 %	

Estimated construction date of residences: Pre-1978 1978 or newer

No.	Bound			Bound		
	Auto	MT	HT	Auto	MT	HT
1						
2						
3						

No.	First Measurement				Second Measurement				Third Measurement			
	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file
1	56	5										
2												
3												

Sketch:



MT: Medium Trucks (vehicles with two axles and six wheels designed for transportation of cargo)
HT: Heavy Trucks (vehicles with three or more axles designed for transportation of cargo)
Cal: Calibration
SLM: Sound Level Meter

Receptor #: R2

Project: _____ EA: 06-48950 Date: 9/13/20

Site Location: AG field east of SR-99 Owner's name(Optional): _____ No. of Units Impacted ____

Field Staff: Allam Alhabaly And: _____

SLM Model:------ 2238 Mediator----- SLM Brand:------ Bruel&Kjaer------SLM Serial Number:----------

Field Cal. Initial:-----94----- Field Cal. Final:-----94-----

No.	START TIME	STOP TIME	DURATION	CLOUD COVER CLASS
1	10:40			Class 1- Heavily overcast
				Class 2- Lightly overcast (sun obscured 20 to 80% of time)
2				Class 3- Sunny (sun essentially unobscured 80% of time)
				Class 4- Clear night (less than 50% cloudy cover)
3				Class 5- Overcast night (50% or more cloud cover)
				Class 5- Overcast night (50% or more cloud cover)

Weather Data	Readings
Temperature:	°F
Wind speed/Direction:	m/s
Humidity:	%

Comments: receiver placed 100 feet from E.S of SR-99

Estimated construction date of residences: Pre-1978 _____ 1978 or newer _____

No.	Bound			Bound		
	Auto	MT	HT	Auto	MT	HT
1						
2						
3						

No.	First Measurement				Second Measurement				Third Measurement			
	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file
1												
2												
3												

Sketch:

MT: Medium Trucks (vehicles with two axles and six wheels designed for transportation of cargo)
HT: Heavy Trucks (vehicles with three or more axles designed for transportation of cargo)
Cal: Calibration
SLM: Sound Level Meter

Receptor #: 3

Project: _____ EA: 06-48950 Date: 10/4/20

Site Location: 1678 S Dayton Owner's name(Optional): _____ No. of Units Impacted _____

Field Staff: _____ And: _____

SLM Model:------ 2238 Mediator----- SLM Brand:------ Bruel&Kjaer------SLM Serial Number:----------

Field Cal. Initial:-----94----- Field Cal. Final:-----94-----

No.	START TIME	STOP TIME	DURATION	CLOUD COVER CLASS
1	11:20	11:30	10 min	Class 1- Heavily overcast
				Class 2- Lightly overcast (sun obscured 20 to 80% of time)
2				Class 3- Sunny (sun essentially unobscured 80% of time)
				Class 4- Clear night (less than 50% cloudy cover)
3				Class 5- Overcast night (50% or more cloud cover)
				Class 5- Overcast night (50% or more cloud cover)

Weather Data	Readings
Temperature:	84 °F
Wind speed/Direction:	m/s | 1
Humidity:	33 %

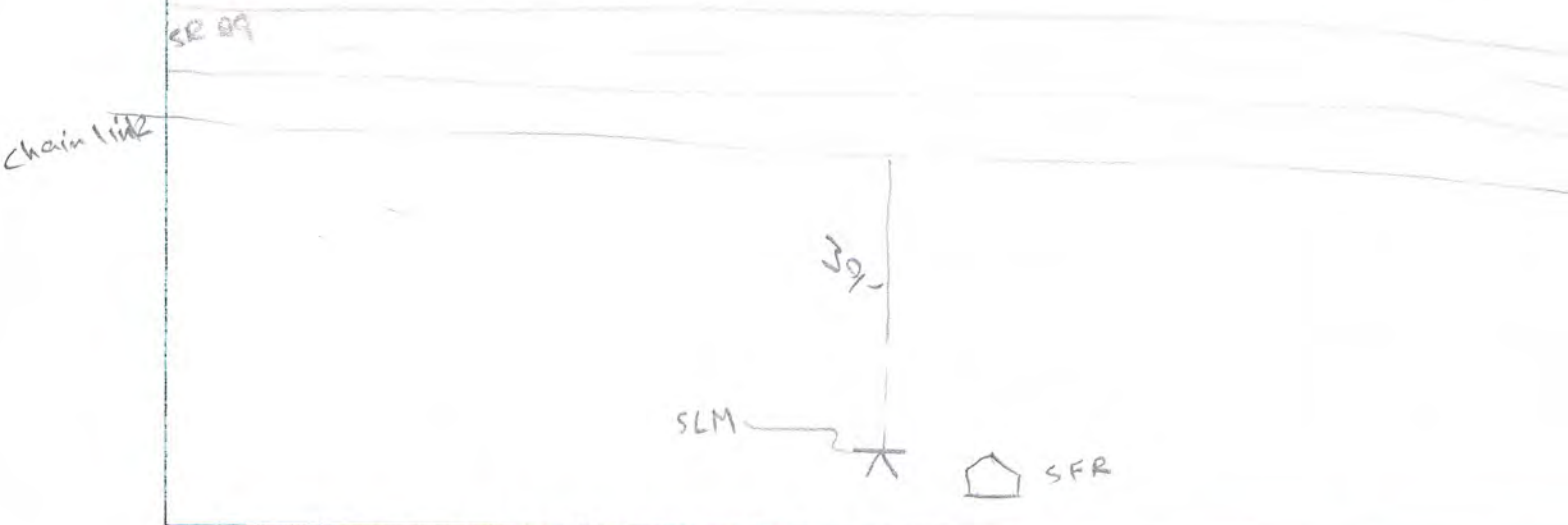
Comments: terrain flat 3 homes with no gathering locations

Estimated construction date of residences: Pre-1978 _____ 1978 or newer _____

No.	N Bound			S Bound		
	Auto	MT	HT	Auto	MT	HT
1	204	10	28	262	6	44
2						
3						

No.	First Measurement				Second Measurement				Third Measurement			
	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	
1	69.9	12										
2												
3												

Sketch:



MT: Medium Trucks (vehicles with two axles and six wheels designed for transportation of cargo)
HT: Heavy Trucks (vehicles with three or more axles designed for transportation of cargo)
Cal: Calibration
SLM: Sound Level Meter

Project: _____ BA: 06-48950 Date: 10/4/20

Site Location: 1442 S Blackstone st Owner's name(Optional): Industrial (Elements Design Center) No. of Units Impacted 1

Field Staff: Allam Alhabaly And: _____

SLM Model:------ 2238 Mediator----- SLM Brand:------ Bruel&Kjaer------SLM Serial Number:----------

Field Cal. Initial:-----94----- Field Cal. Final:-----94-----

No.	START TIME	STOP TIME	DURATION
1	11:50	12:00	10
2			
3			

CLOUD COVER CLASS

Class 1- Heavily overcast

Class 2- Lightly overcast (sun obscured 20 to 80% of time)

Class 3- Sunny (sun essentially unobscured 80% of time)

Class 4- Clear night (less than 50% cloudy cover)

Class 5- Overcast night (50% or more cloud cover)

Weather Data	Readings
Temperature:	86 °F
Wind speed/Direction:	m/s
Humidity:	33 %

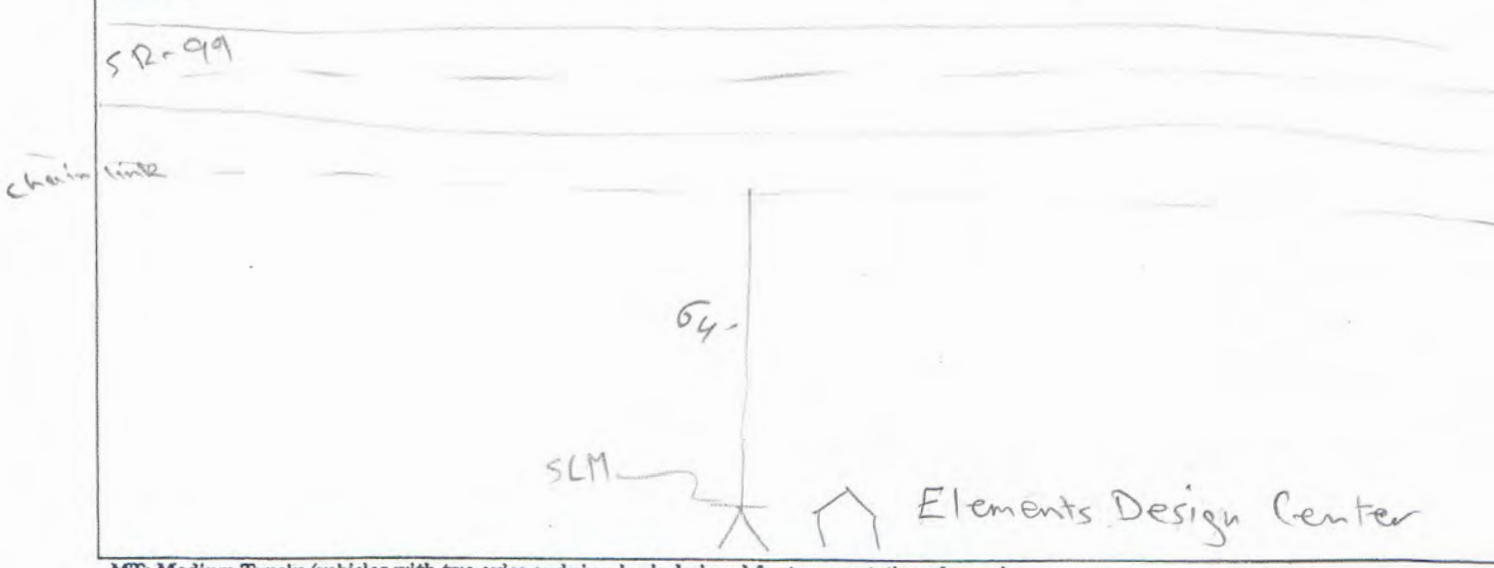
Comments: Flat terrain

Estimated construction date of residences: Pre-1978 _____ 1978 or newer _____

No.	N Bound			S Bound		
	Auto	MT	HT	Auto	MT	HT
1	216	16	34	302		8
2						
3						

No.	First Measurement				Second Measurement				Third Measurement			
	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	
1	68.1	13										
2												
3												

Sketch:



MT: Medium Trucks (vehicles with two axles and six wheels designed for transportation of cargo)
HT: Heavy Trucks (vehicles with three or more axles designed for transportation of cargo)
Cal: Calibration
SLM: Sound Level Meter

Project: _____ EA: 06-48950 Date: 9/18/20 Receptor #: R 3

Site Location: 1216 E Sequoia Ave Owner's name(Optional): SFR No. of Units Impacted 4

Field Staff: _____ And: _____

SLM Model:------ 2238 Mediator----- SLM Brand:------ Bruel&Kjaer------SLM Serial Number:----------

Field Cal. Initial:-----94----- Field Cal. Final:-----94-----

No.	START TIME	STOP TIME	DURATION	CLOUD COVER CLASS
1	11:34			Class 1- Heavily overcast
				Class 2- Lightly overcast (sun obscured 20 to 80% of time)
2				Class 3- Sunny (sun essentially unobscured 80% of time)
				Class 4- Clear night (less than 50% cloudy cover)
3				Class 5- Overcast night (50% or more cloud cover)

Weather Data	Readings
Temperature:	75 °F
Wind speed/Direction:	m/s 2
Humidity:	47 %

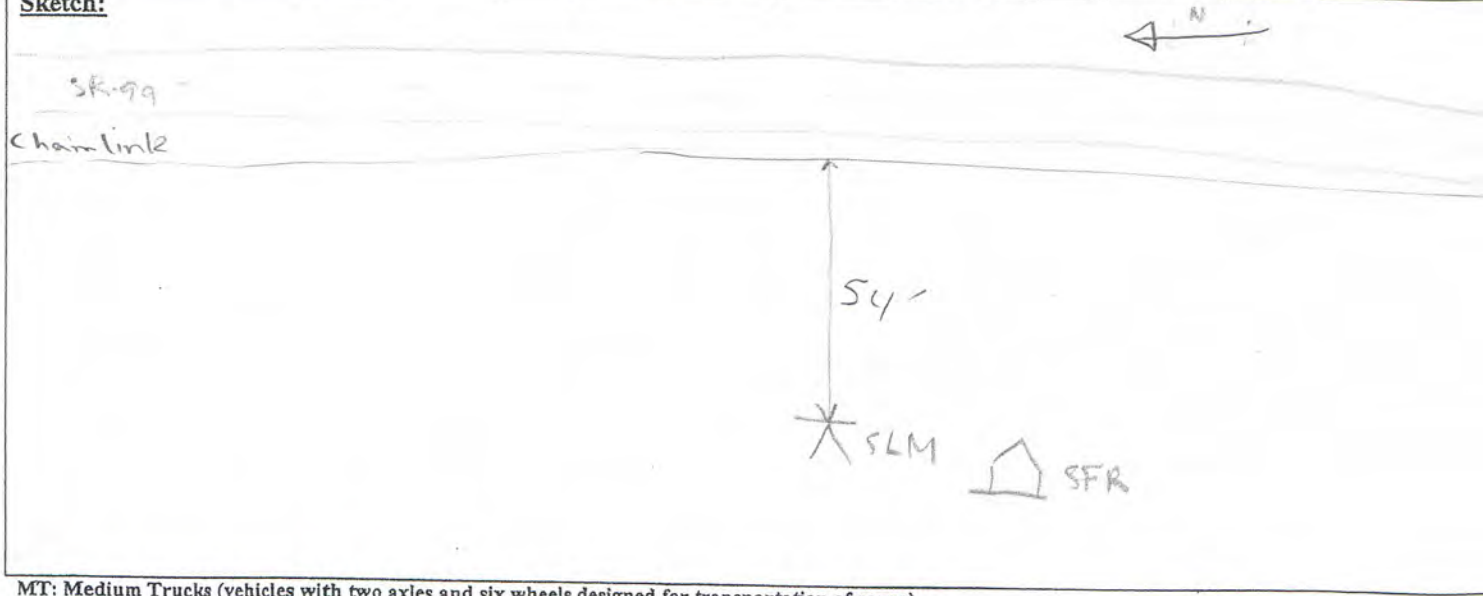
Comments: Hwy depressed in this location

Estimated construction date of residences: Pre-1978 _____ 1978 or newer _____

No.	N Bound			S Bound		
	Auto	MT	HT	Auto	MT	HT
1	166	8	32	178	8	24
2						
3						

No.	First Measurement				Second Measurement				Third Measurement			
	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file
1	61.4	6										
2												
3												

Sketch:



MT: Medium Trucks (vehicles with two axles and six wheels designed for transportation of cargo)
HT: Heavy Trucks (vehicles with three or more axles designed for transportation of cargo)
Cal: Calibration
SLM: Sound Level Meter

Project: _____ EA: 06-48950 Date: 9/13/20 **Receptor #:** 6

Site Location: 320 N Blackstone st Owner's name(Optional): Mobile homes No. of Units Impacted ____

Field Staff: Allam Alhabaily And: _____

SLM Model:------ 2238 Mediator----- SLM Brand:------ Bruel&Kjaer------SLM Serial Number:----------

Field Cal. Initial:-----94----- Field Cal. Final:-----94-----

No.	START TIME	STOP TIME	DURATION	CLOUD COVER CLASS
1	12:27			Class 1- Heavily overcast
				Class 2- Lightly overcast (sun obscured 20 to 80% of time)
2				Class 3- Sunny (sun essentially unobscured 80% of time)
				Class 4- Clear night (less than 50% cloudy cover)
3				Class 5- Overcast night (50% or more cloud cover)

Weather Data	Readings
Temperature:	81 °F
Wind speed/Direction:	2 m/s
Humidity:	31 %

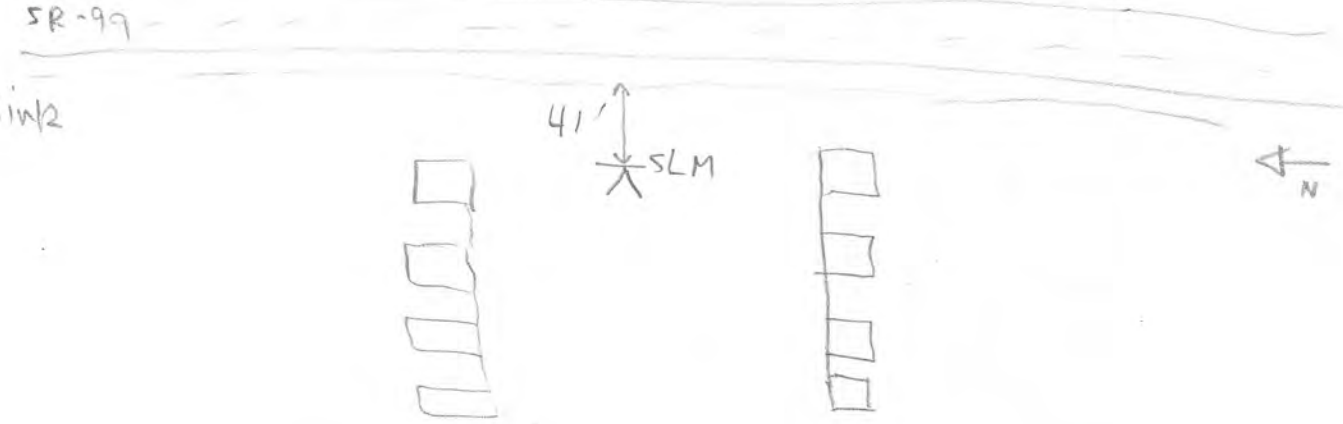
Comments: HWY depressed at this location

Estimated construction date of residences: Pre-1978 _____ 1978 or newer _____

No.	N Bound			S Bound		
	Auto	MT	HT	Auto	MT	HT
1	176	12	20	250	8	34
2						
3						

No.	First Measurement				Second Measurement				Third Measurement			
	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file
1	68	7										
2												
3												

Sketch:



MT: Medium Trucks (vehicles with two axles and six wheels designed for transportation of cargo)
HT: Heavy Trucks (vehicles with three or more axles designed for transportation of cargo)
Cal: Calibration
SLM: Sound Level Meter

Project: _____ EA: 06-48950 Date: 9/13/20 **Receptor #:** R7

Site Location: 1225 E Hillman St Owner's name(Optional): (hotel) No. of Units Impacted ____

Field Staff: Allam Alhabbal And: _____

SLM Model:------ 2238 Mediator----- SLM Brand:------ Bruel&Kjaer------SLM Serial Number:----------

Field Cal. Initial:-----94----- Field Cal. Final:-----94-----

No.	START TIME	STOP TIME	DURATION	CLOUD COVER CLASS
1	1:26			Class 1- Heavily overcast
				Class 2- Lightly overcast (sun obscured 20 to 80% of time)
2				Class 3- Sunny (sun essentially unobscured 80% of time)
				Class 4- Clear night (less than 50% cloudy cover)
3				Class 5- Overcast night (50% or more cloud cover)

Weather Data	Readings
Temperature:	86 °F
Wind speed/Direction:	2 m/s
Humidity:	31 %

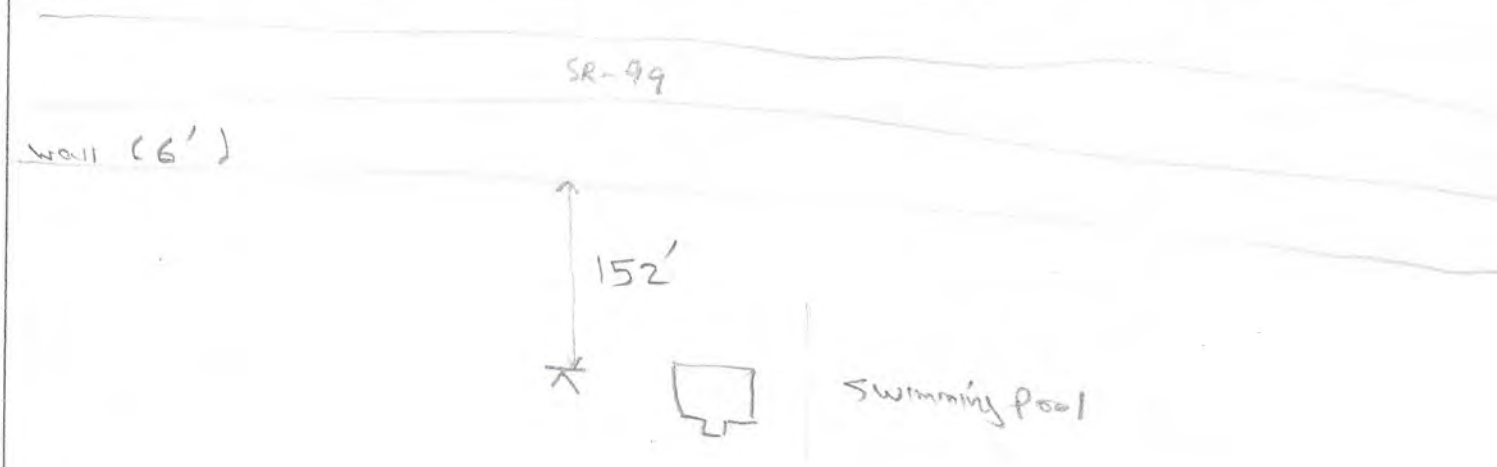
Comments: Hwy depressed at this location

Estimated construction date of residences: Pre-1978 _____ 1978 or newer _____

No.	S Bound			N Bound		
	Auto	MT	HT	Auto	MT	HT
1	164	0	12	182	12	28
2						
3						

No.	First Measurement				Second Measurement				Third Measurement			
	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file
1	58.9	8										
2												
3												

Sketch:



MT: Medium Trucks (vehicles with two axles and six wheels designed for transportation of cargo)
HT: Heavy Trucks (vehicles with three or more axles designed for transportation of cargo)
Cal: Calibration
SLM: Sound Level Meter

Project: _____ EA: 06-48950 Date: 10/4/20 **Receptor #:** R8

Site Location: 500 N Blackstone Owner's name(Optional): Tulare church of christ No. of Units Impacted ___

Field Staff: ALLAM ALHABALY And: _____

SLM Model:------ 2238 Mediator----- SLM Brand:------ Bruel&Kjaer------SLM Serial Number:----------

Field Cal. Initial:-----94----- Field Cal. Final:-----94-----

No.	START TIME	STOP TIME	DURATION	CLOUD COVER CLASS
1	10:40	10:50	10	Class 1- Heavily overcast
				Class 2- Lightly overcast (sun obscured 20 to 80% of time)
2				Class 3- Sunny (sun essentially unobscured 80% of time)
				Class 4- Clear night (less than 50% cloudy cover)
3				Class 5- Overcast night (50% or more cloud cover)

Weather Data	Readings
Temperature:	°F
Wind speed/Direction:	m/s
Humidity:	%

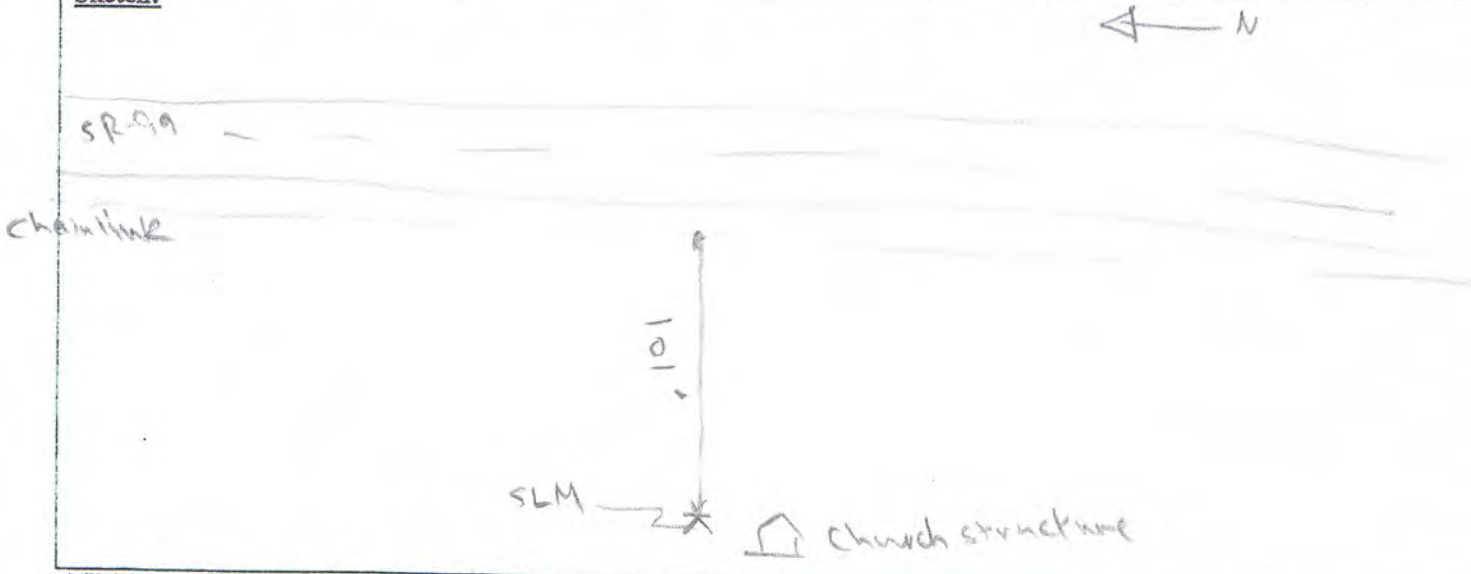
Comments No place of gathering terrain: highway depressed at this location

Estimated construction date of residences: Pre-1978 _____ 1978 or newer _____

No.	N Bound			S Bound		
	Auto	MT	HT	Auto	MT	HT
1	260	4	16	208	8	30
2						
3						

No.	First Measurement				Second Measurement				Third Measurement			
	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	fi
1	61	10										
2												
3												

Sketch:



MT: Medium Trucks (vehicles with two axles and six wheels designed for transportation of cargo)
HT: Heavy Trucks (vehicles with three or more axles designed for transportation of cargo)
Cal: Calibration
SLM: Sound Level Meter

Project: _____ EA: 06-48950 Date: 10/4/20 **Receptor #:** R9

Site Location: 833 N Blackstone Owner's name(Optional): First church of God No. of Units Impacted 1

Field Staff: ALLAM ALHABALY And: _____

SLM Model:------ 2238 Mediator----- SLM Brand:------ Bruel&Kjaer------SLM Serial Number:----------

Field Cal. Initial:-----94----- Field Cal. Final:-----94-----

No.	START TIME	STOP TIME	DURATION	CLOUD COVER CLASS
1	10:10	10:20	10	Class 1- Heavily overcast
2				Class 2- Lightly overcast (sun obscured 20 to 80% of time)
3				Class 3- Sunny (sun essentially unobscured 80% of time)
				Class 4- Clear night (less than 50% cloudy cover)
				Class 5- Overcast night (50% or more cloud cover)

Weather Data	Readings
Temperature:	72 °F
Wind speed/Direction:	m/s | 1
Humidity:	37 %

Comments: Placement gathering is shielded by church structure topo flat terrain

Estimated construction date of residences: Pre-1978 _____ 1978 or newer _____

No.	N Bound			S Bound		
	Auto	MT	HT	Auto	MT	HT
1	198	14	46	282	8	30
2						
3						

No.	First Measurement				Second Measurement				Third Measurement			
	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file	Leq (dBA)	file
1	52.8	9										
2												
3												

Sketch:



MT: Medium Trucks (vehicles with two axles and six wheels designed for transportation of cargo)
HT: Heavy Trucks (vehicles with three or more axles designed for transportation of cargo)
Cal: Calibration
SLM: Sound Level Meter



900 Rankin Avenue mobile homes Soundwall (R1).



900 Rankin Avenue mobile homes Soundwall (R1).



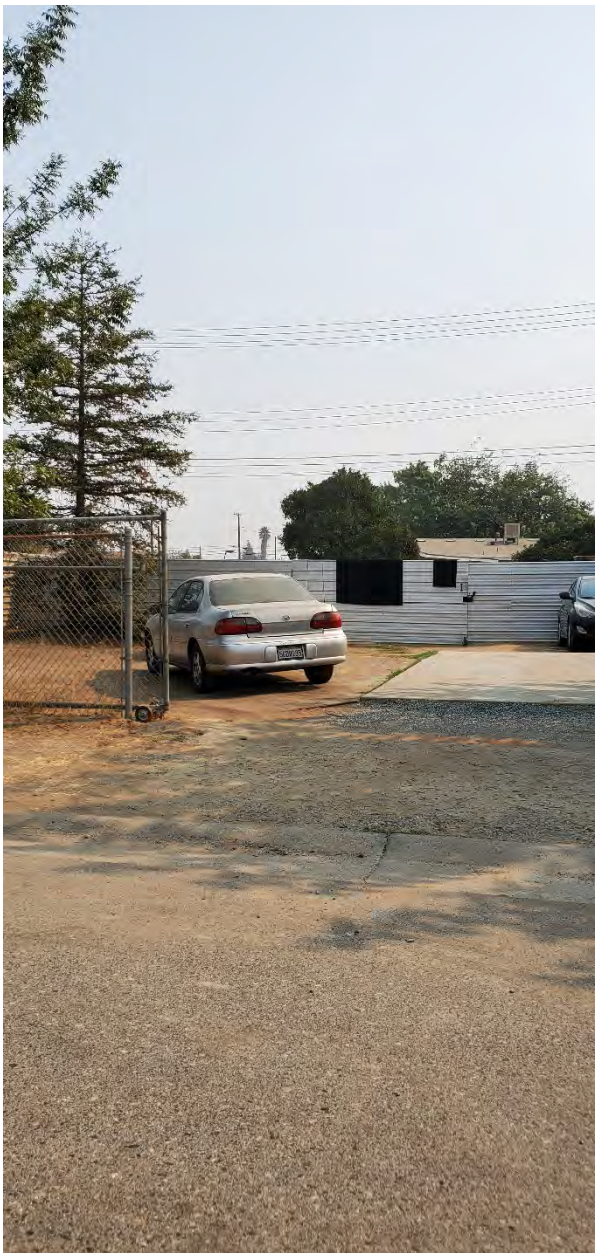
1678 S Dayton-no outdoor locations (R3).



1678 S Dayton-no outdoor locations (R3).



1678 S Dayton-no outdoor locations (R3).



1678 S Dayton-no outdoor locations (R3).



1678 S Dayton Avenue (R3).



1678 S Dayton Avenue (R3).



1678 S Dayton Avenue (R3).



1678 S Dayton Avenue (R3).



1442 S Blackstone Street-commercial (R4).



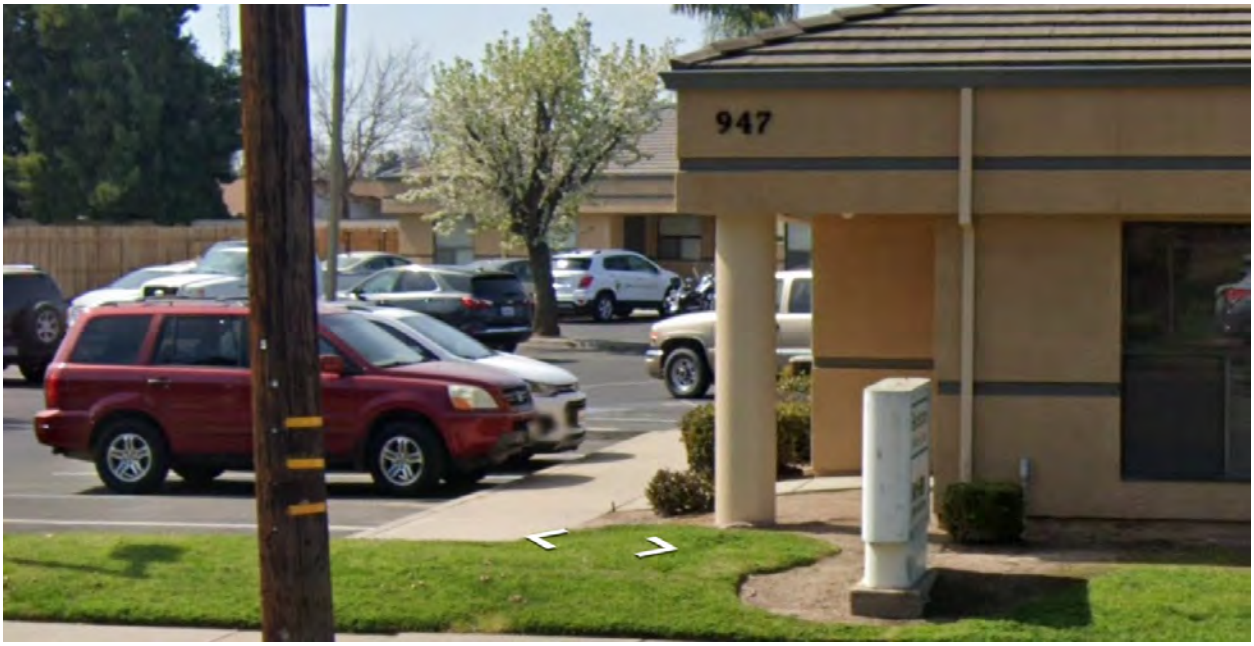
320 N Blackstone Street-mobile homes (R6).



833 N Blackstone Street-Church (R9)



731 N Lynora Street existing wall (R14)



947 N Blackstone Street-office (R15).



498 S Blackstone Street. (R20)



498 S Blackstone Street. (R20)



Existing wall (R20)



1100 Martin Luther King Avenue. (R21)



Existing wall (R21).



400 S Blackstone Street. (R28)



400 S Blackstone Street. (R28)



400 S Blackstone Street-swimming pool location. (R28)



Existing wall (R28).



Existing wall (R20)

Appendix D Model TNM 2.5 Output Tables

Caltrans 20-Oct-20
Allam TNM 2.5
Calculated

RESULTS: S
PROJECT/C 06-48950 (Existing-25.4/27.6)
RUN: Tulare City Widening
BARRIER DI INPUT HEIGHTS

ATMOSPHE 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc
			dBA	dBA	dBA	dB	dB
R1	1	1	0	63.7	66	63.7	10
R2: Ag fiel	34	1	0	72	66	72	10

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	2	0	2.4	4.7
All Impacted	1	0	0	0
All that meet NR Goal	0	0	0	0

with TNM 2.5

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
	dBA	dB	dB	dB
----	59	4.7	8	-3.3
Snd Lvl	72	0	8	-8

Caltrans 20-Oct-20
Allam TNM 2.5
Calculated

RESULTS: S
PROJECT/C 06-48950-Existing noise levels 27.6/30.6
RUN: Tulare City Widening
BARRIER DI INPUT HEIGHTS

ATMOSPHE 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n	Sub'l Inc
			dBA	dBA	dBA	dB		dB
R7	22	1	0	66.8	66	66.8		10
R5	24	1	0	71.2	66	71.2		10
R6	25	1	0	66.9	66	66.9		10
R3: 1678 S	28	1	0	71	66	71		10
R4: Elemer	29	1	0	70.3	66	70.3		10
R8: Tulare	30	1	0	64.7	66	64.7		10
R9: First Cl	31	1	0	60.8	66	60.8		10
R10	32	1	0	72.1	66	72.1		10
R11	33	1	0	56.2	66	56.2		10
R12	34	1	0	59.1	66	59.1		10
R14	36	1	0	68.4	66	68.4		10
R15: office	37	1	0	67.2	66	67.2		10
R16: Quali	38	1	0	63.3	66	63.3		10
R18	40	1	0	68.7	66	68.7		10
R17	41	1	0	62.5	66	62.5		10
R19	42	1	0	65.4	66	65.4		10
R28	44	1	0	63.2	66	63.2		10
R21	45	1	0	65.5	66	65.5		10
R22	46	1	0	65.4	66	65.4		10
R23	47	1	0	61.2	66	61.2		10
R24	48	1	0	57.7	66	57.7		10
R25	49	1	0	65.8	66	65.8		10
R26	50	1	0	64.1	66	64.1		10
R13	51	1	0	69.2	66	69.2		10
R20	53	1	0	69.4	66	69.4		10
R29 (swim	54	1	0	60.4	66	60.4		10
R30	55	1	0	65	66	65		10
R31	56	1	0	61.8	66	61.8		10
R32	57	1	0	61.6	66	61.6		10

R33	58	1	0	59.7	66	59.7	10
R34	59	1	0	60.5	66	60.5	10
R35	60	1	0	59.2	66	59.2	10
R36	61	1	0	59.1	66	59.1	10
R37	62	1	0	59.1	66	59.1	10
R38	63	1	0	69.7	66	69.7	10
R27	65	1	0	72	66	72	10
R39	66	1	0	71.3	66	71.3	10
R40	67	1	0	71.4	66	71.4	10

Dwelling Units	# DUs	Noise Reduction		
		Min dB	Avg dB	Max dB
All Selected	38	0	0.9	6.4
All Impacted	15	0	1.2	6.4
All that meet NR Goal	0	0	0	0

with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
	dBA	dB	dB	dB
Snd Lvl	66.8	0	8	-8
Snd Lvl	71.2	0	8	-8
Snd Lvl	66.9	0	8	-8
Snd Lvl	71	0	8	-8
Snd Lvl	70.3	0	8	-8
----	64.2	0.5	8	-7.5
----	56.8	4	8	-4
Snd Lvl	72.1	0	8	-8
----	56.2	0	8	-8
----	59.1	0	8	-8
Snd Lvl	63.4	5	8	-3
Snd Lvl	67.2	0	8	-8
----	63.3	0	8	-8
Snd Lvl	63.9	4.8	8	-3.2
----	62.3	0.2	8	-7.8
----	65.4	0	8	-8
----	57.9	5.3	8	-2.7
----	59.7	5.8	8	-2.2
----	65.4	0	8	-8
----	61.2	0	8	-8
----	57.7	0	8	-8
----	65.8	0	8	-8
----	64	0.1	8	-7.9
Snd Lvl	69.2	0	8	-8
Snd Lvl	67.5	1.9	8	-6.1
----	60.4	0	8	-8
----	65	0	8	-8
----	61.8	0	8	-8
----	61.6	0	8	-8

----	59.6	0.1	8	-7.9
----	60.5	0	8	-8
----	59.2	0	8	-8
----	59.1	0	8	-8
----	59.1	0	8	-8
Snd Lvl	63.3	6.4	8	-1.6
Snd Lvl	72	0	8	-8
Snd Lvl	71.3	0	8	-8
Snd Lvl	71.4	0	8	-8

Caltrans 20-Oct-20
Allam Alab TNM 2.5
Calculated

RESULTS: S
PROJECT/C 06-48950(Future build levels (27.6/30.6)
RUN: Tulare City Widening
BARRIER DI INPUT HEIGHTS

ATMOSPHE 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n	Sub'l Inc
			dBA	dBA	dBA	dB	dB	
R7	22	1	0	70.3	66	70.3	10	
R5	24	1	0	74.9	66	74.9	10	
R6	25	1	0	69.8	66	69.8	10	
R3: 1678 S	28	1	0	74.4	66	74.4	10	
R4: Elemer	29	1	0	73.8	66	73.8	10	
R8: Tulare	30	1	0	67.7	66	67.7	10	
R9: First Cl	31	1	0	64.7	66	64.7	10	
R10	32	1	0	69.2	66	69.2	10	
R11	33	1	0	59.5	66	59.5	10	
R12	34	1	0	62	66	62	10	
R14	36	1	0	71.9	66	71.9	10	
R15: office	37	1	0	71.1	66	71.1	10	
R16: Quali	38	1	0	66.6	66	66.6	10	
R18	40	1	0	71.9	66	71.9	10	
R17	41	1	0	65.3	66	65.3	10	
R19	42	1	0	68.9	66	68.9	10	
R28	44	1	0	67.2	66	67.2	10	
R21	45	1	0	69.7	66	69.7	10	
R22	46	1	0	69.6	66	69.6	10	
R23	47	1	0	64.4	66	64.4	10	
R24	48	1	0	60.7	66	60.7	10	
R25	49	1	0	69.5	66	69.5	10	
R26	50	1	0	67.8	66	67.8	10	
R13	51	1	0	72.5	66	72.5	10	
R20	53	1	0	74.3	66	74.3	10	
R29 (swim	54	1	0	63.3	66	63.3	10	
R30	55	1	0	67.7	66	67.7	10	
R31	56	1	0	64.4	66	64.4	10	
R32	57	1	0	64.3	66	64.3	10	

R33	58	1	0	61.9	66	61.9	10
R34	59	1	0	63.3	66	63.3	10
R35	60	1	0	61.9	66	61.9	10
R36	61	1	0	61.8	66	61.8	10
R37	62	1	0	61.9	66	61.9	10
R38	63	1	0	73.4	66	73.4	10
R27	65	1	0	75.2	66	75.2	10
R39	66	1	0	74.5	66	74.5	10
R40	67	1	0	74.5	66	74.5	10

Dwelling Units	# DUs	Noise Reduction		
		Min dB	Avg dB	Max dB
All Selected	38	0	2.5	6.9
All Impacted	24	0	2.5	6.9
All that meet NR Goal	0	0	0	0

with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
	dBA	dB	dB	dB
Snd Lvl	70.3	0	8	-8
Snd Lvl	70.2	4.7	8	-3.3
Snd Lvl	63.7	6.1	8	-1.9
Snd Lvl	74.4	0	8	-8
Snd Lvl	73.8	0	8	-8
Snd Lvl	67	0.7	8	-7.3
----	60.2	4.5	8	-3.5
Snd Lvl	69.2	0	8	-8
----	59.5	0	8	-8
----	62	0	8	-8
Snd Lvl	66.3	5.6	8	-2.4
Snd Lvl	71.1	0	8	-8
Snd Lvl	66.6	0	8	-8
Snd Lvl	66.7	5.2	8	-2.8
----	65.1	0.2	8	-7.8
Snd Lvl	68.9	0	8	-8
Snd Lvl	61	6.2	8	-1.8
Snd Lvl	62.8	6.9	8	-1.1
Snd Lvl	69.6	0	8	-8
----	64.4	0	8	-8
----	60.7	0	8	-8
Snd Lvl	69.4	0.1	8	-7.9
Snd Lvl	67.7	0.1	8	-7.9
Snd Lvl	72.5	0	8	-8
Snd Lvl	70.9	3.4	8	-4.6
----	59	4.3	8	-3.7
Snd Lvl	62.1	5.6	8	-2.4
----	60.2	4.2	8	-3.8
----	60	4.3	8	-3.7

----	58.8	3.1	8	-4.9
----	58	5.3	8	-2.7
----	58.7	3.2	8	-4.8
----	58.6	3.2	8	-4.8
----	58.6	3.3	8	-4.7
Snd Lvl	66.5	6.9	8	-1.1
Snd Lvl	70.4	4.8	8	-3.2
Snd Lvl	72.3	2.2	8	-5.8
Snd Lvl	73.2	1.3	8	-6.7

Caltrans 20-Oct-20
Allam TNM 2.5
Calculated

RESULTS: S
PROJECT/C 06-48950 (Existing-25.4/27.6)
RUN: Tulare City Widening
BARRIER DI INPUT HEIGHTS

ATMOSPHE 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc
			dBA	dBA	dBA	dB	dB
R1	1	1	0	63.7	66	63.7	10
R2: Ag fiel	34	1	0	72	66	72	10

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	2	0	2.4	4.7
All Impacted	1	0	0	0
All that meet NR Goal	0	0	0	0

with TNM 2.5

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
	dBA	dB	dB	dB
----	59	4.7	8	-3.3
Snd Lvl	72	0	8	-8

Caltrans 20-Oct-20
Allam TNM 2.5
Calculated

RESULTS: S
PROJECT/C 06-48950 (Existing-25.4/27.6)
RUN: Tulare City Widening
BARRIER DI INPUT HEIGHTS

ATMOSPHE 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc
			dBA	dBA	dBA	dB	dB
R1	1	1	0	63.7	66	63.7	10
R2: Ag fiel	34	1	0	72	66	72	10

Dwelling Units	# DUs	Noise Reduction Min dB	Avg dB	Max dB
All Selected	2	0	2.4	4.7
All Impacted	1	0	0	0
All that meet NR Goal	0	0	0	0

with TNM 2.5

Average pavement type shall be used unless
a State highway agency substantiates the use
of a different type with approval of FHWA.

Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
	dBA	dB	dB	dB
----	59	4.7	8	-3.3
Snd Lvl	72	0	8	-8

Caltrans 20-Oct-20
Allam TNM 2.5
Calculated

RESULTS: S
PROJECT/C 06-48950(Future no build level-27.6/30.6)
RUN: Tulare City Widening
BARRIER DI INPUT HEIGHTS

ATMOSPHE 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n	Sub'l Inc
			dBA	dBA	dBA	dB	dB	
R7	22	1	0	69.3	66	69.3	10	
R5	24	1	0	74.2	66	74.2	10	
R6	25	1	0	69.6	66	69.6	10	
R3: 1678 S	28	1	0	73.7	66	73.7	10	
R4: Elemer	29	1	0	73.2	66	73.2	10	
R8: Tulare	30	1	0	67.2	66	67.2	10	
R9: First Cl	31	1	0	63.5	66	63.5	10	
R10	32	1	0	75.1	66	75.1	10	
R11	33	1	0	59	66	59	10	
R12	34	1	0	61.6	66	61.6	10	
R14	36	1	0	70.9	66	70.9	10	
R15: office	37	1	0	70	66	70	10	
R16: Quali	38	1	0	66.1	66	66.1	10	
R18	40	1	0	71.3	66	71.3	10	
R17	41	1	0	65	66	65	10	
R19	42	1	0	67.9	66	67.9	10	
R28	44	1	0	66	66	66	10	
R21	45	1	0	68.3	66	68.3	10	
R22	46	1	0	68.2	66	68.2	10	
R23	47	1	0	64	66	64	10	
R24	48	1	0	60.3	66	60.3	10	
R25	49	1	0	68.5	66	68.5	10	
R26	50	1	0	66.7	66	66.7	10	
R13	51	1	0	71.7	66	71.7	10	
R20	53	1	0	72.4	66	72.4	10	
R29 (swim	54	1	0	62.8	66	62.8	10	
R30	55	1	0	67.6	66	67.6	10	
R31	56	1	0	64.2	66	64.2	10	
R32	57	1	0	64	66	64	10	

R33	58	1	0	62	66	62	10
R34	59	1	0	62.9	66	62.9	10
R35	60	1	0	61.6	66	61.6	10
R36	61	1	0	61.5	66	61.5	10
R37	62	1	0	61.5	66	61.5	10
R38	63	1	0	72.5	66	72.5	10
R27	65	1	0	74.4	66	74.4	10
R39	66	1	0	73.8	66	73.8	10
R40	67	1	0	73.8	66	73.8	10

Dwelling Units	# DUs	Noise Reduction		
		Min dB	Avg dB	Max dB
All Selected	38	0	0.9	6.4
All Impacted	24	0	1.3	6.4
All that meet NR Goal	0	0	0	0

with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
	dBA	dB	dB	dB
Snd Lvl	69.3	0	8	-8
Snd Lvl	74.2	0	8	-8
Snd Lvl	69.6	0	8	-8
Snd Lvl	73.7	0	8	-8
Snd Lvl	73.2	0	8	-8
Snd Lvl	66.7	0.5	8	-7.5
----	59.5	4	8	-4
Snd Lvl	75.1	0	8	-8
----	58.9	0.1	8	-7.9
----	61.6	0	8	-8
Snd Lvl	65.9	5	8	-3
Snd Lvl	70	0	8	-8
Snd Lvl	66.1	0	8	-8
Snd Lvl	66.5	4.8	8	-3.2
----	64.8	0.2	8	-7.8
Snd Lvl	67.9	0	8	-8
Snd Lvl	60.7	5.3	8	-2.7
Snd Lvl	62.5	5.8	8	-2.2
Snd Lvl	68.2	0	8	-8
----	64	0	8	-8
----	60.3	0	8	-8
Snd Lvl	68.5	0	8	-8
Snd Lvl	66.6	0.1	8	-7.9
Snd Lvl	71.7	0	8	-8
Snd Lvl	70.3	2.1	8	-5.9
----	62.7	0.1	8	-7.9
Snd Lvl	67.6	0	8	-8
----	64.2	0	8	-8
----	64	0	8	-8

----	62	0	8	-8
----	62.8	0.1	8	-7.9
----	61.5	0.1	8	-7.9
----	61.4	0.1	8	-7.9
----	61.4	0.1	8	-7.9
Snd Lvl	66.1	6.4	8	-1.6
Snd Lvl	74.4	0	8	-8
Snd Lvl	73.8	0	8	-8
Snd Lvl	73.8	0	8	-8

Appendix E Receiver Locations


STATE ROUTE 99
S K Street
R1
Build Alternative
06-48950
R1 Receiver
Receiver Location
Existing wall
Sheet 1 of 4


R17
R18
Levin Ave
R10
R43
R42
R41
STATE ROUTE 99
R2
R4
Build Alternative
06-48950
R: Receiver
Receiver Location
Existing wall
Sheet 2 of 4


Kern Ave
Alpine Ave
Stockham Ave
Bardsley Ave
Walnut Ave
Dayton St
STATE ROUTE 99
R5
R10
R20
R21
R22
R23
R24
R27
R39
R40
R13
R12
R11
R3
SW1
SW3
Build Alternative
06-48950
R: Receiver
Receiver Location
Proposed soundwall
Existing wall
Sheet 3 of


Build Alternative
06-48850
R: Receiver
Receiver Location
Proposed soundwall
Existing wall
R16
STATE ROUTE 99
Hillman St
Prosperity Ave
Pecan Ave
R7
Hillcrest Ave
Richard Smith Ave
R15
Fairview Ave
Ben Franklin Ave
Thomas Ave
R14
R9
R38
R8
Cross Ave
R6
Academy Ave
R26
R30-R37
SWE
R29
R25
Tulare Ave
Sheet 4 of 4

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r a n d u m

Making Conservation a California Way of Life!

To: **REBECCA ASHJIAN**
Associate Environmental Planner
Sierra Pacific Environmental Analysis

Date: June 15, 2023

File: 06-48950
061000040
TUL-99
PM 25.0/30.6

From: **KEN ROMERO**
Branch Chief
Central Region Environmental Engineering Branch

Subject: **ADDENDUM TO 2021 NOISE STUDY REPORT**

Objective

The objective of this Addendum is to evaluate the feasibility of the proposed soundwall SW4 located on the edge of shoulder of the onramp from the Paige Avenue to northbound State Route 99 in order to protect the homes on the located east of State Route 99 between Paige Avenue and Tulare Canal.

Project Description

The project proposes to widen the existing four-lane freeway to a six-lane freeway by constructing one lane in each direction in the existing median of State Route 99. The project will take place on State Route 99 in Tulare County between post miles 25.0 and 30.6.

Project Noise Evaluation Summary from the 2021 NSR

The 2021 Noise Study Report evaluated and proposed a total of 3 soundwalls for this project at the following locations:

1. One soundwall along the west side right of way of State Route 99 between Kern and Sierra Avenues. (SW1).
2. One soundwall at the Tulare Mobile Home Park located along the west side right of way of State Route 99 between Tulare Street and Santa Fe Trail (SW2).
3. One soundwall located along the off-ramp between Sierra Avenue and Kern Avenue. (SW3).

After reviewing the updated area maps in landvision and after recent contact with design and the environmental team, design indicated the Tulare Canal will be realigned and the Paige interchange will be reconfigured from the original design proposed in 2021. State Route 99 will now be elevated over Paige Avenue, the original design had Paige Avenue elevated over SR 99. Therefore, noise abatement needed to be reevaluated for the homes located on the east side of State Route 99 between the Tulare Canal and Paige Avenue based on the changes in vertical height of SR 99. Based on this recent information noise modeling was conducted to verify the feasibility of soundwall SW4.

Noise re-evaluation for SW4:

It was concluded from the 2021 NSR there were a total of 12 single family residences represented by receiver 19 (R19) at 2259 S Tamarack Street, see Figures 1 and 2. The single-family homes are located east of State Route 99 between the Tulare canal and Paige Avenue. All the residences have backyards that are facing traffic noise on State Route 99. This Addendum will discuss the feasibility of constructing a noise abatement in the form of soundwall (SW4) for these homes to provide protection from traffic noise on State Route 99.

TNM 2.5 model was used to generate 2047 design year noise levels for the above homes. The data inputted in the model was based on the field noise measurements collected and documented in the 2021 NSR and the design option maps provided by District 6 design branch, see attached TNM output for noise levels.

Table 2 shows that the design year 2047 build noise levels for R19 would be 70 dBA which exceeds the Noise Abatement Category (NAC) of 67 dBA designated for residences. Since the noise level at R19 exceeds the NAC, noise abatement must be considered at this location.

Soundwall (SW4)

This soundwall is proposed on the edge of shoulder of the onramp from the Paige Avenue to northbound State Route 99 to provide noise attenuation for the 12 residences represented by R19. The soundwall starts approximately from the beginning of the onramp and extends along the on-ramp edge of shoulder for a total length of approximately 1,465 feet and provides noise protection for the 12 first row homes.

SW4 is proposed for heights ranging between 8 feet and 14 feet and would extend from approximately easting and northing coordinates: 6464995.41; 1949667.72 to easting and northing coordinates: 6464791.18; 1951102.64 for an approximate total length of 1,465 feet.

Table 1 shows SW4 needs to be at least 12 feet high to provide the required attenuation of 5 dB and meet the required design goal attenuation of 7 dB. The height recommendation for the proposed soundwall is 12 feet in order to break the line of sight of an 11.5-foot truck stack.

The estimated cost allowance per benefitted residence, in this case R19, is based on a cost allowance of $107,000 according to the most recent update for the year 2019 as stated on the Caltrans website for Noise and Vibration.

Table 1: Summary of Reasonableness Determination–Soundwall

Barrier I.D.: SW4 Critical Receptor (R19)	**8-Foot Height**	**10-Foot Height**	**12-Foot Height**	**14-Foot Height**
Number of Benefitted Units	0	10	12	12
Insertion Loss*	3	5	6	7
Reasonable Allowance Per Benefitted Receiver	N/A	$107,000	$107,000	$107,000
Total Reasonable Allowance	$0	$1,070,000	$1,284,000	$1,284,000

*Insertion loss is for the representative receiver (R19).

Table 2: Proposed soundwall SW4

Receiver I.D.	Barrier ID. and Location	Land Use	Number of Dwelling Units	Address	Existing Noise Level Leq(h), dBA	SR 99 Future Worst-Hour Noise Levels - L_{eq}(h), dBA																							
						Design Year Noise Level without Project L_{eq}(h), dBA	Design Year Noise Level with Project L_{eq}(h), dBA	Design Year Noise Level with Project minus Existing Conditions L_{eq}(h), dBA	Design Year Noise Level without Project minus Existing Conditions L_{eq}(h), dBA	Design Year Noise Level with Project Minus No Project Conditions L_{eq}(h), dBA	Activity Category (NAC)	Impact Type	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receptors (NBR)															
													8 feet			10 feet			12 feet			14 feet			16 feet		
													L_{eq}(h)	I.L.	NBR	L_{eq}(h)	I.L.	NBR	L_{eq}(h)	I.L.	NBR	L_{eq}(h)	I.L.	NBR	L_{eq}(h)	I.L.	NBR
R19	SW4	RES	12	2259 S Tamarack Street, Tulare	65	68	**70**	5	3	2	B (67)	A/E	67	3	0	65	5	10	64	6	12	63	7	12	N/A	N/A	N/A

Note: A/E= Future noise conditions approach or exceed the noise abatement criteria; N/A: not applicable: ; RES: residences; Bold: noise impacts above noise abatement criteria: I.L: Insertion Loss: NBR: Number of benefitted residences



Figure 1: 2259 S Tamarack Street (R19).

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

ATTACHMENT - I

Memorandum

To: ERNIE PENUNA
Senior Transportation Engineer
Project Development Division
Design 1-Branch E

Date: October 14, 2021

File: 06-Tul-99
PM 25.4/30.5
EA 06-48950
ID 0614000040

From: TOM GARIBAY *Michael A. Ramos for Tom Garibay* 10/14/2021
Senior Transportation Engineer
Acting Branch Manager
Office of Construction Estimate Review

Subject: **LIFE-CYCLE COST ANALYSIS**

The Life-Cycle Cost Analysis has been completed for the proposed Lane 1 and Off Ramps on Route -99 in Tulare County from PM 25.4/30.5. The structural section alternatives were obtained from the Preliminary Pavement Section Recommendations memorandums for Lane 1 NB/SB dated June 25, 2019, and for the Ramps dated November 13, 2020, provided by the Materials Engineering Branch-Fresno.

It should be noted that additional pavement alternatives were included in the analysis for discussion purposes. These additional alternatives are beyond the minimal requirements per the guidance in Figure 2-1 New Construction and Reconstruction Pavement Alternatives Selection Flowchart of the Life-Cycle Cost Analysis Procedures Manual dated August 1, 2013.

LANES No. 2 and 3

It was determined that a LCCA was not required for the following Lanes No. 2 and 3. The justification was that Lanes 2 and 3 are expected to have a 40-year TI of 17. **Index 621.1-Continuously Reinforced Concrete Pavement (CRCP)** of the Highway Design Manual states "CRCP is the preferred concrete pavement for new construction and concrete overlays for TI ≥ 13.0 in all climate regions except High Mountain and High Desert". Furthermore, **Topic 612.2 New Construction and Reconstruction** of the Highway Design Manual also states that **"The pavement design life for new construction and reconstruction shall be no less than 40-years."** This is a boldface standard that would require approval from the State Pavement Engineer to deviate from. These two design standards

and direction given to use rigid pavement for a 40-year structural section in the Preliminary Pavement Section Recommendations dated June 25, 2019, imply that a 40-year CRCP pavement would be the most appropriate pavement section for lanes 2 and 3 for the proposed project limits.

LANE No. 1

The three alternatives which were analyzed for Lane 1 are as follows:

Alternative 1. 20-year rigid Continuously Reinforced Concrete Pavement (CRCP) (Laterally Supported/Widen Slab) over Hot Mix Asphalt Base with a Flexible Shoulder.

Alternative 2. 40-year rigid Continuously Reinforced Concrete Pavement (CRCP) (Laterally Supported/Widen Slab) over HMA Base with a Flexible Shoulder.

Alternative 3. 40-year flexible Rubberized Hot Mix Asphalt over Hot Mix Asphalt over Class 2 Aggregate Base. Same section for lane and shoulder.

The results of the LCCA for Lane 1 determined that Alternative 2. A 40-year rigid Continuously Reinforced Concrete Pavement (CRCP) (Laterally Supported/Widen Slab) over HMA Base with a Flexible Shoulder has the lowest Life-Cycle Cost of the three proposed alternatives. The Life-Cycle Cost are the sum of the Present Value Agency Cost and Present Value User Cost for each respective alternative. The Deterministic Results of the LCCA for Lane No. 1 are tabulated below

Deterministic Results Lane No. 1

Total Cost	**Alternative 1: LANE-1 0.80' CRCP/ 0.25' HMA/0.70' AS/ MEDIAN SHOULDER 0.20' RHMA/ 0.25' HMA/1.45' AB**		**Alternative 2: LANE-1 0.90' CRCP/ 0.25' HMA/0.70' AS/ MEDIAN SHOULDER 0.20' RHMA/ 0.85' HMA/0.50" AB**		**Alternative 3: LANE-1 0.20' RHMA/ 1.60' HMA/0.50' AB/ MEDIAN SHOULDER 0.20' RHMA/1.60' HMA/0.50' AB**	
	Agency Cost ($1000)	User Cost ($1000)	Agency Cost ($1000)	User Cost ($1000)	Agency Cost ($1000)	User Cost ($1000)
Undiscounted Sum	$19,548	$5,923	$16,612	$274	$35,924	$172,376
Present Value	$15,972	$1,354	$16,474	$274	$25,537	$36,592
Life-Cycle Costs	**$17,326**		**$16,748**		**$62,129**	
EUAC	$722	$61	$745	$12	$1,155	$1,655

RAMPS

It was also determined that a LCCA was not required for each of the proposed ramp reconstruction alternatives provided. The Life-Cycle Cost Analysis Procedures Manual states in Appendix 3 Procedures for Estimating Ramp Alternatives "…only off-ramps are analyzed for LCCA since off-ramps affect mainline traffic". Appendix 3 also states it is not necessary to perform an LCCA for each individual ramp. Instead, the engineer should select one off-ramp which has the highest traffic volume that best represents all the off ramps for the project. For the LCCA, the NB Off-Ramp to Prosperity Ave was used as this off-ramp shows the highest traffic volume for the proposed ramps in the project limits.

The four alternatives which were analyzed for the Off-Ramps are as follows:

Alternative 1. 20-year rigid Jointed Plain Concrete Pavement (JPCP) over Hot Mix Asphalt Base.

Alternative 2. 40-year rigid Jointed Plain Concrete Pavement (JPCP) over Hot Mix Asphalt Base.

Alternative 3. 20-year flexible Rubberized Hot Mix Asphalt over Hot Mix Asphalt over Class 2 Aggregate Base.

Alternative 4. 40-year flexible Rubberized Hot Mix Asphalt over Hot Mix Asphalt over Class 2 Aggregate Base.

The results of the LCCA for the Off-Ramps determined that Alternative 2. A 40-year rigid Jointed Plain Concrete Pavement (JPCP) over HMA Base has the lowest Life-Cycle Cost of the four proposed alternatives. The Life-Cycle Cost are the sum of the Present Value Agency Cost and Present Value User Cost for each respective alternative. The Deterministic Results of the LCCA for Off-Ramps are tabulated below

Deterministic Results Off-Ramps

Total Cost	Alternative 1: 0.90' JPCP/ 0.25' HMA		Alternative 2: 0.95' JPCP/ 0.25' HMA		Alternative 3: 0.20' RHMA/ 0.60' HMA/ 0.95' AB		Alternative 4: 0.20' RHMA/ 0.75' HMA/ 1.00' AB	
	Agency Cost ($1000)	User Cost ($1000)	Agency Cost ($1000)	User Cost ($1000)	Agency Cost ($1000)	User Cost ($1000)	Agency Cost ($1000)	User Cost ($1000)
Undiscounted Sum	$2,506	$2,331	$1,954	$392	$4,101	$1,224	$6,292	$212
Present Value	$1,332	$787	$1,386	$281	$1,879	$405	$3,020	$116
Life-Cycle Costs	**$ 2,119**		**$1,667**		**$ 2,284**		**$ 3,136**	
EUAC	$60	$36	$63	$13	$85	$18	$137	$5

Undiscounted Sum are the cost as if all costs were to occur today.

Present Value is the value of all the future expenditures over the analysis period converted to present value dollars.

EUAC is the equivalent uniform annual cost. EUAC is the yearly cost of an alternative as if they occurred uniformly throughout the analysis period.

Agency Cost include initial construction, maintenance, rehabilitation (including CAPM), support and remaining service life value (credit) costs. For initial construction agency cost, items common between the different alternatives are not included.

User Cost include the additional travel time and related vehicle operating costs incurred by the traveling public due to potential congestion associated with planned construction throughout the analysis period.

For LCCA documentation and submittal of LCCA results, refer to the instructions at the department's LCCA Website.

Attached are the *RealCost Input Data Results Reports* for the analysis. If you have any questions, please contact me at (559) 974-4139, or Mike Ramos at (559) 383-5883.

Attachments

1. 06-48950 RealCost Input Data Lane-1 10-11-21.pdf
2. 06-48950 RealCost Input Data NB Off Ramp 10-13-21.pdf
3. Life Cycle Cost Analysis Procedures Manual: Figure 2-1 New Construction and Reconstruction Pavement Alternatives Flowchart.pdf

Attachment - J

Tulare Six-Lane and Paige Avenue Interchange Improvement

On State Route 99 from Avenue 200 to Prosperity Avenue

06-TUL-99-PM 25.2-30.6

EA 06-48950/Project ID 0614000040

State Clearinghouse Number 2021040498

Final Environmental Impact Report/ Environmental Assessment and Section 4(f) Evaluation With Finding of No Significant Impact



Prepared by the

State of California Department of Transportation

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code 327 and the Memorandum of Understanding dated May 27, 2022, and executed by the Federal Highway Administration and Caltrans.

December 2023

Caltrans

General Information About This Document

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Final Environmental Impact Report/Environmental Assessment. Caltrans is the lead agency under the National Environmental Policy Act (NEPA), and 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 Recirculated Draft Environmental Impact Report/Environmental Assessment circulated to the public for 46 days between August 8, 2023, to September 22, 2023. Comments received during this period are included in Appendix F. Elsewhere, language has been added throughout the document to indicate where a change has been made since the circulation of the Draft Environmental Document. Minor editorial changes and clarifications have not been so indicated.

The Draft Environmental Document was circulated for a 45-day review by agencies and members of the public from April 12, 2023, to May 26, 2023.

Additional copies of this document and the related technical studies are available for review at the Caltrans District 6 office at 1352 West Olive Avenue, Fresno, California 93728, and at the Tulare Public Library at 475 North M Street, Tulare, California 93274. This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-6/district-6-projects.

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Federal Highway Administration Highway ID Number
0614000040
State Clearinghouse Number 2021040498
06-TUL-99-PM 25.2-30.6
Project EA 06-48950

Widen State Route 99 from four to six lanes from post miles 25.2 to 30.6 and rebuild the Paige Avenue Interchange in the City of Tulare in Tulare County

FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL ASSESSMENT and Section 4(f) Evaluation With Finding of No Significant Impact

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S. Code 4332(2)(C)
and 49 U.S. Code 303

THE STATE OF CALIFORNIA
Department of Transportation
and
Responsible Agencies: California Transportation Commission

Philip Vallejo

for Diana Gomez
District Director
California Department of Transportation
NEPA and CEQA Lead Agency

12/28/2023
Date

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

Javier Almaguer, District 6 Environmental Division, California Department of Transportation, 2015 East Shields Avenue, Suite 100, Fresno, California 93726; 559-287-9320; javier.almaguer@dot.ca.gov.

CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT

FOR

Tulare Six-Lane and Paige Avenue Interchange Improvement

The California Department of Transportation (Caltrans) has determined that the Build Alternative will have no significant impact on the human environment. This Finding of No Significant Impact is based on the attached Environmental Assessment, which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment.

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code 327 and the Memorandum of Understanding dated May 27, 2022, and executed by the Federal Highway Administration and Caltrans.

Philip Vallejo

for Diana Gomez
District Director
California Department of Transportation
NEPA and CEQA Lead Agency

12/28/2023
Date

Summary

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 U.S. Code 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (Public Law 112-141), signed by President Barack Obama on July 6, 2012, amended 23 U.S. Code 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding pursuant to 23 U.S. Code 327 (NEPA Assignment Memorandum of Understanding) with the Federal Highway Administration. The NEPA Assignment Memorandum of Understanding became effective October 1, 2012, and was renewed on May 27, 2022, for a term of 10 years. In summary, Caltrans continues to assume Federal Highway Administration 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, the Federal Highway Administration assigned, and Caltrans assumed all of the U.S. Department of Transportation (USDOT) Secretary’s responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance projects off the State Highway System within the State of California, except for certain categorical exclusions that the Federal Highway Administration assigned to Caltrans under the 23 U.S. Code 326 Categorical Exclusion Assignment Memorandum of Understanding, projects excluded by definition, and specific project exclusions.

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The Department is the lead agency under NEPA. The Department is the lead agency under CEQA. In addition, Federal Highway Administration’s responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 and the Memorandum of Understanding dated May 27, 2022, and executed by Federal Highway Administration and Caltrans.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, often a “lower level” document is prepared for NEPA. One of the most common joint document types is an Environmental Impact Report/Environmental Assessment.

After receiving comments from the public and reviewing agencies, a Final Environmental Impact Report/Environmental Assessment was prepared. The Final Environmental Impact Report/Environmental Assessment responded to comments received on the Draft Environmental Impact Report/Environmental

Assessment and has identify the preferred alternative. The decision was made to approve the project, a Notice of Determination will be published for compliance with CEQA, and the Department prepared a Finding of No Significant Impact. A Notice of Availability of the Findings of No Significant Impact will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

Caltrans proposes to widen State Route 99 in the City of Tulare from just south of the Avenue 200 Overcrossing to the Prosperity Avenue Overcrossing (post miles 25.2 to 30.6). One lane would be built in each direction in the freeway median to create a six-lane freeway. The existing interchange at Paige Avenue would be reconfigured.

The purpose of the project is to relieve traffic congestion along State Route 99 from Avenue 200 to Prosperity Avenue and improve traffic operational deficiencies at the Paige Avenue Interchange.

The environmental studies conducted for the project area include an analysis of a wide range of environmental topics. See Chapter 2, Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures, for a list of the topics studied with a broader discussion of topics where potential impacts have been identified. Chapter 3, California Environmental Quality Act Evaluation, contains the California Environmental Quality Act-specific significance determinations and a climate change section.

The environmental process includes coordination with many public agencies having planning or resource-specific jurisdiction within the project area. See Chapter 4, Comments and Coordination, for more information about Caltrans' outreach efforts. See Chapter 6, Distribution List, for a list of agencies that were sent a copy of the Notice of Preparation for the environmental impact report.

Note: Two changes were made to this project since the Notice of Preparation was circulated to the public on April 19, 2021, for a 30-day comment period.

- The original name of the project, "Tulare City Widening," was changed to "Tulare Six-Lane and Paige Avenue Interchange Improvement" on August 26, 2022.
- The original project description included the rehabilitation of the existing northbound and southbound lanes. The work will be executed under a separate project called the Tulare City Rehabilitation project, which is scheduled to be completed in the summer of 2026.

The following table summarizes the potential impacts identified for the proposed Build Alternative and No-Build Alternative.

Summary of Potential Impacts From the Build Alternative and No-Build Alternative

Potential Impact	Build Alternative	No-Build Alternative
Land Use—Consistency with the City of Tulare General Plan	The project would convert three developed parcels from commercial use to transportation use. Two undeveloped parcels that are commercially zoned would be converted to local government.	No land use change
Community Character and Cohesion	The relocation of three businesses would potentially divide the nearby community from these facilities.	No Impact
Parks and Recreational Facilities	During construction, one side of the trail crossing State Route 99 would remain open to the public. The other side would be sectioned off to build the security wall. This project is not expected to "use" those facilities as defined by Section 4(f).	No Impact
Growth	It is reasonably foreseeable that vacant land within the South I Street Industrial Park Specific Plan boundaries will experience accelerated growth.	No Impact
Relocations and Real Property Acquisition—Business Displacements	Three commercial businesses would be relocated.	No business relocation
Environmental Justice	Would cause disproportionately high and adverse effects on minority or low-income populations for cumulative air quality impact.	No Impact
Utilities and Emergency Services	Relocate utilities. Temporary intermittent service during construction.	No Impact
Traffic and Transportation/ Pedestrian and Bicycle Facilities	Temporary construction impacts to traffic may inconvenience commuters.	No Impact
Induced Vehicle Miles Traveled	The project would generate an additional 19,759,200vehicle miles traveled annually (excluding large trucks).	No Impact
Visual/Aesthetics	The project would remove approximately 23,880 linear feet of Oleander, 83 trees, and 7 acres of landscaping.	No improvement plantings
Water Quality and Stormwater Runoff	The project will generate additional stormwater runoff due to the additional pavement being added with additional lanes and interchange improvements.	No Impact
Paleontology	Potential to uncover fossils. A Paleontological Mitigation Plan would be prepared before construction.	No impact to paleontology resources
Hazardous Waste and Materials	Six parcels identified on the Cortese List would require partial or complete acquisitions or would have temporary construction easements.	No remediation of hazardous materials

Potential Impact	Build Alternative	No-Build Alternative
Air Quality	Not a project of air quality concern. Meets federal and state conformity standards for ambient air emissions in the 2022 Regional Transportation Plan/Sustainable Communities Strategies.	No transportation improvement
Noise and Vibration	Increase in noise due to traffic being closer to sensitive receptors.	No Impact
Energy	Using construction equipment and on-road vehicles would temporarily consume energy during construction.	There would be no energy impacts. Congestion and other transportation inefficiencies are likely to continue and result in an increase in energy consumption.
Wetlands and Other Waters	Realigning the Tulare Canal would temporarily impact about 2 acres of the existing canal.	No Impact
Threatened and Endangered Species	The project has the potential to impact the following species: San Joaquin kit fox, Swainson's hawk, and vernal pool fairy shrimp.	No Impact
Cumulative Impact	The project would have a cumulatively considerable impact on the following resources: Air Quality, Environmental Justice, and Greenhouse Gas.	No Impact
Climate Change	The project will increase greenhouse gas emissions.	No Impact

Table of Contents

Tulare Six-Lane and Paige Avenue Interchange Improvement ..... a
Chapter 1 Proposed Project 1
1.1 Introduction 1
1.2 Purpose and Need 5
1.2.1 Purpose 5
1.2.2 Need 5
1.3 Project Description 15
1.4 Project Alternatives 15
1.4.1 Build Alternatives 16
1.4.2 No-Build (No-Action) Alternative 29
1.5 Comparison of Alternatives 30
1.6 Identification of Preferred Alternative 30
1.7 Alternatives Considered but Eliminated From Further Discussion Prior to the Draft Environmental Impact Report/Environmental Assessment 31
1.8 Permits and Approvals Needed 33
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures 35
2.1 Human Environment 36
2.1.1 Existing and Future Land Use 36
2.1.2 Consistency with State, Regional, and Local Plans and Programs 39
2.1.3 Parks and Recreational Facilities 42
2.1.4 Growth 44
2.1.5 Community Character and Cohesion 52
2.1.6 Relocations and Real Property Acquisition 55
2.1.7 Environmental Justice 61
2.1.8 Utilities and Emergency Services 73
2.1.9 Traffic and Transportation/Pedestrian and Bicycle Facilities 75
2.1.10 Visual/Aesthetics 98
2.1.11 Cultural Resources 107
2.2 Physical Environment 110
2.2.1 Water Quality and Stormwater Runoff 110
2.2.2 Paleontology 118
2.2.3 Hazardous Waste and Materials 121
2.2.4 Air Quality 126
2.2.5 Noise and Vibration 147
2.2.6 Energy 166
2.3 Biological Environment 169
2.3.1 Wetlands and Other Waters 169
2.3.2 Threatened and Endangered Species 172
2.3.3 Invasive Species 177
2.3.4 Cumulative Impacts 178
Chapter 3 California Environmental Quality Act Evaluation 195
3.1 Determining Significance Under CEQA 195
3.2 CEQA Environmental Checklist 196

3.2.1 Aesthetics....196
3.2.2 Agriculture and Forest Resources....197
3.2.3 Air Quality....198
3.2.4 Biological Resources....199
3.2.5 Cultural Resources....201
3.2.6 Energy....201
3.2.7 Geology and Soils....202
3.2.8 Greenhouse Gas Emissions....203
3.2.9 Hazards and Hazardous Materials....205
3.2.10 Hydrology and Water Quality....207
3.2.11 Land Use and Planning....208
3.2.12 Mineral Resources....209
3.2.13 Noise....209
3.2.14 Population and Housing....210
3.2.15 Public Services....211
3.2.16 Recreation....212
3.2.17 Transportation....212
3.2.18 Tribal Cultural Resources....214
3.2.19 Utilities and Service Systems....214
3.2.20 Wildfire....215
3.2.21 Mandatory Findings of Significance....216
3.3 Climate Change....219
3.3.1 Regulatory Setting....220
3.3.2 Environmental Setting....223
3.3.3 Project Analysis....228
3.3.4 Greenhouse Gas Reduction Strategies....237
3.3.5 Adaptation....240
Chapter 4 Comments and Coordination....246
Chapter 5 List of Preparers....256
Chapter 6 Distribution List....258
Appendix A Section 4(f)....264
Appendix B Title VI Policy Statement....272
Appendix C Summary of Relocation Benefits....274
Appendix D Avoidance, Minimization and/or Mitigation Measures Summary 280
Appendix E Notice of Preparation....290
Appendix F Federal Highway Administration Air Quality Conformity....294
Appendix G Comment Letters and Responses....296

List of Figures

Figure 1-1 Project Vicinity Map....3
Figure 1-2 Project Location Map....4
Figure 1-3 Type L-6 Interchange Configuration....11
Figure 1-4 Design Layout 1: Begin Construction Segment....19
Figure 1-5 Design Layout 2: Commercial Avenue Segment....19
Figure 1-6 Design Layout 3 (Paige Avenue Interchange): Option 1 Four Roundabout Configuration with Paige Avenue Overcrossing Bridge....20
Figure 1-7 Design Layout 4 (Paige Avenue Interchange): Option 2 Four Roundabout Configuration with Paige Avenue Undercrossng Bridge....21
Figure 1-8 Design Layout 5: Bardsley Segment....22
Figure 1-9 Design Layout 6: Tulare Avenue Segment....23
Figure 1-10 Design Layout 7: End Construction Segment....24
Figure 2-1 Socioeconomic Map of the Project Area....62
Figure 2-2 Map of the Key View Locations....100
Figure 2-3: Existing Conditions of State Route 99 at Post Mile 25.4, North of the Avenue 200 Overcrossing....103
Figure 2-4: Existing Condition on State Route 99 at Post Mile 25.8....104
Figure 2-5: Existing Conditions at Post Mile 27.4....105
Figure 2-6: Existing Conditions on Paige Avenue on the East Side of State Route 99, Looking East....105
Figure 2-7: Existing Conditions at Post Mile 28.5....106
Figure 2-8 Noise Levels of Common Activities....150
Figure 2-9 Proposed Soundwall Locations....165
Figure 2-10 Transportation Projects Within or Near the Project Area....192
Figure 3-1 U.S. 2019 Greenhouse Gas Emissions (Source: U.S. Environmental Protection Agency 2021d)....225
Figure 3-2 California 2019 Greenhouse Gas Emissions by Economic Sector (Source: Air Resources Board 2021a)....226
Figure 3-3 Change in California GDP, Population, and GHG Emissions since 2000 (Source: Air Resources Board 2021a)....226
Figure 3-4 Possible Use of Traffic Operation Strategies in Reducing On-road CO_2 Emissions (*Source:* Barth and Boriboonsomsin 2010)....230

List of Tables

Summary of Potential Impacts From the Build Alternative and No-Build Alternative.... vii
Table 1.1 Level of Service for State Route 99 Within the Project Limits (Post Miles 25.4 to 30.0) No-Build Alternative....5
Table 1.2 Level of Service for State Route 99 Within Project Limits No-Build Alternative....9

Table 1.3 Comparsion of the Annual Average Daily Traffic and Truck Volumes and the Interchanges at the Southern Limits of the Project..... 14
Table 2.1: Proposed Development Near the Proposed Project 37
Table 2.2 Consistency With Plans 40
Table 2.3 Potential Relocation of Businesses..... 54
Table 2.4 Estimated Full Right-of-Way Acquisition 57
Table 2.5 Estimated Partial Right-of-Way Acquisition..... 59
Table 2.6 Environmental Justice Populations by Census Tract in the Socioeconomic Study Area of Tulare County 64
Table 2.7 Emergency Services Within the Project Limits..... 74
Table 2.8 Traffic Volume for Existing Conditions 77
Table 2.9 Existing Level of Service for State Route 99..... 78
Table 2.10 State Route 99 Northbound and Southbound Ramps Existing Level of Service 79
Table 2.11 Paige Avenue Interchange Intersections Existing Level of Service 80
Table 2.12 Collision Rates Along Northbound State Route 99 80
Table 2.13 Collision Rates Along Southbound State Route 99..... 81
Table 2.14 Selection Matrix for Preferred Induced Travel Assessment Method for Project on the State Highway System..... 83
Table 2.15 Annual Daily Traffic Forecast for the Build and No-Build Alternative..... 85
Table 2.16 Projected Level of Service for State Route 99 Freeway..... 87
Table 2.17 State Route 99 Freeway Ramps Level of Service—Northbound Ramps 88
Table 2.18 State Route 99 Freeway Ramps Level of Service—Southbound Ramps 89
Table 2.19 Future Level of Service at Intersections..... 90
Table 2.20 National Center for Sustainable Transportation Induced Travel Calculator User Input Information Summary..... 91
Table 2.21: National Center for Sustainable Transportation Induced Travel Calculator Input Information Summary..... 92
Table 2.22 Summary of Induced Vehicle Miles Traveled Produced by Different Calculation Methods..... 93
Table 2.23 Proposed Mitigation, Mitigation Cost, and Annual Vehicle Miles Traveled Reduction..... 96
Table 2.24 Displays a Summary of Visual Impacts by Key View 107
Table 2.25 State and Federal Criteria Air Pollutant Effects and Sources... 129
Table 2.26 Criteria Pollutants: State and Federal Attainment Status 132
Table 2.27 Ozone Concentrations With Days Over Federal and State Standards 2015-2019 133
Table 2.28 Particulate Matter 2.5 Concentrations With Number of Days Over Federal Standards 2014-2019 134
Table 2.29 Particulate Matter 10 Concentrations With Number of Days Over Standards 2014-2019 135

Table 2.30 Comparsion of Future Build and Future No-Build Emissions on State Route 99.....136
Table 2.31 Comparsion for Future Build and Future No-Build Emissions for the Blackstone Roundabout.....136
Table 2.32 Comparsion for Future Build and Future No-Build Emissions for the Laspina Roundabout 137
Table 2.33 Comparsion for Future Build and Future No-Build Emissions for Two-Roundabout Configuration for the Paige Avenue Interchange.....138
Table 2.34 Construction-Generated Pollutants.....142
Table 2.35 Noise Abatement Criteria.....149
Table 2.36 Short-Term Noise Measurement Results.....152
Table 2.37 Construction Equipment Noise 160
Table 2.38 Annual Construction Fuel Consumption 168
Table 2.39 Present and Resonable Foreseeable Future Actions 182
Table 2.40 Resources in the Study Area.....184
Table 3.1 Regional and Local Greenhouse Gas Reduction Plans.....227
Table 3.2 Modeled Annual Carbon Dioxide Emissions and Vehicle Miles Traveled 233

Chapter 1 Proposed Project

1.1 Introduction

On April 10, 2023, the California Department of Transportation circulated the Draft Environmental Impact Report with three design options for the Paige Avenue Interchange. The design options included a three-roundabout configuration with Paige Avenue Overcrossing Bridge, a four-roundabout configuration with Paige Avenue Overcrossing Bridge, and a four-roundabout configuration with Paige Avenue Undercrossing Bridge. Caltrans decided to drop the three-roundabout configuration from consideration. Refer to the Alternatives Considered but Eliminated From Further Discussion section for the reasoning.

A cumulative impact section was added to the Draft Environmental Impact Report/Environmental Assessment in Chapter 2, and the Existing and Future Land Use, Growth, Air Quality, and Environmental Justice sections were revised to provide to the public and agencies supplemental and clarifying information regarding the project and its potential environmental effects. The Noise and Vibration section was updated to include the consideration of a third soundwall.

The additional information and removal of the design option required that the Draft Environmental Impact Report/Environmental Assessment be recirculated to the public for comments so that Caltrans could make an informed decision.

The California Department of Transportation, as assigned by the Federal Highway Administration, is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the California Environmental Quality Act (CEQA).

Caltrans, in cooperation with the Tulare County Association of Governments, proposes to widen State Route 99 in the City of Tulare from just south of the Avenue 200 Overcrossing to just north of the Prosperity Avenue Overcrossing, between post miles 25.2 and 30.6. See Figures 1-1 and 1-2 for the project vicinity and location maps, respectively.

The project is entirely within the City of Tulare in Tulare County. This segment of State Route 99 is classified as a suburban/urban four-lane freeway within the project limits. One lane would be built in each direction in the existing freeway median to create a six-lane freeway, divided by a concrete median barrier for about 5.4 miles. In addition, the existing Paige Avenue Interchange would be rebuilt.

Demand for the facility is increasing due to regional population growth and recent development throughout the city's urban core. Proposed new development in the surrounding area would add to the operational deficiencies that currently exist. The project proposes to provide congestion relief along the State Route 99 mainline and improve traffic operations at the Paige Avenue Interchange.

One build alternative and a No-Build Alternative are under consideration. The build alternative has the design options for the Paige Avenue Interchange—a four-roundabout configuration with Paige Avenue Overcrossing Bridge and a four-roundabout configuration with Paige Avenue Undercrossing Bridge. Each option has a variation of realigning the Tulare Canal or installing box culverts at locations where the highway crosses the canal.

This project is included in the 2022 and 2023 Federal Transportation Improvement Program and is proposed for funding from the 2022 Tulare County Association of Governments' Regional Transportation Plan. The total construction cost of the project is estimated to be $200 million. Construction is expected to start by the year 2027.

Figure 1-1 Project Vicinity Map

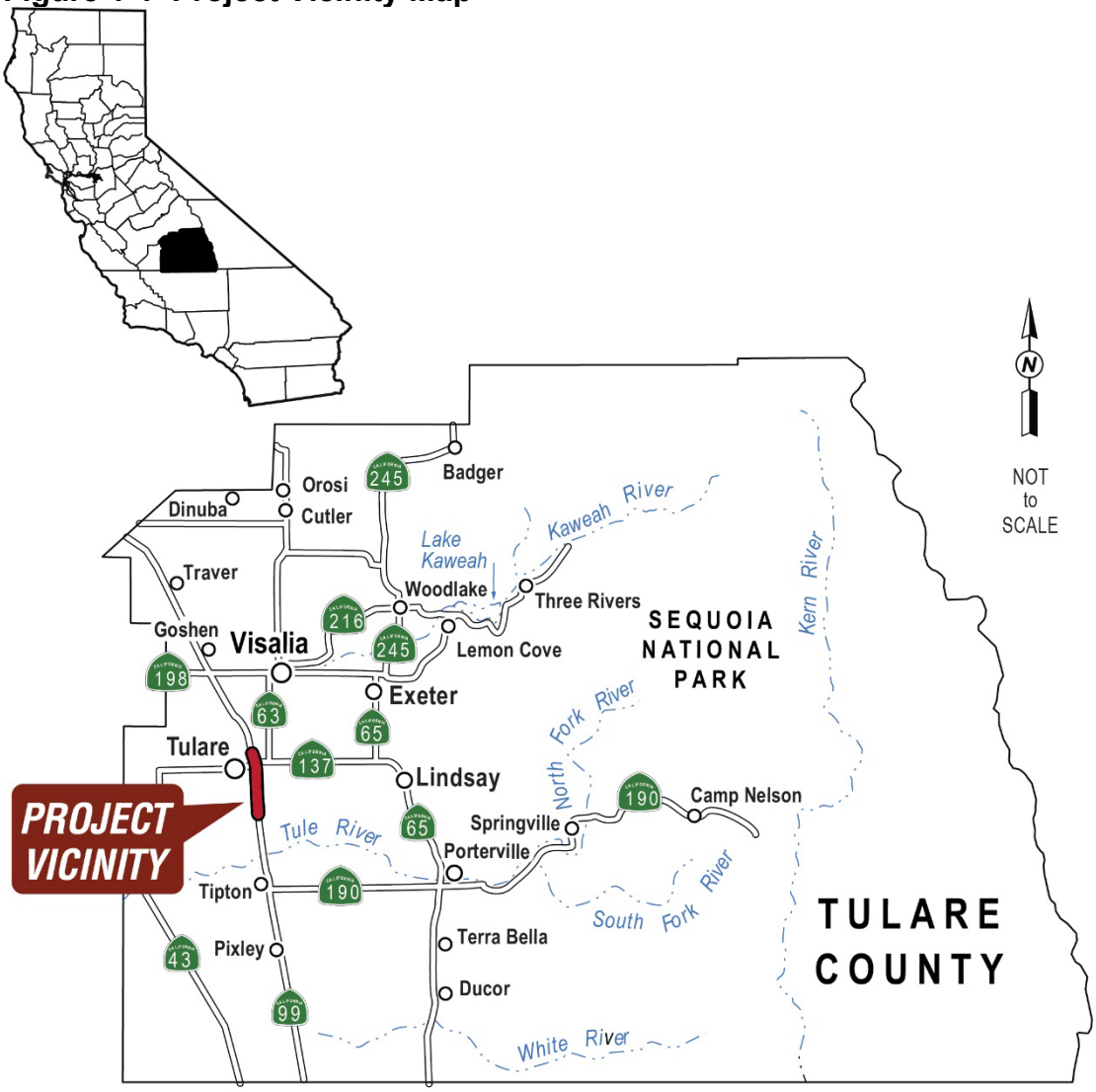
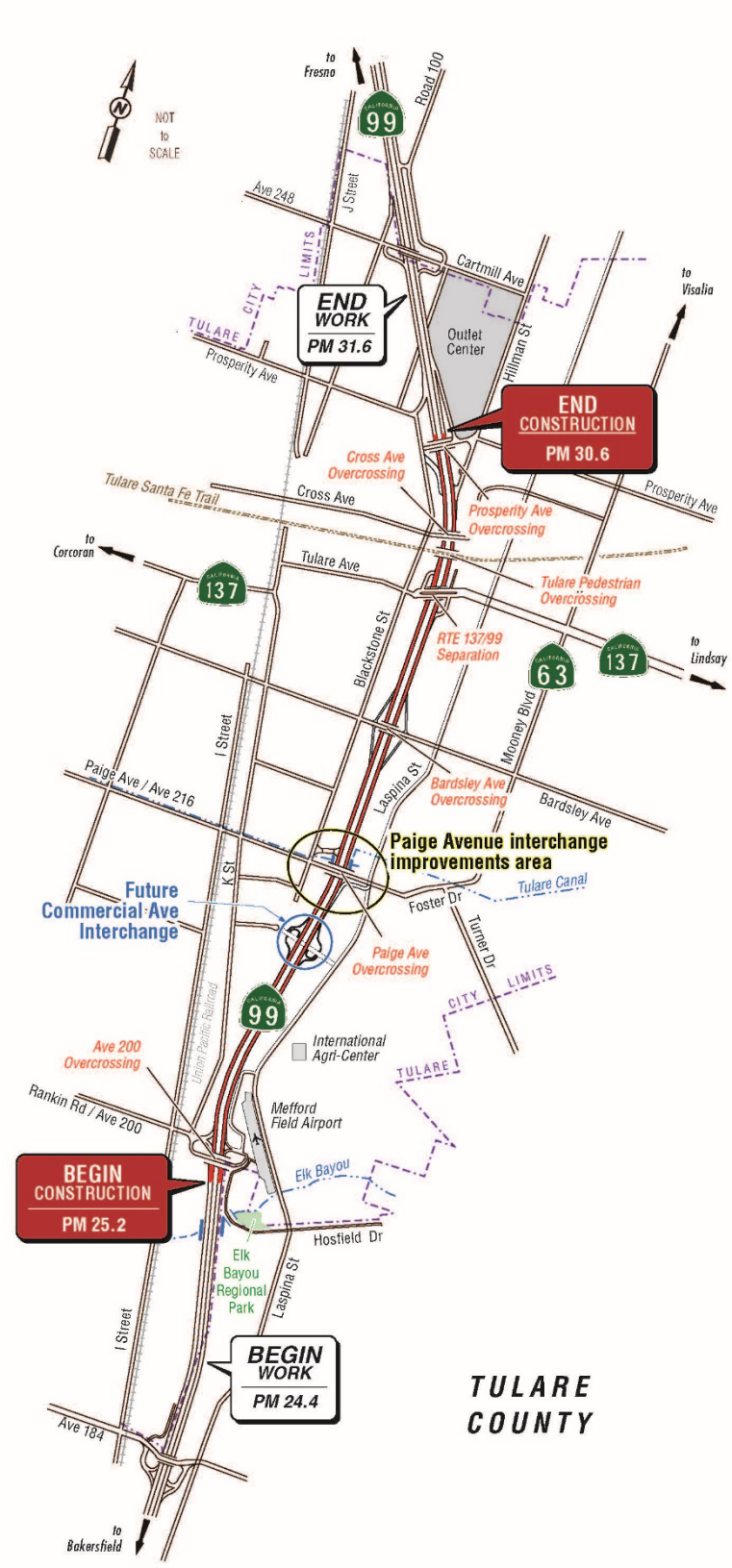


Figure 1-2 Project Location Map



1.2 Purpose and Need

The discussion of the purpose and need for this project provides the reasoning why the project is being considered. The purpose of a project identifies the objectives of the project, and the need describes the key deficiencies of the roadway and the need for the project. The purpose and need form the basis for comparing the proposed alternatives, along with potential environmental impacts, to eventually selecting a preferred alternative to build.

1.2.1 Purpose

- Relieve traffic congestion along State Route 99 from Avenue 200 to Prosperity Avenue; and
- Improve traffic safety; and
- Improve traffic operational deficiencies at the Paige Avenue Interchange; and
- Improve access to local trucking-related facilities and the neighboring industrial area.

1.2.2 Need

Relieve Traffic Congestion

The State Route 99 freeway within the project limits currently operates at acceptable levels of service during peak traffic hours and will continue to do so through the year 2029 without any improvements. However, by 2049, the freeway mainline would have insufficient capacity to accommodate the forecast traffic demand under the No-Build Alternative, and delays would significantly increase.

The existing (2018) Level of Service for the northbound lanes between post miles 25.4 to 30.6 is Level of Service D; the Level of Service is C for the southbound lanes. In the year 2029, the Level of Service would be E for the northbound lanes and D for the southbound lanes. Twenty years later, in the year 2049, the Level of Service would deteriorate to a Level of Service F for both the northbound and southbound lanes if the freeway is still only two lanes in each direction (see Table 1.1).

Table 1.1 Level of Service for State Route 99 Within the Project Limits (Post Miles 25.4 to 30.0) No-Build Alternative

Northbound	Existing (2018)	2029	2049
Level of Service	D	E	F
Southbound	**Existing (2018)**	**2029**	**2049**
Level of Service	C	D	F

Caltrans Traffic Operations, 2019.

The existing (2018) annual average daily traffic within the project limits is about 62,000. In the year 2029, the annual average daily traffic is forecast to be 85,000. Twenty years later, in the year 2049, the average daily traffic is forecast to be 126,000.

Improve Freight Movement

State Route 99 is designated as a Primary Highway Freight System, part of the National Highway Freight Network, from its junction with Interstate 5 in Kern County to Sacramento County. The largest trucks allowed on the interstate system are allowed on this segment of State Route 99.

The 2018 average daily truck traffic is about 15,410 trucks (27.6 percent of all vehicles); more than half of these trucks are large, long-haul trucks (with five or more axles).

When the average number of trucks per lane per day exceeds 2,000 on a route (the existing condition), congestion is characterized by large, long-haul trucks using all lanes for travel and passing, which creates potential safety and capacity problems for all users of the freeway. This is particularly noticeable within the four-lane segments of State Route 99 in Tulare County and the City of Tulare.

As stated in Caltrans' California Freight Mobility Plan 2020, trucking is the most used mode for California's freight transportation. Trucks transport almost all freight and services at some point within the supply chain. For this reason, the trucking industry is one of California's most valuable freight assets. California must continue to develop, maintain, and operate a safe, efficient, and reliable freight transportation network to accommodate the truck volumes necessary to move freight within the state.

Caltrans' Interregional Transportation Strategic Plan 2015 identified State Route 99 as a priority interregional highway. It is a critical north-south interregional freight corridor and an important highway for California's economy. This corridor serves as a major farm-to-market route for most agricultural products from the Central Valley. Most commercial and personal travel between cities within the San Joaquin Valley use State Route 99. This route also serves as the main access route from towns to urban services available in the larger urbanized areas.

The San Joaquin Valley Interstate 5/State Route 99 Goods Movement Corridor Study, prepared for the San Joaquin Valley Council of Governments in 2016, identified improvements to State Route 99 and Paige Avenue Interchange to achieve strategic goals for mobility and reliability. Among the goods movement projects listed for Tulare County, widening State Route 99 through Tulare is in the California 2014 Freight Mobility Plan. In addition, improving the State Route 99/Paige Avenue Interchange is in the 2014 and 2018 Tulare County Regional Transportation Plan.

Describing regional needs for goods movement system improvements, the Tulare County Association of Governments' Regional Transportation Plan (2018) noted that agriculture accounts for a large percentage of commodity movement and truck traffic within and through Tulare County. Milk and produce are time-sensitive items that need to ship reliably to ensure profitability. Other major types of commercial truck travel in the region include retail distribution, construction, gravel mining, delivery to and from industrial facilities, household goods movement, and gasoline and fuel distribution.

The main goal of the State Route 99 Business Plan (issued in 2005 and updated in 2013) was to improve the goods movement throughout California. Other goals were to expand State Route 99 to a minimum six-lane facility to facilitate economic growth. The plan determined that correcting gaps in flow, or choke points, along this route is needed to improve safety, reduce vehicle hours traveled, increase travel-time reliability for the goods movement and general traffic on the freight mobility system, and preserve acceptable facility operation.

A goal of the Regional Transportation Plan (2022) is to protect and enhance the State Route 99 transportation corridor in Tulare County, including through the City of Tulare, to improve interregional connectivity.

The guiding principles stated in the Transportation Element of the City of Tulare General Plan 2035 (2014) include improving goods movement infrastructure and trading and linking transportation improvements to economic development.

Improve Access to Trucking-Related Facilities and the Industrial Area

Near the Paige Avenue Interchange are several trucking-related businesses, including truck stops and truck washing facilities. A truck stop is typically a large facility that provides fuel, food, supplies, services, and overnight parking for heavy-duty trucks.

The industrial area of the City of Tulare extends west from the freeway, south from Bardsley Avenue, and southward along State Route 99. The City of Tulare General Plan 2035 indicates a planned shift to more heavy industry in the future.

The City of Tulare and the Tulare County Association of Governments requested that improved access for trucks at the Paige Avenue Interchange be included in this State Transportation Improvement Program-funded project. The City of Tulare General Plan 2035 implementation measures state that the city will coordinate with Caltrans for the design, funding, and construction to improve freeway interchanges.

The existing Paige Avenue Interchange resembles a Type L-6 configuration. The existing southbound hook ramps connect to Blackstone Street in the

northwest corner of the interchange at an intersection about 150 feet north of the Paige Avenue/Blackstone Street Intersection. Each of those intersections has traffic signals. The existing northbound hook ramps connect directly to Paige Avenue in the southeast corner of the interchange. The northbound off-ramp ends with a recently installed stop light at Paige Avenue. Currently, Paige Avenue has two lanes, with turn lanes at the intersections within the project footprint. The queue length of the eastbound approach of Paige Avenue at Laspina Street is longer than the spacing between the intersection and the northbound off-ramp intersection. The shorter spacing can lead to excessive queuing of traffic at the northbound off-ramp, which could extend to the freeway mainline.

Caltrans design guidance states that the Type L-6 configuration should be considered only when all other interchange types are not acceptable. Furthermore, the Type L-6 configuration is typically used when the parallel road system does not allow for another type of interchange and the ramps connect to the parallel roads. The distance between the parallel roads at this location allows for a more preferred interchange configuration that would better accommodate the heavy truck volumes in the area.

Existing Conditions

State Route 99 is functionally classified as a principal arterial in the state of California. It runs in the north and south directions with a high percentage of truck traffic accounting for 27.6 percent of all vehicles. Truck traffic routes are those that carry 25 percent of the total traffic, according to the U.S. Department of Transportation's Bureau of Transportation Statistics website. It is part of the national Highway system as a Strategic Highway Network route Under the Federal-Aid Surface Transportation Program. State Route 99 is also on the National Truck Network for the Surface Transportation Assistance Act. It is a Primary Highway Freight System, part of the National Highway Freight Network, from its junction with Interstate 5 in Kern County to Sacramento County. The largest trucks allowed on interstate freeways are allowed on this segment of State Route 99.

This segment of State Route 99 is classified as a suburban/urban four-lane freeway and runs north to south within the City of Tulare. The posted speed limit is 70 miles per hour, situated in generally level terrain. The freeway is depressed (below grade), from post mile 28.4 to post mile 28.86, post mile 29.34 to post mile 30.1, and from post mile 30.33 to post mile 30.78. The mainline roadway consists of four 12-foot lanes, 2-to-5-foot inside shoulders, and 8-to-10-foot outside shoulders. A thrie beam barrier is inside the unpaved median, with the median width varying from 32 feet to 220 feet. There are 19 freeway on- and off-ramps and seven bridges that convey arterial streets over the freeway within the project limits.

Traffic Volumes

Mainline State Route 99

Traffic operations are described by Caltrans in terms of "Level of Service." Six levels are defined, ranging from Level of Service A (the best operating conditions) to Level of Service F (the worst operating conditions). Caltrans' goal is to maintain the Level of Service on its facilities at the transition between Level of Service C and Level of Service D. When the actual Level of Service on a roadway falls below this point, a need for improvement is identified.

For a two-lane highway, the ideal speed, denoted as Level of Service A, is greater than 55 miles per hour. Level of Service B is 50 miles per hour, Level of Service C is 45 miles per hour, Level of Service D is 40 miles per hour, Level of Service E is 35 miles per hour, and Level of Service F is less than 30 miles per hour.

State Route 99, within the project limits, is currently operating at acceptable levels of service during peak traffic hours and will continue to do so through 2029 without any improvements. However, by 2049, the freeway mainline would have insufficient capacity to accommodate the forecast traffic demand under the No-Build Alternative, and delays would significantly increase.

The existing (2018) level of Service for the two northbound lanes between post miles 25.2 and 30.6 is D. For the two southbound lanes, the Level of Service is C. By 2029, the Level of Service would be E for the northbound lanes and D for the southbound lanes. By 2049, the Level of Service would deteriorate to F for both northbound and southbound lanes if the freeway is still only two lanes in each direction (see Table 1.2).

Table 1.2 Level of Service for State Route 99 Within Project Limits No-Build Alternative

Northbound Level of Service Existing (2018)	Northbound Level of Service 2029	Northbound Level of Service 2049	Southbound Level of Service Existing (2018)	Southbound Level of Service 2029	Southbound Level of Service 2049
D	E	F	C	D	F

Caltrans Traffic Operations, 2019.

The existing average daily traffic within the project limits is about 62,000. In the year 2029, the annual average daily traffic is forecast to be 85,000. Twenty years later, in the year 2049, the average daily traffic is forecast to be 126,000.

The 2018 average daily truck traffic is about 15,410 trucks (27.6 percent of all vehicles); more than half of these trucks are large, long-haul trucks (with five or more axles). When the average number of trucks per lane per day exceeds

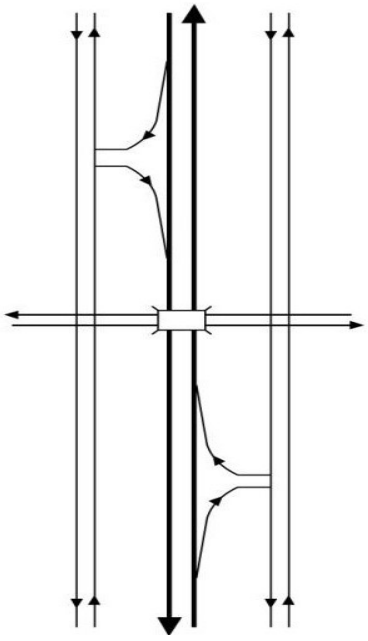
2,000 on a route (the existing condition), congestion is characterized by large, long-haul trucks using all lanes for travel and passing, which creates potential safety and capacity problems for all users of the freeway. This occurrence is common within the four-lane segments of State Route 99 in Tulare County and the City of Tulare.

Paige Avenue Interchange

Improvements to the Paige Avenue Interchange were not included in the proposed alternatives for the Tulare Interchange Project in 2019. The Tulare County Association of Governments requested those improvements be added to this project, explaining that the reconstruction of the Paige Avenue Interchange would improve traffic circulation near Commercial Avenue. The Commercial Avenue project, which is officially called the “International Agri-Center Way Interchange,” will be completed in the summer of 2025. In June 2020, the reconstruction of the Paige Avenue Interchange was added to the project scope. The Notice of Preparation was prepared in April 2021, and it included the improvements to Paige Avenue Interchange.

The existing Paige Avenue Interchange is a modification of a Type L-6 configuration, as shown in Figure 1-3. The existing southbound hook ramps connect to Blackstone Street in the northwest corner of the interchange at an intersection about 150 feet north of the Paige Avenue and Blackstone Street intersection. Each of those intersections has traffic signals. This configuration limits southbound freeway access to the west side of State Route 99.
The modification occurs when the existing northbound hook ramps connect directly to Paige Avenue in the southeast corner of the interchange instead of to Laspina Street. The northbound off-ramp ends with a recently installed stop light at Paige Avenue. This configuration limits the northbound freeway access to the east side of State Route 99.

Figure 1-3 Type L-6 Interchange Configuration



Currently, Paige Avenue has two lanes, with turn lanes at the intersections within the project footprint. The spacing between the northbound off-ramp intersection and the Paige Avenue and Laspina Street intersection is too short to have enough storage for eastbound traffic going through the Paige Avenue and Laspina Street intersection. Through traffic lines up on the eastbound lanes at this intersection, causing excessive queuing of traffic beyond the northbound ramp intersection due to the short spacing. Vehicles are unable to turn into the northbound on-ramp and/or are restricted from making turn movements off the northbound off-ramp, which would cause traffic to back up on the mainline. Additionally, this type of configuration causes indirect travel because traffic would use a local road, such as Blackstone, to go southbound onto or off the freeway. This causes wear and tear and puts excessive demand on the local road system, which can't handle the current traffic volume.

A 2018 traffic study concluded that all intersections at the Paige Avenue Interchange operate at an acceptable Level of Service D or better for the existing condition, except at the intersection of Laspina Street and Paige Avenue, which operates at Level of Service F during the evening peak hour. The existing signalized intersections would maintain an acceptable Level of Service in 2027 and 2037 but would fall to Level of Service E/F in 2047 without improvements to the interchange.

The Type L-6 Interchange configuration is no longer being considered for modern freeway design due to the limitations mentioned, and according to Caltrans design guidance, this configuration should be considered only when all other interchange types are not acceptable.

Near the Paige Avenue Interchange are numerous trucking-related businesses, including truck stops and truck washing facilities. A truck stop is typically a large facility that provides fuel, food, supplies, services, and overnight parking for heavy-duty trucks. Paige Avenue, Blackstone Street, and Laspina Street from Paige Avenue southwards to the city limits are designated truck routes. There are single- and multi-residential homes on the east side of the interchange, such as the Tulare Inn Mobile Home Park situated on the southeast corner of Laspina Street and Paige Avenue and a residential subdivision just north of Paige Avenue between the highway and Laspina Street.

The City of Tulare is the venue for the World Ag Expo, which generates a significant number of trips within a short period within the project limits. It is known to be the largest annual outdoor agricultural exposition in the U.S., with over 1,450 exhibitors and 100,000 attendees from about 67 countries every year (World Ag Exp website). Event participants will exit from State Route 99 at the Paige Avenue Interchange to drive south on Laspina Street, where the expo complex is located. This puts an additional burden on a traffic network that experiences high traffic volume daily, causing unusual queuing and congestion.

Because the City of Tulare General Plan 2035 indicates a planned shift to more heavy industry in the future, the City of Tulare and the Tulare County Association of Governments requested improved access for trucks at the Paige Avenue Interchange and a new interchange at the Commercial Avenue alignment at State Route 99. The City of Tulare General Plan 2035 implementation measures state that the city will coordinate with Caltrans for the design, funding, and construction to improve freeway interchanges.

Bicycle and Pedestrian Traffic

Bicycle access is prohibited on mainline State Route 99 within the project limits because the freeway is a controlled-access facility. A controlled-access highway is designed for high-speed traffic with an unhindered flow of traffic, no traffic signals, intersections, or property access. They are free of any at-grade crossings with other roads, railways, or pedestrian paths, which are instead carried by overpasses and underpasses across the highway. On Paige Avenue, there are no sidewalks or bicycle lanes.

The Santa Fe Trail is the only shared-use trail within the project area that allows pedestrian and bicycle traffic. This 5-mile, lighted trail begins on the east approach at West Inyo Avenue, crosses State Route 99 just south of East Cross Avenue, and ends at Prosperity Avenue. Amenities include benches, water fountains, a pedestrian/bicycle trail, a horse trail, and nearby parks that the trail runs alongside.

Logical Termini and Independent Utility

Federal Highway Administration regulations (23 Code of Federal Regulations 771.111 [f]) require that the action be evaluated:

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

The project has logical termini (post mile 25.2 to post mile 30.6) and is of sufficient length to address the deficiencies identified along the mainline freeway segment and at the interchanges. The environmental scope of the environmental review is sufficient to address all potential impacts of this project on the environment. Traffic data show the demand for increased capacity and operational deficiencies to occur within the post mile limits of the project. The northern limit of this project at post mile 30.6 is reasonable because it will tie into the Tagus 6-Lane Widening Project. The Tagus 6-Lane Widening project is a four-lane to six-lane widening of State Route 99 between post miles 30.6 and 35.2 that began construction in 2021 and is expected to open to traffic in 2024.

The southern limit is beyond the southernmost interchange (Avenue 200 Interchange) of the Tulare City urban area. The southern limit occurs near the city limits boundary at the urban fringe, where the land use transitions to a rural setting. Beginning the project limits just south of Avenue 200 is a logical point because it is the last urban interchange as traffic moves southbound and is the first urban interchange as traffic enters the city in the northbound direction.

[This section has been added since the Draft Environmental Document was circulated.] Table 1.3 shows a comparison of the annual average daily traffic and truck volumes for existing year 2018 and the associated interchanges at the southern limits of the project from post mile 25.2 to 30.6. The truck volume numbers were calculated by taking 27.6 percent of the traffic volume. At post mile 30.6, there are 61,828 annual average daily traffic. Thus, in the southern direction of traffic travel, this number decreases to 56,100 at post mile 25.2. The same is true for the truck volume, which has 16,792 and decreases to 15,236.

Table 1.3 Comparsion of the Annual Average Daily Traffic and Truck Volumes and the Interchanges at the Southern Limits of the Project

Project Limits Post Miles (25.2 to 30.6)	Annual Average Daily Traffic Existing Year 2018	Annual Average Daily Traffic Existing Year 2018 for Trucks
Mainline State Route 99 (Post Mile 30.6)	61,828	16,792
Prosperity Avenue	56,226	15,270
Mainline State Route 99	65,496	17,788
Tulare Avenue Interchange	59,162	16,068
Mainline State Route 99	62,640	17,013
Bardsley Avenue Interchange	54,300	14,747
Mainline State Route 99	57,670	15,663
Paige Avenue Interchange	49,870	13,544
Mainline State Route 99	56,170	15,255
Rankin Road Drive Interchange (Avenue 200)	54,250	14,734
Mainline State Route 99 (Post Mile 25.2)	56,100	15,236

Approximately 25 miles of State Route 99 between Tulare and Pixley are four lanes. The Delano to Pixley 6-Lane widening project proposes to add two lanes in the 13-mile segment. The Delano to Pixley 6-Lane widening project is currently in the environmental review and project approval process. This will leave a 12-mile gap of four lanes between the two projects. Currently, there are no active projects within this 12-mile gap; however, Caltrans is working on a comprehensive multimodal corridor plan for State Route 99 through the entire San Joaquin Valley. The corridor plan will be consistent with the Caltrans corridor planning guidebook and current Caltrans policies and priorities.

The project has independent utility and is a reasonable expenditure as the improvements address the identified deficiencies, even if no other transportation improvements are made. There are no additional projects needed to address the identified deficiencies at the interchanges.

The project would not restrict the consideration of alternatives for reasonably foreseeable transportation improvements. The Tulare County Association of Governments is working in partnership with Caltrans, local jurisdictions, and the private sector to identify transportation corridors and projects that will provide a multimodal system for Tulare County.

The project design has been developed to consider other reasonably foreseeable projects and does not conflict with or constrain the design of these other projects. Through regular coordination with Tulare County and the

City of Tulare, this project includes design features that demonstrate consideration of these other plans.

1.3 Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project while avoiding or minimizing potential environmental impacts. The project proposes one build alternative with two design options at the Paige Avenue Interchange and a No-Build Alternative.

The California Department of Transportation (Caltrans) proposes to widen State Route 99 in the City of Tulare from just south of the Avenue 200 Overcrossing to just north of the Prosperity Avenue Overcrossing between post miles 25.2 and 30.6. One lane would be built in each direction in the existing freeway median to create a six-lane freeway divided by a concrete median barrier.

The Paige Avenue Interchange would be rebuilt into a tight diamond interchange. The existing on- and off-ramps would be removed and replaced with new ramps that would lead to and from two multilane roundabouts. An additional roundabout would be added on Paige Avenue at Blackstone Street and another at Laspina Street. The Paige Avenue Overcrossing would be replaced with a wider structure to add two additional lanes (one lane in each direction) and a pedestrian/bicycle shared path.

The purpose of the project is to relieve traffic congestion along State Route 99 from Avenue 200 to Prosperity Avenue and improve traffic operational deficiencies at the Paige Avenue Interchange. These improvements will accommodate truck freight movement in the industrial area of the City of Tulare.

1.4 Project Alternatives

The project proposes one build alternative, with two design options at the Paige Avenue Interchange and a No-Build Alternative.

This project contains a number of standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the project. These measures are addressed in more detail in the Environmental Consequences section found in Chapter 2.

1.4.1 Build Alternatives

The project proposes to widen the existing four-lane freeway to a six-lane freeway by building one lane in each direction in the existing median of State Route 99. It would also reconfigure the Paige Avenue Interchange, replace the existing overcrossing, and add roundabouts on Paige Avenue. Preliminary design layouts are shown in Figures 1-4 through 1-10.

The project is currently scheduled to begin construction in 2027 and will be open to the public in 2029. The project would be split into two phases: the mainline widening and the interchange improvements at Paige Avenue. The mainline construction is expected to be completed in three stages. The first stage would shift the northbound and southbound traffic toward outside shoulders and build inside lanes and a median barrier. The second stage would shift traffic to the newly constructed inside lanes and construct southbound lanes. The third stage would shift southbound traffic back to the newly constructed southbound lanes. The same process would be repeated for the northbound lanes.

The project would take 360 working days to complete, including approximately 150 nights of construction work. Activities would include resurfacing outside shoulders under temporary lane closures, constructing a cross-median detour, and setting up K-rail (temporary concrete barriers).

Two lanes for the northbound and southbound directions would remain open during the mainline construction work. One lane would be closed periodically during nighttime hours between different stages of construction work. Temporary freeway closure would be required for the construction of the Paige Avenue Bridge. Alternate ramps would be closed for two to four weeks for ramp construction work. Construction of the Paige Avenue Interchange and the roundabout would require the closure of the existing Paige Avenue between Blackstone Street and Laspina Street for approximately six months. The proposed detour would be through the new Commercial Avenue Interchange, which would be constructed between Paige Avenue and Avenue 200 and would be open to traffic by the time the Tulare Six-Lane with Paige Avenue Interchange Improvement project is in construction.

State Route 99 Mainline

All design options include widening the State Route 99 mainline from four lanes to six lanes. Oleander shrubs and the existing thrie beam median barrier would be removed and replaced with a concrete barrier Type 60. The 12-foot-wide additional lane and 8-foot-wide inside shoulder would be constructed with hot-mix asphalt concrete pavement in both directions. Three locations that are depressed (below grade) where the side slope would be cut back by 2 to 15 feet to allow for the widening are between these post miles: 28.4 and 28.86, 29.34 to 30.1, and 30.33 and 30.78. The side slope would not be cut back under the Bardsley Avenue Overcrossing, Tulare

Avenue Overcrossing, and Prosperity Avenue Overcrossing. Existing concrete-paved side slopes would be removed due to freeway widening and profile correction. New concrete-paved side slopes would be constructed in the same locations. At-grade locations where side slopes would be cut are as follows:

- Avenue 200 Overcrossing (Bridge Number 46-193) at post mile 25.43 by about 2 feet per side (no structural work would be involved).
- Tulare Pedestrian Overcrossing (Bridge Number 46-040) at post mile 29.848 by about 5.5 feet per side.
- Cross Avenue Overcrossing (Bridge Number 46-249) at post mile 29.893 by about 5.5 feet per side.

The nonstandard curve of southbound lanes west of the Mefford Field Airport would be corrected to align with the northbound lanes. The existing southbound lanes would be demolished, and three new lanes would be constructed parallel to the northbound lanes for about 0.75 mile north of the Avenue 200 Overcrossing, between post miles 25.62 and 26.35.

All existing guardrails would be replaced with Midwest Guardrail System components to meet current safety standards. All existing roadway signs would be replaced with retroreflective sheeting Type XI signs to meet current safety standards. The existing lighting within the project limits would be upgraded.

New Intelligent Transportation System elements, such as a changeable message sign and two vehicle detection systems, would be installed. The existing Intelligent Transportation System components that would be removed and replaced include a closed-circuit television, 19 traffic census systems, and two traffic census systems/vehicle detection stations.

Ramps

The pavement of existing freeway ramps would be rehabilitated to achieve a minimum design life of 20 years. Ramp metering would be added at these interchanges—Paige Avenue (northbound and southbound on-ramps), Bardsley Avenue (northbound and southbound on-ramps), and Tulare Avenue (northbound on-ramps).

Auxiliary lanes would be constructed at the end of the following on-ramps to improve merging with freeway traffic:

- Bardsley Avenue southbound and northbound on-ramps (300-foot-long lanes).
- Tulare Avenue northbound on-ramp (500-foot-long lane).
- Merritt Avenue southbound on-ramp (500-foot-long lane).

- Paige Avenue northbound and southbound on-ramps (300-foot-long lanes).

Figure 1-4 Design Layout 1: Begin Construction Segment

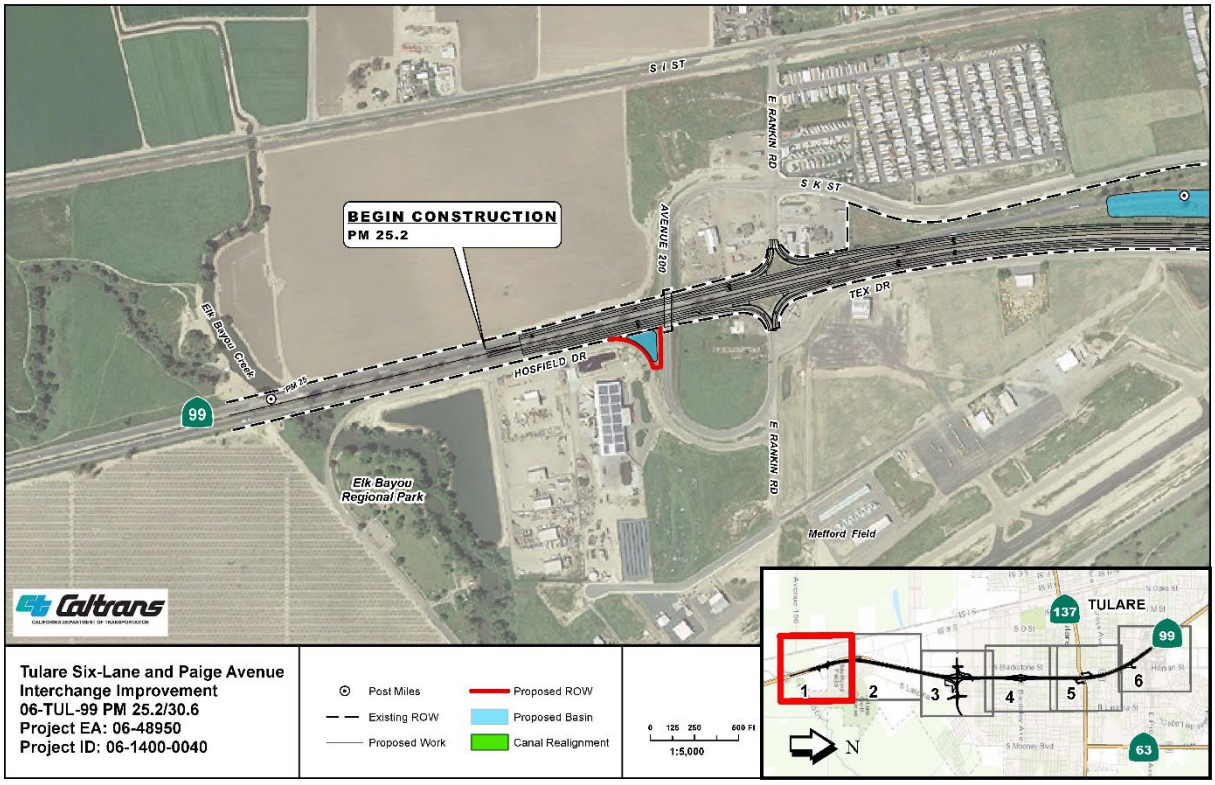


Figure 1-5 Design Layout 2: Commercial Avenue Segment

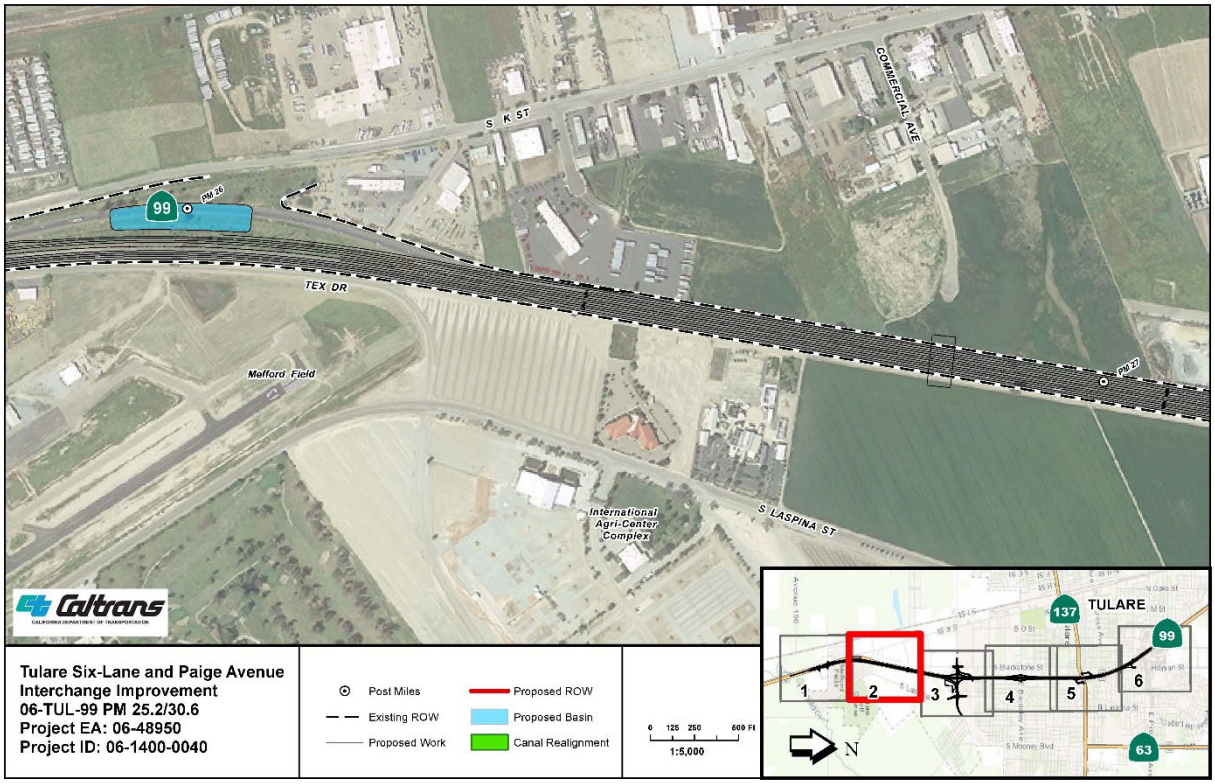


Figure 1-6 Design Layout 3 (Paige Avenue Interchange): Option 1 Four Roundabout Configuration with Paige Avenue Overcrossing Bridge

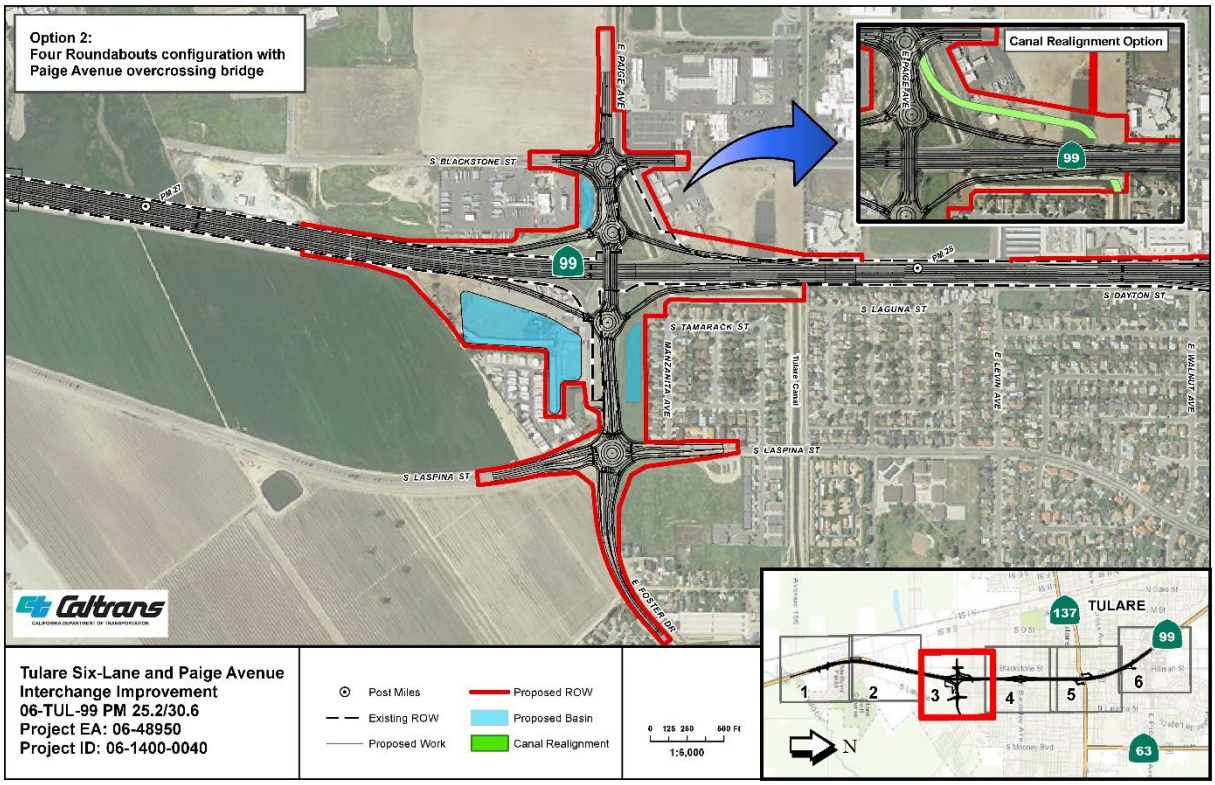


Figure 1-7 Design Layout 4 (Paige Avenue Interchange): Option 2 Four Roundabout Configuration with Paige Avenue Undercrossng Bridge

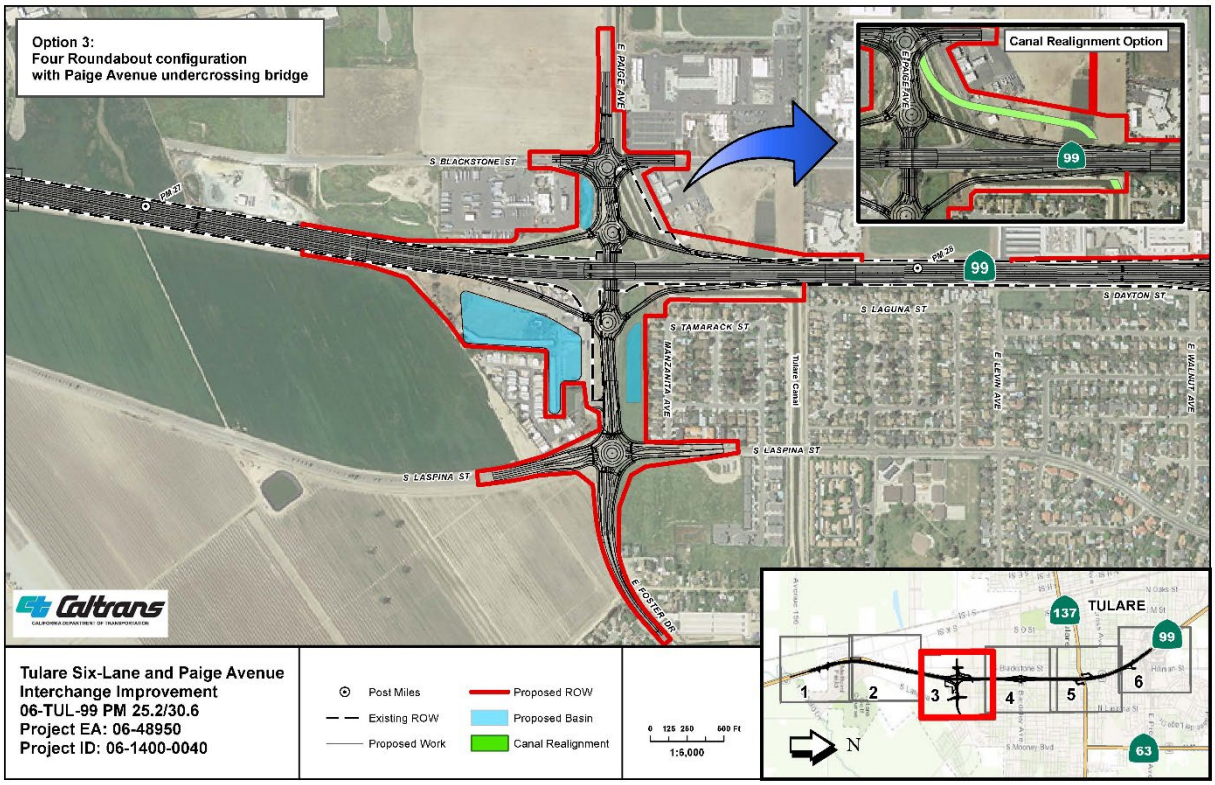


Figure 1-8 Design Layout 5: Bardsley Segment

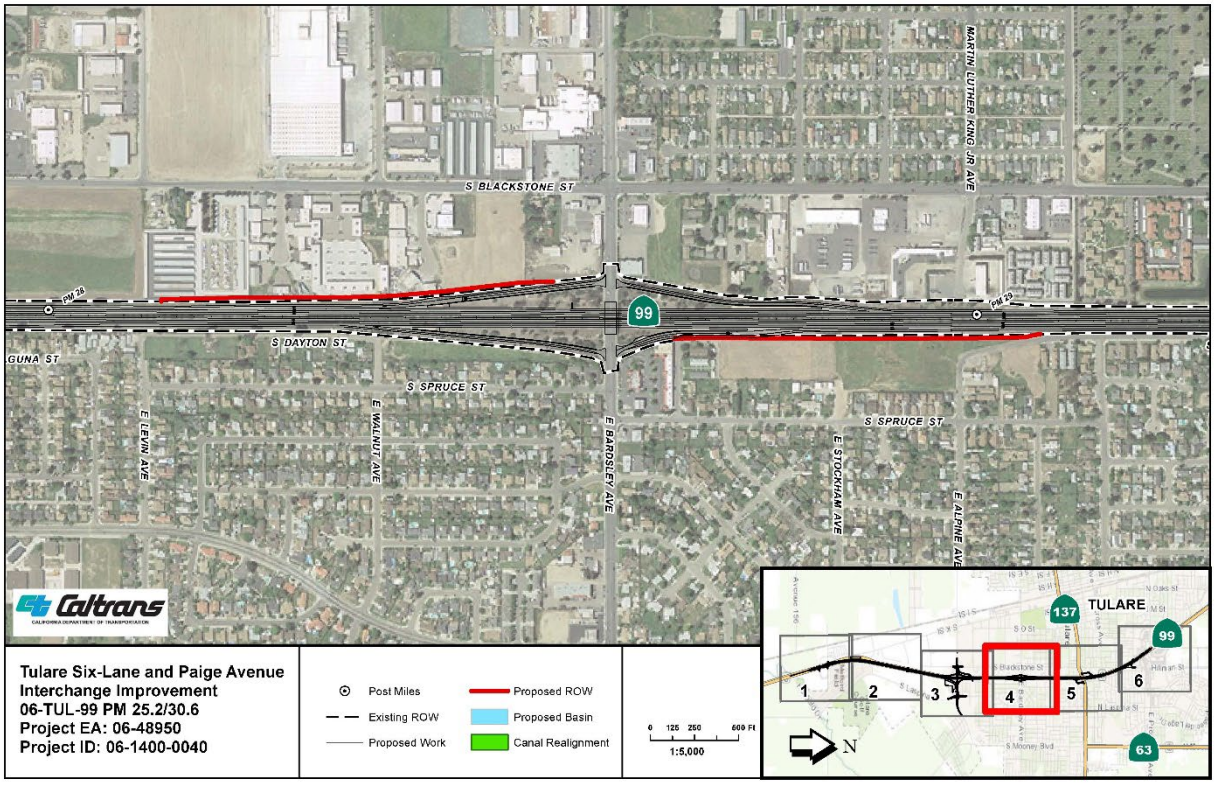


Figure 1-9 Design Layout 6: Tulare Avenue Segment

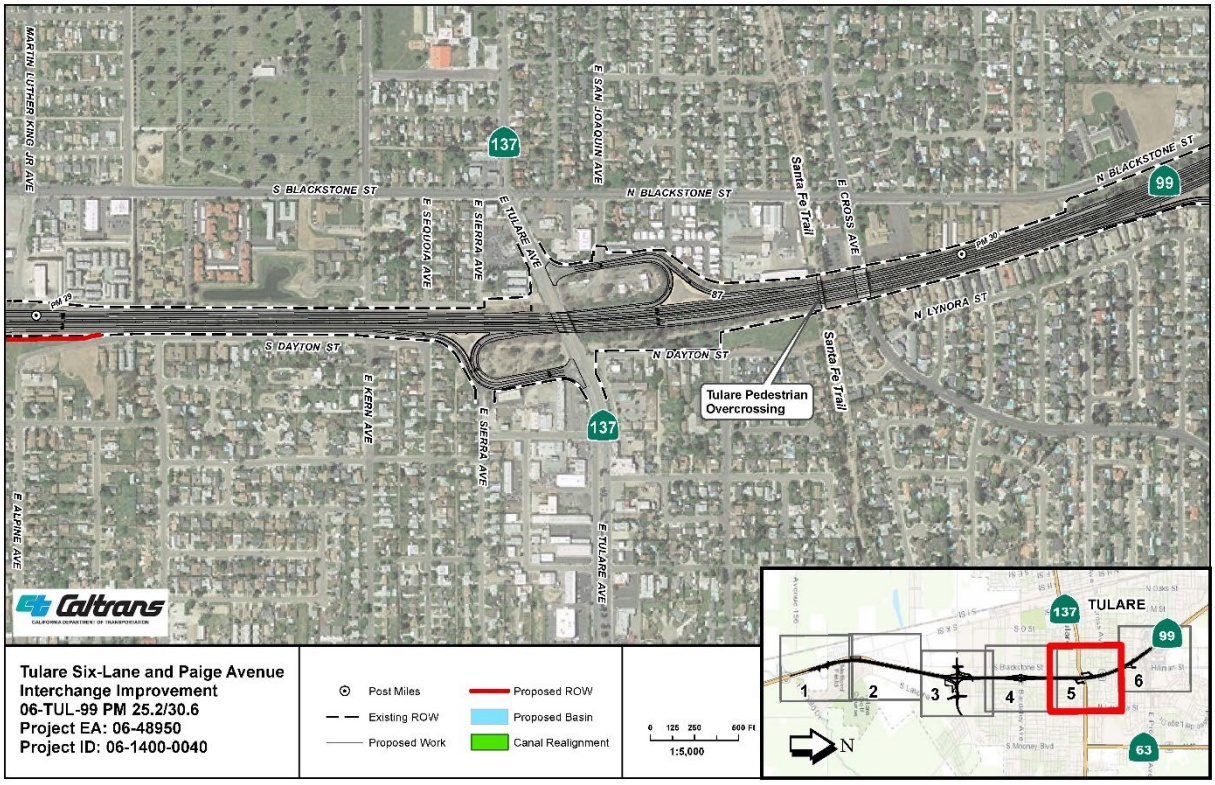
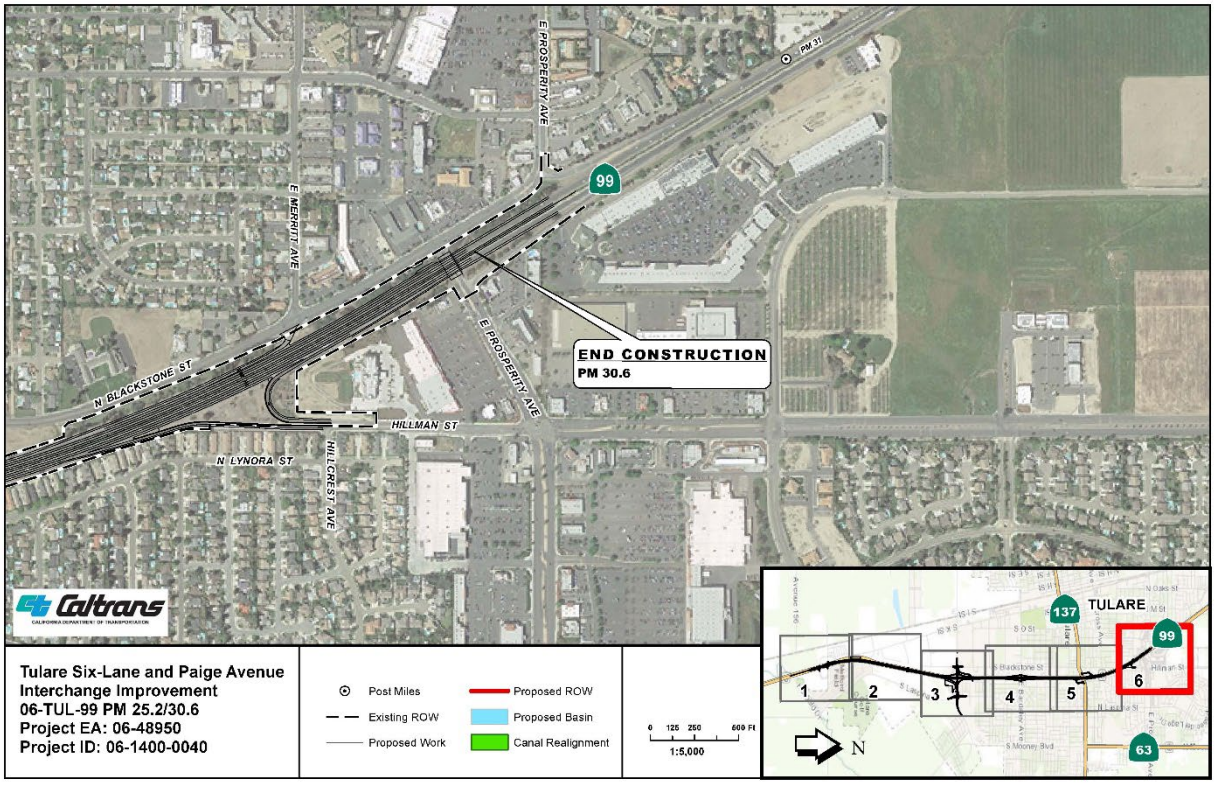


Figure 1-10 Design Layout 7: End Construction Segment



A second lane would be added to the northbound and southbound Bardsley Avenue and northbound Tulare Avenue on-ramps. The existing retaining wall would be removed, and a new retaining wall about 550 feet long would be constructed about 15 feet behind the existing wall for the Bardsley Avenue northbound on-ramp lane addition.

On-ramp improvements at Bardsley Avenue would require right-of-way acquisition from nearby properties. Widening the Bardsley Avenue northbound on-ramp would affect the existing and future extension of South Dayton Street by shortening it.

Temporary construction easements and permanent underground easements would also be needed under the shopping center that is next to the northbound Bardsley Avenue on-ramp and the paved South Dayton Street area if a soil nail type retaining wall is constructed along the on-ramp.

Soundwalls/Security Fencing

Three soundwalls are proposed. The first soundwall would run along the west (southbound) side of the freeway, inside Caltrans' right-of-way between Kern and Sierra Avenues. The second soundwall would be within Caltrans' right-of-way next to the Tulare Mobile Home Park. The third soundwall is along the outside shoulder of the northbound on-ramp from Paige Avenue.

Eight-foot-high security fencing would be installed inside Caltrans' right-of-way. On the west side of the freeway, the fencing would extend from the north end of the proposed soundwall by the Tulare Mobile Home Park to the Tulare Pedestrian Overcrossing, between the pedestrian overcrossing and Cross Avenue Overcrossing, and northwards from Cross Avenue for 400 feet.

On the east side of the freeway, from the Tulare Avenue Overcrossing, a fence would be constructed to include the existing Caltrans basin, extending northwards along Caltrans' right-of-way to the Tulare Pedestrian Overcrossing. Short segments of the fence at the northeast corner of this overcrossing and at the Cross Avenue Overcrossing would connect to existing privately owned concrete block walls.

The types of walls or fencing under consideration are either concrete panel walls or concrete block walls similar to a soundwall. At the request of the Tulare City Parks Division, wrought iron fences are proposed at the connection points to the Tulare Pedestrian Overcrossing.

Drainage Improvements

Five drainage basins are proposed to be constructed, as shown in Figures 1-4 through 1-8. Existing metal and nonreinforced culverts (about 30), overside drains, and asphalt dikes would be replaced with new drainage systems.

New drainage ditches would be constructed in the areas where the side slopes of the freeway would be cut back and where the freeway is not depressed. Approximate locations are from post miles 25.74 to 26.53, post miles 27.16 to 27.27, post miles 27.85 to 28.31, post miles 28.9 to 29.38, and post miles 30.06 to 30.38 (southbound side only). Drainage ditches would be sized to accept the increased impervious surface area of the new lanes and shoulders.

The existing stormwater storage tanks for the Bardsley Avenue, Tulare Avenue, and Prosperity Avenue pumping stations would be replaced, or the existing tank capacity would be increased to handle the additional stormwater flow due to freeway and on-ramp widening. Three maintenance vehicle pullouts for access to the pumping stations would be constructed along the side of the freeway next to the existing pumping stations, requiring the construction of retaining walls. One additional maintenance vehicle pullout for access would be constructed off Blackstone Street near the Prosperity Avenue pumping plant.

The Caltrans right-of-way fence at the southwest corner of the Tulare Avenue Interchange (across from the end of the southbound on- and off-ramps) would be set back to the state right-of-way line; this would provide maintenance access to the Tulare Avenue pumping plant from Sierra Avenue.

Paige Avenue Interchange

The Paige Avenue Interchange would be reconstructed into a tight diamond interchange configuration. The existing on- and off-ramps would be removed and replaced with new ramps that would lead to and from two multilane roundabouts. An additional roundabout would be added on Paige Avenue at Blackstone Street and another at Laspina Street. The existing signals along Paige Avenue at Blackstone Street, Laspina Street, and at the northbound ramps would be removed. The Paige Avenue Overcrossing would be replaced with a wider structure to add two additional lanes (one lane in each direction) and a pedestrian/bicycle shared path.

Two design options are proposed for the Paige Avenue Interchange. Option 1 is a four-roundabout configuration with the Paige Avenue Overcrossing Bridge. Option 2 is a four-roundabout configuration with the Paige Avenue Undercrossing Bridge. Each option has a variation of realigning the Tulare Canal or installing box culverts at locations where the highway crosses the canal. See Figures 1-4 through 1-9 for preliminary design options.

Common Design Features of Paige Avenue Roundabout Design Options

All freeway ramps connecting to roundabouts would have two lanes and include maintenance vehicle pullouts. The on-ramps would have ramp metering, California Highway Patrol pullouts, and 300-foot-long auxiliary lanes for merging.

Construction of the southbound off-ramp and the northbound on-ramp and off-ramp would require the full acquisition of three businesses and one vacant lot. In addition, slivers of land would need to be acquired from about 28 parcels (see Section 2.1.5 Relocations and Real Property Acquisition).

Paige Avenue Improvements

Paige Avenue would be widened from two to four lanes from the west approach to the Blackstone Street roundabout to the Laspina Street roundabout. A Southern California Edison electric power line that runs along the north side of Paige Avenue would be relocated.

At the Blackstone Street roundabout, street access to and from nearby businesses would be limited to right-in and right-out turns only. The existing southbound on-ramp and off-ramp would end at a cul-de-sac just past the south entrance to the Mobil gas station. A 6-foot-high retaining wall would be constructed on the southwest side of the Blackstone Street roundabout.

At the Laspina Street roundabout, the existing northbound on-ramp and off-ramp would be converted into a cul-de-sac at the entrance to Tulare Inn Mobile Home Park. Access to and from Paige Avenue from the Tulare Inn Mobile Home Park would be changed to right-in, right-out turns only. Vehicles that are traveling westbound must pass the mobile home park and turn around at the Paige Avenue/State Route 99 roundabout to make a right turn into the entrance of the mobile home park. Access to and from Manzanita Street to Laspina Street would also become right-in, right-out only. The existing signal on Paige Avenue, just west of Laspina Street, would be removed.

Blackstone Street and Laspina Street Roundabouts

Both roundabouts would be multilane with a raised central island bordered by a truck apron. The circulating outside and inside lane widths would be 20 feet and 18 feet, respectively.

Ten-foot-wide paved paths for shared pedestrian and bicycle use would go around each roundabout and extend east and west along Paige Avenue. Americans with Disabilities Act-compliant curb ramps would be part of the design. A 5-foot-wide landscaped buffer would separate the paths from the roadway in the roundabouts and along approaching and departing lanes on Paige Avenue, Blackstone Street, and Laspina Street.

These two roundabouts would have bypass lanes but would be configured differently. Traffic going from northbound Blackstone Street to southbound State Route 99 would have a bypass lane connecting directly to the southbound on-ramp. Similarly, traffic coming from the southbound off-ramp heading to northbound Blackstone Street would have a bypass lane to skip the roundabout. On the south and north sides of the Blackstone Street

roundabout, the existing street would be split into two lanes in each direction, with a center turning lane for a length of about 300 feet.

At the Laspina Street roundabout, right-turning traffic would have bypass lanes. Two lanes in each direction would extend from the roundabout for about 1,000 feet along Laspina Street and eastward on Paige Avenue before tapering back to the existing lane configuration.

Caltrans has been coordinating with the Tulare Irrigation District to mitigate impacts to the Tulare Main Canal resulting from the Paige Avenue Interchange reconstruction. Two variations are proposed to resolve this conflict for all design options.

Variation 1 would realign the canal on the west side of State Route 99. A new reinforced concrete box culvert would be constructed under the freeway, paralleling the new southbound off-ramp until joining the existing canal at the box culvert under Blackstone Street. A 25-foot-wide maintenance access path to the realigned canal segment would be acquired, running east from Blackstone Street. The existing canal segment that runs north to south between the northbound freeway lanes and Tamarack Street, under the freeway, and west to Blackstone Street, would be removed.

Variation 2 would keep the canal in the same alignment by routing the flow of water through a 1,900-foot-long box culvert segment. The box culvert segment would begin where the canal turns south next to the State Route 99 freeway, then turns southwest to cross under the freeway, and would end after crossing under Blackstone Street.

Unique Features of Paige Avenue Roundabout Design Options

Options 1 and 2 were under consideration for ramp intersections. The environmental impacts are the same for options 1 and 2. A decision was made after the circulation of the Draft Environmental Document and is detailed in this document.

Option 1—Four Roundabouts Configuration With Paige Avenue Overcrossing Bridge

With Option 1, the ramps would begin at two separate circular roundabouts built on the east and west sides of the State Route 99 freeway. The roundabouts will be multilane, with the widths of the circulating outside and inside lanes measuring 20 feet and 18 feet, respectively. The inside and outside shoulders would be 4 feet wide and 8 feet wide, respectively. The bridge rail proposed is a California ST-75 type bridge rail, which would increase the sight distance and visibility of traffic driving through the roundabout. With this option, 10-foot-wide paved paths for shared pedestrian and bicycle use would go around each roundabout and extend east and west along Paige Avenue. Americans with Disabilities Act-compliant curb ramps

would be part of the design. The Paige Avenue Overcrossing structure will be a bridge on a straight-line alignment.

These two roundabouts would be connected by a single four-lane bridge on Paige Avenue, crossing over the freeway. The existing structure would be demolished and replaced with a 98-foot-wide, 224-foot-long bridge. The overcrossing would have a 6-foot-wide raised median, 2-foot-wide inside shoulders, two 12-foot-wide lanes in each direction, and 2-foot-wide outside shoulders. A 2-foot-wide concrete barrier would separate vehicular traffic from 10-foot-wide shared-use paths for pedestrians and bicycles.

Option 2—Four-Roundabout Configuration With Paige Avenue Undercrossing Bridge

With Option 2, Paige Avenue would cross under State Route 99, and State Route 99 would pass over Paige Avenue on a newly constructed bridge. A newly formed embankment on State Route 99 would raise the profile of the freeway to the new bridge structure. The four-roundabout configuration would be similar to option 1, except that the two roundabouts next to the State Route 99 bridge would be located on ground level instead of on embankments.

Ten-foot-wide paved paths for shared pedestrian and bicycle use would go around each roundabout and extend east and west along Paige Avenue. Americans with Disabilities Act-compliant curb ramps would be part of the design. The benefits of this option would be the pedestrian and bicycle facilities crossing State Route 99 at ground level and lower levels of emissions for vehicles using the interchange ramps. The option would have a smaller project footprint compared to option 1.

Reversible Lanes

Reversible freeway lanes were not considered as an alternative for this project because there is not enough of a difference in traffic volumes between the northbound and southbound directions during peak traffic hours to warrant a traffic operations analysis.

1.4.2 No-Build (No-Action) Alternative

There are no proposed improvements in the No-Build Alternative because the existing facility will remain unchanged. Current conditions will persist and worsen if no improvements are made in the future. This will result in an unsatisfactory Level of Service on the State Route 99 mainline beyond 2027. Without improvements, traffic operations and circulation at the Paige Avenue Interchange will worsen as traffic volumes increase in the future. The No-Build Alternative will not satisfy the purpose and need of the project.

1.5 Comparison of Alternatives

When alternatives are evaluated, the purpose and need of the project and the locations where environmental impacts could occur need to be considered.

The build alternative for the State Route 99 mainline would satisfy the purpose of the project because it would improve traffic flow, address current and future traffic operational needs, and alleviate congestion. The two design options proposed for the Paige Avenue Interchange would have the same environmental impacts. The first option would be to build a Paige Avenue Overcrossing Bridge with four roundabouts on Paige Avenue. The second option would elevate State Route 99 over Paige Avenue and construct a Paige Avenue Undercrossing Bridge with four roundabouts on Paige Avenue.

The No-Build Alternative would not satisfy the purpose and need of the project because it would not address the projected increases in traffic volume over time, which would result in motorist delays and excessive congestion within the project limits on State Route 99. The No-Build Alternative would not result in any temporary, permanent, or indirect impacts on environmental resources.

1.6 Identification of Preferred Alternative

This section has been added since the Draft Environmental Document was circulated. The Draft Environmental Impact Report/Environmental Assessment was circulated for public review and comment from August 8, 2023, to September 22, 2023. All comments received were considered and are included in Appendix G.

After evaluating all comments received during the public review period for the Draft Environmental Impact Report/Environmental Assessment, the Project Development Team selected the Build Alternative 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. 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 Finding of No Significant Impact (see page iii of this document) in accordance with the National Environmental Policy Act.

On October 5, 2023, the Project Development Team held a meeting attended by Caltrans, the Tulare County Association of Governments, and City of Tulare staff to choose the design option for the Paige Avenue Interchange.

Option 2 was selected as the preferred option, considering its benefits over Option 1. The benefits of Option 2 are the following:

- About 20 percent lower imported borrow to form interchange embankments.
- Pedestrian and bicycle facilities crossing State Route 99 will be located at ground level.
- It has a slightly smaller footprint of the interchange.
- It will cause a lower level of emissions when traffic approaches the Paige Avenue interchange on- and off-ramps.

However, with Option 2, the new embankment that needs to be formed to elevate State Route 99 over Paige Avenue will encroach into the existing floodplain created by the Bates Slough. Mitigation measures for this encroachment will be considered in the next project phase.

1.7 Alternatives Considered but Eliminated From Further Discussion Prior to the Draft Environmental Impact Report/Environmental Assessment

At the beginning of the environmental phase of the project in 2019, before beginning formal environmental studies, the three build alternatives that had been scoped in the Project Initiation Document signed in 2009 were reassessed. The work needed to construct the project, prepare environmental documents, and determine potential environmental impacts was updated, resulting in new cost estimates and schedules for each alternative.

Alternative 1 proposed widening the existing four-lane freeway to a six-lane freeway by constructing new lanes in the median. An auxiliary lane would have been added along the outside northbound lane between Bardsley Avenue and the Hillman Street off-ramp. Construction of that lane would have required the acquisition of about 100 residences and some businesses. In addition, the existing overcrossings at Tulare Avenue (State Route 137), the Tulare Pedestrian Overcrossing, and the Cross Avenue Overcrossing would have been rebuilt to raise the bridges. The cost was estimated at between $110 million and $130 million.

Alternative 2 proposed widening the existing four-lane freeway to an eight-lane freeway by constructing two additional lanes in each direction outside the existing lanes. All seven overcrossings would have been rebuilt, as would all interchanges within the project limits. New drainage basins would have been

needed at five locations. This alternative would have acquired over 200 homes and businesses along both sides of the freeway. The project cost was estimated at between $300 million and $350 million.

Alternative 3 proposed widening the existing four-lane freeway to a six-lane freeway by constructing the new lanes in the median. The inside and outside shoulders would have been widened. All work would have taken place within the existing Caltrans right-of-way; no right-of-way acquisition was anticipated. The cost was estimated at between $70 million and $80 million.

The design option of a three-roundabout configuration for the Paige Avenue Interchange was considered and included in the original Draft Environmental Document that was circulated to the public from April 10, 2023, to May 24, 2023. With this option, all ramps would have been connected to a larger-diameter roundabout bridge built over State Route 99. This roundabout would have required an inscribed circular diameter of 300 feet, compared to a diameter of 190 feet for the other two roundabouts on Blackstone Street and Laspina Street. This option would have reduced the number of roundabouts a motorist would need to navigate while using Paige Avenue between Blackstone Street and Laspina Street. However, this larger diameter roundabout would have increased the speed limit through the roundabouts to over the maximum of 30 miles per hour. For these reasons, this option was dropped from further consideration.

On August 26, 2019, the Project Development Team, including the Tulare County Association of Governments and representatives of the City of Tulare, agreed to develop Alternative 3 as the sole Build Alternative for the project. Improvements to the Paige Avenue Interchange were added to the scope of this project in 2020. The reasons that Alternatives 1 and 2 were not brought forward for detailed environmental analysis were excessive right-of-way acquisition, high costs, the large numbers of people who would have been displaced and require relocation, and other community impacts, including the potential for direct impacts to environmental justice neighborhoods and impacts to Tulare Santa Fe Trail Park that would have required an Individual Section 4(f) analysis and mitigation.

The Project development Team discussed alternatives for reducing vehicle miles traveled. The Project Development Team considered directing funding toward an investment in rail projects within the region. The investment would have helped facilitate the transfer of freight that would normally be moved on State Route 99 using large trucks over to the rail system. The main benefit of this investment would be improving freight movement along this section of State Route 99 and, therefore, removing a large percentage of the traffic from the road system. Several concerns with this alternative were taken into consideration by the Project Development Team, and the choice was made not to move forward with this alternative. A few of the concerns are listed below.

- The railroads are privately owned industries; as a state department, it would be improper to invest in their operations.
- Senate Bill 743 does not require mitigation for truck traffic, and yet, the purpose and need for this project is to relieve freight-related congestion. Freight vehicles take up more space on the roadway than other vehicles, which magnifies the rate of congestion in locations where freight volumes, as a percentage of total traffic volumes, are high. A State Route 99 Comprehensive Multimodal Corridor Plan for the Central Valley would be prepared in accordance with the 2019 Corridor Planning guidebook that will develop a shared vision and implementation plan for the State Route 99 Corridor that aligns with state goals and policies while meeting the needs of agency partners, stakeholders, and the traveling public.
- A feasibility study conducted for the Central Valley region points to high costs when moving freight by rail, which does not provide an economic incentive to make this switch. Southern California and San Diego are the top origins and destinations for Central Valley goods. The two regions make up 56 percent of California's population, 87 percent of containerized port traffic in California, and more than 30 percent of national container traffic. Still, while there are out-of-state rail services in the Central Valley, there are almost no rail freight services between the Central Valley and Southern California. Perishable goods, such as dairy products and fresh fruits and vegetables bound for Southern California and San Diego, aren't feasible to transport by rail because travel times increase significantly compared to trucks.
- Thirty miles northwest of Tejon Pass, along the Sierra Nevada, is the Tehachapi Pass gateway. The pass features the only rail corridor that connects the Central Valley and Southern California. Nearly all rail freight shipments on this route connect to out-of-state destinations in the Midwest. If a rail freight shuttle from the Central Valley could connect to this service at a competitive rate, the potential for a diversion of Central Valley truck freight to rail might be possible. In addition, the early operating segment of the High-Speed Rail Project may free up capacity on the rail mainline between Merced and Bakersfield, providing an opportunity for containerized freight shuttle services from Merced, with possible stops at container loading ramps in Fresno and Shafter, then eventually connecting to the Midwest. However, this long-term rail strategy would not meet the purpose and need of this project.

1.8 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications are required for project construction:

Agency	Permits, Licenses, Agreements, and Certifications	Status
California Department of Fish and Wildlife	1600 Streambed Alteration Agreement	To be applied for during the Plans, Specifications, and Estimates phase of the project.
Central Valley Regional Water Quality Control Board	Waste Discharge Requirement Fee	To be applied for during the Plans, Specifications, and Estimates phase of the project.
Tulare County Regional Transit Agency	Cooperative Agreement	To be obtained before the start of construction.
Tulare County Area Transit	Cooperative Agreement	To be obtained before the start of construction.

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis done for the project, the following environmental issues were considered, but no adverse impacts were identified. So, there is no further discussion of these issues in this document.

- Coastal Zone—The project is not within the coastal zone boundary, as defined by the California Coastal Act of 1976 and Public Resources Code Division 20, Section 30103(b), defining the coastal zone boundary.
- Wild and Scenic Rivers—There is no federal or state-designated wild and scenic river within or near the project limits (National Wild and Scenic Rivers website, January 2022).
- Farmland—The project proposes to acquire a small corner of parcel 191-070-021, which is currently planted in orchard crops. A review of the City of Tulare's land use map indicates that this entire parcel, consisting of 119 total acres, is zoned C-3, Retail Commercial District. According to Volume 4 of the Standard Environmental Reference Handbook, any farmland (regardless of quality) that is already in or committed to urban development is farmland not subject to the Farmland Protection Policy Act. Where the proposed right-of-way for a transportation project is wholly within a delineated urban area, the completion and submittal of Form AD-1006 or Form NRCS-CPA-106 to the Natural Resources Conservation Service is not necessary.
- Timberland—There are no timber resources in the project vicinity.
- Hydrology and Floodplain—The project does not consist of a longitudinal encroachment or a significant encroachment on the base floodplain as defined in Section 650 105q of Code of Federal Regulations 23 (Floodplain Evaluation, November 2021).
- Geology, Soils, Seismicity, and Topography—The topography of the project area is flat, with no potential for landslides. The closest active earthquake fault is about 20 miles away; the potential for strong ground shaking is low. Preliminary geotechnical studies indicate that liquefaction would not occur (U.S. Geological Survey website, January 2022).

- Natural Communities—No natural communities remain within the project area, and no wildlife corridors are present (Natural Environment Study, June 2021).
- Plant Species—No special-status plant species were identified within the project area during reconnaissance-level botanical surveys. Due to the large amount of habitat modification and disturbance over time, no habitat for these species remains in the project area (Natural Environment Study, June 2021).
- Animal Species—No special-status animal species were identified within the project area during reconnaissance-level surveys. No habitat is present within the project area (Natural Environment Study, June 2021).
- Wildfire—The project is not considered to be in an area identified as vulnerable to wildfires (Caltrans District 6 Climate Change Vulnerability Map, January 2022).

2.1 Human Environment

2.1.1 Existing and Future Land Use

Affected Environment

The location of the project is entirely within the city limits of the City of Tulare.

At the south end of the project, the landscape near the freeway is rural, with some commercial development and a manufactured home community on the west side of the freeway. The Mefford Field Airport is across from the manufactured home community on the east side of the freeway. Just to the north of the airport are the World Ag Expo grounds of the International Agri-Center complex. The Paige Avenue Interchange vicinity, which is approximately in the middle of the project area, consists of truck stops, associated businesses, and one mobile home park. Along the west side of the freeway, recently constructed commercial businesses extend northward to Bardsley Avenue. The zoning in this area is industrial and commercial, except for the mobile home parks.

Going northwards, the remainder of the city next to the freeway is built up. From Paige Avenue north along the east side of the freeway are residential neighborhoods and commercial centers that continue past the northern end of the project, which is by the Tulare Outlets. Along the west side of the freeway from Bardsley Avenue northward are residential neighborhoods, commercial centers, and a few local government facilities extending up to Cartmill Avenue, about 1 mile north of Prosperity Avenue.

Table 2.1 summarizes proposed residential developments and those under construction. Two of the eight projects listed in the table are commercial development.

Table 2.1: Proposed Development Near the Proposed Project

Name of Development	Location	Jurisdiction	Proposed Uses	Status
Fernjo Estates	Mooney Boulevard 0.25 mile south of Bardsley Avenue.	City of Tulare	Development of 80 single-family residential units and infrastructure.	Mitigated Negative Declaration completed in June 2019. The applicant has applied for building permits but is waiting for the final map to be recorded.
Liberty Hill	Bardsley Avenue/West Street	City of Tulare	Development of 384 single-family residences with infrastructure on 79.5 acres. To be developed in four phases.	Mitigated Negative Declaration completed in June 2018. Model home permits have been issued. There is no estimated time frame for when homes will be completed.
Farrar Subdivision	Tulare Avenue/Morrison Street	City of Tulare	Development of 360 single-family residences and infrastructure.	Mitigated Negative Declaration completed in February 2020. The project is under construction.
The Greens at Oak Creek	Seminole Avenue/Mooney Boulevard	City of Tulare	Development of 88 single-family detached residences on 20 acres.	Addendum to the Mitigated Negative Declaration completed in September 2020. The project is expected to be completed by the summer of 2023.
Kensington 3 and 4	Cartmill Avenue/Mooney Boulevard	City of Tulare	Development of 111 low-density residential units, pocket park.	Mitigated Negative Declaration completed in September 2020. The project is expected to be completed in 2023.
Cartmill Commercial	Next to the southeast quadrant of State Route 99/Cartmill Avenue Interchange	City of Tulare	Highway-related and other commercial development with infrastructure. Would subdivide the 21-acre parcel into 10 lots.	The property is In escrow with the developer.
Cartmill Crossings	Cartmill Avenue/Akers Street/Next to the northeast quadrant of State Route 99/Cartmill Avenue Interchange	County of Tulare (the City of Tulare is the lead agency)	Multiuse commercial and residential development. Low, medium, and high-density housing and a park. To be constructed in phases on 127 acres.	Environmental Impact Report and Notice of Determination completed in October 2019. The lots are for sale.
Paige Avenue Industrial Center	South side of Paige Avenue, west of “I” Street	City of Tulare	Development of two industrial buildings on 76.44 acres.	The project is expected to be completed in 2025.

The site of the proposed Fernjo Estates development is a little over a mile from the State Route 99 freeway via Paige Avenue, continuing on Foster Street to Mooney Boulevard, or from Bardsley Avenue to Mooney Boulevard. The parcel is within the City of Tulare's sphere of influence and urban development boundary, and annexation is planned as part of the proposal for which the city is acting as the lead agency.

The proposed Liberty Hill development is 2 miles west of State Route 99 on Bardsley Avenue.

The Farrar development, which is under construction, is 1 mile east of State Route 99 on Tulare Avenue (State Route 137).

The Greens at Oak Creek site on Mooney Boulevard (State Route 63) is a little over 0.5 mile from the freeway via Tulare Avenue and roughly 1.6 miles via Prosperity Avenue.

The Kensington 3 and 4 proposed development is 2 miles from the freeway via Prosperity Avenue and Mooney Boulevard (State Route 63) or 2 miles east of State Route 99 on Cartmill Avenue.

The Cartmill Commercial development site is on the southeast side of the Cartmill Avenue/State Route 99 Interchange, 1 mile north of the Prosperity Avenue Interchange, which is the north end of this freeway widening project.

The Cartmill Crossings mixed-use development site is on the northeast side of the Cartmill Interchange. The parcel is within the City of Tulare's sphere of influence and urban development boundary, and annexation is planned as part of the proposal for which the city is acting as the lead agency.

An industrial warehouse building is currently being built on the southwest corner of Paige Avenue and South I Street. The site plan has about 1 million square feet of warehouse space. The project is expected to be completed in 2025.

Environmental Consequences

The project would convert three developed parcels from commercial use to transportation use. Two undeveloped parcels that are commercially zoned would be converted to local government use as the new location for a City of Tulare retention basin.

Avoidance, Minimization, and/or Mitigation Measures

No specific avoidance, minimization, and/or mitigation measures are needed.

2.1.2 Consistency with State, Regional, and Local Plans and Programs

Affected Environment

Land use and zoning are guided by general plans and other agency plans for the county and cities. The general plans that guide development within the area are the City of Tulare General Plan 2035 (adopted October 7, 2014) and the Tulare County General Plan 2030 (adopted August 28, 2012).

Regional

The Tulare County General Plan, originally adopted in 1964, was most recently updated in August 2012. According to the general plan, the safe and efficient transport of people and goods within the county is of critical importance to the well-being of residents and the economic viability of the county. The mobility of people and goods will continue to be one of the important issues the county has to face in the future (Transportation and Circulation Section, 2030 Update Tulare County General Plan).

The development of the Tulare County transportation system is guided by its Regional Transportation Plan. This plan is a 25-year planning document required by state and federal law that is comprehensively updated every four years and includes programs to better maintain, operate, and expand transportation. Transportation plans applicable to the project are also discussed in Section 2.1.8 Traffic and Transportation/Pedestrian and Bicycle Facilities and Section 3.4 Climate Change. These include the Tulare County Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy 2022, the Tulare County Bicycle Plan (2010), and the Tulare County Association of Governments' Active Transportation Plan (adopted in May 2016 and amended in November 2017 and January 2020).

Local

The City of Tulare General Plan Chapter 3 of the Transportation and Circulation Element discusses how the city should focus on increasing the capacity of facilities to improve mobility for highways within the city limits. The City of Tulare's goal is to develop an integrated transportation system that provides for the safe and efficient movement of people and goods.

Environmental Consequences

This project is included in the 2022 and 2023 Federal Statewide Transportation Improvement Program and is proposed for funding from the Tulare County Association of Governments' Regional Transportation Plan.

Table 2.2 shows the consistency between the project alternatives, the City of Tulare General Plan, and the Tulare County General Plan.

Table 2.2 Consistency With Plans

Plan	Policy	Build Alternative	No-Build Alternative
City of Tulare General Plan	**COS-P2.6 Planting of Native Vegetation.** The city shall encourage the planting of native trees, shrubs, and grasslands to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.	**Consistent.** The landscape project to follow construction would include most native plant species, including valley oaks.	**Not Consistent**. The non-native species would not be removed.

Plan	Policy	Build Alternative	No-Build Alternative
City of Tulare General Plan	TR-P1.1 **Integrated Transportation System.** The city shall continue working with various agencies to maintain a multimodal transportation system that is well integrated and interconnected in terms of service, scheduling, and capacity and that effectively accommodates planned land uses and related transportation needs.	**Consistent.** The project would widen State Route 99 to meet the future traffic demands of the City of Tulare.	**Not Consistent.** Would not make any improvements to State Route 99.
City of Tulare General Plan	COS-P3.1 **Protect Interim Agricultural Activity.** The city shall protect the viability of existing interim agricultural activity in the Urban Development Boundary to the extent possible.	**Consistent.** The project would acquire a narrow strip of farmland from one parcel zoned as light industrial along the west side of the freeway and from one parcel zoned commercial by the intersection of Paige Avenue and Laspina Street. These acquisitions would not result in unfarmable remnant parcels.	**Not Consistent.** No change to existing land use.
Tulare County General Plan	**AG-2.10 Regional Transportation** The county shall work to improve regional transportation systems to support the movement of agricultural products locally, nationally, and globally.	**Consistent—** Creates a more efficient route for trucks that will reduce conflicts with automobile traffic.	**Not Consistent—** Will not provide an efficient route for trucks that will reduce conflicts with automobile traffic.

Plan	Policy	Build Alternative	No-Build Alternative
Tulare County General Plan	**TC-1.9 Highway Completion** The county shall support state and federal capacity improvement programs for critical segments of the State Highway System. Priority shall be given to improvements to State Routes 65, 99, and 198, including widening and interchange projects in the county.	**Consistent—** Provides additional lanes and interchange improvements to State Route 99.	**Not Consistent—** Will not make any improvements to State Route 99.
Tulare County General Plan	**TC-1.10 Urban Interchanges** The county shall work with Tulare County Association of Governments to upgrade State highway interchanges from rural to urban standards within urban development boundaries.	**Consistent—**The interchanges will be upgraded to urban standards. The urban interchanges would have multilane ramps with metering.	**Not Consistent—** No changes to the interchanges.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are needed.

2.1.3 Parks and Recreational Facilities

Regulatory Setting

The Park Preservation Act (California Public Resources Code Sections 5400-5409) prohibits local and state agencies from acquiring any property which is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

Affected Environment

The City of Tulare parks are protected by the Park Preservation Act. The project does not plan to acquire right-of-way from any parks; therefore, the Park Preservation Act is not applicable. However, parks are also protected by Section 4(f) of the Department of Transportation Act of 1966.

Section 4(f) requires the project development team to review how a transportation project would impact public park and recreation lands, wildlife and waterfowl refuges, and historic sites. These locations are known in the act as “Section 4(f) resources.” Section 4(f) requires the project development team to determine if a transportation project would impact the activities, features, and/or attributes of a Section 4(f) resource. Section 4(f) applies to

transportation projects that will receive federal funds or require approval by an agency under the U.S. Department of Transportation.

Two parks—Tulare Santa Fe Trail and Elk Bayou Regional Park—are within the project area.

Tulare Santa Fe Trail

The Tulare Santa Fe Trail is a 5-mile-long recreational facility that runs northeast/southwest across the city within the old Santa Fe Railway right-of-way. The eastern trailhead is on east Prosperity Avenue next to the Tulare Canal, about 600 feet west of Morrison Street. The western trailhead is across from the intersection of west Soults Drive with west Inyo Avenue (State Route 137).

The paved path is a Class 1 bike path that has shared use with pedestrians. In addition, separate equestrian trails extend along most of the linear park. Landscaped seating areas with benches are scattered within the park, and there is lighting along the trail. The park can be reserved for special events, such as fundraising walks and runs.

The Tulare Santa Fe Trail crosses the freeway on the Tulare Pedestrian Overcrossing (Caltrans Bridge Number 46-0040), a conversion of the old Santa Fe Railroad Bridge. This structure is traversed by all users of this segment of the trail, including horses.

Elk Bayou Regional Park

Elk Bayou Regional Park is situated between the south bank of Elk Bayou and Hosfield Drive at 19701 South Hosfield Drive. The westernmost edge of the park is about 230 feet east of the freeway right-of-way fence across Hosfield Drive. Park amenities include recreational facilities, picnic shelters, and restrooms; however, the park lacks potable water.

Environmental Consequences

Tulare Santa Fe Trail

The Tulare Santa Fe Trail would be temporarily affected by project construction. Temporary construction easements would be needed to construct an 8-foot-high wrought iron security fence that curves downward at the top. The fence would adjoin the Tulare Pedestrian Overcrossing as the trail approaches. The fence would be within Caltrans' right-of-way, but the workers and heavy equipment would need to access the park side of the structure to construct it.

During construction, one side of the trail crossing State Route 99 would remain open to the public at all times. The other side would be sectioned off to construct the security fence.

Section 4(f) coordination has been established between Caltrans and the Tulare City Parks Department on October 14, 2021. The city concurred that the project is not expected to "use" those facilities as defined by Section 4(f) since the trail would be used for the ingress and egress of equipment. Refer to Appendix A under the heading "Resources Evaluated Relative to the Requirements of Section 4(f)" for additional details.

Elk Bayou Regional Park

Elk Bayou Regional Park would not be affected by the project, and there would be no "use" of this Section 4(f) resource.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures would be needed.

2.1.4 Growth

Regulatory Setting

The Council on Environmental Quality regulations, which established the steps necessary to comply with the National Environmental Policy Act (NEPA) of 1969, require an evaluation of the potential environmental effects of all proposed federal activities and programs. This provision includes a requirement to examine indirect effects, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The Council on Environmental Quality regulations (40 Code of Federal Regulations 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. The CEQA Guidelines (Section 15126.2[d]) require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…"

Affected Environment

This section addresses the relationship between the project and area growth patterns. Factors affecting growth patterns depend on a range of economic forces that can be local, statewide, or even national in scope.

Different transportation projects will influence growth to different degrees and in different ways. Caltrans used a two-phase approach to evaluate growth-related impacts. The first phase, called "first-cut screening," is designed to help the environmental planner figure out the likely growth potential effect and whether further analysis of the issue is necessary. This will be discussed further in the Environmental Consequences section.

For this growth analysis, the study area consists of Tulare County and the City of Tulare. This impact analysis discusses the environmental impacts by geographic area (at the county and city level) rather than by alternative because most sources publish economic data for areas that are within distinct geographical and political boundaries. Although some sources provide economic data (such as total employment and unemployment rate) for cities, most economic data sources describe the correlation between various economic sectors only at the county level. County-level information includes data for the unincorporated parts of the county and the cities.

The Sustainable Communities Strategy, which is included in the Tulare County Association of Government' Regional Transportation Plan for 2022, identifies an updated forecast of population, housing, and jobs. The Tulare County Association of Governments developed a new forecast for the Sustainable Communities Strategy based on the most comprehensive and up-to-date regional forecasts and projections available. The growth forecast incorporates substantial data available from projections published by the California Department of Finance, Demographic Research Office, in 2021. The growth forecast, based on the Department of Finance's projection, is much more restrained than in previous Regional Transportation Plans.

The new 2021 Department of Finance population projection for the year 2040 (551,563) is quite a bit lower than that of the 2017 Department of Finance projection for the year 2040 (594,348) used for the 2018 Regional Transportation Plan and Sustainable Communities Strategy and significantly lower than the projection for the year 2040 (722,838) used for the 2014 Regional Transportation Plan and Sustainable Communities Strategy, a difference of 171,275 persons. This is due to lower birth rates consistent with the state as a whole and the fact that Tulare County is still experiencing low net migration (573 persons in 2019) as opposed to the peak (4,473-plus persons in 2004) because of the Great Recession.

According to the California County-Level Economic Forecast Methodology Update prepared by the California Economic Forecast, the Tulare County population is expected to grow more slowly than the broader Central Valley from 2022 to 2027. The Tulare County population will expand at an annual average rate of about 0.6 percent, compared to the greater Central Valley region rate of about 0.9 percent per year. These projections fall in line with the Department of Finance numbers from the Sustainable Communities Strategy. The California Economic Forecast also stated that housing construction will mainly come from small projects rather than large, planned communities.

Food processing will remain a viable and growing manufacturing sector for Tulare County for the indefinite future. Tulare County is the location of major manufacturing and food companies, including International Paper, Sonoco, Green Power Bus, California Dairies, Incorporated, Saputo Cheese, Kraft

Foods, Ruiz Foods, DryVit, Land O' Lakes, Incorporated, Svenhards, and Kawneer. Many of these facilities are near the project area.

Tulare County Association of Government'' Regional Transportation Plan 2022

The land use scenario envisioned by the Tulare County Association of Government'' Regional Transportation Plan 2022 would emphasize the development of infill and transit-oriented development projects within existing urbanized areas and, therefore, may redistribute growth patterns. The location of infill and transit-oriented development projects would generally be on properties that have been identified as vacant or underutilized within applicable local jurisdictions. Infill and transit-oriented development projects would not necessarily result in significant new population growth within these jurisdictions; rather, the proposed Tulare County Association of Government'' Regional Transportation Plan 2022 would accommodate anticipated growth and concentrate it within existing urban cores instead of on the periphery of urban areas or within rural or semi-rural areas.

Implementing the proposed Tulare County Association of Government'' Regional Transportation Plan 2022 would create short-term economic growth in the region via construction-related job opportunities. Implementing the plan would also generate additional employment opportunities for roadway, vehicle, and landscape maintenance and transportation facility cleanup. The employment increase may subsequently increase the demand for support services and utilities, which could generate secondary employment opportunities. This additional economic growth would likely raise the existing revenue base within the region, although such growth may incrementally increase economic activity in Tulare County.

Furthermore, while development envisioned as part of the proposed Tulare County Association of Government'' Regional Transportation Plan 2022 could result in additional commerce, industry, recreation, public services, and infrastructure throughout the region, this economic activity would be consistent with the regional growth forecast and local general plans.

Tulare County General Plan, Component B, Tulare County Prosperity

The Prosperity component of the Tulare County General Plan includes the following elements listed below that help shape Tulare County's land use and economic future:

Agriculture

"One of the most identified assets in Tulare County is the rich agricultural land on the Valley floor and in the foothills. The General Plan identifies agriculture not only as an economic asset to the County but also as a cultural, scenic, and environmental resource to be protected."

Land Use

"Tulare County's communities and hamlets will continue to grow and develop while natural resource lands (agriculture and open space) will be preserved. Projected population growth will require a range of housing choices, neighborhood support services, and employment-producing uses that are centrally located in communities. The County will also limit the conversion of agricultural and other natural resource lands to urban uses."

Economic Development

"The County's economy will expand and diversify. Agriculture will remain the mainstay of the County's economy, while agriculturally related industries and non-agricultural industries will play an increasingly larger role in the local economy. Many of the planning principles and policies in the General Plan protect existing agricultural lands and industries while providing support for the advancement and diversification of agriculturally related enterprises."

Housing

"The purpose of the Housing Element is to identify the County's housing needs, state the County's goals and objectives with regard to housing production, rehabilitation, and conservation to meet those needs, and to define the policies and programs that the County will implement to achieve the stated goals and objectives."

2022 Tulare County Association of Governments, Regional Transportation Plan, Chapter D, Goods Movement System Improvements

Shipping raw materials and finished goods is a central feature of any economy. While the trucking industry carries most of the freight, commodity movement can occur by road, rail, air, and pipeline. Throughout the state, freight movement over state highways has grown faster than capacity; Tulare County is no exception to this trend. Freeway widenings in the Tulare region are constrained to this one corridor. Investment in State Route 99 in Tulare County will facilitate the efficient movement of goods and improve safety. The project is one of four remaining segments of State Route 99 proposed for widening in the Regional Transportation Plan, which is designed to complete the system and close the remaining four-lane gaps in Tulare County.

Tulare General Plan for the City of Tulare, Transportation and Circulation Element

The Transportation and Circulation Element prioritizes the following transportation elements:

- Improving the safety and capacity of transportation facilities, along with implementing a plan for enhancement within the City of Tulare.

- Improving goods movement infrastructure and trade to increase economic vitality, safety, and mobility while decreasing congestion and air quality issues.
- Promoting the development of a multimodal transportation system.

City of Tulare Zoning

According to the City of Tulare Zoning and Land Use Viewer available at (https://maps.tulare.ca.gov/portal/apps/webappviewer/index.html?id=77881c8a35a445259d72b416d25ccd7d), the current zoning designation for the entirety of land next to the project area is either heavy industrial or light industrial.

The Tulare County General Plan identifies that the development of land for industrial uses will help meet the present and future needs of Tulare County residents for jobs and economic vitality, which includes the following components:

- The County shall encourage a wide range of industrial development activities in appropriate locations to promote economic development and employment opportunities and provide a sound tax base.
- The County shall encourage the development of visually attractive, well-landscaped, and carefully planned industrial parks in areas with suitable topography and adequate infrastructure.
- The County shall require adequate landscaping and screening of industrial storage areas to minimize visual impacts and enhance the quality of the environment.
- The County shall encourage the infill of existing industrial areas and ensure that proposed industrial uses will not result in significant harmful impacts to nearby land uses.
- The County shall locate industrial development where there is access from collector or arterial roads and where industrial and/or heavy commercial traffic is not routed through residential or other areas with uses not compatible with such traffic.

South I Street Industrial Park Specific Plan

- In 2009, the City of Tulare approved the South I Street Industrial Park Specific Plan. The Specific Plan project area consists of about 458 acres located southwest of the State Route 99/Paige Avenue Interchange. This area is bounded by Bardsley Avenue on the north, Union Pacific Railroad Mainline on the east, Pratt Street on the west, and an east-west running line about 0.5 mile south of Paige Avenue. The Specific Plan includes the annexation of the 458 acres from Tulare County into the Tulare City limits. In addition, the Urban Reserve Line and the Urban Development Line will be amended, adding an additional 265 acres. The proposed area will be divided into 2 acres of light industrial, 361 acres of heavy industrial, and

83 acres of Urban and Suburban Residential. The remaining 12 acres are street and railroad right-of-way. Both the heavy and light industrial districts provide locations for industrial activities, protect industrial areas from the intrusion of incompatible types of land uses, adhere to performance standards provided for the protection of City of Tulare residents and the environment, and provide industrial employment opportunities for residents of the City of Tulare. The objectives of the South I Street Industrial Park Specific Plan are listed below.

- Provide additional industrial land to accommodate larger and medium-sized users.
- Provide a distinct separation or buffer between industrial and residential land uses.
- Provide improved circulation around the Paige Avenue-South I Street intersection that considers a future railroad grade separation crossing.
- Provide for the potential abandonment of South I Street, south of Bardsley Avenue.
- Provide for the extension of South H Street to Paige Avenue.
- Provide industrial park amenities along South H Street that include block walls and landscaping to form a separation between industrial and residential uses.
- Provide a rail connection.
- Establish a land use pattern that allows for railroad-grade separation projects to occur at Bardsley Avenue and Paige Avenue efficiently and economically.

International Agri-Center Interchange Project

About 0.8 mile south of the project area, construction of a four-lane interchange at Commercial Avenue has started. The project will construct a four-lane interchange (two through lanes per the direction of traffic) at Commercial Avenue by using the existing Commercial Avenue from K Street to connect to State Route 99.

The project will also construct a left-turn lane from southbound K Street and a right-turn lane from northbound K Street for traffic to turn onto Commercial Avenue. Existing Commercial Avenue would be widened and realigned to accommodate the new freeway interchange. A new portion of Commercial Avenue would connect with Laspina Street to become a “T” intersection.

The purpose of the project is to improve the operational performance of State Route 99 within the project limits, relieve traffic congestion on local roads, and improve accessibility to the freeway system in that area. In addition, the project improvements would enhance the east-west movement of traffic and goods, supporting economic development.

International Agri-Center

The International Agri-Center is home to the World Ag Expo, an annual event held each February. Annual attendance at the World Ag Expo can exceed 100,000 people from 70 different countries. The World Ag Expo is the largest annual agricultural show of its kind and includes about 1,500 exhibitors displaying agricultural technology and equipment on 2.6 million square feet of showgrounds (World Ag Exp website). The International Agri-Center is about 1 mile south of the Paige Avenue Interchange.

Environmental Consequences

The "first-cut screening" questions below were used to determine the likely growth potential effect and whether further analysis of the issue is necessary.

a. How, if at all, does the project potentially change accessibility?

Response:

The State Route 99/Paige Avenue Interchange is a Type L-6 interchange with the freeway ramps connecting to Blackstone Street and Paige Avenue. The existing southbound hook ramps connect to Blackstone Street in the northwest corner of the interchange at an intersection about 150 feet north of the Paige Avenue and Blackstone Street intersection. The existing northbound hook ramps connect directly to Paige Avenue in the southeast corner of the interchange. The project would improve and reconfigure an already existing interchange, so it would not have the effect of opening up accessibility to an area that is currently not accessible. The project would, however, improve the existing access by improving the operational characteristics of the interchange.

b. How, if at all, do the project type, project location, and growth pressure potentially influence growth?

Some transportation projects may have very little influence on future growth, while others may have a great influence. Some geographic locations are more conducive to influencing growth, while others are highly constrained. These differences may result from physical constraints, planning and zoning factors, or local political considerations.

Response:

Different types of projects present different potentials for influencing growth. According to the Guidance for Preparers of Growth-Related, Indirect Impact Analysis, projects that improve existing conditions in a facility but do not increase capacity or accessibility typically have a low likelihood of causing growth-related impacts. On the other hand, projects that increase capacity and accessibility typically have a high likelihood of growth-related impacts, particularly projects that create new facilities and new access. The Tulare Six-

Lane and Paige Avenue Interchange Improvement project would add capacity to an existing facility but would not create new access.

The project is within the City of Tular''s boundaries and the city's planning area. The land use throughout the project area is a mix of agricultural land, light-to-heavy industrial uses, community commercial facilities, low-to-high-density residential tracts, and neighborhood commercial shopping centers. The immediate vicinity at the Paige Avenue Interchange is considered an industrial area of the city that extends west of the freeway, south from Bardsley Avenue along State Route 99. In this area, the 2035 City of Tulare General Plan indicates a shift toward heavy industrial use in the future.

Growth pressure is the amount and intensity of development in each area and can be an indicator of potential growth-related impacts. Whether or not a project influences growth depends on several factors, including maintaining existing zoning restrictions and land use designations, implementing farmland protection policies, and adhering to adopted growth boundaries. The City of Tulare and the County of Tulare work cooperatively to plan for growth and development, as reflected by the establishment of the Urban Development Boundary. Adherence to these boundaries aids in handling growth pressure by making adequate quantities of land available for development within the existing urban area. The project lies completely within the Urban Development Boundary and would support the City and County plans for development in the area.

c. Determine whether project-related growth is "reasonably foreseeable"" as defined by NEPA. Under NEPA, indirect impacts need only be evaluated if they are reasonably foreseeable, as opposed to remote and speculative.

Response:

Based on the project type, project location, and growth pressure within the project area, it is reasonably foreseeable that the project could have growth-related impacts and requires further analysis.

Growth Impacts for the Build Alternative

As mentioned earlier, the South I Street Industrial Park Specific Plan was approved in 2009 and will guide development throughout the vacant land along the west and southwest areas next to the project. It is reasonably foreseeable that vacant land within the South I Street Industrial Park Specific Plan boundaries will experience accelerated growth with the implementation of the interchange and widening project. Traffic congestion relief within the interchange area would be relieved as large trucks that service the industrial areas can travel more efficiently.

It is reasonably foreseeable that the International Agri-Center Interchange Project mentioned above will accelerate growth within the project area. The

project will use the existing Commercial Avenue from K Street to convey traffic from the west side of State Route 99 to the east side of State Route 99 near the International Agri-Center. This interchange project will help alleviate traffic congestion throughout the Commercial Avenue and Paige Avenue areas by providing a southern entrance for northbound trucks into the industrial areas along the west side of State Route 99.

Accelerated industrial-related growth between I Street and State Route 99 would be expected as access improves to and from the area from the north at Paige Avenue and to the south at Commercial Avenue. It is reasonably foreseeable that infrastructure development and further improvement on local roads would continue as indicated in the South I Street Industrial Park Specific Plan.

Many of the adverse impacts that could occur from the implementation of the project are temporary in nature, resulting primarily from the construction of the proposed transportation project. Typical construction-related impacts can involve the following issues: noise, air quality, aesthetics, and construction-related erosion and associated water quality impacts. Though such materials would not be used in a wasteful manner, all construction activity would involve the use of non-renewable energy sources, potable water, and building materials. The use of these resources during construction would increase demand and impact supplies across the Tulare County region.

For further discussion of potential growth-related impacts associated with the Tulare Six-Lane and Paige Avenue Interchange Improvement project, please see Section 2.4, Cumulative Impacts.

No-Build Alternative

The No-Build Alternative would not be consistent with the Regional Transportation Plan or the city and county general plans because the existing roadway does not meet the projected road capacity demand expected for the future. The project area would deteriorate due to increases in average daily traffic volumes to avoid the more heavily congested segments of this section of State Route 99.

Avoidance, Minimization, and/or Mitigation Measures

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

2.1.5 Community Character and Cohesion

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S. Code 4331[b][2]). The Federal Highway

Administration, in its implementation of NEPA (23 U.S. Code 109[h]), directs that final decisions on projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act (CEQA), an economic or social change by itself is not to be considered a significant effect on the environment.

However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical changes to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

Affected Environment

The project lies within the City of Tulare, with a portion of the work being performed on Paige Avenue, a city street. The land use on Paige Avenue (east of State Route 99 toward Blackstone Street) is heavy industrial and light industrial. Regional chains and businesses (fast food establishments, mini-marts, and gas stations) that cater to the traveling public are concentrated near State Route 99 and Paige Avenue. Low-density residential and neighborhood commercial uses are located west of State Route 99 toward Laspina Street.

This is a cohesive community with public facilities and services overseen by the city council and administered by various city departments, such as city services, planning and economic development, public safety, and human resources.

Environmental Consequences

Three businesses would need to be relocated to construct the Paige Avenue Interchange area, including along the east and west sides of the freeway south of Paige Avenue. The businesses consist of a motel, a truck stop, and an auto/truck tire service (see Table 2.3).

Table 2.3 Potential Relocation of Businesses

Location Area	Assessor's Parcel Number	Business	Use
Southbound On-Ramp to Paige Avenue/Blackstone Street	182-110-020	Gutierrez Auto Truck and Farm Service	Agricultural equipment, tire sales, and service
Northbound On-Ramp to Paige Avenue	191-070-013	Paige Truck Stop	Truck stop
Northbound On-Ramp to Paige Avenue	191-070-014	Budget Inn Motel	Motel

The relocation of the businesses would potentially change community access to these facilities. The Paige Truck Stop is designated as a neighborhood commercial zone in the City of Tulare General Plan, which is a daily convenience shopping service next to residential neighborhoods. A Relocation Impact Memorandum was completed in November 2020, and the real estate market in the area indicates that there is and will be, in the foreseeable future, adequate property for sale or lease in the area to relocate the above businesses.

The project proposes operational improvements that would enhance community cohesion by adding a pedestrian/bicycle shared path on the Paige Avenue Overcrossing. The proposed roundabout locations at Blackstone Street and Laspina Street would have 10-foot-wide paved paths for shared pedestrian and bicycle use, would go around each roundabout, and would extend east and west along Paige Avenue. Americans with Disabilities Act-compliant curb ramps would be part of the design. A 5-foot-wide landscaped buffer would separate these paths from the roadway in the roundabouts and along the approaching and departing lanes on Paige Avenue, Blackstone Street, and Laspina Street.

The project would improve public access with planned interchange improvements and added pedestrian facilities. The project would not impact or divide neighborhoods because the project improvements would be constructed on existing facilities. There are no planned improvements in the project that would divide residences from the existing community facilities. The project is not anticipated to cause any growth in the community because it is making improvements to existing facilities and not creating new accessibility for motorists. The planned improvements would improve the quality of life in the area through better traffic circulation and improved pedestrian and bicycle facilities.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans will provide relocation assistance payments and counseling to businesses affected by the project in accordance with the Uniform Act and Relocation Assistance Program of 1970, as detailed in Appendix C.

2.1.6 Relocations and Real Property Acquisition

Regulatory Setting

The Department's Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), and Title 49 Code of Federal Regulations Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix C for a summary of the Relocation Assistance Program.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix B for a copy of the Department's Title VI Policy Statement.

Affected Environment

A Relocation Impact Memorandum was completed in November 2020, and an updated Right-of-Way Data Sheet Memorandum was completed on August 23, 2022.

To construct the build alternative, right-of-way would need to be acquired by Caltrans in the Paige Avenue Interchange area, including along the east and west sides of the freeway south of Paige Avenue, along Blackstone Street and Laspina Street, where roundabouts would be constructed, between Paige Avenue and Bardsley Avenue along the west side of the freeway, and along the northbound Bardsley Avenue on-ramp.

Environmental Consequences

There are 15 full right-of-way acquisitions estimated for the project that include three commercial businesses, two vacant commercial parcels, four miscellaneous/governmental used parcels, two of which are operating as a canal, and six vacant residential zoned parcels (see Table 2.4).

Gutierrez Auto Truck and Farm Service, located on the southbound off-ramp of the existing Paige Avenue Interchange, would be a full acquisition because the new southbound off-ramp and the proposed relocation of the Tulare Canal would cross onto that parcel.

Construction of the new northbound off-ramp at Paige Avenue and a new drainage basin would require the full acquisition of the Budget Inn Motel and Paige Truck Stop.

On the north side of Paige Avenue, construction of a northbound on-ramp would require the removal of an existing retention basin owned by the City of Tulare, which drains the streets between Paige Avenue, the Tulare Main

Canal, and Laspina Street. Two vacant commercial parcels on Paige Avenue are proposed as a location for a city retention basin and would be crossed by the new northbound on-ramp.

Table 2.4 Estimated Full Right-of-Way Acquisition

Location Area	Assessor's Parcel Number	Business	Use
Southbound On-Ramp to Paige Avenue/Blackstone Street	182-110-020	Gutierrez Auto Truck and Farm Service	Agricultural equipment, tire sales, and service
East Side of State Route 99, North of Paige Avenue	182-230-053	None; zoned as commercial	Vacant lot
Northbound On-Ramp to Paige Avenue	191-070-013	Paige Truck Stop	Truck stop
Northbound On-Ramp to Paige Avenue	191-070-014	Budget Inn Motel	Motel
East Side of State Route 99, North of Paige Avenue	182-230-054	Zoned commercial	Vacant lot
East Side of State Route 99 Next to the Bardsley Avenue Northbound On-Ramp	177-060-009	Zoned miscellaneous	Vacant lot
East Side of State Route 99 Next to the Bardsley Avenue Northbound On-Ramp	177-060-010	Zoned miscellaneous	Vacant lot
East Side of State Route 99 Next to the Bardsley Avenue Northbound On-Ramp	177-060-011	Zoned miscellaneous	Vacant lot
East Side of State Route 99 Next to the Bardsley Avenue Northbound On-Ramp	177-060-012	Zoned miscellaneous	Vacant lot
East Side of State Route 99 Next to the Bardsley Avenue Northbound On-Ramp	177-060-013	Zoned miscellaneous	Vacant lot
East Side of State Route 99 Next to the Bardsley Avenue Northbound On-Ramp	177-060-002	Zoned miscellaneous	Vacant lot
East Side of State Route 99, South of Paige Avenue	191-070-015	Not Applicable	Owned by the City of Tulare. Land being used as truck parking
Proposed Northbound State Route 99 On-Ramp From Paige Avenue	182-230-047	Not Applicable	Drainage basin
Proposed Northbound State Route 99 On-Ramp From Paige Avenue	182-230-048	Not Applicable	Segment of Tulare Canal

Location Area	Assessor's Parcel Number	Business	Use
Proposed Northbound State Route 99 On-Ramp From Paige Avenue	182-190-038	Not Applicable	Segment of Tulare Canal

In addition to the full acquisitions, slivers of land would need to be acquired from about 23 parcels next to existing streets and the freeway (see Table 2.5). Most of these properties are zoned for commercial or industrial uses. The area includes:

- Along the west side of the freeway from the Paige Avenue Interchange southbound ramps northward, partial property acquisition would be needed from five parcels for the realigned southbound off-ramp and proposed realignment of the Tulare Canal.

Along the southbound Bardsley Avenue on-ramp, a narrow strip of land would need to be acquired from 10 parcels, including vacant land, auto and truck-related businesses, and a mini-storage facility.

Table 2.5 Estimated Partial Right-of-Way Acquisition

Location Area	Assessor's Parcel Number	Business and/or Owner	Use	Required Right of Way Area (Acreage)
Southbound State Route 99, Along Blackstone Street	191-060-017	Love's Country Store	The area being affected is vacant land.	5.220
Southbound State Route 99, Along Blackstone Street	191-060-018	Not Applicable	Parking lot for Love's Country Store	The parcel was split from one Assessor Parcel Number; the required right-of-way is not yet determined.
Southbound State Route 99, Along Blackstone Street	191-060-019	Not Applicable	Vacant land	The parcel was split from one Assessor Parcel Number; the required right-of-way is not yet determined.
Southbound State Route 99 On-Ramp From Paige Avenue	191-050-076	Flying J Travel Center	Truck Stop	0.891
Northbound State Route 99 On-Ramp to Paige Avenue	191-070-019	Not Applicable	Sliver of parcel between a mobile home park and Laspina Street	0.730
Northbound State Route 99 On-Ramp to Paige Avenue	191-070-024	Not Applicable	Corner lot with orchard on Laspina Street	0.924
Proposed Northbound State Route 99 On-Ramp From Paige Avenue	182-340-001	Not Applicable	Vacant lot	0.674
Southbound Side of State Route 99, South of Paige Avenue	191-330-016	Calportland Company	Concrete Plant	0.088
Southbound State Route 99 On-Ramp to Paige Avenue	182-110-019	Mobil	Truck Stop	0.508
Southbound State Route 99 On-Ramp to Paige Avenue	182-110-012	Not Applicable	Agricultural field zoned commercial	0.827

Location Area	Assessor's Parcel Number	Business and/or Owner	Use	Required Right of Way Area (Acreage)
Southbound State Route 99 Off-Ramp to Paige Avenue	182-050-046	Krone America Sales and Service Center	Farm equipment; sales	0.331
Southbound State Route 99 Bardsley Avenue On-Ramp	182-010-023	Derrel's Mini Storage, Incorporated	Mini storage	0.21
Southbound State Route 99 Bardsley Avenue On-Ramp	182-020-037	Bender and Bender	Vacant basin	0.053
Southbound State Route 99 Bardsley Avenue On-Ramp	182-020-048	A Premier Towing	Towing and car and truck repair	0.088
Southbound State Route 99 Bardsley Avenue On-Ramp	182-020-049	A and L Truck Supply	Trucking accessories sales	0.023
Southbound State Route 99 Bardsley Avenue On-Ramp	182-020-044	3D Offroad/Spectra Chrome Powder Coating	Repairs, metal fabrication/metal coating, and painting	0.148
Southbound State Route 99 Bardsley Avenue On-Ramp	182-030-032	Autocom/Truck and RV Repair-Road Service and Tire	Truck and RV repair and towing	0.052
Southbound State Route 99 Bardsley Avenue On-Ramp	182-030-031	Aguilar's Mobile Lube Service /Autocom	Auto and heavy equipment repair	0.080
Southbound State Route 99 Bardsley Avenue On-Ramp	182-030-030	Wilbourn, Limited Liability Company	Vacant lot	0.057
Southbound State Route 99 Bardsley Avenue On-Ramp	182-040-031	Santos	Vacant lot	0.126
Southbound State Route 99 Bardsley Avenue On-Ramp	182-040-034	C.P. Phelps, Incorporated	Bulk plant and gas station	0.026
Northbound State Route 99 Bardsley Avenue On-Ramp	177-060-026	Tulare Irrigation District	Underground pipe	0.013
Northbound State Route 99 Bardsley Avenue On-Ramp	177-300-026	City of Tulare	Vacant lot	0.435

An analysis of the real estate market indicates that there is, and will be in the foreseeable future, adequate property for sale or lease in the area to relocate the three businesses that would require full acquisition.

Any person, family, corporation, or partnership who moves from real property or moves personal property from real property as a result of the acquisition of the real property or is required to relocate as a result of a written notice from the California Department of Transportation from the real property required for a transportation project is eligible for relocation assistance. All activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources shall be available to all displacee free of discrimination.

Refer to Appendix C, Summary of Relocation Benefits, for an explanation of Caltrans' Relocation Assistance Advisory Services. Among these services, the Nonresidential Relocation Assistance Program provides assistance to businesses, farms, and nonprofit organizations in locating suitable replacement property and reimbursement for certain costs involved in relocation.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is proposed.

2.1.7 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President William J. Clinton on February 11, 1994.

This executive order directs federal agencies to take the appropriate and necessary steps to identify and address the disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2021, this was $26,500 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. The Department's commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix B of this document.

Affected Environment

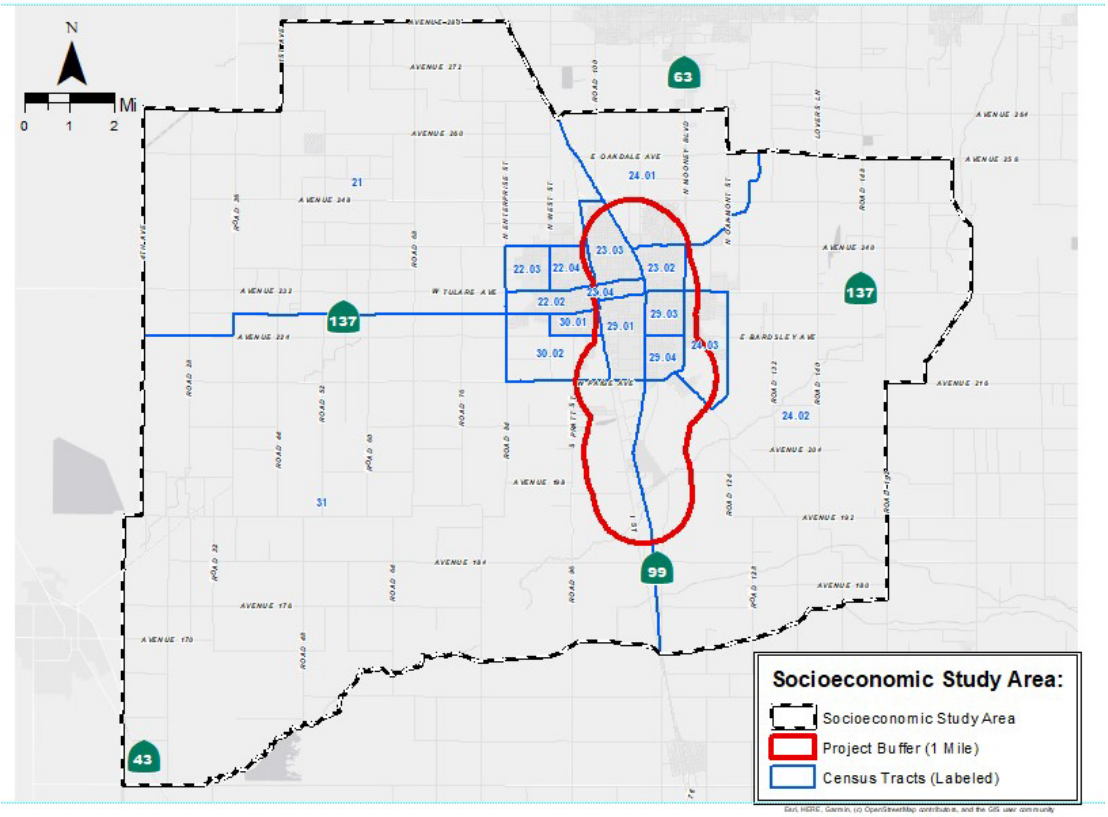
The analysis of environmental justice impacts is a two-step process. The first step is determining the presence of protected populations (minority or low-income populations). The second step is determining whether the project would have a disproportionate adverse impact on those protected populations

if they are present. Impacts are considered disproportionate if they are more severe or greater in magnitude for minority and low-income populations compared to impacts on nonminority or higher-income populations. Impacts on populations can include noise, air quality, water quality, hazardous waste, community cohesion, aesthetics, economic vitality, accessibility, safety, and construction activities.

The study area for the environmental justice analysis consists of the census tracts and a 1-mile radius from the proposed right-of-way.

U.S. Census Bureau, 2021 American Community Survey 1-Year Estimates demographic data were analyzed to comply with Executive Order 12898. The socioeconomic data for census tracts 23.02, 23.03, 23.04, 24, 29.01, 29.03, 29.04, and 31 were used for analysis.

Figure 2-1 Socioeconomic Map of the Project Area



Source: U.S. Census Bureau TIGER/Line Shapefiles.

Income and ethnicity data for census tracts were compared with income and ethnic composition data from the City of Tulare and Tulare County to determine if the study area had a disproportionately large low-income or minority population.

A census tract is considered to contain an environmental justice population if:

- The total minority population of the census tract is more than 50 percent of the total population of the tract or is substantially higher than the city or county that the tract is in.
- The percentage of the census tract population is below the Department of Health and Human Service's poverty threshold or falls below that of the city or county in which the tract is located.

Census tracts and block groups impacted by the project and meeting the criteria of being in an area of disproportionately high ethnic minorities or lower-income households are referred to as "environmental justice population"" or "environmental justice communities" because these groups are afforded certain environmental justice protections under Executive Order 12898.

[This section has been updated since the draft environmental document was circulated] Table 2.6 was corrected to show census tracts 24.01, 24.02, 24.03, and 29.03 as environmental justice populations.

Table 2.6 Environmental Justice Populations by Census Tract in the Socioeconomic Study Area of Tulare County

Geographic Area	Aggregate Minority Percentage	Percentage of Families Below Poverty Level	Median Family Income	Environmental Justice Population?
Tulare County	72.4	18.6	$58,209	Not Applicable
City of Tulare	66.4	12.4	$63,668	Not Applicable
Census Tract 23.02	49.8	15.3	$59,135	Yes
Census Tract 23.03	44.6	9.9	$70,250	No
Census Tract 23.04	62.3	17.1	$57,813	Yes
Census Tract 24.01	60.5	6.7	$109,893	Yes
Census Tract 24.02	52.1	11.7	$73,700	Yes
Census Tract 24.03	64.4	6.9	$83,661	Yes
Census Tract 29.01	95.2	25.6	$58,750	Yes
Census Tract 29.03	64.5	5.7	$69,000	Yes
Census Tract 29.04	60.8	16	$52,788	Yes
Census Tract 31	79.0	12.5	$61,154	Yes

Source: U.S. Census Bureau, 2021 American Community Survey 1-Year Estimates.

Each census tract in the socioeconomic study area has an aggregate minority percentage above 50 percent, except for tract 23.02, with 49.8 percent, and tract 23.03, with 44.6 percent. All tracts are below the city and county percentages except for tracts 29.01 and 31, with 95.2 percent and 79 percent, respectively. The median family income for the city, county, and all tracts is well above the 2021 Department of Health and Human Services poverty threshold of $26,500 for a family of four.

Within the 1-mile radius of the study area is census tract 31, which includes the Matheny Tract, which is about 2 miles west of the Paige Avenue/State Route 99 Interchange. The Matheny Tract is a disadvantaged unincorporated community, according to the Matheny Tract Legacy Plan prepared by the

Tulare County Resource Management Agency Economic Development and Planning Branch.

It is determined that environmental justice populations are present within the study area due to the high percentage of minority populations identified in the socioeconomic study area. An analysis of effects related to environmental justice populations is required, subject to the provisions of Executive Order 12898.

Environmental Consequences

The following impacts would occur because of the Build Alternative:

Community Cohesion and Relocation Impacts

The project would require the relocation of three businesses (Budget Inn, Paige Truck Stop, and Gutierrez Auto Truck and Farm Service (Tire Shop)) that may be used by environmental justice communities (see Community Character and Cohesion Section 2.1.5 and Relocations and Real Property Acquisition 2.1.6 for additional information). While the truck stop provides daily convenience shopping services, the real estate market analysis prepared for the project indicates that adequate relocation options are currently available and will be in the foreseeable future.

Near the Paige Avenue Interchange, similar convenience stores, such as the Flying J Travel Center and Love's Travel Stop, are less than 5 minutes away from the Paige Truck Stop. The relocation of the Paige Truck Stop would not cause an inconvenience for environmental justice communities since there are stores in the area that have similar amenities and will not increase additional travel time. There will be a loss of convenient access to the Gutierrez Auto Tire Shop, which is next to the State Route 99 southbound off-ramp; environmental justice residents would have to travel 1.28 miles to the nearest tire shop (Alfaro Tire Services) on K Street off Paige Avenue. Alfaro Tire Services is closer to the environmental justice community in Matheny Tract.

Access to stores and services that provide the amenities that the community is accustomed to will remain relatively unchanged. Relocation assistance will be provided for those businesses being displaced, and there will not be any high and adverse effects on community cohesion.

Visual Impacts

The overall visual impact of the project is expected to be moderate to high. Removing oleanders within the median and replacing them with pavement would have a visual impact experienced by all users traveling on State Route 99.

Moderate and high impacts can be mitigated using conventional practices, as discussed in Section 2.1.10.

In addition to the above-listed visual impacts:

- The project will not impact scenic vistas.
- The project will not impact scenic resources on a state scenic highway.
- The project will have a less than significant impact (CEQA) on the existing visual character of the site and its surroundings.
- The project will not create a new source of light or glare.

Visual impacts due to the contractor's operation, such as night lighting, dust, temporary structures, hauling materials, contractor yards, or detours, are not expected to be out of the ordinary for a roadway construction area. Temporary construction visual impacts are expected to be low. Therefore, with the inclusion of measures to lessen visual impacts, there will not be any disproportionately high and adverse effects related to visual impacts.

Noise Impacts

Project construction is estimated to last about three years (February 2027 to October 2029). Construction activities would be performed during the day and night. Noise from construction activities may intermittently dominate the noise environment in the immediate construction area (see Section 2.2.5 for additional information).

Night work is expected during construction. Whenever this type of activity occurs, there will be standard special provisions showing the days and times of such activities. Equipment involved in construction is expected to generate noise levels ranging from 80 to 95 A-weighted decibels at 50 feet. The noise produced by construction equipment would be reduced over distance at a rate of about 6 decibels per doubling of distance.

Construction noise varies greatly depending on the construction process, the type and condition of equipment used, and the layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Construction noise estimates are approximate because of the lack of specific information available at the time of the assessment.

The noise level requirement specified herein would apply to the equipment on the job or related to the job, including but not limited to trucks, transit mixers, or transient equipment that may or may not be owned by the contractor.

Vibration due to construction activities would be temporary in nature, and long-term vibration would be unlikely because highway traffic does not generally generate high enough levels of vibration to cause damage to residences or other structures, even at a very close distance from the facility.

Future traffic impacts of the project were measured at frequent outdoor human use areas within the highway project limits. The future worst-case traffic noise impact at frequent outdoor human-use areas along the project alignment was modeled for the Build Alternative to determine abatement measures. The project would result in noise impacts that would require the consideration of noise abatement. Three soundwalls are proposed for the project in environmental justice census tracts 23.04, 29.01, and 29.04.

Therefore, with the inclusion of minimization measures and soundwalls, there will not be any high and adverse effects related to noise impacts.

Air Quality

In the air quality report, sensitive receptors include hospitals, schools, day care facilities, elderly housing, and convalescent facilities. For sensitive receptors, the zone of greatest concern near roadways is within 500 feet (or 150 meters), according to the California Air Resources Board's Air Quality and Land Use Handbook (2005). However, no sensitive receptors have been identified within 500 feet of this project.

Construction-related impacts are temporary in nature and can be reduced through the use of avoidance and minimization measures. This is implemented through compliance with applicable existing city, county, state, and district regulations for reducing construction-related emissions. The San Joaquin Valley Air Pollution Control District's Regulation 8 is applied to all construction sites and would constitute sufficient measures to reduce air quality impacts. Individual projects would be required to implement measures to reduce construction emissions as determined by the respective air quality analysis for construction impacts.

Measures to reduce construction-related greenhouse gas emissions must be included in all projects.

- Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section 14-9.02 "Air Pollution Control" and Section 10-5 "Dust Control," require the contractor to comply with the air pollution control rules, ordinances, and regulations and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017. The amount of Particulate Matter 10 and Oxides of Nitrogen emissions is likely to exceed the San Joaquin Valley Air Pollution Control District's (San Joaquin Valley Air Pollution Control District) Rule 9510/Indirect Source Review Rule. The construction contractor selected for this project will be required to comply with this rule and submit an Air Impact Analysis to the San Joaquin Valley Air Pollution Control District and pay any fees if required.

- Measures to reduce fugitive dust are required by the California Air Resources Board and San Joaquin Valley Air Pollution Control District. The construction contractor must comply with Caltrans' Standard Specifications in Section 14-9 (2015) and Section 14-9-02, which specifically require compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
- A dust control plan will be developed, documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes as needed to minimize construction impacts on existing communities.
- Equipment and material storage sites will be located as far away from park and residential uses as practicable. Construction area will be kept clean and orderly.
- To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

A construction impact analysis will be performed later as the project moves closer to construction. Monitoring and abatement requirements of Caltrans' Standard Specifications and Standard Special Provisions will be adhered to.

No-Build Alternative

Under the No-Build Alternative, the project roadways would remain as currently developed. Minority and low-income populations in the socioeconomic study area and residing within the region would be subject to deteriorating roadways, nonstandard road conditions, and increased congestion on State Route 99 and at the Paige Avenue Interchange. Minority and low-income populations would not experience the effects of the project, such as construction noise and dust; however, these populations would also not experience the beneficial effects associated with the project.

Conclusion

Environmental justice impacts are borne mostly by a minority population and/or a low-income population. Adverse impacts on environmental justice populations in the socioeconomic study area would occur from the following: cumulative impacts to air quality described in the 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report, the project's incremental increase in those emissions would be cumulatively considerable and would contribute to already identified significant cumulative effects (refer to Section 2.4 Cumulative Impact—Air Quality for further discussion). Therefore, the build alternative will cause disproportionately high and adverse effects on minority or low-income populations set forth in Executive Order 12898 and Federal Highway Administration Order 6640.23A.

According to the Federal Highway Administration Guidance on Environmental Justice and the National Environmental Policy Act (2011), if there is a disproportionately high and adverse effect on an environmental justice population, after taking benefits and mitigation into account, the National Environmental Policy Act document must evaluate whether there is a further practicable mitigation measure or practicable alternative that would avoid or reduce the disproportionately high and adverse effect(s). The proposed action will be approved only if it is determined that no such practicable measures exist.

Potential Benefits of Build Alternative

- The proposed mitigation for vehicle miles traveled would increase frequency and ridership on several bus routes within the environmental justice communities.
- The project will incorporate Complete Streets elements for all three design options. Ten-foot-wide paved paths for shared pedestrian and bicycle use would be included in each roundabout and would extend east and west along Paige Avenue. A 5-foot-wide landscaped buffer would separate these paths from the roadway in the roundabouts and also along approaching and departing lanes on Paige Avenue, Blackstone Street, and Laspina Street.
- Removing the existing signalization and replacing it with roundabouts along Paige Avenue at Blackstone Street and Laspina Street would cause less vehicle delay and idling. Roundabouts have the potential to lower fuel use and emissions in some cases (Caltrans Greenhouse Gas Emissions and Mitigation Report, 2020).
- The roundabouts would also remove conflict points and collision types associated with intersecting traffic. A Federal Highway Administration study has shown that roundabouts can reduce 35 percent of total crashes and 76 percent of injury crashes (Federal Highway Administration, SA-10-006, 2015).
- Carbon dioxide emissions will decrease as the project nears the 20-year horizon. These improvements in lessened air pollutants are attributed to technological advancements that will come about in the form of more efficient combustion engines and fuels and the continued use of hybrid and electric vehicles (zero-emission vehicles).
- By constructing roundabouts and eliminating the hook ramps, traffic queuing due to stop-and-go traffic would be eliminated. Construction of the Paige Avenue Interchange for design options 1 and 2 would alleviate traffic congestion by removing the need for vehicles to stop at a signal, as traffic would constantly flow through the roundabouts.

In addition, the Federal Highway Administration Guidance on Environmental Justice and National Environmental Policy Act states that if the affected

population is a minority population protected under Title VI, the proposed action will not be approved unless:

1) There is a substantial need for the project based on the overall public interest; and

2) Alternatives that would have less adverse effects on protected populations have either:

a) adverse social, economic, environmental, or human health impacts that are more severe; or

b) would involve increased costs of an extraordinary magnitude.

The project development team has determined that there is substantial need for the project based on the overall project interest. This project has been developed in partnership with multiple public agencies at every stage of the project development process, which includes the City of Tulare and the Tulare County Association of Governments.

[This section has been updated since the Recirculated Draft Environmental Document was circulated.] During the comment period for the Recirculated Draft Environmental Document from August 8, 2023, to September 22, 2023, and the public meeting on August 15, 2023, Caltrans received 13 comments from community members and elected officials in support of the project and a signature page with 21 signatures from members of the Tulare Chamber of Commerce (refer to Appendix G for all comments received during the public circulation period).

Not addressing the project needs would allow the corridor deficiencies to worsen, which would not provide a safe and efficient roadway for the traveling public. If this project is not completed, there will be no relief to traffic congestion along State Route 99 from Avenue 200 to Prosperity Avenue, no improvements to traffic operational deficiencies at the Paige Avenue Interchange, and no improvement in access to local trucking-related facilities and the neighboring industrial area.

The Project Development Team performed analyses to determine if any alternatives would have less impact on environmental justice communities and would not create other severe environmental effects or result in costs of an extraordinary magnitude.

Alternative 1, dropped from consideration, would widen the existing four-lane freeway to a six-lane freeway by constructing new lanes in the median. An auxiliary lane would have been added along the outside northbound lane between Bardsley Avenue and the Hillman Street off-ramp. Construction of that lane would have required the acquisition of about 100 residences and some businesses.

Alternative 2, dropped from consideration, would widen the existing four-lane freeway to an eight-lane freeway by constructing two additional lanes in each direction outside the existing lanes. All seven overcrossings would have been rebuilt, as would all interchanges within the project limits. New drainage basins would have been needed at five locations. This alternative would have acquired over 200 homes and businesses along both sides of the freeway.

Coordination with the impacted environmental justice communities will be ongoing. The Caltrans Project Development team will also continue correspondence with various organizations and businesses.

Avoidance, Minimization, and/or Mitigation Measures

The project would incorporate Complete Streets elements that would improve transportation within the surrounding community:

- Add shoulders to accommodate bike lanes on Paige Avenue.
- Caltrans will use construction equipment available to reduce the main pollutants in emissions: carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter.
- Provide safer pedestrian crossings along Paige Avenue at Laspina Avenue and Blackstone Avenue by removing six ramp crossings, enhanced pedestrian pathways, and shoulders to accommodate bicycle lanes.
- Roundabout pedestrian and bicycle crossings would provide a safer passage.
- Improve or add pedestrian facilities such as crosswalks, sidewalks, and traffic calming devices (the roundabouts will calm and slow traffic down).
- Improve or add bicycle lanes that were not present.
- Add Complete Streets elements, such as benches at bus stops, lighting where it is not present, and/or bus shelters (keeping bus patrons out of direct sunlight or rain).
- Minimize excessive fossil fuel emissions that contribute to climate change due to large trucks and vehicles idling on the improved pathway.
- Improved infrastructure, highway landscaping, and soundwall aesthetics along the roadway will enhance the visual appeal for commuters and outside visitors.
- All pull boxes and electric service enclosures will be secured to reduce the occurrence of wire theft.
- The local communities could also experience temporary benefits from the construction project; this includes the generation of regional construction industry jobs and the revenue that will likely be generated directly from the

construction workers in the local community. This local revenue and job generation could benefit the local minority and low-income populations.

[This section was added since the circulation of the draft environmental document.] In addition to the onsite improvements on Paige Avenue, between Blackstone Avenue and Laspina Street, Caltrans is coordinating with project stakeholders to implement additional sidewalks to reduce the gaps between existing sidewalks and connect adjacent residential developments. They are located:

- East of the Paige Avenue and Laspina St intersection, sidewalks will extend on both sides of Paige Avenue to connect to existing sidewalks on the east for approximately 900 feet.
- North of Paige Avenue and Laspina Street intersection, a sidewalk will connect to the existing sidewalk on the west side of Laspina Street. On the east side of Laspina street, an 800 feet long sidewalk will connect to the existing sidewalk. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.
- South of the Paige Avenue and Laspina Street intersection, sidewalk will be placed on both sides of Laspina Street for approximately 800 feet.
- On the north and south sides of the Blackstone Street and Paige Avenue intersection, sidewalks will connect to existing sidewalks.
- At the westside of Blackstone Street and Paige Avenue Intersection, the existing sidewalk on the southside of Paige Avenue to K Street will extend for approximately 2,500 feet. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.

The 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report (Section 4.3 Air Quality) outlines mitigation and minimization measures that will be incorporated by Tulare County.

- Locate sensitive receptors more than 500 feet of a freeway, 500 feet of urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
- Locate sensitive receptors more than 1,000 feet from a major diesel rail service or railyards. Where an adequate buffer cannot be implemented, implement the following: Install air filtration (as part of mechanical ventilation systems or stand-alone air cleaners) to reduce pollution exposure for residents and other sensitive populations in buildings that are close to transportation network improvement projects. Use air filtration devices rated MERV-13 or higher.

- Plant trees and/or vegetation suited to trapping roadway air pollution and/or soundwalls between sensitive receptors and the pollution source. The vegetation buffer should be thick, with full coverage from the ground to the top of the canopy. Install higher-efficacy public street and exterior lighting.
- Incorporate design measures and infrastructure that promote safe and efficient use of alternative modes of transportation (e.g., neighborhood electric vehicles, bicycles), pedestrian access, and public transportation use. Such measures may include the incorporation of electric vehicle charging stations, bike lanes, bicycle-friendly intersections, and bicycle parking and storage facilities.
- Incorporate design measures that promote ride-sharing programs (e.g., by designating a certain percentage of parking spaces for ride-sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles, and providing a website or message board for coordinating rides).

2.1.8 Utilities and Emergency Services

Affected Environment

Utilities

The Caltrans Utility Engineering Workgroup conducted a preliminary review of the existing utilities inside the project limits on August 15, 2019. The following utility systems are within the project limits:

- Southern California Edison: Overhead electrical lines
- American Telephone and Telegraph: Telephone lines
- City of Tulare: water and sewer lines
- Southern California Gas Company: Natural gas lines
- Tulare Irrigation District: Irrigation lines
- Central Valley Independent Network: Telecommunication line

Emergency Services

The closest fire station to the project is the City of Tulare Fire Station Number 61, about 0.6 mile on the west side of State Route 99. The closest police station to the project is the Tulare Police Station, about 1.3 miles on the west side of State Route 99. The closest hospital to the project is Adventist Health Tulare, about 0.5 mile from the end of the project limits. Table 2.7 lists the locations of the emergency services in the area and how far they are from the project.

Table 2.7 Emergency Services Within the Project Limits

Name	Facility Type	Address	Distance (Miles)
Adventist Health Tulare	Hospital	869 North Cherry Street Tulare, California 93274	0.5
Kaweah Health Tulare Clinic	Hospital	1000 North Mooney Boulevard Tulare, California 93274	3.1
City of Tulare Fire Station 61	Fire Station	800 South Blackstone Street Tulare, California 93274	0.6
Tulare County Fire Station 25	Fire Station	2082 East Foster Drive Tulare, California 93274	0.8
Tulare Police Department	Police Station	260 M Street Tulare, California 93274	1.3

Environmental Consequences

Utilities

The Paige Avenue Interchange construction would require relocating existing overhead and underground facilities. The existing City of Tulare storm drain basin on the northeast corner of the Paige Avenue Interchange would be relocated in coordination with the City of Tulare. Another storm drain basin owned by the City of Tulare on the southeast corner of the interchange would be combined with a proposed larger size basin to receive stormwater from the Paige Avenue Interchange area.

The proposed embankment for the Paige Avenue northbound on-ramp and the southbound off-ramp would cover the Tulare Irrigation District canal. Currently, negotiations are underway with the Tulare Irrigation District to relocate the canal alignment to the west side of State Route 99.

Construction of soundwalls and security fence walls near Tulare Avenue and the proposed drainage basin would also cause conflict with existing overhead and underground utilities.

The utility relocation plans would be prepared during the plans, specifications, and estimates phase. As part of that effort, the design team would work with the utility provider to identify the relocation area that would minimize the impact on the various resources. Generally, utilities, except for large electrical towers, would be relocated within the existing right-of-way. These areas are already disturbed, so adverse impacts are not expected, and the implementation of standard engineering practices would ensure that no substantial interruptions of utility service would occur. Should the relocation of the utilities result in impacts on resources, additional environmental clearance would be required.

Emergency Services

Two lanes for the northbound and southbound directions would remain open during the mainline construction work. One lane would be closed periodically during nighttime hours between different stages of construction work. A temporary freeway closure is required for the construction of the Paige Avenue Bridge. Alternate ramps would be closed for two to four weeks for ramp construction work. Construction of the Paige Avenue Interchange and the roundabout would require closing the existing Paige Avenue between Blackstone Street and Laspina Street for approximately nine months. The proposed detour would be through the new Commercial Avenue Interchange, which would be constructed between Paige Avenue and Avenue 200 and would be open to traffic by the time the Tulare Six-Lane and Paige Avenue Improvement project is in construction. Blackstone Street and Laspina Street would be closed during nighttime hours to construct the roundabout.

Caltrans would coordinate with emergency services before construction starts and during construction.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures would be needed.

2.1.9 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

Caltrans, as assigned by the Federal Highway Administration, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 Code of Federal Regulations 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by U.S. Department of Transportation regulations (49 Code of Federal Regulations 27) implementing Section 504 of the Rehabilitation Act (29 U.S. Code 794). The Federal Highway Administration has enacted regulations for the implementation of the 1990 Americans with Disabilities Act, including a commitment to build transportation facilities that provide equal access for all people. These regulations require the application of the Americans with Disabilities Act requirements to federal-aid projects, including Transportation Enhancement Activities.

With the passage of Senate Bill 743 (Steinberg, 2013), codified in Public Resources Code Section 21099, California embarked on a new approach for analyzing transportation impacts under CEQA. The analysis documented herein was conducted to provide Senate Bill 743 concurrence and to analyze the project's impact under the California Environmental Quality Act (CEQA) due to increases in vehicle miles traveled attributable to the project. CEQA requires assessing and disclosing environmental impacts resulting from a project, that is, impacts that would not occur but for the project. Therefore, under CEQA, the transportation impact of a roadway capacity project is the overall increase in vehicle miles traveled that is attributable to the project, distinct from any background changes in vehicle miles traveled due to other factors such as population or economic growth. The vehicle miles traveled impact is the difference in vehicle miles traveled with the project and without the project.

The difference in vehicle miles traveled may be negative for some projects that reduce vehicle miles traveled, zero for projects that do not affect vehicle miles traveled, or positive for those projects that are associated with an increase in vehicle miles traveled. Generally, the project types associated with an increase in the total amount of driving are projects that add passenger vehicle and light-duty truck capacity to the State Highway System. Many project types, including maintenance and rehabilitation projects and most safety projects, would be identified as unlikely to induce travel, requiring only screening and a narrative documenting that analysis and conclusion.

Affected Environment

Traffic and Transportation

Traffic Operations Analysis Memorandums were completed for this project on May 2, 2019, September 10, 2020, and February 25, 2021. A Traffic Safety Memorandum was completed on March 28, 2019. A Vehicle Miles Traveled analysis was prepared in September 2021.

State Route 99 serves as a critical route for commercial and personal travel between the cities of the San Joaquin Valley. This segment of State Route 99 is classified as a suburban/urban four-lane freeway. It runs approximately south to north within the City of Tulare in generally level terrain. The posted speed limit is 70 miles per hour. The mainline roadway consists of four travel lanes with thrie beam median barriers within the unpaved median. This project would match the freeway widening of the Tagus 6-Lane Project to the north of the project and would conform to the existing four lanes to the south.

There are four interchanges with bridge crossings over the freeway in the project limits, located at Avenue 200, Paige Avenue, Bardsley Avenue, and Tulare Avenue. Two other crossings include the Tulare Pedestrian Overcrossing that links the Santa Fe Trail at post mile 29.85 and the Cross

Avenue Undercrossing at post mile 29.9, in which the freeway crosses over a local street.

The Paige Avenue Interchange consists of southbound hook ramps that connect to Blackstone Street in the northwest corner of the interchange, about 150 feet north of the Paige Avenue/Blackstone Street Intersection. Each of those intersections has traffic signals. The northbound hook ramps connect to Paige Avenue in the southeast corner of the interchange, with the northbound off-ramp ending at a recently installed stop light at Paige Avenue.

Traffic Volumes

Traffic volume and quality of traffic flow are used to analyze highway operation and related congestion issues. Traffic volumes are represented as annual average daily traffic counts, which are the average number of vehicles that pass a given point within a 24-hour period.

The existing average annual daily traffic on State Route 99 within the project limits is about 62,000. Table 2.8 shows this and the morning and evening peak traffic hour average speeds in miles per hour for existing conditions.

Table 2.8 Traffic Volume for Existing Conditions

Alternative	Morning Peak Traffic Hour Average Speed (Miles Per Hour)	Evening Peak Traffic Hour Average Speed (Miles Per Hour)	Average Annual Daily Traffic
2018 Existing Condition/Baseline Year	65.1	61.3	62,000

Caltrans Traffic Operations, 2021.

The 2018 average daily truck traffic is approximately 15,410 trucks (27.6 percent of all vehicles); more than half of these trucks are large, long-haul trucks (with five or more axles). When the average number of trucks per lane per day exceeds 2,000 on a route (the existing condition), congestion is characterized by large, long-haul trucks using all lanes for travel and passing, which creates potential safety and capacity problems for all users of the freeway. This is common within the four-lane segments of State Route 99 in Tulare County and the City of Tulare.

Caltrans describes traffic operations in terms of “Level of Service.” Six levels are defined, ranging from Level of Service A (the best operating conditions) to Level of Service F (the worst operating conditions). Caltrans’ goal is to maintain the Level of Service on its facilities at the transition between Level of Service C and Level of Service D. When the actual Level of Service on a roadway falls below this point, a need for improvement is identified.

The State Route 99 freeway within the project limits is currently operating at acceptable levels of service during peak traffic hours. As shown in Table 2.9, the existing Level of Service for the northbound lanes between post miles 25.2 and 30.6 is Level of Service D. For the southbound lanes, the Level of Service is C.

Table 2.9 Existing Level of Service for State Route 99

Northbound	Northbound Level of Service	Southbound	Southbound Level of Service
Existing (2018)	D	Existing (2018)	C

Caltrans Traffic Operations, 2019.

The results of the ramp merge and diverge analysis for existing conditions indicate that all existing merge and diverge operations are at acceptable levels, as shown in Table 2.10.

The cells that contain the word “Not Applicable” are labeled as such because the Commercial interchange is planned to be built by the year 2027 (International Agri-Center Way Interchange Project).

Table 2.10 State Route 99 Northbound and Southbound Ramps Existing Level of Service

Northbound Ramps	Existing Year 2018	Southbound Ramps	Existing Year 2018
Off-ramp at Avenue 200	C	Off-ramp at Avenue 200	B
On-ramp at Avenue 200	C	On-ramp at Avenue 200	C
Off-ramp at Commercial Avenue	Not Applicable	Slip on-ramp at Commercial Avenue	Not Applicable
Loop on-ramp at Commercial Avenue	Not Applicable	Loop on-ramp at Commercial Avenue	Not Applicable
On-ramp at Paige Avenue	C	Off-ramp at Paige Avenue	B
Off-ramp at Paige Avenue	C	Slip on-ramp at Paige Avenue	B
Off-ramp at Bardsley Avenue	C	Off-ramp at Bardsley Avenue	C
On-ramp at Bardsley Avenue	C	On-ramp at Bardsley Avenue	C
Off-ramp at Tulare Avenue (State Route 137)	D	Off-ramp at Tulare Avenue (State Route 137)	C
On-ramp at Tulare Avenue (State Route 137)	D	On-ramp at Tulare Avenue (State Route 137)	C
Off-ramp at Hillman Street	D	On-ramp at Prosperity Avenue	C
On-ramp at Hillman Street	C	Not Applicable	Not Applicable

Caltrans Traffic Operations, 2019 and 2021.

The four signalized intersections at the Paige Avenue Interchange perform at acceptable levels for the current (2018) morning and evening peak hour period, as shown in Table 2.11. These intersections were controlled with stop signs until signals were installed between 2019 and 2020.

Table 2.11 Paige Avenue Interchange Intersections Existing Level of Service

Intersection	Existing (2018) Morning	Existing (2018) Evening
Southbound State Route 99 Off-ramp/Blackstone Avenue	B	B
Paige Avenue/Blackstone Avenue	C	C
Northbound State Route 99 Off-ramp/Paige Avenue	C	C
Paige Avenue/Laspina Street	C	C

Source: D6 Traffic Operations.

Collision Analysis

A traffic safety analysis prepared for the project in April 2019 includes the collision history for the most recent three-year study period (October 1, 2015, to September 30, 2018) of the freeway within the project limits (post miles 25.2 to 30.6), and also analyzed the on- and off-ramps.

The collision rates for the northbound lanes show that all actual crash rates are lower than the statewide average collisions for similar roadways with comparable traffic volumes. There were 113 collisions (0-Fatal, 38-Injury, and 75-Property Damage Only) recorded. The crash rates, expressed as crashes per million vehicle miles traveled, are shown in Table 2.12.

Table 2.12 Collision Rates Along Northbound State Route 99

Type	Actual	Type	Statewide Average
Fatal	0.000	Fatal	0.006
Fatal Plus Injury	0.23	Fatal Plus Injury	0.27
Total	0.68	Total	0.81

Caltrans Traffic Operations, 2019.

The collision rates for the southbound lanes of the freeway show that the actual fatal plus injury and actual total collision rates are lower than the statewide average. However, the actual fatal collision rate is higher than the statewide average fatal collision rate on the southbound lanes. There were 79 collisions recorded (2-Fatal, 16-Injury, and 61-Property Damage Only). One of the fatal collisions was caused by a drunk driver at night. The other fatal collision occurred when a pedestrian was walking across the freeway lanes at night and was struck by a vehicle traveling in the outside lane. The collision rates, expressed as collisions per million vehicle miles traveled, are shown in Table 2.13.

Table 2.13 Collision Rates Along Southbound State Route 99

Type	Actual	Type	Statewide Average
Fatal	0.012	Fatal	0.006
Fatal Plus Injury	0.11	Fatal Plus Injury	0.27
Total	0.47	Total	0.81

Caltrans Traffic Operations, 2019.

Given the varied locations, factors, and types of collisions along this segment of State Route 99, there do not appear to be any collision concentrations that would indicate that there is a correctable collision-causing situation.

Transit

The City of Tulare transit system—the Tulare InterModal Express—does not have any routes that use the State Route 99 freeway within the project limits. Route 7 crosses over the freeway via the Tulare Avenue (State Route 137) Overcrossing. Route 4 crosses the freeway on the Prosperity Avenue Overcrossing. Route 2 crosses the freeway on the Bardsley Avenue Overcrossing and continues eastward to Mooney Boulevard, then southward to where it ends and meets Foster Drive, then proceeds westward to Laspina Street, where it turns north to complete a loop at Bardsley Avenue.

The Tulare County Area Transit South County Route (Route 20) originates from the Tulare Transit Center. The transit center is between K and L Streets on the south side of the Tulare Santa Fe Trail. Along State Route 99, there are stops in Tipton, Pixley, Teviston, Earlimart, and Delano. The route follows State Route 155 east to Famoso-Porterville Highway, which runs northwards to Richgrove in Tulare County.

A new Greyhound bus station is at 407 North K Street. Six buses a day provide service to Fresno, Los Angeles, and San Francisco via State Route 99.

Pedestrians and Bicycles

Bicycles and pedestrians are not permitted along this segment of State Route 99 due to the controlled access right-of-way, which prohibits nonmotorized vehicles and pedestrians along a freeway.

The Santa Fe Trail is a 5-mile-long Class 1 bike path that crosses the city from the northeast to the west. This lighted trail begins on the east approach at West Inyo Avenue, crosses State Route 99 just south of East Cross Avenue, and ends at Prosperity Avenue. Amenities include benches, water fountains, a pedestrian/bicycle trail, a horse trail, and nearby parks that the trail runs alongside. This shared-use path traverses the freeway on what is now named the Tulare Pedestrian Overcrossing.

The only existing sidewalks on Paige Avenue within the project area are a narrow sidewalk along the south side of the Paige Avenue Overcrossing, at

the intersection with Blackstone Street, and for a short distance north and south on Blackstone Street. On Laspina Street, north of Paige Avenue, sidewalks are present along the west side of the street; however, the sidewalk does not extend south of the residential neighborhood to Paige Avenue.

There are no bicycle lanes or signs indicating a bike route in the Paige Avenue area of the project. However, the City of Tulare's planned city-wide bikeway network includes a Class 1 bike path along Paige Avenue within the project footprint, extending west to Road 84. The planned path would extend eastward along Foster Drive to Mooney Boulevard. A Class 1 bicycle facility (multiuse path) provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians, with cross traffic from motorists minimized.

The Tulare County Association of Governments' 2010 Tulare County Regional Bicycle Transportation Plan has goals and policies for identifying future improvements to bicycle facilities within the county. These include at least three Class 1 paths, four Class 2 paths, and one Class 3 path that would cross or begin near the freeway within the project limits.

Vehicle Miles Traveled

This project is considered a capacity-increasing project and, therefore, falls into the group of projects that require an analysis of vehicle miles traveled and an evaluation of potential mitigation measures.

In general, two approaches exist for induced travel assessment. The first is the empirical approach, which applies elasticities from empirical studies that quantify the induced travel effect. The University of California, Davis' National Center for Sustainable Transportation Induced Travel Calculator applies this approach. The other is the travel demand model-based approach. These approaches are the preferred induced travel assessment tools for projects on the State Highway System. The approach used to calculate vehicle miles traveled for the air quality assessment used actual average annual daily traffic for the project limits, the project's length in miles, and the number of days in a year as inputs. Therefore, the projected annual vehicle miles traveled are noticeably different from the estimates using the approaches discussed in this section.

The project location qualifies as "Other Metropolitan Statistical Area County," and the project type is "Lane Addition to Class 2 and Class 3 State Routes," as shown in Table 2.14. Applying the National Center for Sustainable Transportation Calculator by county outright or the applicable travel demand model benchmarked with the calculator are the two methods for measuring induced travel.

Table 2.14 Selection Matrix for Preferred Induced Travel Assessment Method for Project on the State Highway System

Project Location or Project Type	General Purpose or High Occupancy Vehicle Lane Addition to Interstate Freeway	General Purpose or High Occupancy Vehicle Lane Addition to Class 2 or Class 3 State Routes	Other Vehicle Miles Traveled-Inducing Projects and Alternatives
County in Metropolitan Statistical Area with Class 1 Facility	Apply the National Center for Sustainable Transportation Calculator by Metropolitan Statistical Area and/or Travel Demand Model benchmarked with the National Center for Sustainable Transportation Calculator.	Apply the National Center for Sustainable Transportation Calculator by county and/or Travel Demand Model benchmarked with the National Center for Sustainable Transportation Calculator.	Apply the Travel Demand Model or other quantitative methods.
Other metropolitan statistical area county	Apply the Travel Demand Model or other quantitative methods.	Apply the National Center for Sustainable Transportation Calculator by county and/or Travel Demand Model benchmarked with the National Center for Sustainable Transportation Calculator.	Apply the Travel Demand Model or other quantitative methods.
Rural county	Apply the Travel Demand Model or other quantitative methods.	Apply the Travel Demand Model or other quantitative methods.	Apply the Travel Demand Model or other quantitative methods.

Source: California Department of Transportation, *Transportation Analysis Framework,* First Edition, California Department of Transportation, 2020.

Notes: If preferred methods are not available, a qualitative assessment is acceptable, as shown in Figure 5 of the Transportation Analysis Framework, First Edition.

Both approaches—the National Center for Sustainable Transportation Induced Travel Calculator and the travel demand model-based assessment methods—were selected for evaluating travel that may be induced by this project. The model-based approach was included, despite satisfying only four of the five checkboxes of the Transportation Analysis Framework's adequacy checklist, to provide a basis for comparison with the calculator approach.

The National Center for Sustainable Transportation Induced Calculator uses three background inputs—the percent change in lane miles, 2016 existing vehicle miles, and one of two elasticities—to estimate the induced annual vehicle miles traveled attributable to the project.

The Tulare County Association of Governments' Regional Travel Demand Model is a conventional travel demand forecasting model that is similar in structure to most other area-wide models used for traffic forecasting in the San Joaquin Valley. It uses land use, socioeconomic, and road network data to estimate travel patterns, roadway traffic volumes, and performance measures.

While the travel demand model is far more sophisticated than the National Center for Sustainable Transportation Induced Travel Calculator tool, it does not include a feedback mechanism for measuring travel induced by increases in roadway capacity and therefore fails Check 1 of the Transportation Analysis Framework's adequacy checklist. It can, however, account for trip length, mode shift, route changes, and newly generated trips due to user-provided changes in land use. However, because the coverage of the model is Tulare County only, vehicle miles traveled attributable to trips to and from outside of the county are not fully captured. Therefore, using the National Center for Sustainable Transportation Induced Travel Calculator is the mandated method for the Tulare Six-Lane and Paige Avenue Interchange Improvement project.

Environmental Consequences

Traffic and Transportation

The traffic operations analysis for the years 2029 and 2049 assumed that improvements to be constructed for the International Agri-Center Way Interchange Project (EA 06-0U880) would have been completed by the year 2027. That project will construct a new interchange on State Route 99 at Commercial Avenue and add an auxiliary lane on the freeway in both directions between the new interchange and Paige Avenue Interchange.

The project proposes to widen the existing four-lane freeway to a six-lane freeway by constructing one lane in each direction in the existing median of State Route 99. Three 12-foot-wide lanes would convey traffic in each direction, separated by an 8-foot-wide inside shoulder on each side of a Type 60 concrete barrier forming the median divider. Where the existing outside shoulders are now 8 feet wide, they would be widened to make a uniform 10-foot-wide standard shoulder.

Ramp metering would be added to the on-ramps at Paige Avenue, Bardsley Avenue, and the Tulare Avenue (State Route 137) northbound on-ramp. A second lane would be added to the northbound and southbound Bardsley Avenue on-ramps and to the Tulare Avenue northbound on-ramp to avoid the

potential for vehicle queues to back up from the on-ramp onto the local street when ramp meters are operating during peak traffic hours.

Intelligent Transportation System elements of traffic monitoring systems would be added along the freeway, and some existing components would be removed and replaced. These include a closed-circuit television, a new permanent changeable message sign, 19 existing traffic census systems, two existing traffic census systems and vehicle detection stations, and two proposed vehicle detection systems.

Traffic Volumes

The annual average daily traffic is forecast to be 85,000 by 2029, and by 2049, it is forecast to be 126,000. Table 2.15 shows this and the morning and evening peak traffic hour average speeds in miles per hour for those two years.

Table 2.15 Annual Daily Traffic Forecast for the Build and No-Build Alternative

Alternative	Morning Peak Traffic Hour Average Speed (Miles per Hour)	Evening Peak Traffic Hour Average Speed (Miles per Hour)	Average Annual Daily Traffic
2029 No-Build Alternative	59.2	51.5	85,000
2049 No-Build Alternative	35 or less	35 or less	126,000
2029 Build Alternative Year Open to Traffic	64.7	64.3	85,800
2049 Build Alternative 20-Year Design Year	58.2	58.3	126,000

Caltrans Traffic Operations, 2021.

The State Route 99 freeway within the project limits is currently operating at acceptable levels of service during peak traffic hours and will continue to do so through the year 2029 without any improvements. However, by 2049, the freeway mainline would have insufficient capacity to accommodate the forecast traffic demand under the No-Build Alternative, and delays would significantly increase.

As shown in Table 2.16, by 2029, the Level of Service would be E for the two northbound lanes and D for the two southbound lanes for the No-Build Alternative. The Level of Service would deteriorate to Level of Service F if the freeway were not widened to six lanes 20 years later, in 2049. The freeway within the project limits would operate at Level of Service C when the Build

Alternative is completed in 2029 (open year) and would still be at an acceptable Level of Service (Level of Service D) 20 years later, in 2049 (design year).

Table 2.16 Projected Level of Service for State Route 99 Freeway

No-Build Northbound Level of Service 2029	No-Build Northbound Level of Service 2049	No-Build Southbound Level of Service 2029	No-Build Southbound Level of Service 2049	Build Northbound Level of Service 2029	Build Northbound Level of Service 2049	Build Southbound Level of Service 2029	Build Southbound Level of Service 2049
E	F	D	F	C	D	C	D

Caltrans Traffic Operations, 2019.

Ramps

The results of the ramp merge and diverge analysis for the No-Build Alternative indicate that all existing merge and diverge operations are at acceptable levels. However, in 2029, the northbound off-ramps and on-ramps at Bardsley Avenue and Tulare Avenue, the southbound off-ramp at Tulare Avenue, and the northbound off-ramp at Hillman Street are forecast to operate at Level of Service E. In 2049, traffic conditions would be further degraded at all locations to an unacceptable Level of Service F during peak traffic hours.

The results of the ramp merge/diverge analysis of the freeway ramps with the proposed improvements constructed are shown in Table 2.17 and Table 2.18. The merge/diverge operations are projected to operate at acceptable levels in both 2029 and 2049, except that the Hillman Street off-ramp would degrade to Level of Service E in 2049. The traffic operations report recommends that an auxiliary lane and an additional lane be added to this off-ramp in the future to avoid this unacceptable Level of Service in 2049.

Table 2.17 State Route 99 Freeway Ramps Level of Service—Northbound Ramps

Northbound Ramps	Year 2029-No-Build	Year 2049-No-Build	Opening Year 2029-Build	Design Year 2049-Build
Off-ramp at Avenue 200	D	F	B	C
On-ramp at Avenue 200	D	F	B	C
Off-ramp at Commercial Avenue	D	F	B	D
Loop on-ramp at Commercial Avenue	D	E	C	D
On-ramp at Paige Avenue	D	F	C	D
Off-ramp at Bardsley Avenue	E	F	C	D
On-ramp at Bardsley Avenue	E	F	C	D
Off-ramp at Tulare Avenue (State Route 137)	E	F	C	D
On-ramp at Tulare Avenue (State Route 137)	E	F	C	D
Off-ramp at Hillman Street	E	F	D	E
On-ramp at Hillman Street	D	F	C	C

Caltrans Traffic Operations, 2019 and 2021.

Table 2.18 State Route 99 Freeway Ramps Level of Service—Southbound Ramps

Southbound Ramps	Year 2029 No-Build	Year 2049 No-Build	Opening Year 2029 Build	Design Year 2049 Build
On-ramp at Prosperity Avenue	D	F	C	D
Off-ramp at Tulare Avenue (State Route 137)	E	F	C	D
On-ramp at Tulare Avenue (State Route 137)	D	F	C	D
Off-ramp at Bardsley Avenue	D	F	C	D
On-ramp at Bardsley Avenue	D	F	C	D
Off-ramp at Paige Avenue	D	F	C	D
Loop on-ramp at Commercial Avenue	D	F	B	D
Slip on-ramp at Commercial Avenue	C	F	B	D
Off-ramp at Avenue 200	C	F	B	C
On-ramp at Avenue 200	D	F	B	D

Caltrans Traffic Operations, 2019 and 2021.

Table 2.19 summarizes the intersection Level of Service during the morning and evening peak hour conditions for the Build Alternative and No-Build Alternative for the open year (2029) and the design year (2049). The results show all intersections would operate at an acceptable Level of Service for the Build Alternative between 2029 and 2049 under all conditions. Without improvements, the intersections will deteriorate to an unacceptable Level of Service F by 2049.

Table 2.19 Future Level of Service at Intersections

Intersection	2029 No-Build Morning/Evening	2049 No-Build Morning/Evening	2029 Build Morning/Evening	2049 Build Morning/Evening
State Route 99/Paige Avenue Northbound Ramps	C/F	F/F	A/A	B/B
State Route 99/Blackstone Avenue Southbound Ramps	B/B	F/F	A/A	B/A
State Route 99 Ramps at Paige Avenue (Applies only to the three-roundabout option)	Not Applicable	Not Applicable	A/A	B/B
Blackstone Street/Paige Avenue	D/D	F/F	A/A	D/D
Laspina Street/Paige Avenue	D/E	F/F	A/A	C/B

Source: District 6 Traffic Operations.

Construction impacts on traffic and transportation would not be substantial. Access to and from State Route 99 would be available during construction, and the highway would remain open to traffic during construction. All ramps within the project limits would undergo alternate closures to minimize impacts on traffic.

Bicycles and Pedestrians

A 10-foot-wide paved shared path for pedestrians and bicycles would be placed around all the roundabouts and on both sides of Paige Avenue between Blackstone Avenue and Laspina Street. A 5-foot-wide landscaped buffer would be placed between the travel lanes and the shared-use path around the roundabouts. Americans with Disabilities Act-compliant curb ramps and marked crosswalks would be part of the design. This facility is classified as a Class 1 bicycle path.

There will be construction equipment accessing the Santa Fe Trail to construct the security wall, which would require closing one lane of the trail that crosses State Route 99. The other side of the trail would remain open to the public at all times.

Vehicle Miles Traveled

Consistent with the language of Section 15064.3 of the CEQA Guidelines, Caltrans agrees that vehicle miles traveled is the most appropriate measure of transportation impacts under CEQA. The determination of significance of a vehicle miles traveled impact will require a supporting induced travel analysis for capacity-increasing transportation projects on the State Highway System

when Caltrans is the lead agency or when another entity acts as the lead agency. Caltrans has developed the *Transportation Analysis Framework* and *Transportation Analysis under CEQA* documents to guide CEQA transportation impact analysis for projects on the State Highway System. Caltrans has prepared these documents to guide the implementation of Senate Bill 743 (Steinberg, 2013). The Transportation Analysis Framework and Transportation Analysis under CEQA establish Caltrans guidance on how to analyze induced travel associated with transportation projects and how to determine impact significance under CEQA, respectively. Table 1 in Section 4.2.2, *Guidance for Selecting Analysis Approach* of the Transportation Analysis Framework, provides a selection matrix to be used in identifying the preferred vehicle miles traveled assessment method(s) based on location and project type. The application of the National Center for Sustainable Transportation Induced Travel Calculator and the travel demand model are described in Sections 4.3 and 4.4 of the Transportation Analysis Framework, respectively.

As shown in Table 2.22 below, the travel demand model-based method produced markedly different induced vehicle miles traveled results compared with the National Center for Sustainable Transportation Induced Travel Calculator method. The travel demand model-based estimates of induced VMT are grounded in a model calibrated to local/regional travel patterns and travel behavior. However, the travel demand model satisfies only four of the five checks on the checklist found in Table 4 of Section 4.5, *The Checklist for Evaluating Model Adequacy*. Therefore, using the National Center for Sustainable Transportation Induced Travel Calculator was the method used for the Tulare Six-Lane and Paige Avenue Interchange Improvement project. Tables 2.20 and 2.22 summarize the selections and data input to the National Center for Sustainable Transportation Induced Travel Calculator and the resulting annual induced vehicle miles traveled.

Table 2.20 National Center for Sustainable Transportation Induced Travel Calculator User Input Information Summary

Metric	Value
Facility Type	Classes 2 and 3
County	Tulare
Total Lane Miles Added by the Project	10.4

Source: Induced Vehicle Miles Traveled (VMT) Analysis for the Tulare Six-Lane and Paige Avenue Interchange Improvement, September 2021.

The National Center for Sustainable Transportation Induced Travel Calculator's results for the Tulare Six-Lane and Paige Avenue Interchange Improvement project indicated that the project would induce an additional 24 million vehicle miles traveled per year. In the vehicle miles traveled analysis completed in September 2021, the total lane miles of 10.4 were inputted into the National Center for Sustainable Transportation Induced Travel Calculator,

which included only the general-purpose lanes added to State Route 99. Improvements to widen Paige Avenue between Laspina Street and Blackstone Street for 1,900 feet brought the total lane miles to 11.1. Paige Avenue is listed as an arterial in the Tulare County General Plan and is included in the vehicle miles traveled calculation.

Transportation Analysis Framework guidance includes the following statement regarding vehicle miles traveled: “For a CEQA-compliant transportation impact analysis, automobile vehicle miles traveled (cars and light trucks) may be evaluated.” Based on current estimated truck volumes (about 27.6 percent) in this corridor, it is reasonable for this project to include a reduction in the induced demand calculation and provide a calculation based on the vehicle miles traveled generated by passenger cars and light-duty trucks. Caltrans’ Interregional Transportation Strategic Plan 2021 identifies State Route 99 as a major interregional trucking route within the San Jose/San Francisco Bay Area–Central Valley-Los Angeles Corridor. The Interregional Transportation Strategic Plan further states that the forecasted increase in freight trips is expected to be significantly higher than the rate of automobile trips. Two-axle trucks make up 36 percent of the overall truck percentage of 27.6 percent. Subtracting 36 percent of light-duty trucks from the overall remaining truck percentage would be 17.67 percent. By conservatively assuming that the percentage of trucks in the induced vehicle miles traveled was the same as the existing percentage of trucks on the roadway, you could reduce the amount of vehicle miles traveled that would need to be mitigated by 17.67 percent. The conclusion would be that the National Center for Sustainable Transportation Induced Travel Calculator induced vehicle miles traveled is 82.33 percent of the total, or 19,759,200.

Table 2.21: National Center for Sustainable Transportation Induced Travel Calculator Input Information Summary

Metric	Value
Lane Miles (Classes 2 and 3)	712
Annual Vehicle Miles Traveled	1,962,000 million
Elasticity	0.75

Source: Induced Vehicle Miles Traveled Analysis for Tulare Six-Lane and Paige Avenue Interchange Improvement, September 2021.

Table 2.22 Summary of Induced Vehicle Miles Traveled Produced by Different Calculation Methods

Calculation Method	Induced Vehicle Miles Traveled (In Millions)
National Center for Sustainable Transportation Induced Travel Calculator with truck reduction	19.76
Travel Demand Model 2042 (Build–No-Build)	8.0
Difference with respect to National Center Sustainable Transportation Calculator	Negative 63 percent

Source: Induced VMT Analysis for Tulare Six-Lane and Paige Avenue Interchange Improvement, September 2021 and Caltrans Traffic Operations

Avoidance, Minimization, and/or Mitigation Measures

Traffic and Transportation/Transit

No mitigation measures would be required for impacts on traffic and transportation. During construction, two lanes for the northbound and southbound directions would remain open during the mainline work. One lane would be closed periodically during nighttime hours between different stages of construction work. A temporary freeway closure would be required for the construction of the Paige Avenue Bridge. Alternate ramps would be closed for two to four weeks for ramp construction work. Construction of the Paige Avenue Interchange and the roundabout would require the closure of the existing Paige Avenue between Blackstone Street and Laspina Street. The proposed detour would be through the new Commercial Avenue Interchange, which would be constructed between Paige Avenue and Avenue 200 and would be open to traffic by the time the Tulare Six-Lane and Paige Avenue Interchange Improvement project is in construction.

A Transportation Management Plan would be developed for the project and would be provided during the Plans, Specifications, and Estimates phase. The plan would include public information, motorist information, incident management, construction, demand management, and alternate routes or detours.

Bicycles and Pedestrians

No avoidance, minimization, and/or mitigation measures are proposed.

Vehicle Miles Traveled

Based on the vehicle miles traveled analysis, the project would increase vehicle miles traveled by 19,759,200 after the deductions for truck vehicle miles traveled noted above, and mitigation measures must be considered. Vehicle miles traveled mitigation can be achieved through modification of the project to reduce the amount of vehicle miles traveled generated or by providing transportation improvements on-system or off-system.

On-system mitigation is a measure that can be implemented within the Caltrans right-of-way. On-system mitigation may include mitigation within or outside the initial project limits of any given capacity-increasing project. Caltrans, as owner and operator of the State Highway System and associated right-of-way, exercises more direct authority over on-system measures as opposed to off-system measures. However, onsite mitigation can be very limited in the amount of vehicle miles traveled reduction. For example, bike lanes or walking paths could be added to the project scope, but the benefit to vehicle miles traveled reduction may be almost zero at the project level.

Off-system mitigation, outside of Caltrans' right-of-way, requires cooperation with those jurisdictions that have influence over land use and transportation systems outside of Caltrans' direct control. The Caltrans Division of Transportation Planning recently completed a literature review and assessment of vehicle miles traveled reduction strategies and found that measures that resulted in the largest decreases in vehicle miles traveled are generally off-system and not under Caltrans' direct control. Similarly, the most cost-effective measures identified in the literature review also tended to be outside of Caltrans' direct control (e.g., transit-oriented development, transportation demand management).

The following are proposed mitigation strategies: After public comment and during final engineering, the mitigation strategies would be incorporated into the project using cooperative agreements with local partners. The cooperative agreements would be finalized before project construction.

Tulare County Regional Transit Agency Vanpool Program

Caltrans would provide $432,000 in funding to subsidize the vanpool program at the Tulare County Regional Transit Agency for five years. Caltrans' funding would subsidize the addition of 30 vanpools to the existing program in the first year and 15 vanpools to the program in the second year. Assumptions include that six passengers (driver not included) would use the vanpools, and each vanpool would result in an average reduction of 220,504 vehicle miles traveled. The transit agencies report transit data to the National Transit Database and the California State Controller. The numbers are used in annual apportionment calculations. This is a two-year cycle, meaning data reported in 2022 will be used to calculate 2024 annual apportionments. Increasing revenue and passenger miles increases the annual apportionments and would allow the transit agencies to continue the services.

Increase Frequency on Tulare County Area Transit Route 20

Caltrans would provide five years of funding in the amount of $1,500,000 to subsidize the round-trip bus service for Route 20 on the Tulare County Area Transit. Route 20 currently operates bus services every two hours between Tulare and Delano on weekdays and weekends. Adding 10 trips per day with a one-way distance of 32 miles and an assumed ridership increase of about

10 per trip would result in an annual vehicle miles traveled reduction of 2,252,800. Using the transit service improvement multiplier allowed per the vehicle miles traveled mitigation playbook would increase the vehicle miles traveled reduction to 4,505,600.

Increase Frequency on Tulare County Area Transit Route 40

Caltrans would provide five years of funding in the amount of $1,500,000 to subsidize the round-trip bus service for Route 40 on the Tulare County Area Transit. Route 40 currently provides bus service every hour between Porterville and Visalia. Adding eight trips per day with a one-way distance of 30 miles and an assumed ridership increase of about 10 per trip would result in an annual vehicle miles traveled reduction of 1,689,600. Using the transit service improvement multiplier allowed per the vehicle miles traveled mitigation playbook would increase the vehicle miles traveled reduction to 3,379,200.

Increase Frequency on Tulare County Area Transit Route 11x

Caltrans would provide five years of funding of $1,250,000 to subsidize round-trip bus service for Route 11x on the Tulare County Area Transit. Route 11x currently provides bus services every hour between Tulare and Visalia. Adding 14 trips per day with a one-way distance of 15 miles and an assumed ridership increase of about 10 per trip would result in an annual vehicle miles traveled reduction of 1,478,400. Using the transit service improvement multiplier allowed per the vehicle miles traveled mitigation playbook would increase the vehicle miles traveled reduction to 2,956,800.

Public transit operates based on public need and demand. The five-year funding would allow Caltrans to build demand to meet route performance measures. Route data are analyzed every year by the transit operator to determine if they are operating effectively and efficiently and meeting set performance measures. Every three years, the Metropolitan Planning Organization would audit the transit agency’s ability to meet set performance measures and determine if performance measures need to be modified. Typically, new routes or expansions are exempt from meeting these performance measures for the first two years of operation.

Table 2.23 summarizes the proposed funding and subsequent vehicle miles traveled reductions for the mitigation measures listed above.

Table 2.23 Proposed Mitigation, Mitigation Cost, and Annual Vehicle Miles Traveled Reduction

Proposed Mitigation	Proposed Funding Amount	Annual Vehicle Miles Traveled Reduction
Tulare County Regional Transit Agency Vanpool Program. Five years of funding.	$432,000	9,922,680
Increase frequency on Tulare County Area Transit Route 20. Five years of funding.	$1,500,000	4,505,600
Increase frequency on Tulare County Transit Route 40. Five years of funding.	$1,500,000	3,379,200
Increased frequency on Tulare County Transit Route 11x. Five years of funding.	$1,250,000	2,956,800
Funding and annual vehicle miles traveled reduction totals for mitigation measures listed above.	$4,682,000	20,767,880

Comprehensive Corridor Management Plan

[This section has been updated since the Recirculated Draft Environmental Document was circulated.] As discussed in Chapter 1, Caltrans Districts 6, 10, and 3 will collaborate with local agencies in the San Joaquin Valley to prepare a Comprehensive Multimodal Corridor Plan for State Route 99 through the Valley. The Comprehensive Multimodal Corridor Plan will prioritize identifying managed lane and mode shift opportunities in the corridor that will lead to reduced vehicle miles traveled. Implementation of a vehicle miles traveled reducing managed lane strategy through the corridor (or parts of the corridor that include this project) could eliminate about 80 percent of the vehicle miles traveled concern from the project because the only relevant capacity increase will result from the removal of trucks from the two general-purpose lanes. Since the Draft Environmental Document, the vehicle miles traveled reducing managed lane strategy has been identified as the preferred strategy to reduce significant vehicle miles traveled impacts. A project to establish a vehicle miles traveled reducing managed lane will be programmed before the project construction closeout in 2026.

Before the start of the State Planning and Research contract, Caltrans District 6 had done preliminary work toward the investigation and implementation of a managed lane in the project vicinity. Preliminary work includes:

- Review of the California Vehicle Code regarding the conversion of existing general-purpose lanes to managed lanes, such as truck-only lanes.
- Coordination with district management to identify and prepare a project delivery schedule for a State Highway Operation and Protection Program project to be initiated for a vehicle miles traveled reducing managed lane project.

The California Vehicle Code does not prevent the reallocation of a general-purpose lane to a managed lane using changes to signage and striping. Vehicle Code 21655 gives the Department of Transportation the authority to designate preferential highway lanes, allows the Department of Transportation to provide instructions to motorists on the use of those lanes, and states that a driver cannot drive on those lanes unless they follow the Department of Transportation's instructions. The rules allow the Department of Transportation to mark vehicle lanes as truck lanes. The California Manual on Uniform Traffic Control Devices (Section 2B.31) should be used for sign guidance, and changes in the California Vehicle Code may be needed for enforcement.

Below is a proposed schedule for a vehicle miles traveled reducing managed lane project. Two assumptions have been made in the development of the proposed schedule and are listed below.

1.) The project will mainly be signage and delineation for lane conversion.

2.) Approval will be granted to amend the project into the 2024 State Highway Operation and Protection Program.

The proposed schedule is as follows:

- Vehicle miles traveled reducing managed lane strategy will be provided to Asset Management in June 2024.
- Asset Management will add the mitigation project to the 10-Year Project Book in July 2024.
- K-phase will open for a vehicle miles traveled reducing managed lane project, and work will start on the Project Initiation Document in November 2024.
- The Project Initiation Document will be completed in May 2025.
- The project will be amended into the 2024 State Highway Operation and Protection Program in August 2025.
- The Project Approval and Environmental Document phase will begin in September 2025.
- Vehicle miles traveled reducing managed lane project will be ready to list for advertisement in the 2026/2027 or 2027/2028 fiscal year and will be funded in the 2024 State Highway Operation and Protection Program.

A preliminary traffic operational analysis was performed for a segment of State Route 99 within the limits of the Tulare Six-Lane and Paige Avenue Interchange Improvement project. The analysis showed that the facility would operate at an acceptable Level of Service with the implementation of a truck-only lane. The analysis assumed an existing condition that included the improvements from the Tulare Six-Lane and Paige Avenue Interchange

Improvement project to be completed by 2029. The project proposes to widen the existing 4-lane freeway to a 6-lane facility on State Route 99 from post mile 25.2 to post mile 30.6 in Tulare County.

The segment of the Tulare Six-Lane and Paige Avenue Interchange Improvement project with the highest forecast volumes was selected for this preliminary analysis. Level of Service analysis was used to describe operational conditions, and forecasted weekday peak hour traffic volumes for the Year 2047 conditions were used. Highway Capacity Software was used to analyze the Level of Service for freeway segments. The results indicate that before the implementation of truck-only lanes, the Level of Service with three mixed-flow lanes would be ‘C.' After the implementation of a truck-only lane, the Level of Service in the two mixed-flow lanes and the single truck-only lane would be ‘C’ and ‘D,’ respectively.

The California Statewide Travel Demand Model will be used as a tool in the assessment of operations and vehicle miles traveled-reducing strategies on an interregional and statewide basis. Preliminary work has been done to modify the transportation network used by the California Statewide Travel Demand Model. The 2050 base Travel Demand Model network was used to create a network with managed lanes on State Route 99 across District 6. This updated network includes parallel segments to all the segments across the district with coding that reflects a managed lane. The parallel segments connect to all the nodes of the existing 2050 network. This work has been done in collaboration with the California Department of Transportation Statewide Modeling Branch in the Division of Transportation Planning, Office of Data Analytics Services.

2.1.10 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically (emphasis added) and culturally pleasing surroundings (42 U.S. Code 4331[b][2]). To further emphasize this point, the Federal Highway Administration, in its implementation of the National Environmental Policy Act (23 U.S. Code 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including, among others, the destruction or disruption of aesthetic values.

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

California Streets and Highways Code Section 92.3 directs Caltrans to use drought-resistant landscaping and recycled water when feasible and to incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

Affected Environment

A visual impact assessment was completed for the project in August 2021. The visual impact assessment was prepared in accordance with the guidelines in the Federal Highway Administration's Visual Impact Assessment for Highway Projects (Federal Highway Administration 2015).

Visual Setting

The project is in the San Joaquin Valley of Central California. The landscape is flat and can allow expansive views of the Sierra Nevada to the east and the coast ranges to the west. The mountain ranges provide the only naturally occurring variation in topography. The southern end of the project corridor is mainly covered with agricultural crops and associated structures. Moving north, the land cover becomes more residential and commercial. Within Caltrans' right-of-way are historic plantings of Eucalyptus trees and oleander shrubs. There are no scenic resources and the highway is not designated as a State Scenic Highway.

Existing Visual Resources

The land cover in the project corridor is mainly agricultural crops, commercial, and residential. The vegetation along the freeway has large, mature oleanders in the median and large, mature Eucalyptus trees on the outside shoulders.

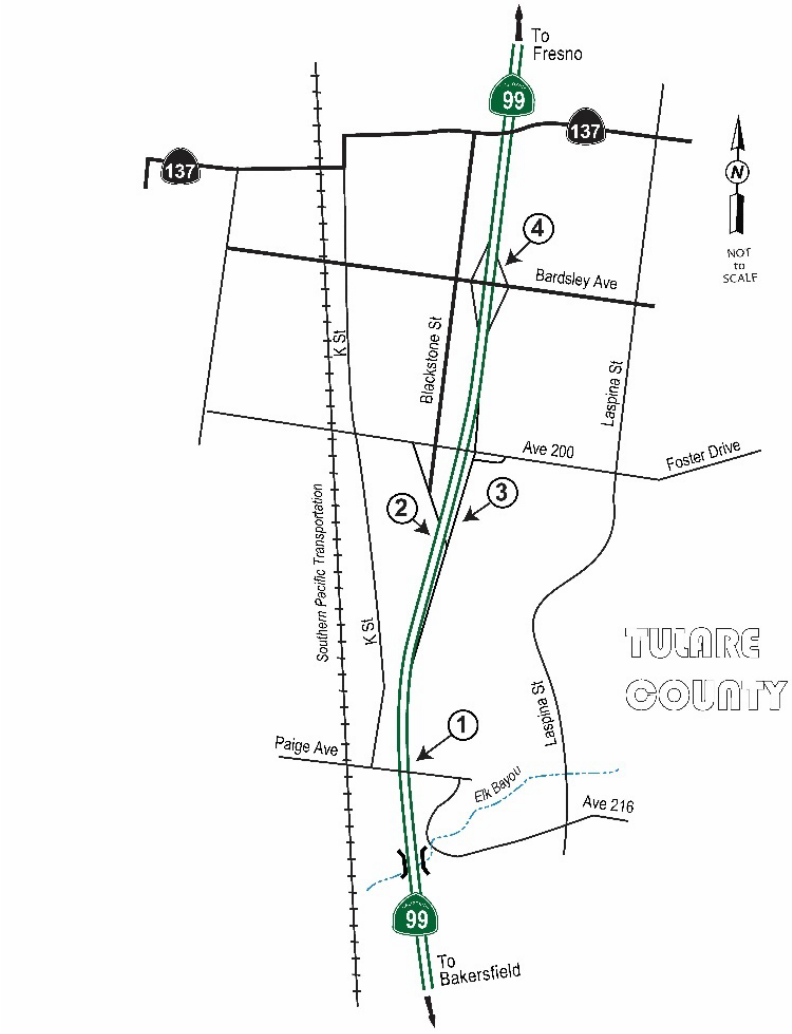
The oleanders in the median add a vibrant sense of color and texture all year round but are memorable when the plants are flowering in the spring and into the fall. The proximity of the vegetation to the traveled way allows it to dominate the views in most locations. The section of the highway between post mile 28.33 and post mile 30.06 is a Classified Landscape Freeway due to the ornamental vegetation planting that meets the criteria established by the California Code of Regulations, Outside Advertising Regulations, Title 4, Division 6.

Visual Assessment and Key Views

The project corridor is divided into a series of "outdoor rooms" or visual assessment units. Each visual assessment unit has its own visual character and visual quality. Because this project lacks diversity of views, only one visual assessment unit and its associated four key views have been identified. A map of the key view locations is shown in Figure 2-2.

- Key View 1: Eucalyptus tree in the median at post mile 25.4. This is an example of the characteristics of State Route 99, and it demonstrates the effect a single tree can have on the landscape.
- Key View 2: Wide median at post mile 25.7 to post mile 26.2. This view is of a 0.5-mile segment where the median geometry is different than the remainder of the corridor segment being studied. The project proposes to conform the wider segment to the width of the rest of the median on the project.
- Key View 3: Oleanders in the median and Eucalyptus trees with bridge overcrossing. Key view 3A within this location is on Paige Avenue, where the project proposes a new interchange and associated roundabouts.
- Key View 4: Below-grade roadway, landscaped freeway, oleanders in the median, and a bridge at post mile 28.5.

Figure 2-2 Map of the Key View Locations



Visual Resources and Resource Change

Resource change is assessed by evaluating the visual character and the visual quality of the visual resources that make up the project corridor before and after project construction. Resource change is one of the two major variables in the equation that determines visual impacts, and the other is viewer response.

Visual character includes attributes, such as form, line, color, and texture, and is used to describe, not evaluate; that is, these attributes are neither considered good nor bad. Changes in visual character can be identified by how visually compatible a proposed project would be with the existing condition by using visual character attributes as an indicator. For this project, the following attributes were considered:

Line—edges or linear definition

Texture—surface coarseness

Dominance—position, size, or contrast

Continuity—an uninterrupted flow of form, line, color, or textural pattern.

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the project corridor. Public attitudes validate the assessed level of visual quality and predict how changes to the project corridor can affect these attitudes. This process helps identify specific methods for addressing each visual impact that may occur because of the project. The three criteria for evaluating visual quality are defined below:

Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.

Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from nontypical visual intrusions.

Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

Viewers and Viewers' Response

The population affected by the project is composed of viewers. Viewers are people whose views of the landscape may be altered by the project—either because the landscape has changed or the viewers' perception of the landscape has changed. Viewers, or more specifically, the response viewers have to changes in their visual environment, are one of two variables that determine the extent of visual impacts that will be caused by the construction and operation of the project.

Viewer Exposure and Viewer Sensitivity

Viewer exposure is a measure of the viewer's ability to see a particular object. It has three attributes:

Location refers to the position of the viewer in relation to the object being viewed. The closer the viewer is to the object, the more exposure there is.

Quantity refers to how many people see an object. The more people can see an object or the greater the frequency an object is seen, the more exposure the object has to viewers.

Duration refers to how long a viewer can keep an object in view. The longer an object can be kept in view, the more exposure there is. High viewer exposure helps predict that viewers will have a response to a visual change.

Viewer sensitivity is a measure of the viewer's recognition of a specific object. It has three attributes:

Activity relates to the preoccupation of viewers. Are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings? The more they are observing their surroundings, the more sensitivity viewers will have to changes to visual resources.

Awareness relates to the focus of view. Is the focus wide and the view general, or is the focus narrow and the view specific? The more specific the awareness, the more sensitive a viewer is to change.

Local values and attitudes also affect viewer sensitivity. If the viewer group values aesthetics in general or if a specific visual resource has been protected by local, state, or national designation, viewers will likely be more sensitive to visible changes. High viewer sensitivity helps predict that viewers will have a high concern for any visual change.

Definition of Visual Impact Levels

- **Low—**Low negative change to existing visual resources and a low viewer response to that change. May or may not require mitigation.
- **Moderately Low—**Low negative change to the visual resource with a moderate viewer response or moderate negative change to the resource with a low viewer response. The impact can be mitigated using conventional practices.
- **Moderate—**Moderate negative change to the visual resource with moderate viewer response. The impact can be mitigated within five years using conventional practices.
- **Moderately High—**Moderate negative visual resource change with high viewer response or high negative visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. The

landscape treatment required will generally take longer than five years to mitigate.

- **High—**A high level of negative change to the resource or a high level of viewer response to visual change such that extraordinary architectural design and landscape treatment may not mitigate the impacts below a high level. An alternative project design may be required to avoid high negative impacts.

Environmental Consequences

Visual resources would be affected by project construction. The following is a description of the changes and the expected viewer response to these changes for each key view.

Figure 2-3: Existing Conditions of State Route 99 at Post Mile 25.4, North of the Avenue 200 Overcrossing



Key View 1

Key view 1 is at post mile 25.4, north of the Avenue 200 Overcrossing. The proposed build alternative would remove the trees, shrubs, and guardrails in the median and replace them with a third lane in each direction, separated by a concrete barrier. With the removal of the trees comes the loss of a distinctive and characteristic element of State Route 99. The level of resource change would be characterized as high. Viewer exposure can be rated as high. Viewers are close to the view, the roadway is a heavily used route, and the amount of time a viewer is in sight of the view is moderate to high. The viewer sensitivity in this segment would be high.

Figure 2-4: Existing Condition on State Route 99 at Post Mile 25.8



Key View 2

The second key view is at post mile 25.8 and is of a portion of the 0.5-mile segment where the median geometry is different than the remainder of the corridor segment being studied. The proposed build alternative would realign the roadway to remove the curve and conform the median to the current standard. Median trees would be removed and replaced by new lanes and a concrete barrier. This would result in the loss of color, texture, and pattern diversity on this segment of the route. The view would have more hard edges and be less balanced. The level of resource change would be characterized as high. Viewer exposure can be rated as high. Viewers are close to the view, the roadway is a heavily used route, and the amount of time a viewer is in sight of the view is moderate-high. The viewer sensitivity in this segment would be high.

Figure 2-5: Existing Conditions at Post Mile 27.4



Key View 3

The third key view is one of two locations—the first is at post mile 27.4—with oleanders in the median, eucalyptus trees, and a bridge overcrossing in the distance. The proposed build alternative would remove the oleanders in the median and add a third lane in each direction, separated by a concrete barrier. The level of resource change would be characterized as moderate. Viewer exposure can be rated as high. Viewers are close to the view, the roadway is a heavily used route, and the amount of time a viewer is in sight of the view is moderate-high. Viewer sensitivity is low.

Figure 2-6: Existing Conditions on Paige Avenue on the East Side of State Route 99, Looking East



Key View 3A

The second location of key view 3 is labeled as key view 3A and is on east Paige Avenue on the east side of State Route 99. The project would add a roundabout at this location, with new on- and off-ramps on both sides of State Route 99. The roundabout, with its design elements and landscape, would add elements of interest to the view. A stormwater basin is also proposed for the north side of Paige Avenue. The level of resource change would be characterized as moderate-high. The viewer's exposure can be rated as high, and the viewer sensitivity is low because no visual elements would be lost with project construction.

Figure 2-7: Existing Conditions at Post Mile 28.5



Key View 4

The fourth key view is at post mile 25.5, where the segment is a classified landscape freeway, the roadway is below grade, the oleanders are in the median, and there is an overcrossing. The proposed build alternative would remove the oleanders in the median and add a third lane in each direction, separated by a concrete barrier. The side slopes would be cut back by 2 to 15 feet to allow for the widening, except under the overcrossing bridges from post mile 28.4 to post mile 28.8, post mile 29.3 to post 30.1, and post mile 30.3 to post mile 30.7. The existing landscaping on the outside would be removed, and the slope would be regraded to be steeper than the existing conditions. The level of resource change would be characterized as high. Viewer exposure can be rated as high. Viewers are close to the view, the roadway is a heavily used route, and the amount of time a viewer is in sight of the view is moderate-high. Viewer sensitivity is low.

Table 2.24 below summarizes and compares the narrative ratings for visual resource change, viewer response, and visual impacts between alternatives for each key view.

Table 2.24 Displays a Summary of Visual Impacts by Key View

Key View Summary	Resource Change	Viewer Response	Visual Impact
Key View 1	High	High	High
Key View 2	High	High	High
Key Views 3 and 3A	High	Moderate	Moderately High
Key View 4	High	Moderate	Moderate

Temporary visual impacts may occur during project construction. Equipment and materials would need to be stored during construction. There may be a temporary increase in light and glare when night work is required. These visual impacts are expected to be temporary.

Avoidance, Minimization, and/or Mitigation Measures

The following measures to avoid or minimize visual impacts can be incorporated into the project:

- Minimize tree removal by removing only trees and shrubs required for the construction of the new roadway facilities. Avoid removing trees and shrubs for temporary uses, such as construction staging areas or temporary stormwater conveyance systems.

The following mitigation measures to offset visual impacts would be incorporated into the project:

- [The following section has been updated since the circulation of the draft environmental document]. Replacement planting would occur at a minimum ratio of 1:1. It is anticipated that replacement planting will amount to approximately 730 to 800 new trees. The locations of the planting may occur at the proposed stormwater basin sites and in the area where State Route 99 will be realigned at post mile 25.8. Most of the new planting would consist of California natives that are drought tolerant and use low to very low amounts of water. In addition, plants that attract pollinator species would be among these new plantings.

2.1.11 Cultural Resources

Regulatory Setting

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

The National Historic Preservation Act of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans went into effect for Caltrans' projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement implements the Advisory Council on Historic Preservation regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The Federal Highway Administration's responsibilities under the Programmatic Agreement have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 U.S. Code 327).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as "unique" archaeological resources. California Public Resources Code Section 5024.1 established the California Register of Historical Resources and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the California Register of Historical Resources and, therefore, a historical resource. Historical resources are defined in Public Resources Code Section 5020.1(j). In 2014, Assembly Bill 52 added the term "tribal cultural resources" to CEQA, and Assembly Bill 52 is commonly referenced instead of CEQA when discussing the process of identifying tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in Public Resources Code Section 21074(a), a tribal cultural resource is a California Register of Historical Resources or local register-eligible site, feature, place, cultural landscape, or object that has cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in Public Resources Code Section 21083.2.

Public Resources Code Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the National Register of Historic Places listing criteria. It further requires Caltrans to inventory state-owned structures in its rights-of-way.

Affected Environment

A Historic Property Survey Report for the project was completed on November 16, 2020, which included an Archaeological Survey Report and a

Historical Resources Evaluation Report. Due to the expansion of the project footprint, a Supplemental Historic Property Survey Report was completed on June 17, 2021, which included a Supplemental Archaeological Survey Report and a Supplemental Historical Resources Evaluation Report.

The Area of Potential Effects for cultural resources consisted of areas that would be directly or indirectly affected by project activities and included existing right-of-way, proposed temporary construction easements, and those parcels proposed for partial or full acquisition. The vertical Area of Potential Effects is based on the depth of anticipated excavation associated with construction activities.

Three historical resources were identified within the Area of Potential Effects and were evaluated for this project: Gutierrez Auto Truck and Farm Service, a single-family residence at 1282 East Sequoia Avenue, and Tulare Mobile Home Park.

No previously recorded archaeological resources are present within the Area of Potential Effects for cultural resources.

Environmental Consequences

Caltrans has determined a Finding of No Historic Properties Affected is appropriate for this undertaking because there are no historic properties within the Area of Potential Effects.

Gutierrez Auto Truck and Farm Service was evaluated in October 2020. On December 23, 2020, the State Historic Preservation Officer concurred with Caltrans' determination that the Gutierrez Auto Truck and Farm Service property is not eligible for the National Register of Historic Places. On August 26, 2021, the State Historic Preservation Officer concurred with Caltrans' determination that the residence at 1282 East Sequoia Avenue and the Tulare Mobile Home Park are not eligible for the National Register of Historic Places.

Native American consultation was initiated through letters to tribal representatives on August 1, 2019, and a supplemental project notification letter was sent to tribal representatives and the Native American Heritage Commission on February 7, 2021. No comments were received.

There is a low potential that buried archaeological deposits could be encountered during project construction.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the county coroner should be contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission, who, pursuant to Public Resources Code Section 5097.98, will then notify the Mostly Likely Descendant. At this time, the person who discovers the remains will contact Christina Gaddis, Cultural Specialist, District 6 Environmental Branch, so that they may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation would be needed.

2.2 Physical Environment

2.2.1 Water Quality and Stormwater Runoff

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the Waters of the U.S. from any point source unlawful unless the discharge complies with a National Pollutant Discharge Elimination System permit. [A point source is any discrete conveyance, such as a pipe or a human-made ditch.] This act and its amendments are known today as the Clean Water Act. Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the National Pollutant Clean Water Act Discharge Elimination System permit scheme. The following are important sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to Waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).

Section 402 establishes the National Pollutant Discharge Elimination System, a permitting system for the discharges (except for dredged or fill material) of any pollutant into Waters of the U.S. Regional Water Quality Control Boards administer this permitting program in California. Section 402(p) requires

permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (MS4s).

- Section 404 establishes a permit program for the discharge of dredged or fill material into Waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers.

The goal of the Clean Water Act is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effects. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineers’ Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers' decision to approve is based on compliance with the U.S. Environmental Protection Agency’s (U.S. EPA) Section 404(b)(1) Guidelines (40 Code of Federal Regulations Part 230) and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers and allow the discharge of dredged or fill material into the aquatic system (Waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a least environmentally damaging practicable alternative to the proposed discharge that would have lesser effects on the Waters of the U.S. and not have any other significant adverse environmental consequences. According to the guidelines, documentation is needed to ensure that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to the Waters of the U.S. [The U.S. Environmental Protection Agency defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”] In addition, every permit from the U.S. Army Corps of Engineers, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 Code of Federal Regulations 320.4. A discussion of the least environmentally damaging practicable alternative determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the Clean Water Act and regulates discharges to the Waters of the State. Waters of the State include more than just Waters of the U.S.; groundwater and surface waters are not considered Waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the Clean Water Act definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act.

The State Water Resources Control Board and Regional Water Quality Control Boards are responsible for establishing the water quality standards (objectives and beneficial uses) required by the Clean Water Act and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable Regional Water Quality Control Board Basin Plan. In California, Regional Water Quality Control Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the State Water Resources Control Board identifies waters that fail to meet standards for specific pollutants. These waters are then state-listed in accordance with Clean Water Act Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or nonpoint source controls (National Pollutant Discharge Elimination System permits or Waste Discharge Requirements), the Clean Water Act requires the establishment of Total Maximum Daily Loads. Total Maximum Daily Loads specify allowable pollutant loads from all sources (point, nonpoint, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board administers water rights, sets water pollution control policy, issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving basin plans, Total Maximum Daily Loads, and National Pollutant Discharge Elimination System permits. Regional Water Quality Control Boards are responsible for protecting beneficial uses of water resources within their regional jurisdiction, using planning, permitting, and enforcement authorities to meet this responsibility.

- National Pollutant Discharge Elimination System Program
- Municipal Separate Storm Sewer Systems

Section 402(p) of the Clean Water Act requires the issuance of National Pollutant Discharge Elimination System permits for five categories of stormwater discharges, including Municipal Separate Storm Sewer Systems (MS4s). A Municipal Separate Storm Sewer System is defined as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater that is designed or used for collecting or conveying stormwater." The State Water Resources Control Board has identified Caltrans as an owner/operator of municipal separate storm sewer systems under federal regulations. Caltrans' municipal separate storm sewer systems permit covers all Department rights-of-way, properties, facilities, and activities in the state. The State Water Resources Control Board or the Regional Water Quality Control Board issues the National Pollutant Discharge Elimination System permits for five years, and permit requirements remain active until a new permit has been adopted.

Caltrans' Municipal Separate Storm Sewer Systems Permit, Order Number 2012-0011-DWQ (adopted on September 19, 2012, and effective on July 1, 2013), as amended by Order Number 2014-0006-EXEC (effective January 17, 2014), Order Number 2014-0077-DWQ (effective May 20, 2014), and Order Number 2015-0036-EXEC (conformed and effective April 7, 2015), has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);

2. Caltrans must implement a year-round program in all parts of the state to effectively control stormwater and non-stormwater discharges; and

3. Caltrans' stormwater discharges must meet water quality standards through the implementation of permanent and temporary (construction) Best Management Practices, to the maximum extent practicable, and other measures as the State Water Resources Control Board determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Stormwater Management Plan to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The Stormwater Management Program assigns responsibilities within Caltrans for implementing stormwater management procedures and practices, as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The Stormwater Management Program describes the minimum procedures and practices

Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices. The project will be programmed to follow the guidelines and procedures outlined in the latest Stormwater Management Program to address stormwater runoff.

Construction General Permit

Construction General Permit, Order Number 2009-0009-DWQ (adopted on September 2, 2009, and effective on July 1, 2010), as amended by Order Number 2010-0014-DWQ (effective February 14, 2011) and Order Number 2012-0006-DWQ (effective on July 17, 2012). The permit regulates stormwater discharges from construction sites that result in a Disturbed Soil Area of 1 acre or greater and/or are smaller sites that are part of a larger common plan of development. By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least 1 acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than 1 acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the Regional Water Quality Control Boards. Operators of regulated construction sites are required to develop Stormwater Pollution Prevention Plans, implement sediment, erosion, and pollution prevention control measures, and obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Level 1, 2, or 3. Risk levels are determined during the planning and design phases and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory stormwater runoff, potential of hydrogen (pH) and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Stormwater Pollution Prevention Plan. In accordance with Caltrans' Stormwater Management Program and Standard Specifications, a Water Pollution Control Program is necessary for projects with a DSA of less than 1 acre.

Section 401 Permitting

Under Section 401 of the Clean Water Act, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will comply with state water quality standards. The most common federal permits triggering 401 Certification are Clean Water Act Section 404 permits issued by the United States Army Corps of Engineers. The 401 permit certifications are obtained

from the appropriate Regional Water Quality Control Boards, dependent on the project location, and are required before the United States Army Corps of Engineers issues a 404 permit.

In some cases, the Regional Water Quality Control Boards may have specific concerns with discharges associated with a project. As a result, the Regional Water Quality Control Boards may issue a set of requirements known as Waste Discharge Requirements under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. Waste Discharge Requirements can be issued to address permanent and temporary discharges of a project.

Affected Environment

A Water Quality Assessment Report was completed for the project on July 25, 2021.

The project area is part of the South Valley Floor Hydrologic Unit within the watershed of the Kaweah Delta Hydrologic Area. Elk Bayou Ditch is the main natural drainage near the project area. This waterway is a tributary of the Kaweah River that receives waters from Outside Creek at its east end and joins the Tule River southwest of the project area.

Although there is no major natural waterway near the City of Tulare, agricultural fields in and around the city are irrigated through a system of canals operated by the Tulare Irrigation District.

The Tulare Canal (also known as the Main Canal or Tulare Main Canal) conveys surface water to farmland in the vicinity of Tagus and to the northwest of the City of Tulare within the Tulare Irrigation District. This canal was originally constructed in 1873. The head of the canal is on the south side of the Kaweah River. From that point, the canal has a southwesterly course, is about 15 miles long, and has a bed width of 16 feet. The segment of the Tulare Canal that flows through the project area is unlined.

The State Route 99 freeway crosses the Tulare Canal just north of the Paige Avenue Overcrossing. On the east side of the freeway, the canal is oriented east/west from east of Laspina Street until it makes a 90-degree turn by the freeway. From that point, the canal flows southwards, next to the northbound lanes for about one block, before turning at an angle to cross under the freeway via box culverts. On the west side of the freeway, the canal continues southwesterly and then flows westward along the north side of Paige Avenue.

The project area is primarily flat, with a lack of significant inclined surface grade and natural creeks or streams. Because of the lack of significant grade (slope), the predominant method of runoff disposal along State Route 99 is the use of ditches and detention basins excavated below ground level.

Environmental Consequences

Project improvements that could impact the site hydrology and water quality include relocating the existing culvert of the Tulare Main Canal under State Route 99 farther north, realigning the canal channel and extending the box culvert under Blackstone Street, grading, paving, striping, material stockpiling and storage at staging areas, and installing new drainage ditches and inlets. In-water and embankment construction activities (i.e., extending culverts, vegetation clearing, and brushing) associated with the relocation of the Tulare Canal could cause sediment displacement and result in increased turbidity levels for a short period of time in the canal.

Contaminants that could be found in runoff from roads would include sediments, oils, grease, and heavy metals. Potential sources of water pollution would originate from sediments released in excavations and grading operations, petroleum and wear products from motor vehicle operations, accidental spills of hazardous materials, and accidental spills during normal roadway operation. Overall, postconstruction runoff from oil, grease, and chemical pollutants is not expected to harm water quality in comparison with existing conditions.

Land disturbance activities, such as grading and excavation during construction, would loosen the soil and remove the protective cover of vegetation, reducing the natural soil resistance to rainfall impact erosion. Silt fencing and hay bales are some of the temporary Best Management Practices that may be used to minimize any downstream turbidity in the Tulare Canal during construction.

The existing paved areas and hard surfaces within the project footprint amount to 97.5 acres of impervious surface area. The project would add 34.4 acres of impervious surface area. The increase in impervious surface area from widening State Route 99 has the potential to increase the stormwater velocity, volume, and potential sediment load being carried into lower elevation areas through culverts and ditches. These potential impacts due to new areas of pavement and other hard surfaces would be minimized through the implementation of stormwater treatment Best Management Practices that promote infiltration and dispersion of runoff.

New drainage inlet systems are proposed along the freeway to capture roadway runoff. The proposed drainage system would be similar to the existing one, with culverts directing runoff to roadside ditches. Using drainage culvert end devices, such as flared end sections, tees, and rock slope protection, will dissipate and disperse the energy of runoff as it flows out of the culverts into the ditches.

Five new detention basins are proposed to increase storage capacity and collect the additional runoff volume that would infiltrate into the ground.

Runoff is not expected to directly discharge into nearby waterbodies. To address increased runoff from the additional impervious surfaces and to ensure that the existing flow conditions are not exceeded, the project would include stormwater runoff Best Management Practices to collect and retain the additional flows within the Caltrans right-of-way, as required by the Caltrans MS4 permit and Caltrans' Statewide Stormwater Management Plan.

Implementation of the following measures would reduce impacts on water quality from stormwater runoff. Caltrans would implement the following avoidance and minimization measures:

Stormwater Best Management Practices

To prevent or reduce impacts, temporary Construction Site Best Management Practices will be implemented for sediment control and material management. These could include cover, drainage inlet protection, fiber roll, silt fence, hydraulic mulch, concrete washout, and street sweeping.

Temporary Construction Site Best Management Practices are implemented during construction activities to avoid and minimize pollutant loads in stormwater/non-stormwater discharges. Construction Site Best Management Practices strategies for this project may include:

- Soil Stabilization: Scheduling, preserving existing vegetation, slope protection, slope interrupter devices, and channelized flows.
- Perimeter control: Silt fences and inlet protection.
- Tracking Controls: Stabilized construction entrances and exits and street sweeping.
- Wind Erosion Controls: temporary covers.
- Non-Stormwater Management: vehicle and equipment operations (fueling, cleaning, and maintenance) and material and equipment use.
- Waste management and materials pollution control: Concrete washout, material delivery and storage, material use, stockpile management, spill prevention and control, soil waste management, hazardous waste and/or contaminated soil management, liquid waste management, and lead abatement and containment.

Permanent Treatment Best Management Practices are postconstruction quality control measures used to remove pollutants from stormwater runoff before being discharged from Caltrans' right-of-way. Direct and indirect discharges to surface waterbodies are not anticipated because three new detention basins will be constructed to capture the additional volume of the new impervious surface runoff.

Stormwater Pollution Prevention Plan

Before the start of construction activities, a Stormwater Pollution Prevention Plan will be prepared by the contractor and approved by Caltrans. The Stormwater Pollution Prevention Plan shall specify and require the implementation of Best Management Practices with the intent of keeping all products of erosion from moving offsite and into receiving waters during construction. The requirements of the Stormwater Pollution Prevention Plan shall be incorporated into design specifications and construction contracts.

Recommended Best Management Practices for the construction phase would include, but would not be limited to, the following:

- Stockpiling and disposing of demolition debris, concrete, and soil properly
- Protecting existing storm drain inlets and stabilizing disturbed areas
- Implementing erosion controls
- Properly managing construction materials
- Managing waste, aggressively controlling litter, and implementing sediment controls
- Submitting a 401 Certification with the Central Valley Regional Water Quality Control Board to ensure compliance with federal and state effluent limitations and water quality standards.
- Submit a Section 1600 Streambed Alteration Agreement with the California Department of Fish and Wildlife.

Conform with other local requirements (Tulare County, City of Tulare, and Tulare Irrigation District) as appropriate.

Implementing water quality measures would be required to address project-related water quality impacts during the construction, operation, and maintenance of the built project. No additional avoidance and minimization measures would be needed to protect water quality and water resources.

Avoidance, Minimization, and/or Mitigation Measures

No additional measures would be needed.

2.2.2 Paleontology

Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils.

Several federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as part of federally authorized projects.

Sixteen U.S. Code Sections 461-467 established the National Natural Landmarks program. Under this program, property owners agree to protect biological and geological resources, such as paleontological features. Federal agencies and their agents must consider the existence and location of designated National Natural Landmarks and areas found to meet the criteria for national significance in assessing the effects of their activities on the environment under NEPA.

Twenty-three U.S. Code Section 1.9(a) requires that the use of federal-aid funds must conform with all federal and state laws.

Twenty-three U.S. Code Section 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 U.S. Code Sections 431-433 above and state law.

Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA).

In addition, the Tulare County General Plan (2012) has established mitigation policies and implementation measures to protect and preserve paleontological resources.

Affected Environment

Caltrans completed a Paleontological Identification Report for the project in October 2019 and a Paleontological Evaluation Report/Preliminary Mitigation Measures in July 2021. The reports included information obtained from paleontological database searches, a review of published journals, and findings from previous Caltrans paleontological mitigation projects that involved excavation in similar geologic materials within the project area.

Caltrans staff conducted a paleontological reconnaissance of the project area on September 22, 2020. The survey consisted of a windshield survey and a systematic survey conducted on the foot of open ground where accessible. Areas observed were predominantly vegetated and covered with pavement and/or debris. The sediments observed consisted of grayish-tan silty, fine-grained sands, and buff-colored fines (silt and clay). These observations are consistent with descriptions of the Modesto Formation reported by past regional studies.

The geologic units expected to underlie the project area are the Modesto Formation and the Riverbank Formation. As classified according to Caltrans' guidelines, the Modesto and Riverbank Formations are identified as having a "High Potential" to contain scientifically significant nonrenewable paleontological resources.

During the construction of the Plainsburg/Arboleda Freeway Project in Merced County, hundreds of vertebrate fossils were discovered at localities attributed to the Modesto Formation. The discovery provided valuable information related to stratigraphic correlation, relative geologic age determination, plant and animal diversity, and paleoclimatology. Fossils recovered from the Modesto Formation included the Columbian mammoth, horse, camel, dire wolf, ground sloth, sabre-toothed cat, bison, llama, rabbit, squirrel, kangaroo rat, pocket gopher, goose, quail, snake, and numerous additional species. Fossils from the Plainsburg/Arboleda Freeway Project were accessioned—record the addition of (a new item) to a library, museum, or other collection—to an academic institution and museum for research and educational purposes.

Based on the paleontological mitigation conducted during the construction of the Betty Drive Interchange project, located about 12 miles to the north of Tulare on State Route 99, the Pleistocene Riverbank Formation was observed underlying the Modesto Formation. Due to the widespread presence of these formations throughout the San Joaquin Valley, the Riverbank Formation is expected to be present beneath the area of the project. In addition, numerous vertebrate fossils were discovered during the construction of the Arco Arena in Sacramento County. The fossils recovered consisted of species of mammoth, sloth, horse, and other vertebrates. The fossil localities from the site were correlated to the Riverbank Formation.

A search for paleontological records was completed using available databases, published peer-reviewed journals, and Paleontological Monitoring Reports from past Caltrans projects that involved excavations into previously undisturbed portions of the Modesto and Riverbank Formations.

Environmental Consequences

Grading, excavation, and other ground disturbance activities within the project area have the potential to impact scientifically significant nonrenewable fossils. Applicable excavations are defined as ground disturbance activities extending into previously undisturbed portions of the Modesto and Riverbank Formations (i.e., not previously backfilled materials) at depths greater than 1 foot below the original grade. These areas include, but are not limited to, construction of the new lanes in the median, reconstruction of existing lanes, excavation of side slopes in depressed areas, the reconfigured Paige Avenue Interchange, including new overcrossing and roundabouts, Tulare Main Canal relocation, excavation of new retention basins, new pumping stations, and excavation for soundwalls, retaining walls, and right-of-way walls or fencing.

Avoidance, Minimization, and/or Mitigation Measures

Due to the potential to affect scientifically significant nonrenewable paleontological resources, mitigation would be required. A Paleontological Mitigation Plan would be prepared before construction by a Caltrans-supplied

consultant. The plan would recommend the measures required to minimize potential impacts on paleontological resources. The mitigation measures would include:

- Identifying and acknowledging construction site safety protocols.
- Conducting paleontological Worker Environmental Awareness Training for all earth-moving personnel and supervisors.
- Conducting mitigation field monitoring of excavation into undisturbed sediments of the Modesto and Riverbank Formations. Excavations from 1 to 3 feet below the ground surface would be spot-checked. Continuous or full-time monitoring would be required for excavations more than 3 feet deep.
- Establishing a protective 25-foot radius buffer zone around fossil discovery locations.
- Notification of the resident engineer upon fossil discovery.
- Processing bulk soil samples for microfossil identification.
- Use of plaster casting to stabilize and preserve macrofossils.
- Preparation of salvaged items for identification to the lowest taxonomic level.
- Curation of salvaged fossils at a receiving museum or academic institution.
- Preparing a Paleontological Mitigation Report following completion of all paleontological monitoring activities, documenting compliance with all mitigation measures.

2.2.3 Hazardous Waste and Materials

Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage, and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and the Resource Conservation and Recovery Act of 1976. The purpose of Comprehensive Environmental Response, Compensation, and Liability, often referred to as “Superfund,” is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, Executive Order 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement the Resource Conservation and Recovery Act in the state. California law also addresses the specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts the disposal of waste and requires the cleanup of wastes that are below hazardous waste concentrations but could impact groundwater and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material are vital if it is found, disturbed, or generated during project construction.

Affected Environment

The Cortese list is a compilation of contaminated and potentially contaminated sites. The Cortese list was reviewed as part of the initial screening for this project. This list, or a property's presence on the list, has a bearing on the local permitting process and on compliance with the California Environmental Quality Act. The project would require partial or complete acquisition of parcels or would need temporary construction easements. These properties, if on the Cortese List, may require further evaluation.

- Roche Oil, Incorporated/Mobil gas station at 1120 East Paige Avenue and the Mobil gas station at 2200 South Blackstone Street (APN 182-110-019 and APN 182-110-018). Partial acquisition and temporary construction

easements are proposed. The existing gas station property includes aboveground storage tanks and handles and stores hazardous materials and waste. The property is a closed-case (2011) leaking underground storage tank site.

- Paige Truck Stop at 1297 East Paige Avenue (APN 191-070-013). A full acquisition of this existing gas station is proposed. Project construction would impact tanks and piping. The parcel is a closed-case (2018) leaking underground storage tank site that had soil and groundwater contamination. A full site evaluation would be required before acquisition. The removal of tanks and/or piping would be the responsibility of the property owner, per local requirements.
- Love's Travel Stop at 2700 South Blackstone Street (APN 191-060-011). A partial acquisition is proposed for this existing gas station. The area to be acquired is asphalt, concrete, and landscaping.
- Flying J Travel Center at 979 East Paige Avenue (APN 191-050-076). A partial acquisition is proposed for this new gas station; the area to be acquired is signage and landscaping.
- Tulare Joint Union High School District, Administration Office, and Bus Maintenance at 426 North Blackstone Street. Temporary construction easements are proposed in APN 171-090-031, APN 171-090-032, and APN 171-090-038). The school district owns and operates an underground storage tank and handles and stores other hazardous materials and waste; minor surface staining is likely. The area of the construction easement is asphalt and concrete. Parcels APN 171-090-029, APN 171-090-032, and APN 171-090-038 are a closed-case (1998) leaking underground storage tank site.
- C. P. Phelps, Incorporated, at 1010 South Blackstone Street (APN 182-040-034). A partial acquisition is proposed for this existing gas station parcel. The area to be acquired is dirty and vacant. The property is a closed-case (2013) leaking underground storage tank site.

These sites, although not listed on the hazardous waste databases noted above, are locations where hazardous materials and/or hazardous wastes are handled and stored, and the parcels could include undocumented underground storage tanks.

- Gutierrez Auto Truck and Farm Service at 1132 East Paige Avenue (APN 182-110-020) would be a full acquisition. This business handles and stores hazardous materials and waste, including tires, has a hydraulic lift, and performs auto and truck repairs. This parcel may be the site of a former gas station.
- Vacant lot owned by the City of Tulare at 1285 East Paige Avenue (APN 191-070-015). This parcel, which is used for the truck stop parking area, would be a full acquisition. Minor surface and subsurface hydrocarbon impacts due to spillage and stains from truck parking are present.

- A Premier Towing at 1125 East Batavia Court (APN 182-020-048). A partial acquisition is proposed for this parcel. This business does car and truck repair; tires and miscellaneous storage are present. There is minor surface staining onsite. The area to be acquired is asphalt and concrete.
- A and L Truck Supply at 1128 East Batavia Court (APN 182-020-049). A partial acquisition is proposed for this parcel. Trucking accessories and supplies are present. The area to be acquired is dirty and vacant.
- 3D Offroad at 1442/1454 South Blackstone Street (APN 182-020-044). A partial acquisition is proposed for this parcel located in a light industrial strip mall. This business does repair and metal fabrication and has truck accessories. Also present are rusted parts and metal, and there is minor surface staining onsite; a storm drain was noted. The area to be acquired is asphalt and concrete.
- Spectra Chrome Powder Coating at 1442/1454 South Blackstone Street (APN 182-020-044). A partial acquisition is proposed for this parcel located on a light industrial strip mall. This business does metal coating and blasting and has a painting/sandblasting booth. There are miscellaneous parts, metal, and equipment storage onsite. The area to be acquired is asphalt and concrete.
- Autocom/Truck and RV Repair-Road Service and Tire at 1159 Security Court (APN 182-030-032) A partial acquisition is proposed for this parcel, which is a car and truck repair shop. A hydraulic lift, tires, a steam cleaner, and miscellaneous storage are onsite. The area to be acquired is asphalt and concrete.
- Aguilar's Mobile Lube Service/AutoCom at 1175 Security Court (APN 182-030-031). A partial acquisition is proposed for this parcel. This business does auto and heavy equipment repair.

Environmental Consequences

Preliminary Site Investigations were performed in May 2022 and June 2022 at Gutierrez Auto Truck and Farm Service, Mobil/Roche Oil, Incorporated, and Paige Truck Stop. Preliminary Site Investigations are required within the proposed right-of-way acquisition area to determine if any petroleum hydrocarbon contamination and volatile organic compounds have occurred before acquisition. The results showed that the sites were not significantly impacted by total petroleum hydrocarbons, volatile organic compounds, oil and grease, or heavy metals. The hazardous waste risk associated with these sites is low.

Aerially Deposited Lead

Aerially deposited lead from the historical use of leaded gasoline exists along roadways throughout California. There is the likely presence of soils with elevated concentrations of lead because of aerially deposited lead on the State Highway System right-of-way within the limits of the project alternatives.

Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, aerially deposited lead agreement between Caltrans and the California Department of Toxic Substances Control. This agreement allows such soils to be safely reused within the project limits as long as all requirements of the aerially deposited lead agreement are met.

The project would require work off the existing pavement, and excess soil generated during construction would need to be relinquished or disposed of. A previous Preliminary Site Investigation addressing aerially deposited lead from post mile 26.3 to post mile 27.7 was conducted in December 2017. A Preliminary Site Investigation in May 2022 and June 2022 was done on the remaining post miles that were not previously studied (from post mile 25.4 to post mile 26.3 and post mile 27.7 to post mile 30). The results indicated that soil excavated from the surface to a depth of 3 feet on the southbound shoulder of State Route 99 would be considered nonregulated material. The soil can be either disposed of or relinquished without restrictions. Soil excavated from the northbound shoulder from the surface to a depth of 1 foot would be classified as regulated material and could be used only within Caltrans' right-of-way or at other commercial property per the Department of Toxic Substances Control's Agreement for Aerially Deposited Lead Contaminated Soil.

Lead-Based Paint

Lead-based paint was not collected from the concrete box culverts because no paint was seen on the surfaces. Seven lead-based paint chip samples were collected from the exterior buildings within the project footprint. The interior paint was inspected and found to be in good condition. Paint on the south exterior trim and southeast overhang of existing buildings within the project footprint would classify as state and federal hazardous waste.

Asbestos-Containing Materials

A survey for asbestos-containing materials was completed for the Paige Avenue Overcrossing in 2017 and detected no asbestos. A Preliminary Site Investigation in May 2022 and June 2022 found no detection of asbestos from the concrete box culverts.

Other Hazardous Substances or Wastes

There is some agricultural land within the project boundaries. Residual organochlorine pesticides are not likely to be present in shallow soils that would be of concern or exceed regulatory health-based screening thresholds for commercial/industrial land use.

According to the Department of Conservation's mapping, naturally occurring asbestos or other hazardous minerals are not expected to be found in the

project area. There are no active or abandoned mining activities or operations in the project vicinity.

Other potential hazardous substances or hazardous waste issues requiring proper handling and disposal include treated wood waste on roadside signs and guardrails and pavement paint, striping, and markings. Yellow and white pavement paint, striping, and markings have been found to contain high levels of lead.

Avoidance, Minimization, and/or Mitigation Measures

Avoidance and minimization measures for the project would include:

- A lead compliance plan and an asbestos compliance plan would be required to be prepared by the contractor before the start of construction.
- Project-specific special provisions and/or nonstandard special provisions would be included in the construction contract to address proper handling and disposal of hazardous waste and to minimize exposure to potential hazards.

2.2.4 Air Quality

Regulatory Setting

The Federal Clean Air Act, as amended, is the primary federal law that governs air quality, while the California Clean Air Act is its companion state law. These laws and related regulations by the U.S. Environmental Protection Agency and the California Air Resources Board set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards. National Ambient Air Quality Standards and state ambient air quality standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide, nitrogen dioxide, ozone, particulate matter—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (Particulate Matter 10) and particles of 2.5 micrometers and smaller (Particulate Matter 2.5), lead, and sulfur dioxide. In addition, state standards exist for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. The National Ambient Air Quality Standards and state standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel “Conformity” requirement under the Federal Clean Air Act also applies.

Conformity

The conformity requirement is based on Federal Clean Air Act Section 176(c), which prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to the State Implementation Plan for attaining the National Ambient Air Quality Standards. "Transportation Conformity" applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the National Ambient Air Quality Standards and only for the specific National Ambient Air Quality Standards that are, or were, violated. U.S. Environmental Protection Agency regulations at 40 Code of Federal Regulations 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for National Ambient Air Quality Standards and do not apply at all for state standards, regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the National Ambient Air Quality Standards for carbon monoxide, nitrogen dioxide, ozone, particulate matter (Particulate Matter 10 and Particulate Matter 2.5), and in some areas (although not in California), sulfur dioxide. California has nonattainment or maintenance areas for all of these transportation-related "criteria pollutants" except sulfur dioxide and also has a nonattainment area for lead; however, lead is not currently required by the Federal Clean Air Act to be covered in transportation conformity analysis. Regional conformity is based on the emission analysis of Regional Transportation Plans and Federal Transportation Improvement Programs, which include all transportation projects planned for a region over a period of at least 20 years (for the Regional Transportation Plans) and four years (for the Federal Transportation Improvement Programs). Regional Transportation Plans and Federal Transportation Improvement Programs conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years, showing that the requirements of the Federal Clean Air Act and the State's air quality implementation, are met. If the conformity analysis is successful, the Metropolitan Planning Organization, Federal Highway Administration, and Federal Transit Administration make the determination that the Regional Transportation Plans and Federal Transportation Improvement Programs are in conformity with the State's air quality implementation plan for achieving the goals of the Federal Clean Air Act. Otherwise, the projects in the Regional Transportation Plans and/or Federal Transportation Improvement Programs must be modified until conformity is attained. If the design concept and scope and the "open-to-

traffic" schedule of a proposed transportation project are the same as described in the Regional Transportation Plans and Federal Transportation Improvement Programs, then the project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming Regional Transportation Plan and Transportation Improvement Program; the project has a design concept and scope that have not changed significantly from those in the Regional Transportation Plans and Transportation Improvement Program; project analyses have used the latest planning assumptions and Environmental Protection Agency-approved emissions models; and in particle matter areas, the project complies with any control measures in the State Implementation Plan. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in carbon dioxide and particle matter nonattainment or maintenance areas to examine localized air quality impacts.

Affected Environment

Caltrans completed an Air Quality Report for the project in September 2021. The project site is in the City of Tulare in Tulare County, which lies within the San Joaquin Valley Air Basin. The San Joaquin Valley Air Pollution Control District has jurisdiction over the San Joaquin Valley Air Basin.

Climatic Conditions

In the region, airflow is channeled by mountain ranges, with the predominant wind direction following the valley's north-south axis in one direction. The second most prevalent wind also follows this pattern but in the opposite direction. California's coastal mountain ranges limit the inflow of maritime air into the interior of California. Due to subsidence inversion (discussed below), marine airflow over the mountains is stifled, and airflow is limited to breaks or low points in the coastal range. The greatest portion of maritime air reaches the Central Valley via a major break in the coastal ranges, the Carquinez Straits of San Francisco Bay.

During the day, precursor emissions from the Bay Area and the northern San Joaquin Air Basin move downwind into the interior San Joaquin Valley, accumulating in a region stretching out of Stockton to Bakersfield. Limited airflow allows the escape of some air over the Tehachapi Mountains into the Mojave Desert. At night, the wind pattern is much the same. However, cooler drainage winds at the Tehachapi Mountains force the air back northwards in a circular air pattern known as the Fresno eddy. The pollutants swirl in a counterclockwise pattern and return the air back to the polluted urban areas, where more precursors are added the next day. Nighttime winds are caused by a jet stream of fast-moving air about 1,000 feet above the valley floor, up to 30 miles per hour. Pollutants transported to higher altitudes due to daytime heating settle downward due to drainage winds.

Once marine air flows into the basin, it is relatively trapped. The San Joaquin Valley Air Basin is an essentially closed basin surrounded by the coastal ranges on the west, the Tehachapi Mountains to the south, and the Sierra Nevada to the east. These conditions result in poor horizontal movement of pollutants; meanwhile, high pressure hinders the movement of vertical pollutants, so pollutants settle and accumulate.

Criteria Pollutants

Federal and state governments have established ambient air quality standards to define clean air to protect human health and the environment. An air quality standard defines the maximum amount of a pollutant averaged over a specified period that can be present in outdoor air without harmful effects on human health or the environment.

At the federal level, there are six criteria pollutants for which National Ambient Air Quality Standards have been established: carbon monoxide, lead, nitrogen dioxide, ozone, fine and respirable particulate matter (Particulate Matter 10 and Particulate Matter 2.5), and sulfur dioxide. Table 2.25 summarizes the health effects and sources of the six criteria pollutants and additional pollutants regulated in the State of California.

Table 2.25 State and Federal Criteria Air Pollutant Effects and Sources

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Ozone	High concentrations irritate the lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic volatile organic compounds may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases or volatile organic compounds and nitrogen oxides in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.
Carbon Monoxide	Carbon monoxide interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. Carbon monoxide is also a minor precursor for photochemical ozone. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. Carbon monoxide is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Respirable Particulate Matter (Particulate Matter 10)	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with an increased risk of cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic and other aerosol and solid compounds are part of Particulate Matter 10.	Dust- and fume-producing industrial and agricultural operations; combustion smoke and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.
Fine Particulate Matter (Particulate Matter 2.5)	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter (a toxic air contaminant) is in the Particulate Matter 2.5 size range. Many toxic and other aerosol and solid compounds are part of Particulate Matter 2.5.	Combustion, including motor vehicles, other mobile sources, and industrial activities. Residential and agricultural burning. It is also formed through atmospheric chemical and photochemical reactions involving other pollutants, including nitric oxide, sulfur oxides, ammonia, and reactive organic gases.
Nitrogen Dioxide	Irritating to eyes and respiratory tract. Colors the atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of stormwater. Part of the “Nitric Oxide” group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel, refineries, and industrial operations.
Sulfur Dioxide	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, and steel. Contributes to acid rain. Limits visibility.	Fuel combustion, especially coal and high-sulfur oil, chemical plants, sulfur recovery plants, metal processing, and some natural sources like active volcanoes. Limited contribution is possible from heavy-duty diesel vehicles if ultra-low-sulfur fuel is not used.
Lead	Disturbs the gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also, a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.
Sulfates	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries, oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.
Hydrogen Sulfide	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes, such as refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Visibility Reducing Particles	Reduces visibility. Produces haze. NOTE: not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class 1" areas. However, some issues and measurement methods are similar.	See particulate matter above. May be related more to aerosols than to solid particles.
Vinyl Chloride	Neurological effects, liver damage, and cancer. Also considered a toxic air contaminant.	Industrial processes

Source: Air Quality Report, September 2022.

The state and federal attainment status for all regulated air pollutants in the San Joaquin Valley Air Basin, where the project is located, is shown in Table 2.26. Tulare County is designated as a nonattainment area for the following pollutants:

- State: 1-hour and 8-hour ozone, respirable particulate matter, and fine particulate matter standards.
- Federal: 8-hour ozone and fine particulate matter standards

The basin is in attainment of the federal respirable particulate matter and carbon monoxide standards.

Table 2.26 Criteria Pollutants: State and Federal Attainment Status

Pollutant	State Attainment Status	Federal Attainment Status
One Hour Ozone	Nonattainment/Severe	Not Applicable
Eight-Hour Ozone	Nonattainment	Nonattainment/Extreme
Respirable Particulate Matter (Particulate Matter 10)	Nonattainment	Attainment
Fine Particulate Matter (Particulate Matter 2.5)	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment	Attainment/Unclassified
Sulfur Dioxide	Attainment	Nonattainment/Unclassified
Lead	Attainment	No Designation/Classification
Visibility-Reducing Particles	Unclassified	Not Applicable
Sulfates	Attainment	Not Applicable
Hydrogen Sulfide	Unclassified	Not Applicable
Vinyl Chloride	Attainment	Not Applicable

Source: Air Quality Report, September 2022.

The San Joaquin Valley Air Pollution Control District and the California Air Resources Board's air quality monitoring program collect accurate real-time measurements of ambient level pollutants at 38 sites in the San Joaquin Valley. Pollutants monitored include ozone, fine particle matter and respirable particle matter, carbon monoxide, nitrogen oxides, sulfur oxides, and hydrocarbons. The data generated are used to define the nature and severity of pollution, determine which areas are in attainment or nonattainment, identify pollution trends in the state, support agricultural burn forecasting, and develop air models and emission inventories.

The closest air quality monitoring station to the project is in the City of Visalia at 310 North Church Street. The Church Street monitor is about 12 miles northeast of the Tulare Six-Lane and Paige Avenue Interchange Improvement project. A summary of 2015-2019 monitoring data from this station is included in Tables 2.27 through 2.29. The tables show the number of days that federal and California standards for ozone, fine particle matter, and respirable particle matter were exceeded in the five-year period. Data for ambient nitrogen dioxide and sulfur dioxide concentrations are not available because the station does not monitor these pollutants.

The paragraph below pertains to the third column in Table 2.27, which states, “Number of days exceeding 0.12 parts per million federal standard.”

The federal one-hour ozone standard was revoked in 2005; however, under the anti-backsliding provisions of the federal Clean Air Act, areas like San Joaquin Valley not meeting the standard at the time of revocation were nonetheless required to make an attainment demonstration with the standard.

Table 2.27 Ozone Concentrations With Days Over Federal and State Standards 2015-2019

Ozone Data	2015	2016	2017	2018	2019
Highest measured one-hour concentration (parts per million)	0.110	0.098	0.109	0.112	0.093
Number of days exceeding 0.09 parts per million state standard	9	1	9	8	0
Number of days exceeding 0.12 parts per million federal standard	0	0	0	0	0
Highest measured state 8-hour average concentration (parts per million)	0.091	0.083	0.092	0.095	0.082
Number of days exceeding 0.070 parts per million state standard	52	19	65	58	26
Highest measured federal 8-hour average concentration (parts per million) (federal 0.070 parts per million)	0.090	0.083	0.091	0.094	0.082
Number of days exceeding 0.070 parts per million federal standard	49	18	61	53	22

Source: California Air Resources Board.

Table 2.28 Particulate Matter 2.5 Concentrations With Number of Days Over Federal Standards 2014-2019

Particulate Matter 2.5 Data	2014	2015	2016	2017	2018	2019
Highest measured federal 24-hour average concentration (micrograms per cubic meter)	81.3	86.3	48.0	86.1	86.8	47.2
Number of days exceeding the 24-hour (35 micrograms per cubic meter) federal standard	35.5	17.9	21.3	26.7	42.3	19.9
Measured state annual average concentration (micrograms per cubic meter) (state standard equals 12.0 micrograms per cubic meter)	17.8	Insufficient data	15.5	16.8	17.4	12.2
Measured federal annual average concentration (micrograms per cubic meter) (federal standard equals 12.0 micrograms per cubic meter)	17.8	16.1	14.6	16.2	17.3	12.9

Source: California Air Resources Board.

Table 2.29 Particulate Matter 10 Concentrations With Number of Days Over Standards 2014-2019

Particulate Matter 10 Data	2014	2015	2016	2017	2018	2019
Highest measured state 24-hour concentration	104.2	140.3	132.5	145.7	159.6	418.5
Highest measured federal 24-hour concentration	102.4	67.3	137.1	144.8	153.4	411.1
Number of days exceeding 24-hour state standard (50 micrograms per cubic meter)	Insufficient data	Insufficient data	Insufficient data	135.9	164.4	115.8
Number of days exceeding 24-hour federal standard (150 micrograms per cubic meter)	0	Insufficient data	0	0	0	5.0
Measured annual average, state methodology (standard equals 20 micrograms per cubic meter)	Insufficient data	Insufficient data	Insufficient data	46.9	52.0	46.3
Measured annual average, federal methodology (no standard)	45.4	28.9	43.3	47.4	52.5	45.7

Data Source: California Air Resources Board.

Environmental Consequences

National Environmental Policy Act Analysis Requirement

The National Environmental Policy Act applies to all projects that receive federal funding or involve a federal action. The National Environmental Policy Act requires that all reasonable alternatives for the project are rigorously explored and objectively evaluated. For the National Environmental Policy Act analysis, emissions from the future year Build scenario are compared with those from the future year No-Build scenario. Tables 2.30 to 2.34 compare the emissions for the mainline and all roundabout alternatives.

Table 2.30 Comparsion of Future Build and Future No-Build Emissions on State Route 99

Analysis	Peak Particulate Matter 2.5 (Pounds per Day)	Peak Particulate Matter 10 (Pounds per Day)	Peak Carbon Monoxide (Tons per Year)
Existing Year 2018	84	268	279
No-Build 2029	87	346	125
Build 2029	84	343	129
No-Build 2049	112	486	168
Build 2049	120	494	122

Comparing the No Build 2029 to the Build 2029, both Particulate Matter 2.5 and Particulate Matter 10 Total (AM plus PM) emissions decreased, while carbon monoxide emissions increased. However, by Design Year 2049, the differences between the No-Build 2049 and Build 2049 emissions patterns will invert. Project construction would increase the amounts of Particulate Matter 2.5 and Particulate Matter 10 while carbon monoxide emissions would drop.

In the future, carbon monoxide emissions are expected to decrease due to a combination of improved engine and fuel innovations that continue to improve efficiency. Carbon dioxide emissions will decrease as more motorists rely on hybrid electric/combustion and all-electric engines. At the same time, particulate matter will remain proportionate to the number of automobiles on the road and will increase with the expected additional vehicles forecasted for 2049; this is due in part because road dust and tire and brake wear are the main contributors of particulate matter. Caltrans is continuing to fund research and work with universities and regulatory agencies to develop acceptable measures to reduce particulate matter that is not from exhaust pipes; however, there are currently no formally approved measures.

Table 2.31 Comparsion for Future Build and Future No-Build Emissions for the Blackstone Roundabout

Blackstone Roundabout	Peak Particulate Matter 2.5 (Pounds per Day)	Peak Particulate Matter 10 (Pounds per Day)	Peak Carbon Monoxide (Tons per Year)
Existing Year 2018	7	32	25
No-Build 2029	11	53	18
Build 2029	8	41	14
No-Build 2049	22	106	25
Build 2049	15	74	18

Blackstone Roundabout

The 2029 No-Build Particulate Matter 2.5 emissions will be 11 pounds per day. If the project is built, the Particulate Matter 2.5 emissions will be 8 pounds per day, 3 pounds less than the No-Build Alternative.

The 2049 No-Build Particulate Matter 2.5 emissions will be 22 pounds per day. If the project is built, the emissions will be 15 pounds per day, 7 pounds less than the No-Build Alternative.

The 2029 No-Build Particulate Matter 10 emissions will be 53 pounds per day. If the project is built, the Particulate Matter 10 emissions will be 41 pounds per day, 12 pounds less than the No-Build Alternative.

The 2049 No-Build Particulate Matter 10 emissions will be 106 pounds per day. If the project is built, the Particulate Matter 10 emissions will be 74 pounds per day, 32 pounds less than the No-Build Alternative.

The 2029 No-Build carbon monoxide emissions will be 18 tons per day. If the project is built, the carbon monoxide emissions will be 14 tons per day, 4 tons less than the No-Build Alternative.

The 2049 No-Build carbon monoxide emissions will be 25 tons per day. If the project is built, the carbon monoxide emissions will be 18 tons per day, 7 tons less than the No-Build Alternative.

Table 2.32 Comparsion for Future Build and Future No-Build Emissions for the Laspina Roundabout

Laspina Roundabout	Peak Particulate Matter 2.5 (Pounds per Day)	Peak Particulate Matter 10 (Pounds per Day)	Peak Carbon Monoxide (Tons per Year)
Existing Year 2018	7	27	24
No-Build 2029	11	52	17
Build 2029	9	44	14
No-Build 2049	21	107	25
Build 2049	18	89	21

Laspina Roundabout

The 2029 No-Build Particulate Matter 2.5 emissions will be 11 pounds per day. If the project is built, the Particulate Matter 2.5 emissions will be 9 pounds per day, 2 pounds less than the No-Build Alternative.

The 2049 No-Build Particulate Matter 2.5 emissions will be 21 pounds per day. If the project is built, the emissions will be 18 pounds per day, 3 pounds less than the No-Build Alternative.

The 2029 No-Build Particulate Matter 10 emissions will be 52 pounds per day. If the project is built, the Particulate Matter 10 emissions will be 44 pounds per day, 8 pounds less than the No-Build Alternative.

The 2049 No-Build Particulate Matter 2.5 emissions will be 107 pounds per day. If the project is built, the Particulate Matter 10 emissions will be 89 pounds per day, 18 pounds less than the No-Build Alternative.

The 2029 No-Build Carbon Monoxide emissions will be 17 tons per day. If the project is built, the Carbon Monoxide emissions will be 14 tons per day, 3 tons less than the No-Build Alternative.

The 2049 No-Build Carbon Monoxide emissions will be 25 tons per day. If the project is built, the Carbon Monoxide emissions will be 21 tons per day, 4 tons less than the No-Build Alternative.

Table 2.33 Comparsion for Future Build and Future No-Build Emissions for Two-Roundabout Configuration for the Paige Avenue Interchange

Paige Avenue: Two Roundabouts	Peak Particulate Matter 2.5 (Pounds per Day)	Peak Particulate Matter 10 (Pounds per Day)	Peak Carbon Monoxide (Tons per Year)
Existing Year 2018	7	25	21
No-Build 2029	9	47	16
Build 2029	11	62	21
No-Build 2049	19	96	23
Build 2049	23	114	27

The Existing Particulate Matter 2.5 emissions are 7 pounds per day, the Existing Particulate Matter 10 emissions are 25 pounds per day, and the Existing Carbon Monoxide emissions are 21 tons per year.

The 2029 Build Particulate Matter 2.5 emissions will be 11 pounds per day, 4 pounds more than the Existing Particulate Matter 2.5 emissions.

The 2049 Build Particulate Matter 2.5 emissions will be 23 pounds per day, 16 pounds more than the Existing Particulate Matter 2.5 emissions.

The 2029 Build Particulate Matter 10 emissions will be 62 pounds per day, 37 pounds more than the Existing Particulate Matter 10 emissions.

The 2049 Build Particulate Matter 10 emissions will be 114 pounds per day, 89 pounds more than the Existing Particulate Matter 10 emissions.

The 2029 Build Carbon Monoxide emissions will be 21 tons per year, the same as the Existing Carbon Monoxide emissions.

The 2049 Build Carbon Monoxide emissions will be 27 tons per year, 6 tons more than the Existing Carbon Monoxide emissions.

This section describes the results of the air quality analyses conducted for the project. The analyses conducted applied methodology and assumptions that are consistent with federal and state requirements for air quality. The analyses also used guidelines and procedures provided in applicable air quality analysis protocols, such as the Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) (Garza et al., 1997), Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in Particulate Matter 2.5 and Particulate Matter 10 Nonattainment and Maintenance Areas (U.S. Environmental Protection Agency, 2015), and the Federal Highway Administration Updated Interim Guidance on Air Toxic Analysis in NEPA Documents (Federal Highway Administration, 2016).

- Regional Air Quality Conformity—The project is included in the Tulare County Association of Governments' 2023 Federal Transportation Implementation Plan, the 2022 Regional Transportation Plan/Sustainable Communities Strategy, and the corresponding Conformity Analysis.
- Carbon Monoxide—The project, individually, meets the carbon monoxide protocol standards to a satisfactory level, and no further analysis was required. In 1997, the San Joaquin Valley Air Basin was designated as a maintenance area for carbon monoxide by the Environmental Protection Agency, and the Valley was compelled to adhere to a 20-year maintenance plan to decrease the levels of carbon monoxide to acceptable levels. This goal was achieved on November 30, 2017.
- Ozone—While the project is in a nonattainment area for the federal and state 8-hour ozone levels, when projects are listed in an approved Regional Transportation Plan with associated conformity emissions analysis, the projects are considered to be conforming to the State Implementation Plan for ozone.
- Particulate Matter 10 Hot-Spot Analysis—The project was submitted for interagency consultation on January 7, 2022. It was deemed not a "Project of Air Quality Concern" by the interagency consultation partners and, therefore, did not require a Particulate Matter 10 hot-spot analysis. Concurrence for "Not a Project of Air Quality Concern" was granted by the Environmental Protection Agency on January 24, 2022, and by the Federal Highway Administration on January 27, 2022.
- Mobile Source Air Toxics —The analysis conducted for the project, according to Federal Highway Administration guidance to assess mobile source air toxics, found the project is considered a "Project with No Meaningful Potential Mobile Source Air Toxics Effects" and best falls into the category of "Low Potential Mobile Source Air Toxics Effects." The proposed build alternative would not increase emissions substantially above the No-Build scenario. Mobile source air toxic emissions in the

study area are likely to be lower in the future, in all cases, because of improved technology, according to the Environmental Protection Agency's analysis.

- Construction Conformity—Emissions from construction equipment are expected and would include carbon monoxide, nitrogen oxides, volatile organic compounds, directly emitted particulate matter (Particulate Matter 10 and Particulate Matter 2.5), and toxic air contaminants, such as diesel exhaust particulate matter. However, with the implementation of Caltrans' Standard Specifications in Section 14 and other measures included in the project, there would not be substantive impacts from the project.
- Carbon Dioxide—Carbon dioxide is a greenhouse gas and is discussed in Chapter 3, Section 3.3, Climate Change, of this document.

Assembly Bill 617 requires the California Air Resources Board and air districts to develop and implement additional emissions reporting, monitoring, reduction plans, and measures to reduce air pollution exposures in disadvantaged communities, according to the San Joaquin Valley Air Pollution Control District webpage. No identified Assembly Bill 617 communities are in the project area.

Regional Conformity

The project is included in the 2022 Tulare County Association of Governments' financially constrained Regional Transportation Plan, which was found to conform by the Tulare County Association of Governments on August 15, 2022.

[This section has been updated since the draft environmental document was circulated] The final regional conformity determination includes coordination with the Federal Highway Administration to ensure any future formal amendments to the Regional Transportation Plan/Federal Transportation Improvement Program list the project correctly (see Appendix F).

Project Level Conformity

The environmental document prepared for this project is an Environmental Assessment under NEPA and is considered a regionally significant project. A regionally significant project is a nonexempt transportation project that serves regional transportation needs, major activity centers in the region, major planned developments, transportation terminals, and most terminals themselves.

The project is within the San Joaquin Valley Air Basin and is under the jurisdiction of the San Joaquin Valley Air Pollution Control District. Tulare County is in nonattainment for the Federal 8-hour Ozone and Particulate Matter 2.5 and in attainment for federal Particulate Matter 10 and carbon monoxide standards.

For project-level conformity, a project may not contribute to any new localized carbon monoxide, fine, and/or respirable particulate matter violations or delay the timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the time frame of the transportation plan (or regional emissions analysis).

No project-level conformity requirements apply to ozone because it is considered a regional pollutant. The project would not interfere with the implementation of any transportation control measures.

Interagency Consultation

The Tulare Six-Lane and Paige Avenue Interchange Improvement project was submitted for Interagency Consultation on January 7, 2022. It was deemed not a “Project of Air Quality Concern” by the Environmental Protection Agency on January 24, 2022, and by the Federal Highway Administration on January 27, 2022.

The Federal Highway Administration and the Environmental Protection Agency concurred that the project will not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay the timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the time frame of the transportation plan (or regional emissions analysis).

Short-Term Effects (Construction Emissions)

During construction, the project will generate air pollutants. The exhaust from construction equipment contains hydrocarbons, nitrogen oxides, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction progresses.

Construction Equipment, Traffic Congestion, and Fugitive Dust

Construction greenhouse gas emissions for the project are calculated using Caltrans’ Construction Emissions Tool.

Project construction is expected to generate about 6,062 tons of carbon dioxide during 400 working days (less than the 264 working days per 1 year) duration. See Table 2.34 for the construction activities and related totals of construction-generated pollutants for Particulate Matter 10, Particulate Matter 2.5, carbon monoxide, nitrogen oxide, and carbon dioxide.

Table 2.34 Construction-Generated Pollutants

Activity (Pounds per Day)	Particulate Matter 10	Particulate Matter 2.5	Carbon Monoxide	Nitrogen Oxide	Carbon Dioxide
Land Clearing/Grubbing	0.358	0.074	0.577	0.608	160
Roadway Excavation and Removal	0.721	0.431	5.23	5.315	1,261.00
Structural Excavation and Removal	0.332	0.049	0.171	0.276	86
Base/Subbase/Imported Borrow	0.715	0.425	5.472	5.093	1187
Structure Concrete	0.096	0.094	1.094	1.554	396
Paving	0.218	0.214	1.356	2.965	625
Drainage/Environment/Landscaping	0.162	0.158	1.066	2.102	448
Traffic Signalization/Signage/ Striping/Painting	0.12	0.118	1.683	2.023	970
Other Operation	0	0	0	0	0
Project Total	**2.722**	**1.563**	**16.649**	**19.936**	**5,133**

Long-Term Effects (Operational Emissions)

Operational emissions take into account long-term changes in emissions due to the project (excluding the construction phase). The operational emissions analysis compares forecasted emissions for existing/baseline, future no-build, and future build alternatives.

In particulate matter nonattainment or maintenance areas, if a project is determined to be a project of air quality concern, a hot-spot analysis needs to be conducted under the conformity requirement. The U.S. Environmental Protection Agency guidance for particulate matter hot-spot analysis, in concert with required interagency consultation, is used to determine whether a project is a project of air quality concern.

In November 2015, the U.S. Environmental Protection Agency released an updated version of Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in Fine and Respirable Particulate Matter Nonattainment and Maintenance Areas (guidance) for quantifying the local air quality impacts of transportation projects and comparing them to the particulate matter National Ambient Air Quality Standards (75 Federal Register Section 79370). The U.S. Environmental Protection Agency originally released the quantitative guidance in December 2010 and released a revised version in November 2013 to reflect the approval of the Emission Factor 2011 model and the 2012 Particulate Matter National Ambient Air Quality Standards final rule. The November 2015 version reflects the 2014 Motor Vehicle Emission Simulator model and its subsequent minor revisions, such as the Motor Vehicle Emissions Simulator model 2014a, to revise design value calculations to be more consistent with other U.S. Environmental Protection Agency programs and to reflect guidance implementation and experience in the field. Note that the Emission Factor model, not the Motor Vehicle Emissions Simulator model, should be used for project hot-spot analysis in California.

The guidance requires a hot-spot analysis to be completed for a project of air quality concern. The final rule in 40 Code of Federal Regulations Section 93.123(b)(1) defines a project of air quality concern as:

i. New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

ii. Projects affecting intersections that are at Level of Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

iii. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;

iv Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and Caltrans, as a project sponsor, has determined that this project does meet these criteria for not being a "Project of Air Quality Concern."

- Mainline Build/No-Build Annual Average Daily Traffic and Truck Annual Average Daily Traffic for the project are the same for the Existing, Open to Traffic, and Design Years. Traffic/Truck volumes are not expected to increase significantly over the life of the project.
- Operational improvements to the freeway and Paige Avenue will not induce out-of-area traffic to the vicinity. The increased mainline capacity will allow more free flow in traffic and lessen the chance of lane overcrowding and gridlock. The Paige Avenue operational improvements will improve safety for local and regional traffic. Truck transport movement will become more efficient if the project is implemented.
- Significant improvements would be made to improve safety along this segment of State Route 99. Hazardous features that impede line-of-sight would be removed, including the realignment of a nonstandard curve in the roadway.
- Time delays due to waiting at stop- or signal-controlled intersections would be reduced by substituting with roundabouts. Trucks navigating the Paige Avenue intersections would not have to stop completely, while surrounding traffic would be able to freely flow through the roundabout lanes.
- Project construction would reduce harmful emissions. Travel time could be shortened due to increased capacity on the freeway. Replacing the intersections with roundabouts would eliminate the need for vehicles to come to a complete stop, idle, and reaccelerate.

General Construction Impacts for Build Alternative

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment are expected and would include carbon monoxide, nitrogen oxides, volatile organic compounds, directly emitted particulate matter (Particulate Matter 10 and Particulate Matter 2.5), and toxic air contaminants, such as diesel exhaust particulate matter. Ozone is a regional pollutant that comes from nitrogen oxides and volatile organic compounds in the presence of sunlight and heat. For more details on construction emissions for this project, see Appendix C of the Air Quality Report in Volume 2, Technical Studies, which can be sent upon request.

Site preparation and roadway construction typically involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, building bridges, and paving roadway surfaces. Construction-related effects on air

quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough Particulate Matter 10, Particulate Matter 2.5, and small amounts of carbon monoxide, sulfur dioxide, nitrogen oxides, and volatile organic compounds to be of concern.

Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soil. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries. Particulate Matter 10 emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. Particulate Matter 10 emissions would depend on soil moisture, silt content of the soil, wind speed, and the amount of equipment operating. Larger dust particulates would settle near the source, while fine particulates would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the U.S. Environmental Protection Agency to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. In addition to dust-related Particulate Matter 10 emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate carbon monoxide, sulfur dioxide, nitrogen oxides, volatile organic compounds, and some soot particulate (Particulate Matter 10 and Particulate Matter 2.5) in exhaust emissions.

Construction activities would not last for more than five years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 Code of Federal Regulations 93.123(c)(5)). During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment are expected and would include carbon monoxide, nitrogen oxides, volatile organic compounds, directly emitted particulate matter (Particulate Matter 10 and Particulate Matter 2.5), and toxic air contaminants, such as diesel exhaust particulate matter. Ozone is a regional pollutant that comes from nitrogen oxides and volatile organic compounds in the presence of sunlight and heat.

If construction activities were to increase traffic congestion in the area, carbon monoxide and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Sulfur dioxide is generated by oxidation during the combustion of organic sulfur compounds contained in diesel fuel. Under California law and Air Resources Board regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 parts per million sulfur), so sulfur dioxide-related issues due to diesel exhaust would be minimal.

Some phases of construction, particularly asphalt paving, may result in short-term odors in the immediate area of each paving site. Such odors would quickly disperse to below-detectable levels as the distance from the site increases.

Implementation of the following standardized measures, some of which may also be required for other purposes, such as stormwater pollution control, would reduce any air quality impacts resulting from construction activities:

The construction contractor must comply with Caltrans Standard Specifications Section 14. Section 14 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. Section 14 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are described in Section 18 specification.

- Water or dust palliatives would be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions and avoidance, minimization, and/or mitigation measures generally must meet a “no visible dust” criterion either at the point of emissions or at the right-of-way line, depending on local regulations.
- Soil binder would be spread on any unpaved roads used for construction purposes and on all project construction parking areas.
- Construction equipment and vehicles would be properly tuned and maintained. All construction equipment would use low sulfur fuel as required by California Code of Regulations Title 17, Section 93114.
- A dust control plan would be developed to document sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes as needed to minimize construction impacts on existing communities.
- Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, would be used.
- All transported loads of soils and wet materials would be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) would be provided to minimize the emission of dust (particulate matter) during transportation.

- Dust and mud that are deposited on paved public roads due to construction activity and traffic would be promptly and regularly removed to decrease particulate matter emissions.
- To the extent feasible, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Mulch would be placed or vegetation planted as soon as practical after grading to reduce windblown particulate matter in the area.

The project contains standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the project.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation would be required.

Climate Change

The U.S. Environmental Protection Agency and the Federal Highway Administration have not issued explicit guidance or methods to conduct project-level greenhouse gas analysis. FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the National Environmental Policy Act (NEPA) determination for the project.

2.2.5 Noise and Vibration

Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. These laws intend to promote the general welfare and foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a project will have a noise impact. If a project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/Title 23 Part 772 of the Code of Federal Regulations noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the noise abatement criteria for residences (67 A-weighted decibels) are lower than the noise abatement criteria for commercial areas (72 A-weighted decibels). The following table, Table 2.35, lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

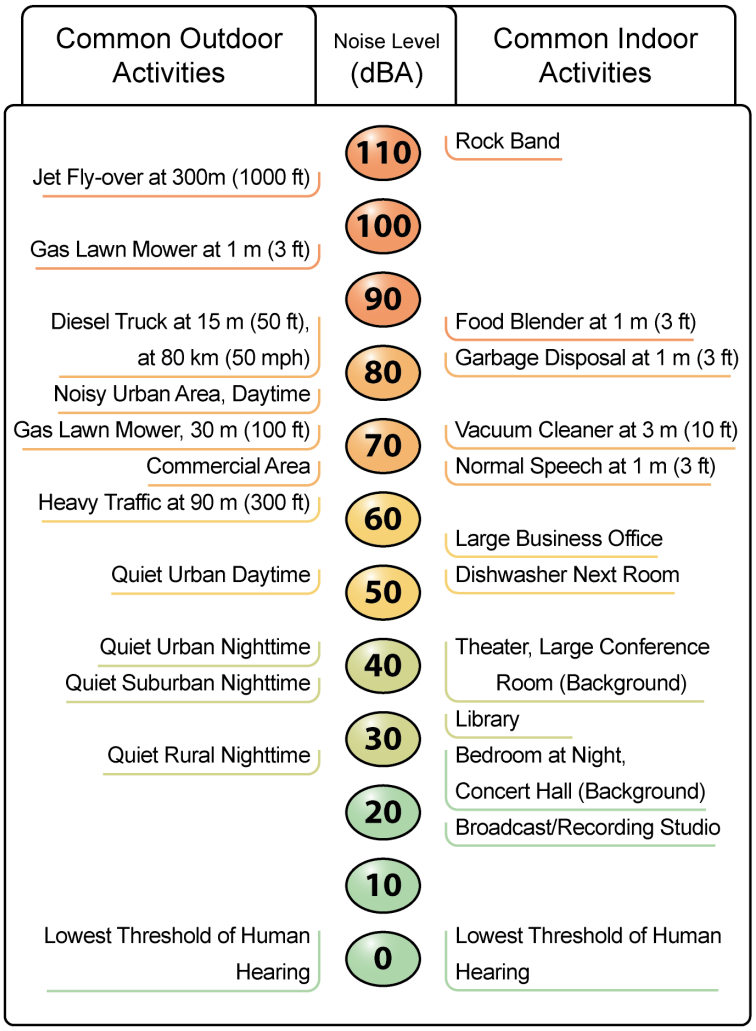
Columns B and C in Table 2.35 include undeveloped lands permitted for the activity category.

Table 2.35 Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, Hourly A-Weighted Noise Level, Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Residential.
C	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F	No Noise Abatement Criteria—Reporting Only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No Noise Abatement Criteria—Reporting Only	Undeveloped lands that are not permitted.

Figure 2-8 below lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Figure 2-8 Noise Levels of Common Activities



According to Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011,* a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more) or when the future noise level with the project approaches or exceeds the NAC. A noise level is considered to approach the noise abatement criteria if it is within 1 A-weighted decibel of the noise abatement criteria.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated into the project.

Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. The feasibility of noise abatement is an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 decibels at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, the presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors, 2) the cost of noise abatement, and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

Affected Environment

A Noise Study Report was completed for the project on October 22, 2020 and was updated on November 8, 2021. This section has been added since the draft environmental document was circulated. An addendum to the Noise Study Report was completed on June 15, 2023, for the consideration of an additional Soundwall. A Noise Abatement Decision Report was completed in July 2023.

Field investigations were conducted on September 13, 2020, and October 4, 2020, to identify land uses that could be subject to traffic noise impacts from the project. The land uses within the project limits and their representative receivers are divided into segments and described in detail in the following section based on roadway topography with respect to the identified receivers.

Segment 1: Between Post Mile 25.2 and Paige Avenue

State Route 99 is on flat terrain in this segment with respect to the represented receivers. Land uses within this segment on both sides of State Route 99 consist of two mobile home communities, light industries, manufacturing facilities, and truck stops.

Segment 2: Between Paige Avenue and Bardsley Avenue

State Route 99 is on flat terrain in this segment with respect to the represented receivers. Land uses within this segment consist of single-family residences on the east side of State Route 99 and small businesses and warehouses on the west side of State Route 99.

Segment 3: Between Bardsley Avenue and Cross Avenue

State Route 99 is depressed at some locations within this segment with respect to the representative receivers. Land uses within this segment on

both sides of State Route 99 consist of single-family residences and multifamily residences, a mobile home community, and offices.

Segment 4: Between Cross Avenue and Post Mile 30.4 (About 350 Feet South of Prosperity Avenue)

State Route 99 is depressed at some locations within this segment with respect to the representative receivers. Land uses on both sides of State Route 99 within this segment consist of multifamily residences and duplexes with no outdoor locations for outdoor gatherings. Tulare Church of Christ and First Church of God have no outdoor locations for gatherings.

Environmental Consequences

This project is a Type 1 project as defined by the Federal Highway Administration because it would increase the number of through-traffic lanes, potentially increase the volume or speed of traffic, and move the traffic closer to a receiver.

The project would result in noise impacts that require the consideration of noise abatement. Three soundwalls are proposed for the project.

A noise study investigation was performed on September 13, 2020, and October 4, 2020. Short-term (10-minute) noise measurements were conducted at nine sites to evaluate the existing noise environment. Most residences visited during the fieldwork have barking dogs and other noise-generating equipment, such as lawn mowers and agricultural farming equipment, that would contaminate a noise measurement. Therefore, nine short-term field measurements were collected to represent a total of 43 potentially impacted receiver locations. Table 2.36 shows the short-term noise measurement results for the nine sites.

Table 2.36 Short-Term Noise Measurement Results

Receiver Number	Location	Land Use	Noise Level Meter Distance From Right-of-Way in Feet	Measure of Equivalent, A-Weighted Decibels
Receiver 1	900 East Rankin Avenue	Residential	36	56
Receiver 2	Agriculture Field	Agricultural	100	60
Receiver 3	1678 South Dayton Street	Residential	39	70
Receiver 4	1442 South Blackstone	Commercial	64	68
Receiver 5	1216 East Sequoia Avenue	Residential	54	61
Receiver 6	320 North Blackstone Street	Residential	41	69
Receiver 7	1225 East Hillman Street	Motel	152	61
Receiver 8	500 North Blackstone Street	Church	101	61
Receiver 9	833 North Blackstone Street	Church	425	53

Predicted design year traffic noise levels with the project are compared with existing conditions and design year no-build conditions. The comparison with

existing conditions is included in the analysis to identify traffic noise impacts under federal law.

Noise abatement is considered for areas of frequent human use that would benefit from a lowered noise level. The noise study report impact analysis focused mainly on locations with defined outdoor use areas, such as residential backyards, common use areas at multifamily residences, parks, and pool areas of hotels/motels.

The 43 receivers and their impacts are described below:

Segment 1 Between Post Mile 25.0 and Paige Avenue

Predicted traffic noise levels for the design year with project conditions do not approach or exceed the noise abatement criteria for five receivers; therefore, noise abatement is not proposed in this segment:

Receiver 1: There is an existing 11-foot-high soundwall at this mobile home park community. The noise level for the design year build alternative at Receiver 1 is 62 A-weighted decibels. This noise level would not approach or exceed the federal noise abatement criteria threshold of 67 A-weighted decibels for the designated land use, and the design year noise levels at Receiver 1 would not substantially exceed the existing noise level.

Receiver 2: The noise level for the design year build alternative is 75 A-weighted decibels. No noise impact criteria have been set for agricultural fields.

Receiver 41: This receiver represents the westernmost row of mobile homes at the Tulare Inn Mobile Home Park located at 1401 East Paige Avenue, east of State Route 99, and south of two of the proposed roundabouts at the Paige Avenue Interchange. This receiver is set back about 600 feet from the existing edge of the traveled way of the freeway. In addition, a wall on top of the fill that surrounds the mobile home park also provides some protection from noise. The noise level for the design year build alternative at Receiver 41 is 62 A-weighted decibels, which is below the noise abatement criteria for this land use. Therefore, no noise abatement was considered for this location.

Receiver 42: This receiver represents the first row of the mobile homes facing Laspina Street and is located in the northeast corner of the walled Tulare Inn Mobile Home Park. The receiver is set back 85 feet from the edge of the traveled way of the southbound traffic on Laspina Street. The noise level for the design year build alternative at Receiver 42 is 62 A-weighted decibels, which is below the noise abatement criteria for this land use. Therefore, no noise abatement was considered for this location.

Receiver 43: This receiver also represents the first row of the mobile homes facing Laspina Avenue in Tulare Inn Mobile Home Park and is located south

of Receiver 42. This receiver is set back about 125 feet from the edge of the traveled way of the southbound traffic on Laspina Street. The noise level for the design year build alternative at this receiver is 61 A-weighted decibels, which is below the noise abatement criteria for this land use. For that reason, noise abatement was not considered for this location.

Segment 2 Between Paige Avenue and Bardsley Avenue

Receiver 3: This receiver is for a single-family residence at 1678 South Dayton Street and represents the first row of five homes on the east side of State Route 99 between East Levin and East Walnut Avenues. The noise level for the design year build alternative at Receiver 3 is 74 A-weighted decibels. The design year noise level at this receiver is above the noise abatement criteria threshold of 67 A-weighted decibels for this land use. However, a field visit to this site revealed no outdoor locations for frequent gatherings at these homes that would benefit from a soundwall as an abatement measure. No abatement is recommended for this location.

Receiver 4: This receiver is for an industrial site (Elements Design Center) located on the west side of State Route 99 and set back about 200 feet from the freeway. The noise level for the design year build alternative at Receiver 4 is 76 decibels. No noise impact criteria for industrial land uses have been set.

Receiver 11: This receiver is for a single-family residence at 1173 South Spruce Street and represents the first row of 17 homes on the east side of State Route 99 between East Bardsley and East Walnut Avenues. The noise level for the design year build alternative at Receiver 11 is 61 dBA. The design year noise level at this receiver is below the noise abatement criteria threshold of 67 dBA. No abatement is recommended for this location.

Receiver 17: This receiver is for a single-family residence at 1703 South Spruce Street and represents the first row of 19 homes on the east side of State Route 99 between East Levin and East Walnut Avenues. The noise level for the design year build alternative at Receiver 17 is 65 A-weighted decibels, which is below the noise abatement criteria threshold of 67 A-weighted decibels. No abatement is recommended for this location.

Receiver 18: This receiver is for a single-family residence at 1875 South Laguna Street and represents the first row of 13 single-family residences and three multifamily residences located on the east side of State Route 99 between East Levin Avenue and the Tulare Canal. There is an existing wall about 10 to 12 feet high between the residences and northbound State Route 99. The noise level for the design year build alternative at Receiver 18 is 64 A-weighted decibels, which is below the noise abatement criteria threshold of 67 A-weighted decibels. No abatement is recommended for this location.

Receiver 19: This receiver is for a single-family residence at 2259 South Tamarack Street and represents the first row of 12 single-family residences

located on the east side of State Route 99 between the Tulare Canal and Paige Avenue. All residences have backyards that face traffic noise on State Route 99. An addendum to the 2021 Noise Study Report was prepared to discuss the feasibility of constructing a noise abatement in the form of a soundwall for these homes to protect them from traffic noise on State Route 99. Receiver 19 would be at 70-A weighted decibels by design year 2047, which exceeds the noise abatement category of 67 decibels. Therefore, noise abatement must be considered at this location.

Segment 3: Between Bardsley Avenue and Cross Avenue

Receiver 5: This receiver is for a single-family residence at 1216 East Sequoia Avenue and represents the first row of five residences on the west side of State Route 99, just south of Sierra Avenue. The noise level for the design year build alternative at Receiver 5 is 70 A-weighted decibels, which is above the noise abatement criteria threshold of 67 A-weighted decibels. Therefore, noise abatement must be considered at this location.

Receiver 6, Receivers 29-37: These receivers are in Tulare Mobile Home Park, 320 North Blackstone Street, located on the west side of State Route 99. The receiver locations represent the first row of nine mobile homes and a swimming pool. The mobile homes in the first row are set back at various distances ranging from about 130 feet to 350 feet from the edge of the shoulder of southbound State Route 99. The design year build noise levels for Receiver 6 and Receiver 30 exceed the noise abatement criteria of 67 A-weighted decibels. Therefore, noise abatement must be considered at these receiver locations.

Receiver 12: This receiver is for a single-family residence at 757 South Spruce Street and represents the first row of 11 residences on the east side of State Route 99 north of Bardsley Avenue. The noise level for the design year build alternative at Receiver 12 is 62 A-weighted decibels, which is below the noise abatement criteria threshold of 67 dBA. No abatement is recommended for this location.

Receiver 13: This receiver is for a single-family residence at 468 South Dayton Street, located on the east side of State Route 99, and represents the first row of 13 single-family residences and 13 multifamily units between East Alpine Avenue and East Kern Avenue. The noise level for the design year build alternative at Receiver 13 is 72 A-weighted decibels. Although the design year noise level at this receiver is above the noise abatement criteria threshold of 67 A-weighted decibels, there are no locations for outdoor frequent gatherings that face State Route 99 at these residences that would benefit from noise abatement. No abatement is recommended for this location.

Receiver 20: This receiver is for a multifamily residence on the west side of State Route 99 at 498 South Blackstone Street and represents the first row of

eight units. These multifamily units have no locations for outdoor gathering activities, so the receiver was placed outside the unit to measure the outdoor noise level. Furthermore, there is an existing 7-foot wall surrounding the units. The noise level for the design year build alternative at Receiver 20 is 70 A-weighted decibels. The resulting indoor noise level for this receiver with the windows closed will be 45 A-weighted decibels (25 A-weighted decibels below the outside noise level). Therefore, the indoor design year noise level at this receiver is below the threshold of 52 A-weighted decibels. No abatement is recommended for this location.

Receiver 21: This receiver is for an apartment building unit at 1100 Martin Luther King Junior Avenue and represents the first row of eight units on the first floor. The units face the highway and have high, solid-walled balconies that overlook the parking garages. In addition, there is an existing 8-foot wall between the apartments and State Route 99. The receiver was placed at the sports field (a common gathering location at the apartments) and set back about 250 feet from the southbound edge of the traveled way of State Route 99. The noise level for the design year build alternative at Receiver 21 is 63 A-weighted decibels, which is below the noise abatement criteria threshold of 67 A-weighted decibels. No abatement is recommended for this location.

Receiver 22: This receiver is for an industrial/commercial site at 976 South Blackstone Street, located on the west side of State Route 99 just north of Bardsley Avenue. The noise level for the design year build alternative at Receiver 22 is 70 A-weighted decibels. However, there are no noise impact criteria for industrial and commercial land uses.

Receiver 23: This receiver is for a quadruplex unit at 908 South Dayton Street, located on the east side of State Route 99 north of Bardsley Avenue. The noise level for the design year build alternative at Receiver 23 is 64 A-weighted decibels, which is below the noise abatement criteria threshold of 67 A-weighted decibels. No abatement is recommended for this location.

Receiver 24: This receiver is for a single-family residence at 877 South Spruce Street and represents the first row of six residences on the east side of State Route 99 between Stockham and Alpine Avenues. The noise level for the design year build alternative at Receiver 24 is 60 A-weighted decibels, which is below the noise abatement criteria threshold of 67 A-weighted decibels. No abatement is recommended for this location.

Receiver 27: This receiver is for a single-family residence at 1282 East Sequoia Avenue, located on the east side of State Route 99, and represents the first row of three single-family residences between East Kern Avenue and East Sierra Avenue. The noise level for the design year build alternative at Receiver 27 is 75 A-weighted decibels, which is above the NAC threshold of 67 A-weighted decibels. Since the noise level at Receiver 27 exceeds the

noise abatement criteria threshold, noise abatement must be considered at this location.

Receiver 28: This receiver is for a multifamily unit at 400 South Blackstone Street and represents the first row of 20 first-floor units located on the west side of State Route 99. The units' windows face away from State Route 99. There is an existing 7-foot wall between the first units and the freeway. The receiver was placed at the swimming pool (a common gathering area for activities) and was set back about 300 feet from the southbound edge of the shoulder of State Route 99. The noise level for the design year build alternative at Receiver 28 is 61 A-weighted decibels. The wall noise attenuation could be increased by raising the wall height, if desired. No noise abatement is recommended for this location.

Segment 4: Between Cross Avenue and Post Mile 30.4 (About 350 Feet South of Prosperity Avenue)

Receiver 7: This receiver represents the swimming pool (a place for frequent gathering) at the Fairfield Inn and Suites at 1225 Hillman Street; it was set back about 220 feet from the edge of the shoulder of northbound State Route 99. The noise level for the design year build alternative at Receiver 7 is 70 dBA, which is below the noise abatement criteria threshold of 72 A-weighted decibels designated for this land use. Therefore, no abatement is recommended for this location.

Receiver 8: This receiver is on the west side of State Route 99 at 500 North Blackstone Street (Tulare Church of Christ). Although there are no outdoor locations for frequent activity gatherings, the receiver was placed outside the church building to record the outside noise level at the church. The noise level for the design year build alternative at Receiver 8 is 68 A-weighted decibels. However, the interior noise level in the church with windows closed would be much quieter at 43 A-weighted decibels (25 A-weighted decibels less than the exterior noise level reading). This noise level is below the noise abatement criteria threshold for the interior noise level of 52 A-weighted decibels designated for this land use. Since there are no locations outside the church building for frequent gatherings that would benefit from a noise abatement, no abatement is recommended at this location.

Receiver 9: This receiver is on the west side of State Route 99 at 833 North Blackstone Street (First Church of God). The receiver was placed outside the church building at a gathering location, as recommended by the church minister. The receiver location is set back about 425 feet from the chain-link fence adjacent to the southbound lanes of State Route 99. The noise level for the design year build alternative at Receiver 9 is 60 A-weighted decibels, which is below the noise abatement criteria threshold of 67 A-weighted decibels. No abatement is recommended for this location.

Receiver 14: This receiver is for a multifamily residence on the east side of State Route 99 at 731 North Lynora Street and represents 32 multifamily residence units located along the east side of northbound State Route 99. Receiver 14 is set back about 60 feet from the edge of the shoulder of northbound State Route 99. The noise level for the design year build alternative at Receiver 14 is 67 A-weighted decibels. There is currently an existing 7-foot wall that protects the residences from highway traffic noise, providing a 5 A-weighted decibel noise reduction (the noise level at Receiver 14 without wall noise attenuation is 72 A-weighted decibels). The wall noise attenuation could be increased by raising the wall height, if desired. No abatement is recommended for this location.

Receiver 15: This receiver represents offices located on the west side of State Route 99 at 947 North Blackstone Street; it was set back about 185 feet from the edge of the traveled way of southbound State Route 99. The noise level for the design year build alternative at Receiver 15 is 71 A-weighted decibels. The design year noise level at this receiver is approaching the designated noise abatement criteria of 72 A-weighted decibels for this land use; however, there are no defined outdoor locations for frequent gatherings that would benefit from noise abatement. No abatement is recommended for this location.

Receiver 16: This receiver represents a swimming pool (a place for frequent gatherings) at the Quality Inn Hotel at 1010 East Prosperity Avenue. The receiver was set back about 130 feet from the edge of the shoulder of northbound State Route 99. The noise level for the design year build alternative at Receiver 16 is 67 A-weighted decibels, which is below the noise abatement criteria threshold of 72 A-weighted decibels designated for this land use. No abatement is recommended for this location.

Receiver 38: This receiver is for a multifamily residence on the west side of State Route 99 at 600 North Blackstone Street and represents eight multifamily residence units located along the west side of southbound State Route 99. Receiver 38 is set back about 70 feet from the edge of the shoulder of southbound State Route 99. The noise level for the design year build alternative at Receiver 38 is 67 A-weighted decibels. There is currently an existing 7-foot wall that protects the residences from highway traffic noise and provides a 6 A-weighted decibel noise reduction (the noise level at Receiver 38 without wall noise attenuation is 73 A-weighted decibels). The wall noise attenuation could be increased by raising the wall height, if desired. No abatement is recommended for this location.

Construction Noise

Temporary construction noise impacts would be unavoidable in areas immediately next to the project alignment. Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction.

Construction time for this project is expected to last 400 days. Approximately 150 nights of work are expected.

Construction noise varies greatly depending on the construction process, the type and condition of equipment used, and the layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Construction noise estimates are approximate because of the lack of specific information available at the time of the assessment. Temporary construction noise impacts would be unavoidable in areas immediately next to the project alignment.

Table 2.37 lists the type of construction equipment typically used for similar projects. As indicated, equipment involved in construction is expected to generate noise levels ranging from 80 to 95 A-weighted decibels at a distance of 50 feet. The noise produced by construction equipment would be reduced over distance at a rate of about 6 A-weighted decibels per doubling of distance.

Table 2.37 Construction Equipment Noise

Noise Source	50-Foot Maximum Noise Level A-Weighted Decibels
Air Compressor (portable)	89
Air Compressor (stationary)	89
Auger, Drilled Shaft Rig	89
Backhoe	90
Chain Saw	88
Compactor	85
Concrete Mixer (small trailer)	68
Concrete Mixer Truck	89
Concrete Pump Trailer	84
Concrete Vibrator	81
Crane, Derrick	90
Crane, Mobile	85
Dozer (Bulldozer)	90
Excavator	92
Forklift	86
Front-End Loader	90
Generator	87
Grader	89
Grinder	82
Impact Wrench	85
Jackhammer	88
Paver	92
Pavement Breaker	85
Pneumatic Tool	88
Pump	80
Roller	83
Sand Blaster	87
Saw, Electric	80
Scraper	91
Shovel	90
Tamper	88
Tractor	90
Trucks (Under Load)	95
Water Truck	94

Avoidance, Minimization, and/or Noise Abatement Measures

Four soundwalls were evaluated for this project at locations where the design year build noise levels exceeded the noise abatement criteria. Only three soundwalls were found to be reasonable and feasible. The soundwalls are discussed below. Figure 2-9 shows an aerial view of the locations of all two soundwalls.

Soundwall 1

This 855-foot-long soundwall is proposed to provide noise attenuation for the five residences represented by Receiver 5 along the west side of State Route 99 between Kern and Sierra Avenues. The wall would extend about 220 feet south of Kern Avenue to cover the house represented by Receiver 10 at 1229

East Kern Avenue. The masonry wall would be located about 4 feet within Caltrans' right-of-way.

According to the noise study report, soundwall 1 would need to be at least 10 feet high to provide the required noise attenuation of 5 decibels and to meet the required design goal of noise attenuation of 7 decibels. The height recommendation for the proposed soundwall is 12 feet to break the line of sight of an 11.5-foot-high truck exhaust stack.

The standard cost allowance for noise abatement is $107,000 per benefited residence; the total allowance for this structure is $535,000. The project engineer's construction cost estimate for a uniform 12-foot-high soundwall is $677,000, which is higher than the reasonable allowance. Therefore, a variable-height soundwall was considered for this location since the roadway profile is lower than the existing ground profile at the soundwall. Based on the profile difference, it was determined that a variable-height, 8-to-12-foot-high soundwall would provide the same coverage as a 12-foot-high soundwall and meet the required design goal of noise attenuation of 7 decibels at this location. The estimated total construction cost for this wall is $552,000, which is about 3 percent more than the total reasonable allowance. The construction of this design of soundwall is recommended.

Soundwall 2

This 800-foot-long soundwall is proposed along the right-of-way next to Tulare Mobile Home Park on the west side of State Route 99, next to the Tulare Avenue southbound off-ramp. The masonry wall would be located about 4 feet within Caltrans' right-of-way. This soundwall would provide noise attenuation for five residences represented by Receiver 6 and the swimming pool location (Receiver 29).

Soundwall 2 would need to be at least 12 feet high to provide the required noise attenuation of 5 decibels and to meet the required design goal of noise attenuation of 7 decibels. The height recommendation for the proposed soundwall is 12 feet to break the line of sight of an 11.5-foot-high truck exhaust stack.

The total cost allowance for the 12-foot-high wall is $535,000. The project engineer's construction cost estimate for a uniform 12-foot-high soundwall is $646,000, which is higher than the reasonable allowance. Therefore, a variable-height soundwall was considered at this location because the roadway profile is lower than the existing ground profile at the soundwall. Based on the profile difference, it was determined that a variable-height, 8-to-14-foot-high soundwall would provide the same coverage as a 12-foot-high soundwall and meet the required design goal of noise attenuation of 7 decibels at this location. The soundwall would start at San Joaquin Avenue, starting with the 14-foot-high section of the wall that would be 150 feet long, next to the swimming pool area. The next wall section would be 12 feet high

and 100 feet long. The third section of the wall would be 10 feet high and 100 feet long. The final section of the soundwall would be 8 feet high and extend for 425 feet past the corner of the mobile home park. The estimated total construction cost for this variable-height soundwall is $545,000, which is about 2 percent more than the total reasonable allowance. The construction of this design of soundwall is recommended.

Soundwall 3

This 630-foot-long soundwall was proposed on the edge of the shoulder of the northbound off-ramp to Tulare Avenue, south of Sierra Avenue. This soundwall would provide noise attenuation for two residences represented by Receiver 27 and Receiver 39 along the off-ramp and between Sierra Avenue and Kern Avenue.

Soundwall 3 would need to be at least 12 feet high to provide the required noise attenuation of 5 decibels and meet the required design goal of noise attenuation of 7 decibels. The wall height of 12 feet is also recommended to break the line of sight of an 11.5-foot-high truck exhaust stack.

The total reasonable allowance for this soundwall, which would benefit the two residences, is $214,000 ($107,000 per residence). The engineer's construction cost estimate for a uniform 12-foot-high soundwall is $499,000, which is higher than the reasonable allowance. Based on the profile difference, it was determined that a variable-height, 8-to-14-foot-high soundwall would provide the same coverage as a 12-foot-high soundwall and meet the required design goal of noise attenuation of 7 decibels at this location. However, construction of the variable-height soundwall is expected to require a combination of spread footing and cast-in-drilled-hole pile foundations; the estimated total cost would be $421,000, which is about 97 percent more than the total reasonable allowance. Therefore, the construction of soundwall 3 is not recommended.

Soundwall 4

This soundwall is proposed on the edge of the shoulder of the on-ramp from Paige Avenue to northbound State Route 99 to provide noise abatement for the 12 residences represented by receiver 19. The soundwall would start approximately from the beginning of the Paige Avenue northbound on-ramp and extend along the on-ramp edge of the shoulder for a total length of 1,465 feet. Soundwall 4 would need to be at least 12 feet to provide the required attenuation of 5 decibels and meet the required design goal attenuation of 7 decibels.

The total reasonable allowance for this soundwall, which would benefit the 12 residences, is $1,284,000 (107,000 per residence). The engineer's construction cost estimate for a uniform 12-foot-high soundwall is $1,035,500, which is lower than the reasonable allowance. The construction of this design of soundwall is recommended.

Based on the studies completed to date and input from the public, Caltrans intends to incorporate noise abatement in the form of the three barriers described above: Soundwall 1, Soundwall 2, and Soundwall 4. If conditions have substantially changed during final design, noise abatement may not be constructed. The final decision on noise abatement will be made upon completion of the project design.

Construction Noise

The following are possible control measures that can be implemented to minimize noise disturbances in sensitive areas during construction.

- All equipment shall have sound-control devices no less effective than those provided on the original equipment.
- Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine should be operated on the job site without an appropriate muffler.
- Construction methods or equipment that will provide the lowest level of noise impact should be used.
- Idling equipment shall be turned off.
- Truck loading, unloading, and hauling operations shall be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest extent possible.

The contractor would be required to adhere to the following administrative noise control measures:

- Once details of construction activities become available, the contractor shall work with local authorities to develop an acceptable approach to minimize interference with the business and residential communities, traffic disruptions, and the total duration of the construction.
- Good public relations shall be maintained with the community to minimize objections to unavoidable construction impacts. Frequent activity updates of all construction activities shall be provided. A construction noise monitoring program to track sound levels and limit the impacts shall be implemented.
- In case of construction noise complaints by the public, the resident engineer shall coordinate with the construction manager and the specific noise-producing activity may be changed, altered, or temporarily suspended if necessary.

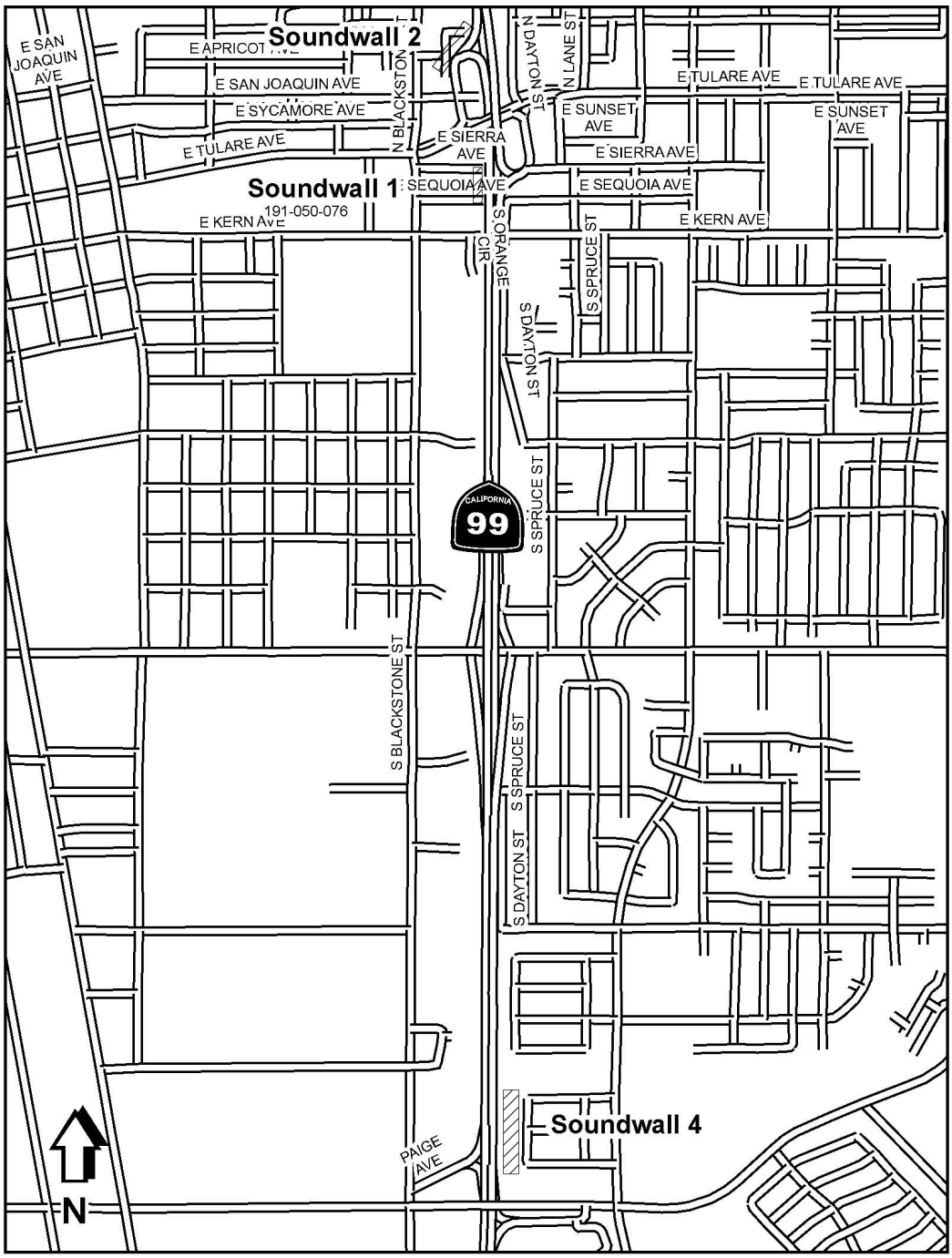
Certain construction activities could cause intermittent localized concerns from vibration in the project area. During certain construction phases, processes, like earth moving with bulldozers, the use of vibratory compaction rollers, demolitions, or pavement braking, may cause construction-related

vibration impacts, such as human annoyance or, in some cases, building damages. The following measures would be used to minimize potential impacts from construction vibration:

- Restrict the hours of vibration-intensive equipment or activities, such as vibratory rollers, so that impacts on residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).
- The owner of a building close enough to a construction vibration source that damage to that structure due to vibration is possible would be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.

Conduct vibration monitoring during vibration-intensive activities.

Figure 2-9 Proposed Soundwall Locations



2.2.6 Energy

Regulatory Setting

The National Environmental Policy Act (NEPA) (42 U.S. Code [USC] Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

The California Environmental Quality Act (CEQA) Guidelines Section 15126.2(b) and Energy Conservation require an analysis of a project's energy use to determine if the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy or wasteful use of energy resources.

Affected Environment

Trucks account for about 20.2 percent of the Annual Average Daily Traffic within this corridor, as compared with the State average of 9 percent of truck traffic. Large amounts of truck traffic within the project area stress the exiting pavement; surface cracks and larger holes in the pavement are prevalent throughout the project area. The current condition of the pavement contributes to higher energy consumption, i.e., shorter intervals between maintenance.

Transportation systems management within the project area consists of traffic count stations, vehicle detection systems, changeable message signs, extinguishable message signs, and a highway advisory radio station. Highway lighting within the project limits is very sparse and limited mainly to light poles situated near State Route 99 on- and off-ramps; most of the light poles are equipped with LED lights.

Environmental Consequences

Activities that consume energy also contribute to other related impacts. Greenhouse gas emissions, for example, are linked to energy consumption. In transportation, carbon dioxide is the primary greenhouse gas pollutant due to its abundance when compared with other vehicle-emitted greenhouse gases, including methane, nitrous oxide, hydrofluorocarbon, and black carbon.

Therefore, direct energy consumption can be quantified by using an approved version of the emissions modeling tool CT-EMission FACtor or EMission FACtor. Construction energy consumption can be estimated using the Caltrans Construction Emission Tool, the Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model, or the California emissions estimator model. If energy consumption is not quantified in the emissions modeling tool used, gasoline and diesel consumption can be estimated from carbon dioxide using the U.S. Environmental Protection Agency's greenhouse gas equivalency formulas for diesel and gasoline.

To assess fuel consumed by vehicles, EMission FACtor 2017 was used to estimate operational fuel consumption. This is shown in Table 2.38 below.

Table 2.38 Annual Construction Fuel Consumption

Scenario/ Analysis Year	Energy Consumption: Gasoline (Gallons)	Energy Consumption: Diesel (Gallons)	Energy Consumption: Electricity (Kilowatt Hour)	Total Energy Consumption (in 100,000 British Thermal Unit)	Change From Base Year (in 100,000 British Thermal Unit)	Change From No-Build (in 100,000 British Thermal Unit)
2018 Existing	11,363	7,951	720,746	24,592	Not Applicable	Not Applicable
2029 No-Build	10,700	10,053	781,998	26,682	2,090	Not Applicable
2029 Build	10,799	10,147	789,284	26,930	2,339	249
2049 No-Build	12,520	11,931	921,767	31,451	6,859	Not Applicable
2049 Build	12,520	11,931	921,767	31,451	6,859	0

When comparing the 2029 and 2049 future No-Build/Build energy consumption to the existing 2018 energy consumption, there is an increase due to additional traffic on mainline State Route 99. The increase in traffic can be attributed to population growth in the valley. When comparing the 2029 and 2049 future No-Build energy consumption to the 2029 and 2049 future Build energy consumption, there is little to no difference. Project improvements are not expected to increase operational energy consumption and would not induce traffic volumes within the project limits.

Avoidance, Minimization, and/or Mitigation Measures

Per Caltrans' Best Management Practices, newer or well-maintained equipment that is more energy efficient would be used during construction. The amount of energy used by construction during the project would be temporary. The following Best Management Practices would be used to minimize energy use and would be incorporated into the contract specifications:

- The contractor would consolidate material delivery whenever possible to promote efficient vehicle and energy use. The contractor would schedule material deliveries during non-rush hours to minimize fuel loss during traffic congestion.
- The contractor would maintain equipment and machinery in good working condition and inspect it regularly. The contractor would also maintain inspection records.
- Operators would avoid leaving equipment and vehicles idling when parked or not in use.
- Equipment found operating on the project that has not been inspected or has oil leaks would be shut down and subject to citation.

The contractor would implement, to the extent feasible, the following measures to reduce greenhouse gas emissions from construction equipment:

- Use alternative-fueled (e.g., biodiesel and electric) construction vehicles/equipment, making up at least 15 percent of the fleet.
- Use at least 10 percent of local building materials during construction.
- Recycle at least 50 percent of construction waste or demolition materials.

2.3 Biological Environment

2.3.1 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more

commonly referred to as the Clean Water Act (33 U.S. Code 1344), is the primary law regulating wetlands and surface waters. One purpose of the Clean Water Act is to regulate the discharge of dredged or fill material into Waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over nontidal waterbodies extend to the ordinary high water mark in the absence of nearby wetlands. When nearby wetlands are present, Clean Water Act jurisdiction extends beyond the ordinary high water mark to the limits of the nearby wetlands. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used, which includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present under normal circumstances for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation’s waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the U.S. Environmental Protection Agency.

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effects. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineers' Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers' decision to approve is based on compliance with the U.S. Environmental Protection Agency’s Section 404(b)(1) Guidelines (40 Code of Federal Regulations Part 230) and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (guidelines) were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers and allow the discharge of dredged or fill material into the aquatic system (Waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a “least environmentally damaging practicable alternative” to the proposed discharge that would have lesser effects on Waters of the U.S. and not have any other significant adverse environmental consequences.

The executive order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, Executive Order 11990 states that a federal agency, such as the Federal Highway Administration and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction, and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board, the Regional Water Quality Control Boards, and the California Department of Fish and Wildlife. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission, or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Wildlife before beginning construction. If the California Department of Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. California Department of Fish and Wildlife jurisdictional limits are usually defined by the tops of the stream or lake banks or the outer edge of riparian vegetation, whichever is wider. Wetlands under the jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the California Department of Fish and Wildlife.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act. In compliance with Section 401 of the Clean Water Act, the Regional Water Quality Control Boards also issue water quality certifications for activities that may result in a discharge to Waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for more details.

Affected Environment

A Natural Environment Study was completed for the project on May 28, 2021. The biology action area studied for the project consists of the project footprint plus a 250-foot-wide buffer zone. The Tulare Main Canal, an unlined, channelized distributary of the Kaweah River, crosses the project area. No Waters of the U.S. are present within the project footprint.

There are no wetlands within the project footprint. Elk Slough is outside the limits of the action area.

Environmental Consequences

Realigning the Tulare Canal would temporarily impact about 2 acres of the existing canal. Construction would not permanently affect the flow, volume, or capacity of the canal. The realigned segment of the canal would match the existing canal in appearance.

Due to the unvegetated and channelized nature of the canal, no special-status species or habitats are expected to occur or to experience impacts as a result of the canal realignment.

A 1600 Streambed Alteration Agreement would be required by the California Department of Fish and Wildlife due to the realignment of the Tulare Canal, a water of the state. Also, a Waste Discharge Requirement fee would be paid to the Central Valley Regional Water Quality Control Board.

Culverts that would be replaced by the project are limited to roadway runoff and crossroad conveyances and do not connect to any wetland or waterway.

Elk Slough is outside the limits of the action area and project footprint, and no impacts are expected to this waterway.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

2.3.2 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act: 16 U.S. Code Section 1531, et seq. See also 50 Code of Federal Regulations, Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (and Caltrans, as assigned), are required to consult with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take Statement or a Letter of Concurrence. Section 3 of the Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts on rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife is the agency responsible for implementing the California Endangered Species Act. Section 2080 of the California Fish and Game Code prohibits the "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by the California Department of Fish and Wildlife. For species listed under both the Federal Endangered Species Act and the California Endangered Species Act requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Wildlife may also authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the U.S., by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Affected Environment

A Natural Environment Study was completed for the project on November 8, 2021. The biology action area studied for the project consists of the project footprint plus a 250-foot-wide buffer zone.

A list of federally endangered or threatened species and critical habitat(s) that may be affected by the project was requested from the U.S. Fish and Wildlife Service on November 9, 2023. Caltrans Federal Endangered Species Act Determinations are listed in the Appendix. Based on in-office research (California Native Plant Society, the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service) and field surveys, Caltrans biologists determined that there was potentially suitable habitat for the vernal pool fairy shrimp, San Joaquin kit fox, and Swainson's hawk that may be present within the project footprint.

Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp is listed as federally threatened by the U.S. Fish and Wildlife Service. This freshwater crustacean is found in vernal pools or vernal pool-like habitats. These depressions fill with rainwater in the winter and are dry by the summer, which is why these invertebrates have such a short life cycle. Fairy shrimp hatch, mature, and reproduce in a few weeks. They produce specialized eggs that mature as cysts, which lie dormant in the soil during the dry season. When the winter rain returns, the pool fills with water. Some of the cysts hatch, and some continue to lie dormant in dry conditions for years.

The vernal pool fairy shrimp is found in suitable habitats in California and southern Oregon. The fairy shrimp feeds on algae, bacteria, protozoa, and detritus. Because these crustaceans have no defenses, they are easy prey for other species, including the California tiger salamander and the western spadefoot toad. Waterfowl can disperse fairy shrimp to other vernal pools during migration. The vernal pool fairy shrimp ranges in size from 0.12 to 1.5 inches long and typically appears semitransparent or grayish white with delicate elongated bodies, large, stalked compound eyes, and 11 pairs of swimming legs. The vernal pool fairy shrimp is distinguished from other fairy shrimp by the presence and size of the mound on the male's second antennae and by the female's short, pear-shaped brood pouch.

San Joaquin kit fox

The San Joaquin kit fox is federally listed as endangered and is state listed as threatened.

The San Joaquin kit fox is a small fox that is native only to the San Joaquin Valley. Its historical range included most of the valley, from San Joaquin County southward to southern Kern County. Currently, San Joaquin kit foxes occur in the remaining native valley and foothill grasslands and saltbush scrub communities of the valley floor and surrounding foothills from southern Kern County north to Merced County. San Joaquin kit foxes use dens for protection, temperature regulation, and shelter from the weather. They may dig their own dens, use dens constructed by other animals, or use artificial structures (culverts, abandoned pipelines, or banks in sumps). Females are capable of breeding two or more times per year.

The San Joaquin kit fox is active year-round, living in grassland, scrubland, oak woodland, alkali sink scrubland, and vernal pool and alkali meadow communities, but is also known to occur in extensively modified habitats, such as oil fields and wind turbine facilities. San Joaquin kit foxes are present but less common in agricultural row crops, irrigated pastures, orchards, and vineyards.

Swainson's Hawk

The Swainson's hawk is listed as a state-threatened species by the California Department of Fish and Wildlife. In addition, hawks are protected by the Migratory Bird Treaty Act and California Fish and Game Code Section 3503. The Swainson's hawk is a summer migrant to California, wintering in South America and breeding in western North America. This hawk prefers to nest in large trees surrounded by open areas and riparian forests; it forages in nearby grasslands or some agricultural fields and pastures. Formerly abundant in California, populations have declined due to loss of nesting habitat, migration mortalities, and low fertility rates.

Nests are made from sticks, bark, and fresh leaves built in a tree or bush from 4 feet to 100 feet above the ground.

There are no occurrences of Swainson's hawks recorded within the action area; however, multiple occurrences have been reported within 1 mile. The project falls within the known range of the species, and potential nesting habitat is present, primarily in landscape shrubs and trees, including those within the existing right-of-way.

Four occurrences of Swainson's hawk sightings and nests within the Tulare area have been recorded, most recently in 2011. The closest observation was in 2007, about 1,500 feet from the anticipated work area, along Elk Slough.

During surveys in the project area, Swainson's hawks were seen flying overhead. Fields adjacent to the project footprint contain low-growing ruderal species that provide potential foraging habitat.

There are no known nest trees within the action area, and no Swainson's hawk nests were detected during field surveys.

Environmental Consequences

Vernal Pool Fairy Shrimp

In late March, a fairy shrimp species was seen on the roadside and in a ponding area in the vicinity of Paige Avenue/Laspina Street and Paige Avenue/Blackstone Street, as well as in sediment-covered asphalt puddles in Love's Travel Stop parking lot. Due to significantly below-average rainfall during the winter and spring of 2020 and 2021 that may have prevented cysts from hatching, the U.S. Fish and Wildlife Service deemed the season a non-sampling season for fairy shrimp. Due to the inability to sample, the exact species identity of the fairy shrimp found could not be confirmed. Based on visual observations and the extremely poor-quality habitat, however, it was determined that the species found in the project area is most likely the versatile fairy shrimp, a more common species that does not have a special-status designation.

The most recent occurrences of vernal pool fairy shrimp in the Tulare area were recorded over 10 miles from the project area in significantly higher quality habitat. Vernal pool fairy shrimp are not expected to occur within the project area and, thus, would not be impacted by the project. The potential habitat for the species within the action area is extremely poor, and reconnaissance surveys indicated that a common species of fairy shrimp is likely to be present. Therefore, the area does not support the species. No direct, indirect, or future impacts on vernal pool fairy shrimp are expected to occur from the project.

San Joaquin Kit Fox

San Joaquin kit foxes are not expected to occur within the project area and thus would not be impacted by the project. The potential habitat for the species within the action area is poor, and reconnaissance surveys found very little prey available. The action area does not support this species. No direct, indirect, or future impacts on San Joaquin kit foxes are expected to occur from the project. Therefore, the project will have no effect on the San Joaquin kit fox.

Swainson's Hawk

While the action area contains suitable nest trees, no nesting Swainson's hawks were seen within the project limits. About 128 shrubs and trees are expected to be removed to complete the project.

Avoidance, Minimization, and/or Mitigation Measures

Vernal Pool Fairy Shrimp

Fairy shrimp surveys will be conducted during the final design phase of the project in a U.S. Fish and Wildlife Service protocol survey year to confirm visual observations that it is the non-listed species, versatile fairy shrimp, present in briefly ponded areas. If surveys detect vernal pool fairy shrimp in the action area, a Biological Opinion and avoidance, minimization, and/or mitigation measures would be required before completion of the project's design phase action.

San Joaquin Kit Fox

Preconstruction surveys will be conducted within the action area within 30 days before beginning work on the project to ensure no listed species, including the San Joaquin kit fox, are present. Worker Environmental Awareness training will also be included in the contract's special provisions.

Swainson's Hawk

With the implementation of the following avoidance and minimization measures, no impacts on Swainson's hawks are anticipated:

- Preconstruction surveys following the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central*

Valley (May 2000) would be conducted by qualified biologists within 500 feet of the project footprint during nesting season (February 1 to September 30) before groundbreaking activities.

- If nesting Swainson's hawks are discovered within 500 feet of the project footprint, the nest site would be designated an Environmentally Sensitive Area, and a 500-foot buffer (exclusion zone) would be established until a qualified biologist has determined that the nest is no longer active.
- A qualified biologist would monitor the active nest during construction activities within the buffer.
- Removal of any trees within the project area should be done outside of the nesting season; however, if trees within the project area need to be removed during the nesting season, a qualified biologist will inspect the tree before removal to ensure that no nests are present.

2.3.3 Invasive Species

Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order 13112, requiring federal agencies to combat the introduction or spread of invasive species in the U.S. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration guidance issued on August 10, 1999, directs the use of the state's invasive species list, maintained by the California Invasive Species Council, to define the invasive species that must be considered as part of the NEPA analysis for a proposed project.

Affected Environment

A Natural Environment Study was completed for the project on November 8, 2021.

Several California Invasive Plant Council-listed plant species were encountered in the action area. All of these species observed have a widespread distribution throughout the Central Valley and are characteristic of many disturbed sites throughout the region. Dominant invasive plants include Russian thistle, various mustard species, star thistles, ripgut brome, and wild radish.

These invasive weeds grow along areas of unpaved highway shoulders, vegetated highway medians, and weedy areas around and between agricultural fields and other structures.

Environmental Consequences

To prevent the introduction and spread of invasive species, Caltrans has issued policy guidelines, which provide a framework for addressing roadside vegetation management issues for construction activities and maintenance programs. These measures may include the inspection and cleaning of project equipment, commitments to ensure the use of native or invasive-free mulches, topsoils, and seed mixes, and eradication strategies for the removal and proper disposal of existing populations or those that could occur in the future.

In compliance with the Executive Order on Invasive Species, Executive Order 13112, and guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will not use species listed as invasive. None of the species on the California list of invasive species is used by Caltrans for erosion control or landscaping in the San Joaquin Valley. All equipment and materials will be inspected for the presence of invasive species and cleaned if necessary.

Avoidance, Minimization, and/or Mitigation Measures

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

2.3.4 Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts on resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and the introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under the California Environmental Quality Act can be

found in Section 15355 of the California Environmental Quality Act Guidelines. A definition of cumulative impacts under the National Environmental Policy Act can be found in 40 Code of Federal Regulations Section 1508.7.

Affected Environment

Cumulative impacts identified for the Tulare Six-Lane and Paige Avenue Interchange Improvement project are those impacts that result from past, present, and reasonably foreseeable future actions occurring in the project area. The study area for each of the resources potentially affected by the cumulative projects is discussed here. The affected environment for each of these resources has been previously discussed in their respective portions of Chapter 2.

Cumulative impacts on resources in the project area may result from residential, commercial, industrial, and highway development. These land use activities can degrade habitats and populations through alteration of hydrology, contamination, erosion, sedimentation, disruptions of migration corridors, changes in water quality, and the introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

To define the resource study area of a transportation system, the cumulative impact analysis must consider the impacts of resource areas in which there are significant impacts. The project would not impact the following resource areas.

Resources Not Substantially Affected by Cumulative Impacts

The following resources were studied and determined not to be in poor or declining health or that the project would not contribute to cumulatively considerable impacts. Impacts to the health, status, or condition of these resources, as a result of past, present, and reasonably foreseeable impacts, would not occur as a result of this project.

Section: 2.1.1 Existing and Future Land Use

Section: 2.1.2 Consistency with State, Regional, and Local Plans

Section: 2.1.3 Parks and Recreational Facilities

Section: 2.1.5 Community Character and Cohesion

Section: 2.1.6 Relocation and Real Property Acquisition

Section: 2.1.8 Utilities and Emergency Services

Section: 2.1.11 Cultural Resources

Section 2.2.1 Water Quality and Stormwater Runoff

Section 2.2.2: Paleontology

Section 2.2.3 Hazardous Waste and Materials

Section 2.2.6 Energy

Section: 2.3.1 Wetland and Other Waters

Section 2.3.2 Threatened and Endangered Species

Section 2.3.3 Invasive Species

The cumulative impact analysis is based on known projects that are currently proposed, approved, or under construction with Caltrans, Tulare County, and the City of Tulare.

The analysis concluded that there may be cumulative impacts on several resources:

- Air Quality
- Environmental Justice
- Visual/Aesthetics
- Noise and Vibration
- Traffic/Growth
- Greenhouse Gas

An analysis of the cumulative impacts of these resources is presented below. The affected environment for each of these resources has been previously discussed in its respective portion in Chapter 2; the analysis focuses on the cumulative impacts of the Build Alternatives in this section.

This section describes the social and demographic characteristics of the project area. The data were derived from the 2022 Tulare County Association of Governments' Regional Transportation Plan, and the 2014 City of Tulare General Plan was also referenced for this section.

This section is the baseline evaluation of the cumulative analysis, with the identification of resource study areas, resource health or status, and project contribution to cumulative effects based on the individual evaluations provided and summarized in Table 2.40. Resource study areas are generally on the natural boundaries of the resource affected rather than jurisdictional boundaries. The geographic scope (or area within which projects may

contribute to a specific cumulative effect) of the cumulative impact analysis varies depending on the specific environmental issue area being analyzed.

Environmental Consequences

The list of reasonably foreseeable projects is based on known projects identified by Caltrans and the City of Tulare. Table 2.39 shows the reasonably foreseeable projects considered in the cumulative impact analysis for this project.

Table 2.39 Present and Resonable Foreseeable Future Actions

Project Name or Applicant	Project Location	Project Description	Project Uses	Environmental Impacts	Project Status
International Agri-Center Way Interchange	City of Tulare; 0.8 mile south of the Paige Avenue Overcrossing.	This project proposes to construct a new interchange by using the existing Commercial Avenue from K Street to connect to State Route 99.	The project will improve the operational performance of State Route 99 within the project limits, relieve traffic congestion on local roads, and improve accessibility on the freeway system in that area.	A total of 19 acres of farmland and one business needed to be acquired.	Start of Construction Summer of 2023
Bardsley Interchange Operational Improvements	In the City of Tulare, between post mile 28.20 and post mile 28.90.	This project proposes to signalize the State Route 99 northbound and southbound intersections at Bardsely Avenue. The northbound and southbound ramps would be widened to accommodate one left-turn and one right-turn lane.	The project would improve the operation of ramp intersections at Bardsley Avenue Interchange and optimize traffic flow for vehicles, pedestrians, and bicyclists.	The project is in the early stages of development. Environmental studies are anticipated to begin in February 2024, which would provide further determination on environmental impacts.	The project is anticipated to begin environmental studies in February 2024.
Tagus Six-Lane	In Tulare County, on State Route 99 between Prosperity Avenue and north of the North Goshen Overhead.	This project will widen State Route 99 from a four-lane freeway to a six-lane freeway.	The project will provide improved operations by meeting current design standards and adding merge lanes.	A total of 26 acres of farmland and one parking lot of a business were acquired.	The project is currently under construction.

Project Name or Applicant	Project Location	Project Description	Project Uses	Environmental Impacts	Project Status
Delano to Pixley 6-lane with Pavement Rehabilitation	On State Route 99, from post miles 56.4 to 57.6 in Kern County and from post miles 0.0 to 13.5 in Tulare County.	This project will widen State Route 99 from a four-lane freeway to a six-lane freeway.	The project will improve operational deficiencies, improve freight movement, provide for future growth, and repair and extend the service life of the existing pavement along this segment.	The project will increase vehicle miles traveled.	The Final Environmental Impact.
Paige Avenue Industrial Center	South side of Paige Avenue, west of I Street.	Development of two industrial buildings on 76.44 acres.	The project will build a distribution center to bring hundreds of jobs to the City of Tulare.	A total of 76.44 acres of land are zoned for industrial.	The project is anticipated to be completed in 2025.

Table 2.40 Resources in the Study Area

Resource Study Areas and Resource Evaluations Environmental Issues	Geographic Scope of Resource Study Area	Resource Health/Status	Project Contribution to Cumulative Impacts
Air Quality	Surrounding Project Area	Declining	Considerable
Visual/Aesthetics	Proposed Project Corridor	Stable	Not Considerable
Noise and Vibration	Proposed Project Corridor	Declining	Not Considerable
Traffic Circulation/Growth	Proposed Project Corridor	Declining	Not Considerable
Greenhouse Gas	Surrounding Project Area	Declining	Considerable

Air Quality

Resource Study Area and Current Cumulative Condition

Within the San Joaquin Valley Air Basin, Tulare County is a designated non-attainment area for ozone and particulate matter and must consider transportation control measures to reduce emissions to demonstrate conformity with the State Implementation Plan for air quality to satisfy federal requirements. The 2022 Tulare County Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy Environmental Impact Reports (Draft May 2022; Final August 2022), which include the project as part of its build alternative, assessed the cumulative impacts of the Regional Transportation Plan/Sustainability Communities Strategy. Those documents, including, but not limited to, the cumulative impact analysis contained in Section 4.3, are, hereby, incorporated by reference into this Environmental Assessment/Environmental Impact Report; they can be found at the Tulare County Association of Governments' website at: https://tularecog.org/tcag/planning/rtp/rtp-2022/.

The 2022 Tulare County Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy Environmental Impact Reports analyzed and determined the following, which are relevant to the cumulative condition and conclusions for the Tulare Six-Lane and Paige Avenue Interchange Improvement project:

1. Construction activities associated with transportation improvements and land use projects would result in a cumulatively considerable net increase in criteria pollutants for which the project region is non-attainment under applicable federal or state ambient air quality standards.

This impact would be significant and unavoidable.

2. Operation of the proposed transportation improvements and land use projects envisioned by the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy would result in a cumulatively considerable net increase of criteria pollutants for which the project is in non-attainment attainment under applicable federal or state ambient air quality standards. This impact would be significant and unavoidable.

The 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report cumulative analysis states:

Emissions of reactive organic gases, nitrogen oxides, and Particulate Matter 2.5 and Particulate Matter 10 under the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy would decrease as compared to the Tulare County Association of Governments' 2021 baseline, despite a projected increase in vehicle miles traveled. This decrease in emissions is consistent with the statewide downward trend for these pollutants as a result of California Air Resources Board rules designed to reduce emissions from cars and trucks. The transportation improvements and future land use scenario envisioned by the Regional Transportation Plan/Sustainability Communities Strategy encourage improved circulation and higher density development along transportation corridors, which would further reduce on-road mobile emissions.

The proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy is intended to increase residential and commercial land use capacity within existing transit corridors, shifting a greater share of future growth to these corridors and ultimately increasing density, improving circulation and multimodal connections, and leading to lower per capita vehicle miles traveled, which would have a beneficial effect on air quality. Conditions under the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy were compared to 2046 "No Project" conditions for informational purposes. The proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy would result in a net decrease in vehicle miles traveled compared to the 2046 "No Project" scenario due to transportation improvements and land use patterns identified in the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy. As such, on-road vehicle emissions would also be reduced under the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy conditions when compared to the "No Project" scenario. As previously noted, Tulare County is currently in nonattainment for federal and state Particulate Matter 2.5 and ozone standards and state Particulate Matter 10 standards. As shown in Table 4.3-5, under the "No Project" and "proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy" scenarios, emissions levels for ozone precursors are forecast to decline despite projected future growth. Nitrogen oxide emissions are primarily generated by trucks and are expected to decrease over time due in part to the impact of California Air Resources Board rules designed to reduce nitrogen oxide

emissions from diesel trucks and buses. Reactive organic gas emissions are primarily due to gasoline vehicles and are lower due to improvements in vehicle emission rates. Particulate Matter 10 emissions are also generally consistent with statewide trends.

Also, note that the air contaminant emissions shown in Table 4.3-5 are modeled emissions based on vehicle miles traveled. The results do not account for some proposed vehicle miles traveled reduction strategies, such as a transportation demand management plan, telecommuting, and transit service enhancements, because these strategies are off-model reductions that cannot be included in EMFAC. The mobile air contaminant emissions from the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy are expected to decrease with the inclusion of these vehicle miles traveled reduction strategies, such that the analysis herein represents a reasonable worst-case scenario for air contaminant emissions. Therefore, long-term operational impacts would be less than significant.

However, with the inclusion of other land use emissions, the cumulative impacts of both transportation and other land use emissions were determined to be cumulatively considerable and would result in a significant and unavoidable cumulative impact.

1. The proposed transportation improvements and land use projects envisioned by the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy would expose sensitive receptors to substantial particulate matter pollutant concentrations. However, because the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy would reduce exposure in comparison to the baseline, impacts would be less than significant.

The 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report cumulative analysis states:

Re-entrained dust refers to roadway dust that is “kicked up” by moving vehicles on paved and unpaved roadways. This type of dust would be generated by roadway activity under the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy. In addition, dust from construction activity would add to regional dust levels. The synergistic effects of road dust (typically measured as Particulate Matter 10) with ozone and the hazardous constituents of re-entrained road dust itself (carcinogens, irritants, and pathogens) may affect human health by contributing to respiratory illnesses such as asthma and allergies. Although motor vehicle emission control advances have allowed vehicle tailpipe emissions of some pollutants to decrease over the last 20 years, the number of vehicles in use and the amount of vehicle activity have continued to increase. This would suggest that re-entrained road dust has increased as well because the amount of re-entrained dust is related to the number of vehicles on a road.

Total particulate emissions would be lower with the implementation of the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy as compared to 2021 baseline conditions. Despite an increase in vehicle miles traveled within the Tulare County Association of Governments region, particulate emissions would be lower under the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy conditions, as compared to existing conditions, largely due to emission control advances. Therefore, the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy would not expose sensitive receptors to substantial pollutant concentrations associated with re-entrained road dust, and impacts would be less than significant.

1. The transportation improvements and land use projects envisioned by the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy would expose sensitive receptors to substantial toxic air contaminant concentrations. Impacts would be significant and unavoidable.

The 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report cumulative analysis states:

While overall toxic air contaminant concentrations and associated health risks within any given distance of mobile sources in the region would generally decrease with the implementation of the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy compared to existing (2021) levels (refer to Table 4.3-7), exposure is primarily based on local parameters such as average daily traffic on local roadway segments or wind direction in relation to source and receptor. As such, the health risks adjacent to heavily trafficked roadways and transportation facilities (e.g., State Routes 99 and 198) would remain higher than regional averages. See Section 4.14, Transportation, for a summary of average daily traffic on heavily trafficked roadways in the Tulare County Association of Government region.

It is important to note that a variety of other factors contribute to the decline in contaminant emissions compared to existing conditions, including vehicle technology, cleaner fuels, and fleet turnover. However, to achieve the greatest vehicle miles traveled reductions from an efficient circulation network, development also must necessarily be in relatively close proximity to public transit and major roadway corridors. Although the precise location and density of such development are not known at this time, the proposed 2022 Regional Transportation Plan/Sustainability Communities Strategy could result in new sensitive receptors sited close to Tulare County Association of Governments 2022 Regional Transportation Plan & Sustainable Communities Strategy 4.3-32 existing and new toxic air contaminants sources, potentially resulting in the exposure of sensitive receptors to substantial toxic air contaminants concentrations. Therefore, impacts related to toxic air contaminant emissions would be potentially significant. The siting of new sensitive receptors would be subject to an individual jurisdiction's land use

approval processes and would be analyzed on an individual project basis and subject to mitigation measures identified below. The below mitigation measures would reduce this impact.

Indirect and Direct Project Impacts (Contribution)

As discussed in Section 2.2.4 of this document, the project would result in an increase in emissions for some criteria pollutants when compared to existing conditions; it would also increase emissions for some criteria pollutants when comparing future build to future no build.

Past and Foreseeable Future Projects

Future planned transportation projects, such as the Delano to Pixley 6-Lane with Pavement Rehabilitation, Tagus Six-Lane, International Agri-Center Interchange, and Paige Avenue Industrial Park, are within the project vicinity. These projects could contribute to cumulative short-term air quality impacts if construction schedules for these projects overlap. This scenario is not expected to occur because the construction of the various present and reasonably foreseeable future projects is not expected to be simultaneous.

Based on the air quality analysis documented in Section 4.3 of the Draft Environmental Impact Report, the 2022 Tulare County Association of Governments' Regional Transportation Plan conforms to the applicable San Joaquin Valley Air Pollution Control District plans (2016 Ozone Plan, the 2007 Particulate Matter 10 Maintenance Plan, and the 2012 Particulate Matter 2.5) and demonstrates progress toward attainment with the state ambient air quality standards for fine and respirable particle matter and ozone.

Potential Cumulative Impacts

Construction activities cause short-term air quality impacts, which are considered unavoidable. Long-term air quality impacts would be due to the project's increase in vehicle travel due to growth in the area. The project will improve safety and operational efficiency at the Paige Avenue Interchange and improve local traffic flow on and off State Route 99. Construction of the build alternative would improve travel along the state route, maximize operational efficiency, and minimize motorists' exposure to hazards that may contribute to vehicular collisions.

While the project increases in air pollutant emissions detailed in Section 2.2.4 would individually not be considered substantial under NEPA/significant under CEQA, given the existing and future cumulative conditions described in the 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report, the project's incremental increase in those emissions would be cumulatively considerable and would contribute to already identified significant cumulative effects.

Environmental Justice

Environmental justice impacts are borne mostly by a minority population and/or a low-income population. Adverse impacts on environmental justice populations in the socioeconomic study area would occur from the following: cumulative impacts to air quality described in the 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report, the project's incremental increase in those emissions would be cumulatively considerable and would contribute to already identified significant cumulative effects (refer to Section 2.4 Cumulative Impact – Air Quality for further discussion and to Section 2.1.7 for Environmental Justice).

Visual/Aesthetics

Resource Study Area

The land cover in the project corridor is mainly agricultural crops, commercial, and residential. The vegetation along the freeway has large, mature oleanders in the median and large, mature Eucalyptus trees on the outside shoulders. The oleanders in the median add a vibrant sense of color and texture all year round but are memorable when the plants are flowering in the spring and into the fall. The proximity of the vegetation to the traveled way allows it to dominate the views in most locations. The section of the highway between post mile 28.33 and post mile 30.06 is a Classified Landscape Freeway due to the ornamental vegetation planting that meets the criteria established by the California Code of Regulations, Outside Advertising Regulations, Title 4, Division 6.

Indirect and Direct Project Impacts

The removal of trees and other vegetation for this project, especially those that have large or long-established visual features, has a moderate to high visual impact, as does the removal of the characteristic median oleander shrubs. When trees are removed from the roadside, they should be replaced, preferably in the landscape or visual impact area where they were removed, when there is adequate right-of-way. In the case of this project, the cumulative impact will be lessened by replacement plantings, all of which should be able to be accommodated within the project limits. Past transportation improvement projects and maintenance activities have removed trees and other vegetation recently, and ongoing maintenance activity may result in the additional removal of trees and shrubs. This project includes replanting, which will reduce this project's impacts and, therefore, its contribution to the cumulative visual condition.

Past and Foreseeable Future Projects

Three projects that are planned or currently in construction could be considered as contributing to the corridor's visual resources: Delano to Pixley 6-Lane with Pavement Rehabilitation, Tagus Six-Lane, and International Agri-Center Interchange. All projects would contribute to the corridor's visual changes; however, with measures to lessen the visual impacts, they would

not significantly alter the visual landscape, degrade the visual quality of the project area, or negatively affect highway users and highway neighbors. Therefore, the project's cumulative effects would not be cumulatively considerable.

Noise and Vibration

Resource Study Area

Field investigations were conducted on September 13, 2020, and October 4, 2020, to identify land uses that could be subject to traffic noise impacts from the project. The land uses within the project limits and their representative receivers are divided into segments and described in detail in the following section based on roadway topography with respect to the identified receivers.

Indirect and Direct Project Impacts

This project is a Type 1 project as defined by the Federal Highway Administration because it would increase the number of through-traffic lanes, potentially increase the volume or speed of traffic, and move the traffic closer to a receiver. Temporary construction noise impacts would be unavoidable in areas immediately next to the project alignment. Noise from construction activities may intermittently dominate the noise environment in the immediate construction area.

Past and Foreseeable Future Projects

Future planned transportation projects, such as the Delano to Pixley 6-Lane with Pavement Rehabilitation, Tagus Six-Lane, and International Agri-Center Interchange, are within the project vicinity. These projects could contribute to cumulative short-term noise impacts if construction schedules for these projects overlap. This scenario is not expected to occur because the construction of the various present and reasonable scenarios is not expected to be simultaneous. Further, each project would be responsible for following applicable noise ordinances during construction, thereby reducing the noise impact. As a result, the project would not contribute to a cumulative noise quality impact.

Potential Cumulative Impacts

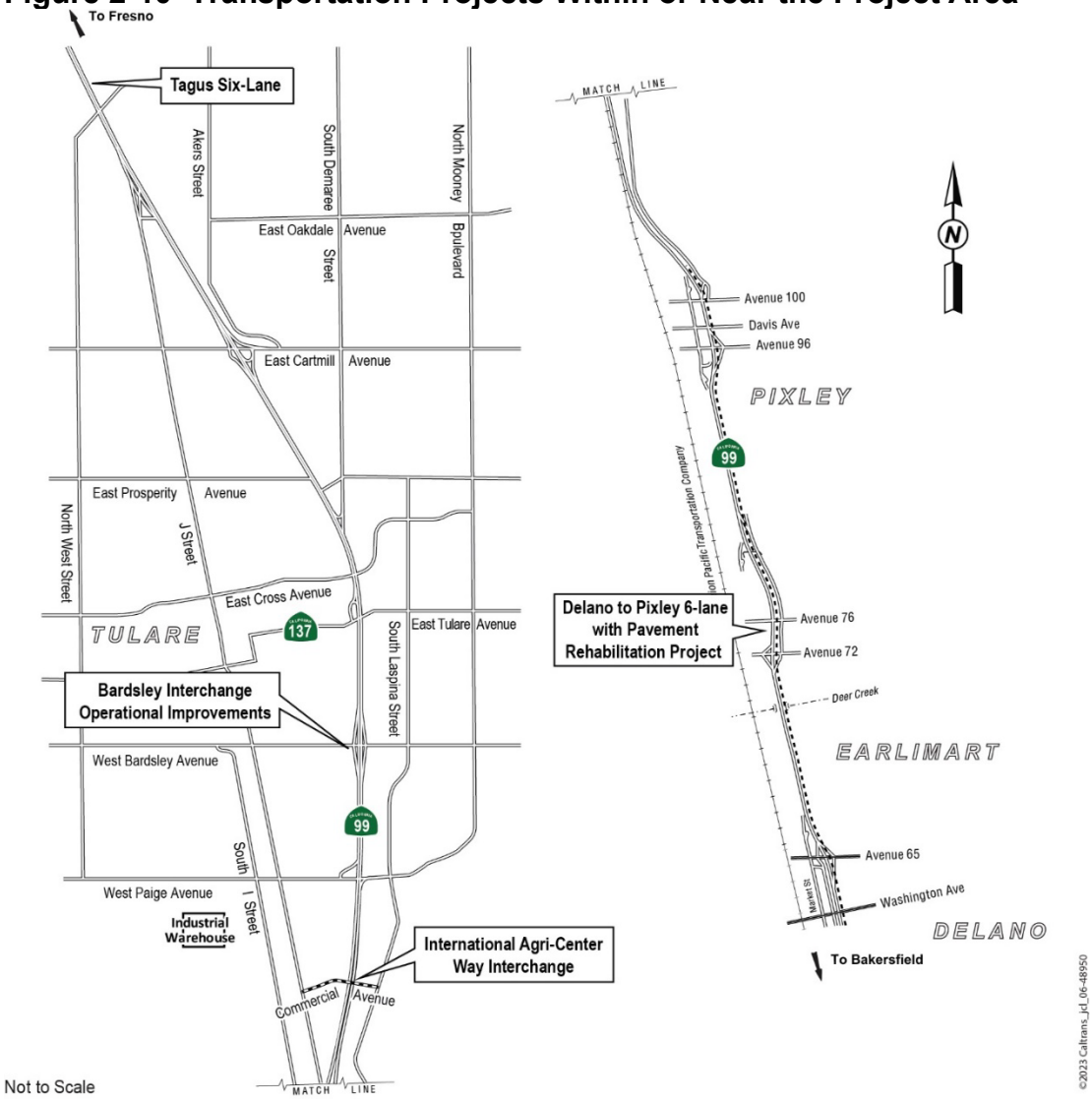
Caltrans intends to incorporate noise abatement in the form of the three barriers described above as Soundwall 1, Soundwall 2, and Soundwall 4. These measures may change based on input received from the public. If conditions have substantially changed during the final design, noise abatement may not be constructed. The final decision on noise abatement will be made upon completion of the project design. With abatement, the project would not have a cumulatively considerable noise impact.

Traffic/Growth

Resource Area

The project is within the City of Tulare's boundaries and the city's planning area. The land use throughout the project limits is a mix of agricultural land, light-to-heavy industrial uses, community commercial facilities, low-to-high-density residential tracts, and neighborhood commercial shopping centers. The immediate vicinity of the Paige Avenue Interchange is considered an industrial area of the city that extends west of the freeway and south of Bardsley Avenue along State Route 99. In this area, the 2035 Tulare General Plan indicates a shift toward heavy industrial use in the future. See Figure 2.10 for the transportation projects relevant to the project area.

Figure 2-10 Transportation Projects Within or Near the Project Area



Indirect and Direct Project Impacts

Under the cumulative condition, ongoing urban development is expected to continue within the study area. Local and regionally planned transportation projects are intended to accommodate the expected increase in traffic related to development in the region. However, if work on multiple projects were to overlap with the project during construction, significant cumulative impacts related to traffic delays and detours for travel in the region could occur.

Past and Foreseeable Future Projects

The City of Tulare approved the Paige Avenue Industrial Center on West Paige Avenue and I Street on 74.66 acres of land designated in the City of Tulare's General Plan as industrial. The project is in line with the 2009 Final Environmental Impact Report for the South I Street Industrial Park Specific Plan and anticipates having an opening year of 2025. The Specific Plan

project area consists of about 458 acres, and the land was divided into 2 acres of light industrial, 361 acres of heavy industrial, and 83 acres of urban and suburban residential. The remaining 12 acres are for street and railroad. The specific plan outlines several objectives, one of which is to provide additional industrial land to accommodate larger and medium-sized users. Therefore, the current and future developments would have occurred with or without the improvements to the Paige Avenue Interchange. The Tulare Six-Lane and Paige Avenue Interchange Improvement project would not induce growth substantially beyond what is projected in city and county general plans.

Planned highway projects, such as the Delano to Pixley 6-Lane with Pavement Rehabilitation and Tagus Six-Lane widening projects on the State Route 99 corridor, could require temporary reductions in lane widths and speed limits along State Route 99, which could contribute to substantial cumulative impacts on traffic circulation and congestion in construction zones. While some level of traffic disruption could occur if planned development and transportation improvement projects overlap, cumulative construction impacts would be temporary, and individual projects would contain measures to avoid major traffic delays. Therefore, it is not anticipated that the temporary effects of the construction of multiple projects would combine to result in cumulatively substantial impacts, and the project would not have a cumulatively considerable contribution.

Potential Cumulative Impacts

Over the long term, planned transportation improvements on major roadways in the study area are expected to benefit the existing State Route 99 highway and the Paige Avenue interchanges by improving safety and reducing congestion. Taken together, these transportation projects would provide a cumulative regional benefit to transportation and improve circulation and access in the region. Therefore, traffic impacts would not be cumulatively considerable.

Greenhouse Gas

Greenhouse Gas analysis is, by its nature, cumulative. No individual project is of sufficient size to be the sole reason for climate change. Instead, climate change is the result of millions of activities that emit greenhouse gases. The analysis of the project's greenhouse gas emissions is within the context of statewide efforts to minimize the impacts of climate change. See Section 3.3, Climate Change, for the discussion of cumulative impacts and mitigation measures.

Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance Under CEQA

The project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). FHWA's responsibility for environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code Section 327 and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and Caltrans. Caltrans is the lead agency under NEPA and CEQA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement or a lower level of documentation will be required. NEPA requires that an Environmental Impact Statement be prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated, and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Each and every significant effect on the environment must be disclosed in the Environmental Impact Report and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an Environmental Impact Report. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.2 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant Impact With Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A No Impact answer reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project and standardized measures that are applied to all or most Caltrans projects, such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered before any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 to provide you with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates, by reference, the information contained in Chapters 1 and 2.

3.2.1 Aesthetics

CEQA Significance Determinations for Aesthetics

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

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

No Impact—The project would not have a substantial adverse effect on a scenic vista because the project area does not include any scenic vistas.

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

No Impact—The project would not substantially damage scenic resources within a state scenic highway because the project area does not include any scenic vistas.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the

project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact With Mitigation Incorporated–As discussed in Chapter 2 under the Visual/Aesthetics section, the project would have an impact on the existing visual character of the site and its surroundings. [This section has been updated since the circulation of the draft environmental document. The project would remove approximately 23,880 linear feet of oleander, 83 trees, and 7 acres of landscaping (pending the ultimate design choices made for the Paige Avenue Interchange). Replacement planting would occur at a minimum ratio of 1:1. It is anticipated that replacement planting will amount to approximately 730 to 800 new trees. The locations of the planting may occur at the proposed stormwater basin sites and in the area where State Route 99 will be realigned at post mile 25.8.

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

No Impact—The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.2.2 Agriculture and Forest Resources

CEQA Significance Determinations for Agriculture and Forest Resources

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

Would the project:

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

No Impact—The project proposes to acquire a small corner of parcel 191-070-021, which is currently planted in orchard crops. A review of the City of

Tulare's land use map indicates that this entire parcel, which consists of 119 total acres, is zoned C-3, Retail Commercial District. According to Volume 4 of the Standard Environmental Reference Handbook, any farmland (regardless of quality) that is already in or committed to urban development is not subject to the Farmland Protection Policy Act.

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

No Impact—The project would not conflict with existing zoning for agricultural use or a Williamson Act contract because the project would not acquire land that would be acquired under a Williamson Act contract.

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

No Impact—There is no forest land or timberland in the project area.

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

No Impact—There is no forest land or timberland in the project area.

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

No Impact—There are no other changes anticipated to farmland, and there is no forest land in the project area.

3.2.3 Air Quality

CEQA Significance Determinations for Air Quality

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

Would the project:

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

No Impact—The project is included in the Tulare County Association of Governments' 2023 Federal Transportation Improvement Program and 2022 Regional Transportation Plan with corresponding air conformity analysis.

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

No Impact—The project is located within the San Joaquin Valley Air Basin and is under the jurisdiction of the San Joaquin Valley Air Pollution Control District. Tulare County is in nonattainment for the federal 8-hour ozone and fine particulate matter standards and in attainment for the federal respirable particulate matter and carbon monoxide standards. Tulare County must consider transportation control measures to reduce emissions to demonstrate conformity with the State Implementation Plan for air quality to satisfy federal requirements. The Tulare Six-Lane and Paige Avenue Interchange Improvement was submitted for Interagency Consultation on January 7, 2022. It was deemed not a “Project of Air Quality Concern” by the Environmental Protection Agency on January 24, 2022, and by the Federal Highway Administration on January 27, 2022. The Federal Highway Administration and the Environmental Protection Agency concurred that the project will not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the time frame of the transportation plan (or regional emissions analysis).

c) Expose sensitive receptors to substantial pollutant concentrations?

No Impact—Sensitive receptors include hospitals, schools, day care facilities, elderly housing, and convalescent facilities. For sensitive receptors, the zone of greatest concern near roadways is within 500 feet (or 150 meters), according to the California Air Resources Board Air Quality and Land Use Handbook (2005). However, no sensitive receptors have been identified within 500 feet of this project.

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

No Impact—The project will not result in other emissions, such as odors, adversely affecting a substantial number of people. The project is in a transportation corridor within a major highway, and there are no sensitive receptors in the immediate area.

3.2.4 Biological Resources

CEQA Significance Determinations for Biological Resources

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-

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

Less Than Significant Impact—The project would have a less than significant impact on the San Joaquin kit fox and Swainson's hawk with the incorporation of avoidance and minimization measures as discussed in Chapter 2 under Biological Environment.

Fairy shrimp surveys will be conducted during the final design phase of the project. If surveys detect vernal pool fairy shrimp in the action area, a Biological Opinion and additional avoidance, minimization, and/or mitigation measures would be required.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

No Impact—A California Natural Diversity Database query did not identify any riparian habitat or other sensitive natural communities of special concern within the project area. No potential impacts on riparian habitats or natural communities of special concern are expected.

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

No Impact—There are no wetlands within the project footprint. Elk Slough is outside the limits of the action area. Realigning the Tulare Canal would temporarily impact about 2 acres of the existing canal. Construction would not permanently affect the flow, volume, or capacity of the canal. The realigned segment of the canal would match the existing canal in appearance.

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

No Impact—The project would not interfere with the movement of fish or wildlife species. To ensure this, preconstruction surveys would be done for migratory birds during the nesting season.

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

No Impact—There would be no conflicts with any local policies or ordinances protecting biological resources.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact—The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.2.5 Cultural Resources

CEQA Significance Determinations for Cultural Resources

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

No Impact—As discussed in Chapter 2 under Cultural Resources, there are no historical resources within the project area.

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

No Impact—As discussed in Chapter 2 under Cultural Resources, no previously recorded archaeological resources are present within the Area of Potential Effects. No surface indications of historic or prehistoric archaeological sites were found as a result of the archaeological surveys.

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

No Impact—As discussed in Chapter 2 under Cultural Resources, no archeological sites were discovered. If buried cultural material is encountered during construction, it is Caltrans' policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find.

3.2.6 Energy

CEQA Significance Determinations for Energy

Would the project:

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

No Impact—Per Caltrans' Best Management Practices, newer or well-maintained equipment that is more energy efficient would be used during construction. The amount of energy used by construction during the project

would be temporary. Fuel consumption projected for the build alternative will be offset by efficiencies experienced from the new freeway alignment and reduction of congestion on local roadways.

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

No Impact—The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

3.2.7 Geology and Soils

CEQA Significance Determinations for Geology and Soils

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

No Impact—Rupture of a known earthquake fault is not expected since the project is not in a known earthquake fault area (California Geological Survey, Seismic Hazard Zones, and Alquist-Priolo Earthquake Fault Zone Interactive Map, accessed January 2022).

ii) Strong seismic ground shaking?

No Impact—Strong seismic ground shaking is not expected since the project is not in a known earthquake fault area (U.S. Geological Survey U.S. Quaternary Faults interactive map, accessed January 2022).

iii) Seismic-related ground failure, including liquefaction?

No Impact—The project is in an area with low potential for seismic-related ground failure, including liquefaction, because the project area does not contain soil that is prone to liquefaction or seismic-related ground failure (U.S. Geological Survey U.S. Quaternary Faults interactive map, accessed January 2022).

iv) Landslides?

No Impact—The project area would not be subject to landslides because of the generally flat topography and because the project would not involve large cuts and fills or steep excavation.

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

No Impact—Project construction would not result in substantial erosion or loss of topsoil because the project would include appropriate Best Management Practices to prevent substantial soil erosion or loss of topsoil.

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

No Impact—Project construction would not cause the project area to become unstable or result in landslides, lateral spreading, subsidence, or collapse. The soil in the project area is not subject to liquefaction.

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

No Impact—The project is not on expansive soil and would not create substantial direct or indirect risks to life or property.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact—The project would not include septic tanks or alternative wastewater disposal systems; therefore, there would be no impact.

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

Less Than Significant Impact With Mitigation Incorporated—As discussed in Chapter 2 under Paleontology, the geologic units expected to underlie the project area are the Modesto Formation and the Riverbank Formation, both of which have a high potential to contain paleontological resources. A Paleontological Mitigation Plan would be prepared before construction by a Caltrans-supplied consultant. The plan would recommend the measures required to minimize potential impacts on paleontological resources.

3.2.8 Greenhouse Gas Emissions

CEQA Significance Determinations for Greenhouse Gas Emissions

Would the project:

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

[In the Climate Change Section under the CEQA Conclusion, Caltrans disclosed that the project impacts for increased greenhouse gas emissions are significant and unavoidable. This section was updated and made consistent with that determination.]

Significant and Unavoidable—The project would increase carbon dioxide emissions, a greenhouse gas, and therefore conflict with current air quality plans that require reduction of greenhouse gas emissions.

The analysis found carbon dioxide emissions would increase regardless of whether the Safer Affordable Fuel-Efficient Factor was applied. However, the difference between the Safer Affordable Fuel-Efficient Factor carbon dioxide emissions and the baseline emissions is much larger than those without the Safer Affordable Fuel-Efficient Factor multiplier.

The comparison of the carbon dioxide emissions for both the 2029 and 2049 No-Build/Build emissions is not excessive. However, the imposition of the Safer Affordable Fuel-Efficient Factor is progressive, increasing each year, as shown in Table 3.2. The application of the Safer Affordable Fuel-Efficient Factor multiplier shows an increase in carbon dioxide emissions throughout the project.

Furthermore, the Safer Affordable Fuel-Efficient Factor multiplier does not apply to projects that predate the year 2021, so there is a larger carbon dioxide emissions difference when comparing the 2018 Existing Year to the 2029 Open to Traffic Year and the 2049 Design Year.

The increase in emissions would mainly come from population growth in the county, along with the implementation of planned development in the area. Improvement of the existing Paige Avenue Interchange would provide more direct access and redistribute future traffic that would otherwise use circuitous routes on local roads and nearby interchanges traveling to and from the project area.

The emerging requirements to model and measure mitigation to reduce greenhouse gas emissions are narrowly defined and limited. Requirements limit projects to a zero increase in existing emissions to meet California’s emissions reduction goals. The modeling results focus only on the state highway and don’t consider the local street system. There are no regulatory or industry-wide established methods to accurately measure whether the project features and measures would reduce emissions enough to mitigate the project impacts.

By all regulatory standards, as reported in Section 2.2.4 Air Quality of this document, this project complies with all regulatory requirements for regional air-quality conformity, carbon monoxide, ozone, Particulate Matter 2.5 and 10,

mobile source air toxics, emissions during construction, and reporting carbon dioxide.

Caltrans and regional partner agencies have determined the project is needed. The improvements to local roads and the construction of complete interchanges would reduce stop-and-go traffic and provide more direct access to and from the highway. It would reduce traffic driving on direct routes on local roads to destinations. As air studies have documented, the highest vehicle emissions occur in stop-and-go traffic, and free-flowing traffic produces the least amount of vehicle emissions, regardless of the criteria pollutant.

The project does include features and measures that reduce greenhouse gas emissions, such as Complete Streets elements with landscaping to promote bicycle and pedestrian use and encourage active transportation overuse of vehicles. Installing Intelligent Transportation System elements is designed to improve traffic efficiency and reduce congestion on roadways, thereby lowering vehicle emissions. Also, roundabouts proposed on Blackstone Street and Laspina Street along Paige Avenue would contribute to smoother, more efficient traffic circulation, resulting in less stop-and-go travel and lower vehicle emissions. Caltrans applies a large list of standard measures to most, if not all, projects during construction that require practices and restrict equipment that reduces dust and equipment emissions.

The project would increase greenhouse gas emissions and, therefore, conflict with current air quality plans that require the reduction of greenhouse gas emissions. Without established regulatory, industry-wide methods to accurately measure whether the project features and measures would reduce emissions enough to mitigate the project impacts, Caltrans must determine that the project impacts for increased greenhouse gas emissions are significant and unavoidable.

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

Significant and Unavoidable—See previous response (a).

3.2.9 Hazards and Hazardous Materials

CEQA Significance Determinations for Hazards and Hazardous Materials

Would the project:

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

Less Than Significant Impact—As discussed in Chapter 2 under Hazardous Waste, applicable Caltrans Standard Special Provisions and/or Non-Standard

Special Provisions addressing proper handling and disposal of aerially deposited lead, asbestos-containing materials, lead-based paint, and treated wood waste would be included in the construction contract to protect construction personnel and the public.

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

No Impact—Project construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

No Impact—No public schools exist within 0.25 mile of the project.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and, as a result, would it create a significant hazard to the public or the environment?

Less Than Significant Impact—As discussed in Chapter 2 under Hazardous Waste and Materials, six parcels are listed on the Cortese list that Caltrans proposes to acquire within its right-of-way. During the preliminary site investigation, there was little to no contamination, and/or the low risk can be minimized with construction contract special provisions.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact—The project is not within an airport land use plan or within 2 miles of a public or private airport that would result in a safety hazard or excessive noise for people residing or working in the project area.

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

No Impact—The project would not temporarily impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan during construction. State Route 99 would remain open, and/or detours would be provided during any required closure.

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

No Impact—The project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. The project is not considered to be in an area identified as vulnerable to wildfires.

3.2.10 Hydrology and Water Quality

CEQA Significance Determinations for Hydrology and Water Quality

Would the project:

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

No Impact—With the implementation of Best Management Practices and Caltrans Standard Specifications, the project would not violate any water quality standards or waste discharge requirements or substantially degrade surface water or groundwater quality.

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

No Impact—The construction or operation of the project would not impede sustainable groundwater management of the basins. The new drainage inlets, drainage ditches, culverts, and detention basins would be installed to capture the additional runoff and promote groundwater recharge or seepage into the underlying acquirer.

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

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

No Impact—Project construction would not result in substantial soil erosion or siltation because the project would include appropriate Best Management Practices to prevent soil erosion and siltation.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site;

Less Than Significant Impact—The project would increase the amount of surface runoff but would capture it by building five new drainage basins.

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

Less Than Significant Impact—The project would build five new detention basins to accommodate the additional runoff.

iv) Impede or redirect flood flows?

Less Than Significant Impact—The project would not impede or redirect flood flows. As discussed in Chapter 2 under Water Quality, the build alternative proposes five new detention basins to increase the storage capacity and collect the additional runoff volume.

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

No Impact—The project is not in a flood hazard, tsunami, or seiche zone.

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

No Impact—The project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan.

3.2.11 Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Would the project:

a) Physically divide an established community?

Less Than Significant Impact—As discussed in Chapter 2 under Community Character and Cohesion, three businesses would need to be relocated to construct the Paige Avenue Interchange. A Relocation Impact Memorandum was completed in November 2020, and the real estate market in the area indicates that there is, and will be, in the foreseeable future, adequate property for sale or lease in the area to relocate the businesses.

The project proposes operational improvements that would enhance community cohesiveness by adding a pedestrian/bicycle shared path on the Paige Avenue Overcrossing.

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

No Impact—The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.2.12 Mineral Resources

CEQA Significance Determinations for Mineral Resources

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact—No known mineral resources are present within or near the City of Tulare.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact—No mineral resources are delineated within or near the City of Tulare (Tulare County Mineral Resources Zones, Figure 8-B, Tulare County General Plan, 2012).

3.2.13 Noise

CEQA Significance Determinations for Noise

Would the project result in:

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

Less Than Significant Impact —As discussed in Chapter 2 under Noise and Vibration, the Build Alternative would move future traffic closer to the identified receptors on State Route 99.

According to the Caltrans Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011, a noise impact occurs when the predicted future noise levels with the project substantially exceed the existing noise level (defined as an increase of 12 decibels or more) or when the future noise level with the project approaches or exceeds the noise abatement criterion (67 decibels in this case). Approaching the noise abatement criterion is defined as coming within 1 decibel of the noise abatement criterion. Therefore, potential abatement measures must be considered.

Based on the studies completed to date and input from the public, Caltrans intends to incorporate noise abatement in the form of three barriers described as Soundwall 1, Soundwall 2, and Soundwall 4. If conditions have substantially changed during final design, noise abatement may not be

constructed. The final decision on noise abatement will be made upon completion of the project design.

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

Less Than Significant Impact—Groundborne vibration may occur during project construction; however, equipment noise control and administrative measures would be in place. The application of these measures would reduce construction-related noise impacts; nevertheless, a temporary increase in noise and vibration may still occur. These measures are detailed in Chapter 2.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact—The project is not within the vicinity of a private airstrip or an airport land use plan and is not within 2 miles of a public airport or public use airport.

3.2.14 Population and Housing

CEQA Significance Determinations for Population and Housing

Would the project:

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

No Impact—The project would not induce substantial unplanned population growth in the area. Because project work would improve the existing highway and the Paige Avenue Interchange, the project would not involve the extension of new roads or infrastructure. Additionally, the project would not propose new homes or businesses in the area. The interchange improvements could indirectly lead to growth in the area after the improvements are made but would not increase population growth substantially.

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

No Impact—The project would not displace substantial numbers of existing people or housing.

3.2.15 Public Services

CEQA Significance Determinations for Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection? Police protection?

Less Than Significant Impact—The project would have a temporary impact on fire and police protection. Two lanes for the northbound and southbound directions would remain open during the mainline construction work. One lane would be closed periodically during nighttime hours during different stages of construction work. Temporary freeway closure would be required for the construction of the Paige Avenue Bridge. Alternate ramps would be closed for two to four weeks for ramp construction work. Construction of the Paige Avenue Interchange and the roundabout would require the closure of the existing Paige Avenue between Blackstone Street and Laspina Street.

Detours would be provided during road closures. Caltrans will be in coordination with emergency services before the start of construction and during construction.

Schools?

No Impact—The project would not result in an impact on schools because there are no schools within the project area.

Parks?

No Impact—The Tulare Santa Fe Trail Park would be temporarily affected by project construction. During construction, one side of the trail crossing State Route 99 will remain open to the public. The other side will be sectioned off for the construction of the security wall.

Other public facilities?

No Impact—The project would not result in an impact on public facilities because there are no public facilities within the project area.

3.2.16 Recreation

CEQA Significance Determinations for Recreation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact—The Tulare Santa Fe Trail Park would be temporarily affected by project construction. During construction, one side of the trail crossing State Route 99 will remain open to the public. The other side will be sectioned off for the construction of the security wall. This project is not expected to "use" those facilities, as defined by Section 4(f).

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

No Impact—The project does not propose any recreational facilities or require the construction or expansion of recreation facilities.

3.2.17 Transportation

CEQA Significance Determinations for Transportation

Would the project:

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

No Impact—The project would not conflict with any applicable program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The project would ensure the safe operation of the highway system for motorists, bicyclists, and emergency responders.

b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Significant and Unavoidable—According to CEQA, transportation projects that reduce or have no impact on vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, such as the Tulare Six-Lane and Paige Avenue Interchange Improvement, agencies have the discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. A lead agency has the discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household, or in any other measure.

An Induced vehicle miles Traveled Analysis was completed in September 2021 for the project. The analysis found that annual vehicle miles traveled induced by the project would increase by about 19,759,200 after the deductions for truck vehicle miles traveled, as discussed in Chapter 2, Section 2.1.9 Transportation/Pedestrian and Bicycle Facilities. The increase in vehicle miles traveled would result from the addition of one northbound travel lane and one southbound travel lane and the widening of Paige Avenue between Laspina Street and Blackstone Street for 1,900 feet.

Mitigation Measures

Mitigation measures would be used to decrease the project's permanent effects on vehicle miles traveled, as discussed in Chapter 2, Section 2.1.9 Transportation/Pedestrian and Bicycle Facilities. As discussed in Chapter 1, Section 1.2.2 Need, the Comprehensive Multimodal Corridor Plan would include the prioritization of identifying managed lane and mode shift opportunities in the corridor that would lead to reduced vehicle miles traveled.. Vehicle miles traveled-reducing outcomes through the implementation of managed lanes may be identified in the development of the Comprehensive Multimodal Corridor Plan and included in the Final Environmental Document. Additional other proposed mitigation measures would fully mitigate the annual vehicle miles traveled impacts by 20,767,880.

With the proposed mitigation, the impacts from induced vehicle miles traveled appear to be less than significant. However, there is the possibility of an unforeseen event that would prevent the mitigation from being completed; therefore, Caltrans will proceed with a Statement of Overring Consideration for unmitigated impacts. This section was added since the circulation of the Draft Environmental Document. Vehicle Miles Traveled, without mitigation measure, would be a significant impact under the California Environmental Quality Act but not significant under the National Environmental Policy Act. The National Environmental Policy Act does not make significance determinations on individual resources (transportation) but rather the significance of the action as a whole.

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

No Impact—The project would not increase hazards due to a geometric design feature.

d) Result in inadequate emergency access?

No Impact—The project would not result in inadequate access. During construction, temporary freeway closures would be required for the construction of the Paige Avenue Bridge. Alternate ramps will be closed for two to four weeks for ramp construction work. Construction of the Paige

Avenue Interchange and the roundabout would require the closure of the existing Paige Avenue between Blackstone Street and Laspina Street. Caltrans would coordinate with emergency services before the start of construction and during construction. Detours would be provided during road closures.

3.2.18 Tribal Cultural Resources

CEQA Significance Determinations for Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

No Impact—No resources in the project area are listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources as defined in Public Resources Code Section 5020.1(k).

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

No Impact—There are no tribal cultural resources in the project area that are significant to a California Native American tribe pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

3.2.19 Utilities and Service Systems

CEQA Significance Determinations for Utilities and Service Systems

Would the project:

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

Less Than Significant Impact—The project will require the relocation of existing stormwater drainage, electric power, and telecommunications

facilities. These facilities will be relocated as needed within the project area, which will not cause significant environmental effects.

The utility relocation plans would be prepared during the plans, specifications, and estimates phase. As part of that effort, the design team would work with the utility provider to identify the relocation area that would minimize impacts on various resources. Generally, utilities, with the exception of large electrical towers, would be relocated within the existing right-of-way. These areas are already disturbed, so adverse impacts are not expected, and the implementation of standard engineering practices would ensure that no substantial interruptions of utility service would occur.

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

No Impact—The project will have sufficient water supplies for construction and will not require additional water supplies in future years.

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

No Impact—The project will not generate significant amounts of wastewater or require future capacity for wastewater treatment.

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

No Impact—The project will not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

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

No Impact—The construction contractor will be responsible for controlling/disposing of solid waste in accordance with federal, state, and local statutes and regulations.

3.2.20 Wildfire

CEQA Significance Determinations for Wildfire

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

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

No Impact—The project is not in or near state responsibility areas or lands classified as very high fire hazard severity zones.

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

No Impact—The project would not exacerbate wildfire risks, expose project occupants to pollutant concentrations from a wildfire, or promote the uncontrolled spread of a wildfire. The project is not within a very high fire hazard severity zone.

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

No Impact—The project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may result in temporary or ongoing impacts to the environment. The project is not within a very high fire hazard severity zone.

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

No Impact—The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The project is not within a very high fire hazard severity zone.

3.2.21 Mandatory Findings of Significance

CEQA Significance Determinations for Mandatory Findings of Significance

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

No Impact—The environmental studies conducted for this project found the project would not substantially degrade the quality of the environment. The project would not reduce the habitat of fish or wildlife, cause a fish or wildlife population to drop, threaten to eliminate plant or animal communities, reduce the number or restrict the range of rare or endangered plant or animal species, or eliminate important examples of California history or prehistory.

Biological and cultural studies conducted in 2020 and 2021 using data research and field reviews for species, habitat, and historical resources found no evidence of the presence of special-status species and/or historic resources in the project area. The area is highly disturbed by mostly agricultural development, with no native plant species found. There is potential for vernal pool fairy shrimp and Swainson's hawk to occur in the project area. Caltrans has best management practices to avoid and minimize impacts on existing nests according to regulatory requirements. Preconstruction surveys would be conducted to identify any new arrivals and protect them if they do appear. The Caltrans Historic Property Survey Report (June 2021) determined that no sensitive historic or prehistoric resources would be impacted by the project. No mitigation would be required.

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

Significant and Unavoidable—The project has been evaluated for cumulative impacts as described in Section 2.4, Potential Cumulative Impacts: While the project's increases in air pollutant emissions detailed in Section 2.2.4 would individually not be considered significant under CEQA, given the existing and future cumulative conditions described in the 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report (see Section 2.4), the project's incremental increase in those emissions would be cumulatively considerable and would contribute to already identified significant cumulative effects. Adverse impacts to environmental justice populations in the socioeconomic study area would occur from the following: cumulative impacts to air quality described in the 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report; the project's incremental increase in those emissions would be cumulatively considerable and would contribute to already identified significant cumulative effects.

The 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report (Section 4.3 Air Quality) outlines mitigation and minimization measures that will be incorporated by Tulare County.

- Locate sensitive receptors more than 500 feet of a freeway, 500 feet of urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
- Locate sensitive receptors more than 1,000 feet from a major diesel rail service or railyards. Where an adequate buffer cannot be implemented, implement the following: ▫ Install air filtration (as part of mechanical ventilation systems or stand-alone air cleaners) to indoor reduce pollution exposure for residents and other sensitive populations in buildings that are close to transportation network improvement projects. Use air filtration devices rated MERV-13 or higher.
- Plant trees and/or vegetation suited to trapping roadway air pollution and/or sound walls between sensitive receptors and the pollution source. The vegetation buffer should be thick, with full coverage from the ground to the top of the canopy. Install higher-efficacy public street and exterior lighting.
- Incorporate design measures and infrastructure that promote safe and efficient use of alternative modes of transportation (e.g., neighborhood electric vehicles, bicycles), pedestrian access, and public transportation use. Such measures may include the incorporation of electric vehicle charging stations, bike lanes, bicycle-friendly intersections, and bicycle parking and storage facilities.
- Incorporate design measures that promote ride-sharing programs (e.g., by designating a certain percentage of parking spaces for ride-sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles, and providing a website or message board for coordinating rides).

Greenhouse gas analysis is, by its nature, cumulative. No individual project is of sufficient size to be the sole reason for climate change. Instead, climate change is the result of millions of activities that emit greenhouse gases.

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

Less Than Significant Impact—The project would increase capacity by constructing one additional lane on either side of State Route 99, which would increase vehicle miles traveled. Based on the vehicle miles traveled analysis, the project will induce an additional 19,759,200 vehicle miles traveled per year after the deduction for truck vehicle miles traveled. The improvements proposed for the Tulare Six-Lane and Paige Avenue Interchange Improvement project primarily address the anticipated growth in freight traffic. Trucks account for about 20.2 percent of the Annual Average Daily Traffic within this corridor, compared with the state average of 9 percent of truck traffic. When the average number of trucks per lane per day exceeds 2,000 on a route (the existing condition), congestion is characterized by large, long-haul trucks using all lanes for travel and passing, which creates potential

safety and capacity problems for all users of the freeway. This is particularly noticeable within the four-lane segments of State Route 99 in Tulare County and the City of Tulare.

While the traffic study projections show that traffic will increase in the project area, which correlates with the predicted increase in vehicle miles traveled, this is primarily from predicted increased population growth and the implementation of approved local planned developments and not from project construction. The impacts from the individual project are not cumulatively considerable. No mitigation for cumulative impacts would be required.

3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to greenhouse gas emissions generated from the production and use of fossil fuels.

Human activities generate greenhouse gases consisting primarily of carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF6), and various hydrofluorocarbons (HFCs). Carbon dioxide is the most abundant greenhouse gas; while it is a naturally occurring and necessary component of Earth’s atmosphere, fossil-fuel combustion is the main source of additional, human-generated carbon dioxide that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of greenhouse gas emissions, mostly carbon dioxide.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce greenhouse gas emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, “mitigation” involves actions to reduce greenhouse gas emissions to lessen adverse impacts that are likely to occur. “Adaptation” is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

3.3.1 Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce greenhouse gas emissions from transportation sources.

Federal

To date, no national standards have been established for nationwide mobile-source greenhouse gas reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and greenhouse gas emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 U.S. Code Part 4332) requires federal agencies to assess the environmental effects of their proposed actions before making a decision on the action or project.

The Federal Highway Administration recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. The Federal Highway Administration, therefore, supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (Federal Highway Administration 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability" (Federal Highway Administration, n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

The federal government has taken steps to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 U.S. Code Section 6201) as amended by the Energy Independence and Security Act of 2007 and Corporate Average Fuel Economy Standards. This act established fuel economy standards for on-road motor vehicles sold in the United States. The U.S. Department of Transportation's National Highway Traffic and Safety Administration sets and enforces the Corporate Average Fuel Economy standards based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. The Environmental Protection Agency calculates average fuel economy levels for manufacturers and also sets related greenhouse gas emissions standards under the Clean Air Act. Raising Corporate Average Fuel Economy standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces greenhouse gas emissions (U.S. Department of Transportation 2014).

The U.S. Environmental Protection Agency published a final rulemaking on December 30, 2021, that raised federal greenhouse gas emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. This rulemaking revised lower emissions standards that had been previously established for model years 2021 through 2026 in the Safer Affordable Fuel-Efficient Vehicles Rule Part Two in June 2020. The updated standards will result in avoiding more than 3 billion tons of greenhouse gas emissions through 2050 (U.S. Environmental Protection Agency 2021a).

State

California has been innovative and proactive in addressing greenhouse gas emissions and climate change by passing multiple Senate and Assembly bills and executive orders, including, but not limited to, the following:

Executive Order S-3-05 (June 1, 2005): The goal of this Executive Order is to reduce California's greenhouse gas emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and Senate Bill 32 in 2016.

Assembly Bill 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: Assembly Bill 32 codified the 2020 greenhouse gas emissions reduction goals outlined in Executive Order S-3-05, while further mandating that the California Air Resources Board create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The legislature also intended that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020 (Health and Safety Code Section 38551(b)). The law requires the Air Resources Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas reductions.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low-carbon fuel standard for California. Under this Executive Order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. The Air Resources Board readopted the low-carbon fuel standard regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor's 2030 and 2050 greenhouse gas reduction goals.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the Air Resources Board to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a "Sustainable

Communities Strategy" that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391, Chapter 585, 2009, California Transportation Plan: This bill requires the state's long-range transportation plan to identify strategies to address California's climate change goals under Assembly Bill 32.

Executive Order B-16-12 (March 2012) orders state entities under the direction of the governor, including the Air Resources Board, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015) establishes an interim statewide greenhouse gas emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions in greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reduction targets. It also directs the Air Resources Board to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent. Greenhouse gases differ in how much heat each trap in the atmosphere (global warming potential). Carbon dioxide is the most important greenhouse gas, so amounts of other gases are expressed relative to carbon dioxide using a metric called "carbon dioxide equivalent." The global warming potential of carbon dioxide is assigned a value of 1, and the global warming potential of other gases is assessed as multiples of carbon dioxide. Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, Safeguarding California, every 3 years and to ensure that its provisions are fully implemented.

Senate Bill 32, Chapter 249, 2016, codifies the greenhouse gas reduction targets established in Executive Order B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

Senate Bill 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands … is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

Assembly Bill 134, Chapter 254, 2017, allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs,

demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

Senate Bill 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

Senate Bill 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the Air Resources Board to prepare a report that assesses progress made by each metropolitan planning organization in meeting its established regional greenhouse gas emission reduction targets.

Executive Order B-55-18 (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets for reducing greenhouse gas emissions.

Executive Order N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce greenhouse gas emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This executive order also directs the Air Resources Board to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

3.3.2 Environmental Setting

State Route 99, currently a four-lane freeway within the project limits, traverses a small city that is surrounded by the vast rural agricultural area of the San Joaquin Valley. The project is entirely within the city limits of the City of Tulare.

At the south end of the project, the landscape near the freeway is rural, with some commercial development but no residences except for one mobile home community located on the west side of the freeway. Mefford Field Airport is across from it on the east side of the freeway. Just to the north of the airport are the World Ag Expo grounds of the International Agri-Center complex. Approximately in the middle of the project is the Paige Avenue Interchange area, which consists of truck stops, associated businesses, and one mobile home park. Recently constructed commercial businesses extend northward to Bardsley Avenue along the west side of the freeway. The zoning in this area is industrial and commercial, except for the mobile home parks.

Going northwards, the remainder of the city next to the freeway is built up. From Paige Avenue north along the east side of the freeway are residential neighborhoods and commercial centers that continue past the northern end of the project, which is by the Tulare Outlets. Along the west side of the freeway from Bardsley Avenue northward are residential neighborhoods, commercial centers, and a few local government facilities extending up to Cartmill Avenue, about 1 mile north of Prosperity Avenue.

The 2022 Regional Transportation Plan/Sustainable Communities Strategy by the Tulare County Association of Governments guides transportation development in the area. This document, along with the Climate Action Plans incorporated in the County of Tulare and the City of Tulare General Plans, addresses greenhouse gases in the project area.

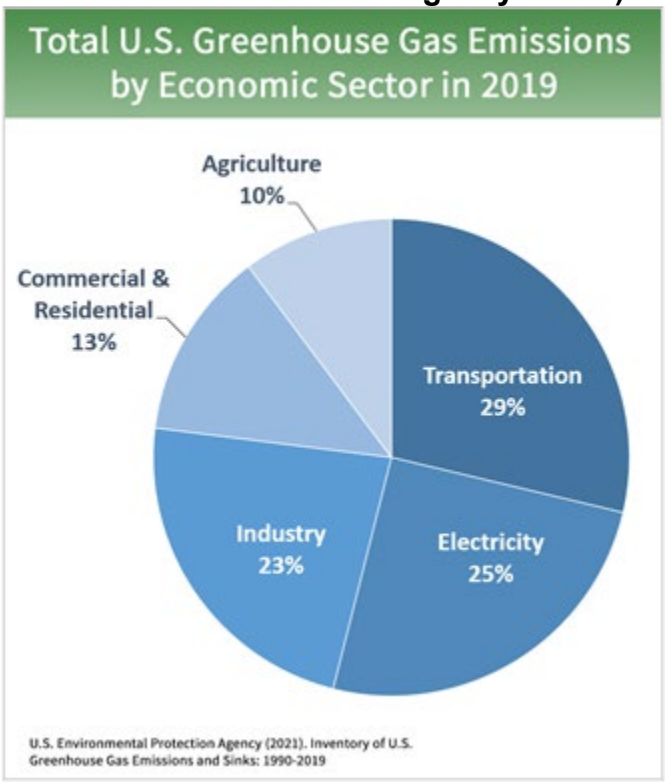
Greenhouse Inventories

A greenhouse gas emissions inventory estimates the amount of greenhouse gases discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual greenhouse gas emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. The U.S. Environmental Protection Agency is responsible for documenting greenhouse gas emissions nationwide, and the Air Resources Board does so for the state, as required by Health and Safety Code Section 39607.4. Cities and other local jurisdictions may also conduct local greenhouse gas inventories to inform their greenhouse gas reduction or climate action plans.

National Greenhouse Gas Inventory

The annual greenhouse gas inventory submitted by the U.S. Environmental Protection Agency to the United Nations provides a comprehensive accounting of all human-produced sources of greenhouse gases in the United States. The 1990-2019 inventory found that overall greenhouse gas emissions were 6,558 million metric tons in 2019, down 1.7 percent from 2018 but up 1.8percent from 1990 levels. Of these, 80 percent were carbon dioxide, 10 percent were methane, and 7 percent were nitrous oxide; the balance consisted of fluorinated gases. Carbon dioxide emissions in 2019 were 2.2 percent less than in 2018 but 2.8 percent more than in 1990. As shown in Figure 3.1, the transportation sector accounted for 29 percent of U.S. greenhouse gas emissions in 2019 (U.S. Environmental Protection Agency, 2021b, 2021c).

Figure 3-1 U.S. 2019 Greenhouse Gas Emissions (Source: U.S. Environmental Protection Agency 2021d)



State Greenhouse Gas Inventory

The Air Resources Board collects greenhouse emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its greenhouse gas reduction goals. The 2021 edition of the greenhouse emissions inventory reported emissions trends from 2000 to 2019. It found total California emissions were 418.2 metric tons of carbon dioxide equivalent in 2019, a reduction of 7.2 metric tons of carbon dioxide equivalent since 2018 and almost 13 metric tons of carbon dioxide equivalent below the statewide 2020 limit of 431 metric tons of carbon dioxide equivalent. The transportation sector (including intrastate aviation and off-road sources) was responsible for about 40 percent of direct greenhouse gas emissions, a 3.5 metric tons of carbon dioxide equivalent decrease from 2018 (Figure 3-2). Overall, statewide greenhouse gas emissions declined from 2000 to 2019 despite growth in population and state economic output (Figure 3-3) (Air Resources Board 2021a).

Figure 3-2 California 2019 Greenhouse Gas Emissions by Economic Sector (Source: Air Resources Board 2021a)

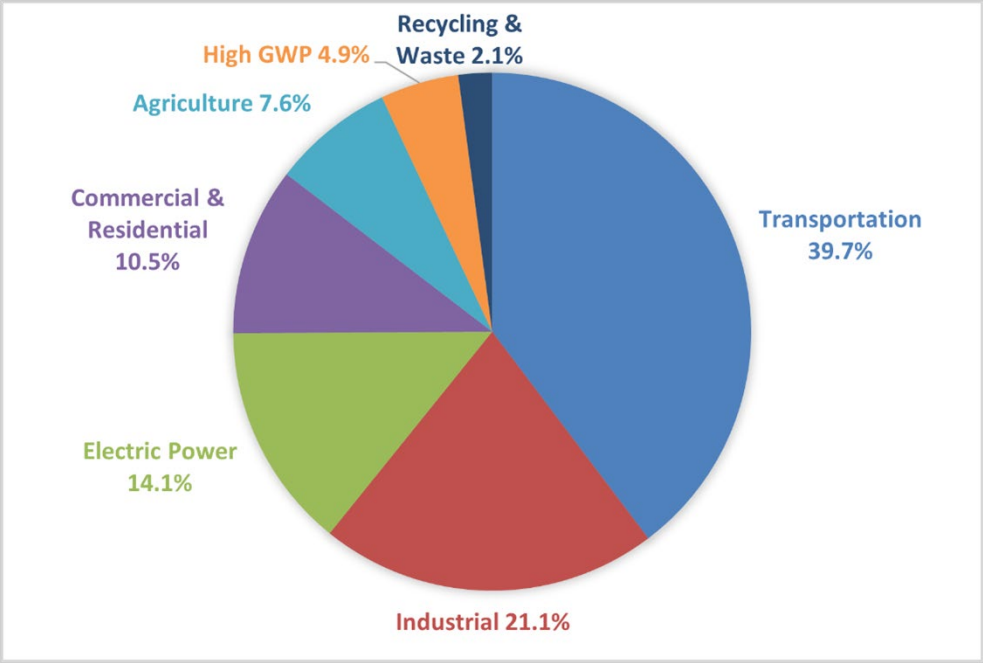
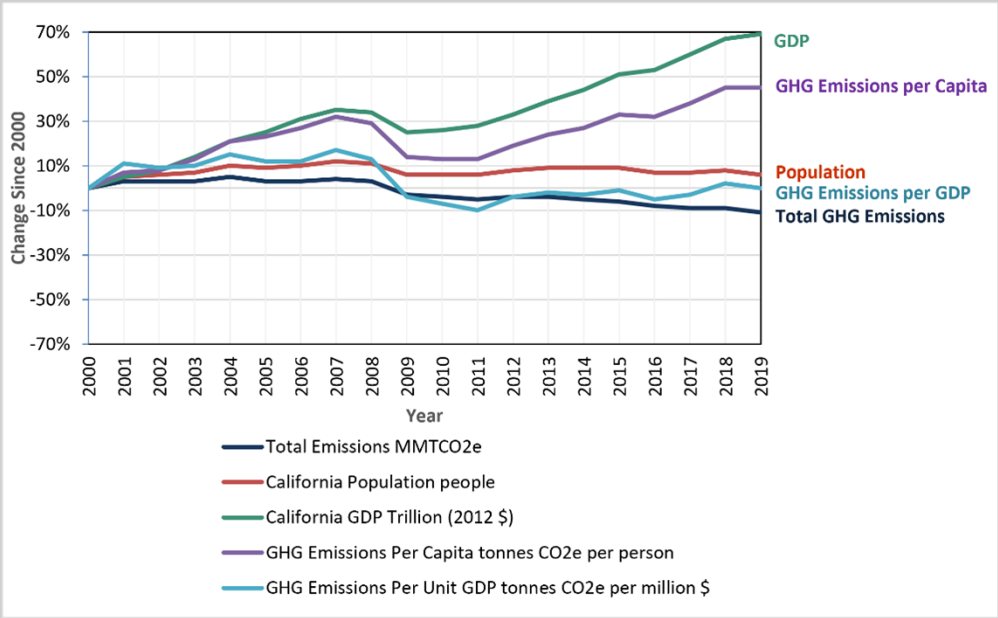


Figure 3-3 Change in California GDP, Population, and GHG Emissions since 2000 (Source: Air Resources Board 2021a)



Assembly Bill 32 required the Air Resources Board to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing greenhouse gas emissions to 1990 levels by 2020 and to update it every 5 years. The Air Resources Board adopted the first scoping plan in 2008. The second updated plan, California's 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in

Executive Order B-30-15 and Senate Bill 32. The Assembly Bill 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce greenhouse gas emissions.

Regional Plans

The Air Resources Board sets regional targets for California's 18 Metropolitan Planning Organizations to use in their Regional Transportation Plan/Sustainable Communities Strategy to plan future projects that will cumulatively achieve greenhouse gas reduction goals. Targets are set at a percent reduction of passenger vehicle greenhouse gas emissions per person from 2005 levels. The project is included in the 2018 Regional Transportation Plan/Sustainable Communities Strategy issued by the Tulare County Association of Governments. The regional reduction target for Tulare County is 13 percent for the year 2020 and 16 percent for the year 2035 (Air Resources Board 2019c).

The following table, titled Table 3.1 Regional and Local Greenhouse Gas Reduction Plans, lists policies, strategies, and goals—included in the Regional Transportation Plan and in the climate action plans of Tulare County and the City of Tulare—that are pertinent to greenhouse gas reduction related to transportation.

Table 3.1 Regional and Local Greenhouse Gas Reduction Plans

Plan	Greenhouse Gas Reduction Policies or Strategies
Tulare County Association of Governments' 2018 Regional Transportation Plan/Sustainable Communities Strategy	Reduce vehicle miles traveled. Reduce criteria for air emissions. Reduce commute times. Improve the reliability of the road system. Increase the use of active transportation modes. Expand the use of transit.

Plan	Greenhouse Gas Reduction Policies or Strategies
Tulare County Climate Action Plan 2018 Update (lists measures in Tulare County General Plan 2030 [Adopted 2012])	Greenhouse gas emissions reduction plan. Alternative fuel vehicle infrastructure. Purchase of low-emission/alternative fuel vehicles. Transportation demand management programs. Ridesharing. Provide a wide variety of public transportation options that reduce vehicle trips and miles traveled, such as transit and rail service. Nodal land use patterns that support public transit. Consider nonmotorized modes in planning and development. Provisions for bicycle use. Bicycle/pedestrian trail system.
City of Tulare 2011 Climate Action Plan (Included in City of Tulare General Plan 2035 [Adopted 2014])	Shift single-occupancy trips to alternative modes: Increase transportation-related bicycle trips to reduce vehicle miles traveled. Improve mobility by implementing a citywide Complete Streets ordinance and program. Expand public transit routes and provide light rail transit options. Reduce work-related vehicle miles traveled with the support of transportation demand management programs. Support regional transportation management programs to shift single-occupancy vehicle trips to other modes. Reduce emissions from vehicles: Reduce emissions from on-road vehicle sources. Reduce emissions from on-road commercial and industrial transportation sources through reduced vehicle idling and efficient vehicle flow.

3.3.3 Project Analysis

Greenhouse gas emissions from transportation projects can be divided into those produced during the operation of the state highway system and those

produced during construction. The primary greenhouse gases produced by the transportation sector are carbon dioxide, methane, nitrous oxide, and hydrofluorocarbon. Carbon dioxide emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of methane and nitrous oxide are emitted during fuel combustion. In addition, a small amount of hydrofluorocarbon emissions is included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code, Section 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation versus San Diego Association of Governments (2017), 3 Cal. 5th 497, 512.) In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

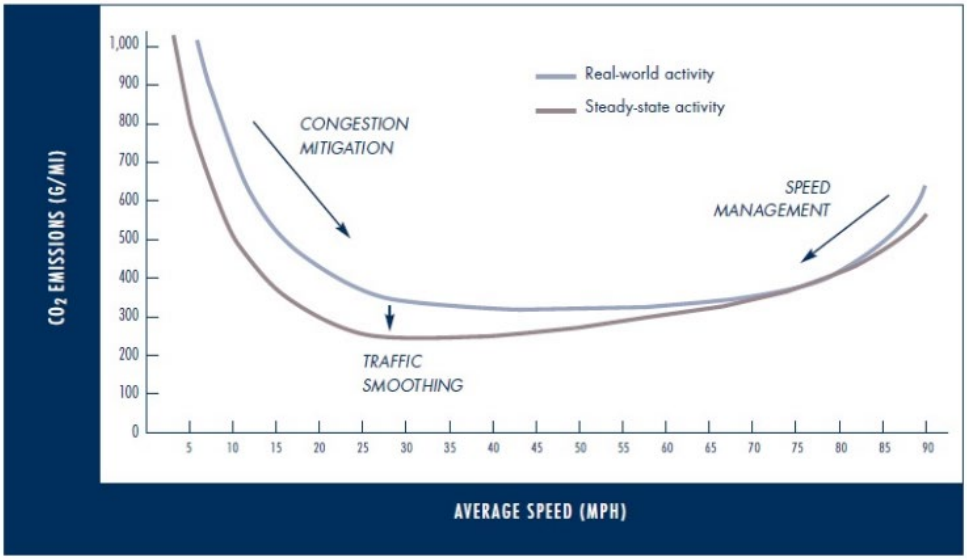
Operational Emissions

Nearly 29 percent of U.S. greenhouse gas emissions in 2019 came from the transportation sector. Carbon dioxide emissions from fossil fuel combustion accounted for 74.1 percent of all greenhouse gas emissions, and transportation activities accounted for about 37.5 percent of carbon dioxide emissions from fossil fuel combustion in 2019. Most transportation-related greenhouse gas emissions are from passenger cars (40.5 percent), freight trucks (23.6 percent), and light-duty trucks (17.2 percent). The remainder of greenhouse gas emissions comes from other modes of transportation, including aircraft, ships, boats, and trains, as well as pipelines and lubricants (U.S. Environmental Protection Agency, 2021b, 2021c). Because carbon dioxide emissions represent the greatest percentage of greenhouse gas emissions, they have been selected as a proxy within the following analysis for potential climate change impacts.

The highest levels of carbon dioxide from mobile sources such as automobiles occur at stop-and-go speeds (0 to 25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0 to 25 miles per hour (see Figure 3-3). To the extent that a project enhances operational efficiency and improves travel times in high-congestion travel corridors, greenhouse gas emissions, particularly carbon dioxide, may be reduced, provided that improved travel times do not induce additional vehicle miles traveled.

Four primary strategies can reduce greenhouse gas emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity, (3) transitioning to lower greenhouse gas-emitting fuels, and (4) improving vehicle technologies and efficiency. To be most effective, all four strategies should be pursued concurrently.

Figure 3-4 Possible Use of Traffic Operation Strategies in Reducing On-road CO_2 Emissions (*Source:* Barth and Boriboonsomsin 2010)



The project is in the 2018 Regional Transportation Plan/Sustainable Communities Strategy issued by the Tulare County Association of Governments. The project meets all of the Tulare County Association of Governments' performance measures for listing a capacity-increasing project in the Regional Transportation Plan. The project is consistent with the Regional Transportation Plan/Sustainable Communities Strategy goals of improving goods movement along the regionally significant transportation corridor of State Route 99. The project location is identified as a congested corridor needing operational improvements to the existing freeway to improve the Level of Service and air quality.

The Tulare Six-Lane and Paige Avenue Interchange Improvement project would reduce congestion by adding one lane in each direction of the State Route 99 freeway in the City of Tulare. The project would include ramp metering and Intelligent Transportation System elements of traffic monitoring systems. Furthermore, the Paige Avenue Interchange would be reconfigured with new ramps, a wider overcrossing with an additional lane in each direction, and four multilane roundabouts. The design for this interchange area includes 10-foot-wide shared-use paths (a Class 2 bikeway), which would encourage active transportation use.

The 2016 Active Transportation Plan, part of the 2018 Regional Transportation Plan, shows that a Class 1 bike path is planned along Paige Avenue within the project footprint. The Regional Transportation Plan/Sustainable Communities Strategy goals include protecting and enhancing specific major transportation corridors, including the State Route 99 (and Union Pacific rail line) corridor through Tulare County. The plan lists the widening of State Route 99 through Tulare as a planned strategy for interregional connectivity.

During the planning stages of this project (which occurred before 2010), no transportation modes other than vehicular were considered as alternatives.

Quantitative Analysis

The Air Resources Board developed the EMission FACtor model to facilitate the preparation of statewide and regional mobile source emissions inventories. The model generates emissions rates that can be multiplied by vehicle activity data from all motor vehicles, including passenger cars and heavy-duty trucks, operating on highways, freeways, and local roads in California. EMission FACtor has a rigorous scientific foundation, has been approved by the U.S. Environmental Protection Agency, and has been vetted through multiple stakeholder reviews. Caltrans developed the CT-EMission FACtor to apply project-specific factors to the Air Resources Board's model.

EMission FACtor's greenhouse gas emission rates are based on tailpipe emissions test data, and the model does not account for factors such as the rate of acceleration and vehicle aerodynamics, which influence the amount of emissions generated by a vehicle. Greenhouse gas emissions quantified using CT-EMission FACtor are, therefore, estimates and may not reflect actual on-road emissions. The model does not, however, account for induced travel. Modeling greenhouse gas estimates with EMission FACtors or CT-EMission FACtors, nevertheless, remains the most precise means of estimating future greenhouse gas emissions. While CT-EMission FACtors are currently the best available tool for calculating greenhouse gas emissions from mobile sources, it is important to note that the greenhouse gas results are only useful for a comparison of alternatives.

The Safer Affordable Fuel-Efficient Vehicles Rule Part One, effective November 2019, revoked California's authority to set its own greenhouse gas emissions standards. Part Two, effective June 2020, established new Corporate Average Fuel Economy and tailpipe carbon dioxide emissions standards for passenger cars and light trucks covering model years 2021 through 2026 (National Highway Traffic Safety Administration 2020). Therefore, the Air Resources Board provided greenhouse gas emissions adjustment factors for EMission FACtor 2017 based on the Safer Affordable Fuel-Efficient Rule. Since then, EMission FACtor 2021 has been released, which accounts for the Safer Affordable Fuel-Efficient Rule and does not require adjustment factors. Federal Corporate Average Fuel Economy and

greenhouse gas emissions standards are evolving, and models will be updated to account for final regulatory changes.

Data for the fourth column in Table 3.2 represent off-model adjustment factors for gasoline light-duty vehicle carbon dioxide emissions in EMission FACtor 2014 and EMission FACtor 2017.

The annual vehicle miles traveled values in the fifth column in Table 3.2 were derived from daily vehicle miles traveled values multiplied by 347. Table 3.2 takes into account both Option 1 and Option 2 for the Paige Avenue Interchange.

Table 3.2 Modeled Annual Carbon Dioxide Emissions and Vehicle Miles Traveled

Alternative	Carbon Dioxide Emissions (Metric Tons/Year)	Safer Affordable Fuel-Efficient Factor	Safer Affordable Fuel-Efficient Carbon Dioxide Emissions (Metric Tons/Year)	Vehicle Miles Traveled (Annual)
2018 Existing Condition/Baseline Year	140,298	Earliest year is 2021	Not Applicable	117,676,000
2029 No-Build Alternative	141,728	1.0629	150,642,691	161,330,000
2029 Build Alternative Year Open to Traffic	183,371	1.0629	194,905,036	239,148,000
2049 No-Build Alternative	158,335	1.1268	178,411,878	162,848,400
2049 Build Alternative 20-Year Design Year	201,371	1.1268	226,904,843	239,148,000

Source: Air Quality Report CT EMission FACtor (2017) model.

The amount of carbon dioxide emissions generated during the baseline year 2018 was 140,298 tons per year. Because the earliest year for which Safer Affordable Fuel-Efficient Factors were developed was 2021, this factor could not be incorporated into the modeling for the existing 2018 conditions (baseline).

In the year 2029, if the project is not built, the carbon dioxide emissions are modeled to be 141,728 metric tons per year, which is 1,430 metric tons more carbon dioxide emissions than for the baseline year. With the Safer Affordable Fuel-Efficient factor applied, the 2029 No-Build Alternative carbon dioxide emissions would be 150,643 metric tons per year, 10,345 tons more than for the baseline year.

Assuming the project is open to traffic in 2029 Build, the EMission FACtor 2017 model calculated the carbon dioxide emissions to be 183,371 metric tons per year, which is an increase of 43,073 metric tons of carbon dioxide emissions over the baseline year. With the Safer Affordable Fuel-Efficient factor applied, carbon dioxide emissions for the opening year would be 194,905 metric tons per year, which is 54,607 more metric tons of emissions than for the Baseline Year.

Carbon dioxide emissions modeled for the No-Build Alternative for the design year 2049 are 158,335 tons per year, which is 18,037 more tons per year than the baseline year. With the Safer Affordable Fuel-Efficient factor incorporated into the modeling, these emissions would be 178,411.878 metric tons per year, which is 38,114 more metric tons of carbon dioxide than for the baseline year of 2018.

For the Build Alternative in the design year 2049, carbon dioxide emissions would be 201,329 tons per year, which is 61,031 more metric tons of carbon dioxide emissions than for the baseline year. Applying the Safer Affordable Fuel-Efficient factor, carbon dioxide emissions were modeled to be 226,904.843 metric tons, which is about 86,607 more metric tons of carbon dioxide emissions than for the baseline year 2018.

Table 3.2 also shows an increase in vehicle miles traveled over time under the baseline conditions; annual vehicle miles traveled within the project limits were 117,676,000. In the year 2029, this number is projected to increase to 161,330,000 if the project is not built. If the project is constructed and opens to traffic in 2029, as planned, the vehicle miles traveled would increase to 239,148,000 that year. In the year 2049, if the freeway within the project limits is not widened, the annual vehicle miles traveled would be 162,848,400. Twenty years after project construction, vehicle miles traveled for the design year would be 239,148,000.

While CT-EMission FACtor has a rigorous scientific foundation and has been vetted through multiple stakeholder reviews, its greenhouse gas emission

rates are based on tailpipe emission test data. Moreover, the model does not account for factors such as the rate of acceleration and vehicle aerodynamics, which influence the amount of emissions generated by a vehicle. Greenhouse gas emissions quantified using the CT-EMission FACtor are, therefore, estimates and may not reflect actual physical emissions. Though CT-EMission FACtor is currently the best available tool for calculating greenhouse gas emissions from mobile sources, it is important to note that the greenhouse gas results are useful only for comparison among alternatives.

Construction Emissions

Construction greenhouse gas emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

The use of long-life pavement, improved traffic management plans, and changes in materials can also help offset greenhouse gas emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

All construction contracts include Caltrans Standard Specifications related to air quality. Sections 7-1.02A and 7-1.02C, Emissions Reduction, require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all Air Resources Board emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce greenhouse gas emissions.

The following measures would be incorporated into the project and would help to reduce construction-related emissions:

- Truck and equipment idling is limited to five minutes for delivery and dump trucks and other diesel-powered equipment (with some exceptions).
- Schedule truck trips outside of peak morning and evening commute hours.
- Encourage improved fuel efficiency from construction equipment by maintaining equipment in proper working condition, using the right size equipment for the job, and using equipment with new technologies.
- Use recycled water for construction.

CEQA Conclusion

The analysis found carbon dioxide emissions would increase regardless of whether the Safer Affordable Fuel-Efficient Factor was applied. However, the difference between the Safer Affordable Fuel-Efficient Factor carbon dioxide emissions and the baseline emissions is much larger than those without the Safer Affordable Fuel-Efficient Factor multiplier.

The comparison of the carbon dioxide emissions for both the 2029 and 2049 No-Build/Build emissions is not excessive. However, the imposition of the Safer Affordable Fuel-Efficient Factor is progressive, increasing each year, as shown in Table 3.2. The application of the Safer Affordable Fuel-Efficient Factor multiplier shows an increase in carbon dioxide emissions throughout the project.

Furthermore, the Safer Affordable Fuel-Efficient Factor multiplier does not apply to projects that predate the year 2021, so there is a larger carbon dioxide emissions difference when comparing the 2018 Existing Year to the 2029 Open to Traffic Year and the 2049 Design Year.

The increase in emissions would mainly come from population growth in the county, along with the implementation of planned development in the area. Improvement of the existing Paige Avenue Interchange would provide more direct access and redistribute future traffic that would otherwise use circuitous routes on local roads and nearby interchanges traveling to and from the project area.

The emerging requirements to model and measure mitigation to reduce greenhouse gas emissions are narrowly defined and limited. Requirements limit projects to a zero increase in existing emissions to meet California’s emissions reduction goals. The modeling results focus only on the state highway and don’t consider the local street system. There are no regulatory or industry-wide established methods to accurately measure whether the project features and measures would reduce emissions enough to mitigate the project impacts.

By all regulatory standards, as reported in Section 2.2.4 Air Quality of this document, this project complies with all regulatory requirements for regional air-quality conformity, carbon monoxide, ozone, Particulate Matter 2.5 and 10, mobile source air toxics, emissions during construction, and reporting carbon dioxide.

Caltrans and regional partner agencies have determined the project is needed. The improvements to local roads and the construction of complete interchanges would reduce stop-and-go traffic and provide more direct access to and from the highway. It would reduce traffic driving on direct routes on local roads to destinations. As air studies have documented, the highest vehicle emissions occur in stop-and-go traffic, and free-flowing traffic

produces the least amount of vehicle emissions, regardless of the criteria pollutant.

The project does include features and measures that reduce greenhouse gas emissions, such as Complete Streets elements with landscaping to promote bicycle and pedestrian use and encourage active transportation overuse of vehicles. Installing Intelligent Transportation System elements is designed to improve traffic efficiency and reduce congestion on roadways, thereby lowering vehicle emissions. Also, roundabouts proposed on Blackstone Street and Laspina Street along Paige Avenue would contribute to smoother, more efficient traffic circulation, resulting in less stop-and-go travel and lower vehicle emissions. Caltrans applies a large list of standard measures to most, if not all, projects during construction that require practices and restrict equipment that reduces dust and equipment emissions.

The project would increase greenhouse gas emissions and, therefore, conflict with current air quality plans that require the reduction of greenhouse gas emissions. Without established regulatory, industry-wide methods to accurately measure whether the project features and measures would reduce emissions enough to mitigate the project impacts, Caltrans must determine that the project impacts for increased greenhouse gas emissions are significant and unavoidable.

3.3.4 Greenhouse Gas Reduction Strategies

Statewide Efforts

In response to Assembly Bill 32, California is implementing measures to achieve emission reductions of greenhouse gases that cause climate change. Climate change programs in California are effectively reducing greenhouse gas emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, low-carbon, and cleaner future while maintaining a robust economy (Air Resources Board 2022).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 greenhouse gas emissions targets. The Governor's Office of Planning and Research identified five sustainability pillars in a 2015 report: (1) Increasing the share of renewable energy in the state's energy mix to at least 50 percent by 2030; (2) reducing petroleum use by up to 50 percent by 2030; (3) increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) reducing emissions of short-lived climate pollutants; and (5) stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (Office of Planning and Research 2015).

The transportation sector is integral to the people and economy of California. To achieve greenhouse gas emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. Greenhouse gas emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and a reduction in vehicle miles traveled. Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency, 2015).

In addition, Senate Bill 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision-making. Trees and vegetation in forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate the natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and, in particular, low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released *the Natural and Working Lands Climate Smart Strategy Draft* for public comment in October 2021.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in Assembly Bill 32. Executive Order B-30-15, issued in April 2015, and Senate Bill 32 (2016) set an interim target to cut greenhouse gas emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets:

Climate Action Plan for Transportation Investments

The California Action Plan for Transportation Infrastructure builds on executive orders signed by Governor Newsom in 2019 and 2020, targeted at reducing greenhouse gas emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's climate goals. Under the *California Action Plan for Transportation Infrastructure,* where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

California Transportation Plan

The California Transportation Plan is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The California Transportation Plan 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide greenhouse gas emissions reduction targets and increase resilience to climate change. It demonstrates how greenhouse gas emissions from the transportation sector can be reduced through advancements in clean fuel technologies, continued shifts toward active travel, transit, and shared mobility, more efficient land use and development practices, and continued shifts to telework (Caltrans 2021a).

Caltrans Strategic Plan

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a vehicle miles traveled monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30 Climate Change (June 22, 2012) established a department policy to ensure coordinated efforts to incorporate climate change into departmental decisions and activities. The *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce greenhouse gas emissions and identifies additional opportunities for further reducing greenhouse gas emissions from department-controlled emission sources in support of departmental and state goals.

Project-Level Greenhouse Gas Reduction Strategies

The following measures will also be implemented in the project to reduce greenhouse gas emissions and potential climate change impacts from the project.

- Truck and equipment idling is limited to five minutes for delivery and dump trucks and other diesel-powered equipment (with some exceptions).
- Schedule truck trips outside of peak morning and evening commute hours.

- Encourage improved fuel efficiency from construction equipment by maintaining equipment in proper working condition, using the right size equipment for the job, and using equipment with new technologies.
- Use recycled water for construction.

[This section was added since the circulation of the draft environmental document.] In addition to the onsite improvements on Paige Avenue, between Blackstone Avenue and Laspina Street, Caltrans is coordinating with project stakeholders to implement additional sidewalks to reduce the gaps between existing sidewalks and connect adjacent residential developments. They are located:

- East of the Paige Avenue and Laspina St intersection, sidewalks will extend on both sides of Paige Avenue to connect to existing sidewalks on the east for approximately 900 feet.
- North of Paige Avenue and Laspina Street intersection, a sidewalk will connect to the existing sidewalk on the west side of Laspina Street. On the east side of Laspina street, an 800 feet long sidewalk will connect to the existing sidewalk. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.
- South of the Paige Avenue and Laspina Street intersection, sidewalk will be placed on both sides of Laspina Street for approximately 800 feet.
- On the north and south sides of the Blackstone Street and Paige Avenue intersection, sidewalks will connect to existing sidewalks.
- At the westside of Blackstone Street and Paige Avenue Intersection, the existing sidewalk on the southside of Paige Avenue to K Street will extend for approximately 2,500 feet. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.

3.3.5 Adaptation

Reducing greenhouse gas emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; and storm surges combined with a rising sea level can inundate highways. Wildfires can directly

burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and Federal Highway Administration NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S. Code Chapter 56A Section 2921 et seq.). The Fourth National Climate Assessment, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (U.S. Global Change Research Program 2018).

The U.S. Department of Transportation Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of the Department of Transportation to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services, and operations remain effective in current and future climate conditions" (U.S. Department of Transportation 2011).

Federal Highway Administration Order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, December 15, 2014) established Federal Highway Administration policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The Federal Highway Administration has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (Federal Highway Administration 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation

system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) is the state's effort to "translate the state of climate science into useful information for action." It provides information that will help decision-makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The state's approach recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce greenhouse gas emissions by 2021 or sooner, the state is projected to experience a 2.7 to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures, with impacts on agriculture, energy demand, natural systems, and public health; a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production; a 77 percent increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67 percent of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surges as early as 2040; San Francisco International Airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

In 2008, then-governor Arnold Schwarzenegger recognized the need when he issued Executive Order S-13-08, focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and updated in 2013 and 2017. The 2017 projections of sea level rise and a new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018. This executive order also gave rise to the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan), which addressed the full range of climate change impacts and recommended adaptation strategies. The Safeguarding California Plan was updated in 2018 and again in 2021 as the *California Climate Adaptation Strategy*, incorporating key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio,* and the California Transportation Plan (described above). Priorities in the 2021 California Climate Adaptation Strategy include acting in

partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, using nature-based climate solutions, using the best available climate science, and partnering and collaborating to best leverage resources (California Natural Resources Agency 2021).

Executive Order B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This Executive Order recognizes that the effects of climate change, in addition to sea level rise, also threaten California's infrastructure. At the direction of Executive Order B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017 to encourage a uniform and systematic approach.

Assembly Bill 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group to help actors throughout the state address the findings of California's Fourth Climate Change Assessment. It released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*, in 2018. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts (Climate Change Infrastructure Working Group 2018).

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide the analysis of at-risk assets and the development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Project Adaptation Analysis

Sea Level Rise

The project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts on transportation facilities due to the projected sea-level rise are not expected.

Floodplains Analysis

No portion of the project footprint is within the 100-year floodplain (FEMA flood maps for Tulare, California, https://msc.fema.gov/portal/search?addressquery=tulare%20ca#searchresultsanchor, accessed October 7, 2020, and August 25, 2021).

Wildfire

The project area is located in the San Joaquin Valley, many miles away from areas that are vulnerable to wildfire (California Department of Forestry and Fire Protection Local Responsibility Map for Tulare County [2008 draft], https://osfm.fire.ca.gov/media/6832/fhszl06_1_map54.pdf).

Temperature

The District Climate Vulnerability Assessment does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices.

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Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required to identify potential impacts, avoidance, minimization, and/or mitigation measures, and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, and Project Development Team meetings. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

A Notice of Preparation was distributed electronically through the Governor's Office of Planning and Research and the State Clearinghouse and Planning Unit and posted on the Governor's Office of Planning and Research website on April 21, 2021. A copy of the Notice of Preparation was sent to 72 potential interested agencies and parties, per CEQA guidelines. The Notice of Preparation was sent to the California Transportation Commission.

See Chapter 6, Distribution List, for a list of the agencies and organizations that were sent copies of the Notice of Preparation. See a copy of the original Notice of Preparation in Appendix D of this document.

Caltrans received a total of six response letters and emails on the project from the following representatives:

- Church of Christ of Tulare
- Leadership Counsel for Justice and Accountability
- Native American Heritage Commission, Santa Rosa Rancheria Tachi Yokut Tribe
- California Department of Fish and Wildlife
- San Joaquin Valley Air Pollution Control District

The following text describes some of the agencies and community members Caltrans coordinated with through face-to-face meetings, phone calls, and emails to research and gather information about the project area and to share information about the project.

Tulare County Association of Governments—The Tulare County Association of Governments is responsible for regional transportation planning. The Tulare County Association of Governments is a policy board composed of 17 members representing the eight cities within Tulare County,

five members of the Tulare County Board of Supervisors, three members at large, and one representative of public transit.

The Tulare County Association of Governments plays a major role in building regional consensus among the region's transit systems. State and federal laws and local tax measures have given the Tulare County Association of Governments an important role in financing numerous transportation improvements. The Tulare County Association of Governments coordinates the countywide sales tax measure, Measure R, which was passed in November 2006. The Tulare County Association of Governments also conducts transportation planning, delivers projects, and manages various transportation programs.

The Tulare County Association of Governments has coordinated with Caltrans to plan this project. Representatives participated in the Project Development Team, which is a multidisciplinary team of managers, engineers, and planners established to problem-solve and gather information. The Tulare County Association of Governments has focused mostly on decisions made for the improvements at the Paige Avenue Interchange.

On August 26, 2019, representatives from the Tulare County Association of Governments were part of the discussion on the proposed build alternatives. In the meeting, the Tulare County Association of Governments requested that Caltrans include the Paige Avenue Interchange improvements in the project scope.

[The following section has been added since the circulation of the Recirculated Draft Environmental Document] On October 5, 2023, the Project Development Team held a meeting attended by staff members from Caltrans, the Tulare County Association of Governments, and the City of Tulare to choose the design option for the Paige Avenue Interchange.

On October 5, 2023, staff members from Caltrans, the Tulare County Association of Governments, the City of Tulare, and the Tulare County Resource Management Agency attended a neighborhood meeting hosted by the Leadership Counsel of Justice and Accountability in the Matheny Tract community.

City of Tulare Public Works Department—The public works department is responsible for the design, construction, and maintenance of streets, sidewalks, traffic signals, streetlights, trails, public buildings, and landscaping throughout the city.

Staff from the public works department have coordinated with Caltrans to plan this project. Department staff members participate in the multidisciplinary team to problem-solve and gather information. They are liaisons who work on

behalf of the interests of the city for this project. The city has focused mostly on decisions made for the improvements at the Paige Avenue Interchange.

[The following section has been added since the circulation of the Recirculated Draft Environmental Document] On October 5, 2023, the Project Development Team held a meeting attended by staff members from Caltrans, the Tulare County Association of Governments, and the City of Tulare to choose the design option for the Paige Avenue Interchange.

On October 5, 2023, staff members from Caltrans, the Tulare County Association of Governments, the City of Tulare, and the Tulare County Resource Management Agency attended a neighborhood meeting hosted by the Leadership Counsel of Justice and Accountability in the Matheny Tract community.

Tulare County Regional Transit Agency—The Tulare County Regional Transit Agency provides fixed-route, Americans with Disabilities Act complementary paratransit, and on-demand services in the cities of Dinuba, Exeter, Farmersville, Lindsay, Porterville, Tulare, Woodlake, and the unincorporated areas of Tulare County. The Tulare County Regional Transit Agency is governed by eight boards of directors.

Caltrans coordinated with the Tulare County Regional Transit Agency to discuss potential mitigation for vehicle miles traveled by providing funding through city bus services.

[The following section has been revised since the circulation of the Recirculated Draft Environmental Document/Environmental Assessment, and the public hearing has been added since the Draft Environmental Document.]

Pursuant to the National Environmental Policy Act and California Environmental Quality Act requirements, the Draft Environmental Impact Report/Environmental Assessment for the project was circulated for public review and comment. The Draft Environmental Document was circulated for a 45-day review by agencies and members of the public from April 12, 2023, to May 26, 2023.

The Notice of Availability for the Draft Environmental Document and announcement of the open house were sent to property owners, residents, public agencies, emergency responders, transit agencies, civic and community groups, environmental groups, and other interested parties likely to be interested in the project.

The Notice of Availability for the Draft Environmental Document and the announcement of the open house were prepared in English and Spanish. Public notices include the date, time, and location of the open house. The notice was published in the Visalia Times-Delta on April 12, 2023, in English and Spanish.

The Draft Environmental Document and technical studies were made available for public viewing at the following locations:

- Caltrans District 6 office: 1352 West Olive Avenue, Fresno, California 93728
- Tulare Public Library: 475 North M Street, Tulare, California 93274

The Project Development Team held an open house on Wednesday, April 26, 2023, from 5:30 p.m. to 7:30 p.m. at the Tulare International Agricultural Center (Banquet Hall) for the Tulare Six-Lane and Paige Avenue Interchange Improvement Project.

The open house provided members of the public and other interested parties with an opportunity to learn more about the project and to comment on the Draft Environmental Document/Environmental Assessment for the project. The Draft Environmental Document was available on the project website, along with information about the environmental process, the right-of-way process, vehicle miles traveled mitigation, and the status of the project.

The open house was publicized through the Notice of Availability/Announcement of an Open House sent by first-class U.S. mail, public notices (advertisements) in the Visalia Times-Delta, and on the Caltrans District 6 Facebook, Twitter, and Nextdoor accounts.

The public hearing was held in an informal open house format where the public could wander the room, view the various displays, and ask questions to the project team from engineering, environmental, and right-of-way. A sign-in table was set up at the entrance of the banquet hall. Attendees were greeted by a Caltrans representative who assisted them through the check-in process and explained the open house format. Caltrans staff gave each attendee information sheets stating the project description, purpose, background, cost, funding source, timeline, and a contact name for those interested in obtaining more information. Two visual simulator videos were continuously playing on two projectors, showing design options 1 and 3 for the Paige Avenue Interchange. Project staff members were available from 5:30 p.m. to 7:30 p.m. on the evening of the event to interact with the attendees. A total of 25 individuals attended the open house.

Via comment sheets provided at the open house, attendees could submit written comments about the project at the open house or through email or U.S. mail to Caltrans. Participants could also dictate their comments to the onsite court reporter, if preferred.

The following summarizes the outreach effort carried out by Caltrans during the document circulation period:

District 06: Project EA 06-48950 Open House: On April 26, 2023, Caltrans held an open house for public outreach and to gather input from the local

population regarding the Tulare Six-Lane and Paige Avenue Interchange Improvement project. (Project ID: 0614000040)

The following public outreach methods were used:

- Public notice advertisement in the Visalia Times-Delta in English and Spanish
- Direct mail letters from the District 6 director and environmental staff
- Social media on Facebook, Twitter, and Nextdoor
- Caltrans staff conducted door-to-door outreach from April 17–18, 2023, handing out public notices in English and Spanish to businesses and residents along Paige Avenue between I Street and Blackstone Avenue and to residents living near the proposed soundwall locations. Two Spanish-speaking Caltrans staff members were present to translate information into Spanish.

Translation/Interpretation: The Project Development Team used the Limited English Proficiency Four Factor Analysis in the local area and determined that the translation of presentations, advertising, handout materials, and interpreter services would be necessary for the following open house and related material:

- Public notices (English and Spanish)
- Comment cards were available (in English and Spanish).
- Summary page from the Draft Environmental Document/Environmental Assessment (Spanish)
- A Spanish-language interpreter was on hand during the open house.
- A court reporter was available to assist those with literacy, writing, visual, or language issues (via an interpreter or a linguist from LanguageLine Solutions).
- A LanguageLine Solutions Language Identification Guide was available.

Date and Time: The meeting was held on April 26, 2023, from 5:30 p.m. to 7:30 p.m. at the Tulare International Agri-Center (Banquet Hall) at 4500 South Laspina Street, Tulare, California 93274.

The following Title VI information was used at the meeting:

- The Caltrans Non-Discrimination Policy Statement was made available in both English and Spanish.
- Title VI brochures were made available online and at the open house in English and Spanish.
- Title VI Public Participation Surveys were made available in English and Spanish.

Attendees: A total of 35 attendees, including Caltrans staff, were tallied during the meeting time (5:30 p.m. to 7:30 p.m.).

During the draft circulation period, the public requested the Draft Environmental Impact Report/Environmental Assessment be translated into Spanish and circulated to the public due to the large presence of Spanish-speaking residents in the surrounding project area. Caltrans staff had the Draft Environmental Impact Report/Environmental Assessment translated into Spanish. Based on public comments, Caltrans decided to revise the Draft Environmental Impact Report/Environmental Assessment to provide supplemental and clarifying information regarding the project and its potential environmental effects. The Draft Environmental Impact Report/Environmental Assessment was recirculated in English and Spanish for a 45-day comment period from August 8, 2023, to September 22, 2023.

Due to the scope of revisions and supplemental information, spoken and written comments that were received during the circulation period of April 10, 2023, to May 24, 2023, were not addressed in the final environmental document. The letters and the public notice included this language. Also, letters were sent to individuals who commented on the previous Draft Environmental Document.

The Recirculated Draft Environmental Document and technical studies were made available for public viewing at the following locations:

- Caltrans District 6 office: 1352 West Olive Avenue, Fresno, California 93728
- Tulare Public Library: 475 North M Street, Tulare, California 93274

The public outreach methods were conducted the same during the first circulation period of the Draft Environmental Document but were expanded for the Recirculated Draft Environmental Impact Report/Environmental Assessment as outlined below:

- Public notice advertisement in the Visalia Times-Delta in English and Spanish.
- Direct letters were sent to businesses and residents on Paige Avenue between I Street and Laspina Street, public agencies, emergency responders, transit agencies, civic and community groups, environmental groups, and other interested parties likely to be interested in the project. Caltrans included the Matheny Tract community on the mailing list.
- Project-related materials were posted on Caltrans District 6 social media sites, including Facebook, Twitter, and Nextdoor.
- Project-related materials were sent to parents via Palo Verde Elementary School's student information system (allows to send messages to parents).

- Caltrans staff members conducted door-to-door outreach on August 11, 2023, handing out public notices in English and Spanish to businesses and residents along Paige Avenue between I Street and Blackstone Avenue and to residents living near the proposed soundwall locations. Two Spanish-speaking Caltrans staff members were present to translate information into Spanish.

The public notices were posted in the neighborhood of the Matheny Tract at the following bus stops and pole locations by cross street.

- Addie Avenue and Canal Street
- Beacon Avenue and Canal Street
- Wade Avenue and Canal Street
- Casa Street and Beacon Avenue

The public notices were also posted at nearby businesses near the Matheny Tract:

- C & E Market - 3850 South Pratt Street, Tulare, California 93274
- Love's Travel Stop - 2700 South Blackstone Street, Tulare, California 93274
- Ana’s Place - 1075 East Rankin Road, Tulare, California 93274
- Chevron - 1076 East Rankin Road, Tulare, California 93274
- Mobil - 1120 East Paige Avenue, Tulare, California 93274
- Arco - 1070 East Bardsley Avenue, Tulare, California 93274
- Birrieria Apatzingan - 1066 East Rankin Road, Tulare, California 93274
- Iglesia de Cristo – 326 Beacon Avenue, Tulare, California

Caltrans staff members went from door to door and left public notices at the following mobile home parks and hotels:

- Estates Manufactured Home Community at 900 East Rankin Road, Tulare, California 93274
- Budget Inn - 1301 East Paige Avenue, Tulare, California 93274
- Tulare Inn Mobile Home Park - 1401 East Paige Avenue, Tulare, California 93274
- Sun & Fun RV Park - 1000 East Rankin Road, Tulare, California 93274
- Tulare Mobile Home Park - 320 North Blackstone Street, Tulare, California 93274
- Parkview Mobile Home Estates - 975 North H Street #21, Tulare, California 93274

An additional public meeting was held on Tuesday, August 15, 2023, at Palo Verde Elementary School from 5:30 p.m. to 7:30 p.m. There was a short presentation that was pre-recorded in English and Spanish discussing the project and its potential impacts. Project staff members were available from 5:30 p.m. to 7:30 p.m. on the evening of the event to interact with the attendees.

Via comment sheets provided at the open house, attendees could submit written comments about the project at the open house or through email or U.S. mail to Caltrans. Participants could also dictate their comments to the onsite court reporter, if preferred.

Comments received during the public circulation period, including those received at the public hearing, are provided in Appendix G, which has been added to the environmental document. Responses to all public comments received during the public circulation period are also provided in Appendix G.

Translation/Interpretation: The Project Development Team used the Limited English Proficiency Four Factor Analysis in the local area and determined that the translation of presentations, advertising, handout materials, and interpreter services would be necessary for the following second open house and related material:

- Public notices (English/Spanish)
- Recirculated Draft Environmental Impact Report/Environmental Assessment was available (English and Spanish)
- Poster boards were on display (English and Spanish)
- Comment cards available (English/Spanish)
- Name tags were created to identify Caltrans staff as Spanish speakers.
- A Spanish language interpreter was on hand during the open house.
- A court reporter was available to assist those with literacy, writing, visual, or language issues (via an interpreter or a linguist from LanguageLine Solutions).
- A LanguageLine Solutions Language Identification Guide was available.

The following Title VI information was used at the meeting:

- The Caltrans Non-Discrimination Policy Statement was made available in both English and Spanish.
- Title VI brochures were made available online and at the open house in English and Spanish.
- Title VI Public Participation Surveys were made available in English and Spanish.

Attendees: There were a total of 75 attendees during the meeting time (5:30 p.m. to 7:30 p.m.).

On October 5, 2023, staff members from Caltrans, the Tulare County Association of Governments, the City of Tulare, and the Tulare County Resource Management Agency attended a neighborhood meeting hosted by the Leadership Counsel of Justice and Accountability in the Matheny Tract community.

Chapter 5 List of Preparers

This document was prepared by the following Caltrans District 6 staff:

Allam Alhabaly, Transportation Engineer. B.S., Civil Engineering, California State University, Fresno; 18 years of environmental technical studies, with emphasis on noise studies. Contribution: Noise Study Report.

Rebecca Ashjian, Associate Environmental Planner. B.S., Forest Resource Conservation, Humboldt State University; 4 years of environmental planning experience. Contribution: Environmental generalist and prepared the Environmental Impact Report/Environmental Assessment.

Myles Barker, Editorial Specialist. B.A., Mass Communication and Journalism, California State University, Fresno; 7 years of writing and editing experience. Contribution: Technical Editor.

Jefferson Birrell, Landscape Associate. B.S. Landscape Architecture, University of California, Davis; 18 years of landscape architecture work on environmental restoration, emphasis on riparian/wetland and oak woodland restoration.

Brian Clerico, Transportation Engineer. M.S., Chemistry, California State University, Fresno; 20 years of air quality experience. Contribution: Air Study Report.

Ezekiel Currier, Environmental Planner (Natural Sciences). B.S., Biology (Ecology and Biodiversity), Humboldt State University, Arcata; 7 years of botany and biology experience. Contribution: Natural Environment Study-Minimal Impact.

Christina Gaddis, Associate Environmental Planner, Archaeologist. M.A., Theological Studies, Vanguard University of Southern California, Costa Mesa; B.A., Anthropology, Vanguard University of Southern California; 16 years of both archaeological and cultural resource management experience. Contribution: Historic Property Survey Report and Archaeological Survey Report

Maya Jean Hildebrand-Garcia, Associate Environmental Planner (Air Quality Coordinator). B.S., Geology, Utah State University; 5 years of experience in air quality analysis and 4 years of experience in combined geological/environmental hazards. Contribution: Air Quality.

Rogerio Leong, Engineering Geologist. B.S., Geology, University of Sao Paulo, Brazil; 18 years of environmental site assessment and investigation experience. Authored and co-authored several Remedial

Investigation/Feasibility Study Reports for Superfund contaminated sites. Contributions: Water Quality Compliance Study.

Michelle Maggi, Landscape Associate. B.S. Landscape Architecture, California Polytechnic State University, San Luis Obispo, 24 years of experience in landscape architecture. Contribution: Visual Impact Assessment.

David Meyers, Audio Visual Specialist. B.A., Fine Arts/Music, California State University, Fresno; A.A., Liberal Studies, College of the Sequoias, Visalia; more than 25 years of visual design, public participation, multimedia, and fine arts/music experience. Contribution: Graphics.

Kai Pavel, Engineering Geologist. Professional Geologist. M.A., Geography, Geology, Heinrich Heine University Dusseldorf, Germany; 14 years of experience in hazardous waste/materials, water quality, and environmental technical studies. Contributions: Paleontological Study.

Som Phongsavanh, Associate Environmental Planner. B.S., Biology/Physiology, California State University, Fresno; 18 years of environmental planning experience. Contributions: Assisted in preparation of the Environmental Impact Report/Environmental Assessment.

Lea Spann, Engineering Geologist. B.A., Environmental Studies, University of California, Santa Barbara; over 20 years of hazardous waste/materials experience and 6 years of environmental planning experience. Contributions: Hazardous Waste Study

Kyle Singh, GIS Coordinator. B.A., City Planning, California State University, Fresno; 27 years of experience in Geographic Information Systems. Contribution: Environmental Justice Map.

Jennifer H. Taylor, Environmental Office Chief. Double Bachelor of Arts in Political Studies and Organizational Sciences, Pitzer College; more than 30 years of experience in environmental and land use planning. Contribution: Oversight review of the environmental document.

Juergen Vespermann, Senior Environmental Planner. Civil Engineering, Fachhochschule Muenster, Germany; more than 30 years of experience in transportation planning/environmental planning. Contribution: Environmental Manager.

Chapter 6 Distribution List

Local Government

Rob A., Hunt, City Manager, City of Tulare, 411 East Kern Avenue, Tulare, California 93274

Michael W., Miller, PE, City Engineer, City of Tulare, 411 East Kern Avenue, Tulare, California 93274

Luis, Nevarez, Fire Chief, City of Tulare, 800 South Blackstone Street, Tulare, California 93274

Craig, Miller, Community Services Director, City of Tulare, 830 S. Blackstone Street, Tulare, California 93274

Mario, Anaya, Principal Planner, City of Tulare, 411 East Kern Avenue, Tulare, California 93274

Wes, Hensley, Police Chief, City of Tulare, 260 South M Street, Tulare, California 93274

Richard, Lujan, Airport Operations Manager, City of Tulare, 3981 South K Street, Tulare, California 93274

Trisha, Whitfield, Public Works Director, City of Tulare, 3981 South K Street, Tulare, California 93274

Stephen, Harrell, Councilmember, District 3, City of Tulare, 411 East Kern Avenue, Tulare, California 93274

Dennis A., Mederos, Councilmember District 4, City of Tulare, 411 East Kern Avenue, Tulare, California 93274

Patrick, Isherwood, Councilmember District 5, City of Tulare, 411 East Kern Avenue, Tulare, California 93274

Tony, Rodriguez, Superintendent, Tulare Joint Union High School District, 426 North Blackstone Street, Tulare, California 93274

Brian, Hollingshead, Superintendent, Tulare City School District, 6000 North Cherry Street, Tulare, California 93274

Pete Vander Poel III, Tulare County Supervisor, 2800 West Burrel Avenue, Visalia, California 93291

Charlie, Norman, Fire Chief, Tulare County Fire Department, 835 South Akers Street, Visalia, California 93277

Andrew, Lockman, Manager, Tulare County Office of Emergency Services, 5957 South Mooney Boulevard, Visalia, California 93277

Roland P., Hill, Clerk-Recorder, Tulare County, 221 South Mooney Boulevard, Courthouse Room 105, Visalia, California 93291

Reed, Schenke, Director, Tulare County Resource Management Agency, 5961 South Mooney Boulevard, Visalia, California 93277

Theodore, Smalley, Executive Director, Tulare County Association of Governments, 210 North Church Street, Suite B, Visalia, California 93291

Samir, Sheikh, Executive Director, San Joaquin Valley Air Pollution Control District, 1990 East Gettysburg Avenue, Fresno, California 93726

Tashia, Clemons, Director, Planning and Environment, Federal Highway Administration, 650 Capitol Mall, Suite 4-100, Sacramento, California 95814

U.S. Fish and Wildlife Service, 2800 Cottage Way, Sacramento, California 95825

Ashley, Werner, Attorney, Leadership Counsel for Justice and Accountability, 2210 San Joaquin Street, Fresno, California 93721

Tulare Irrigation District, 6826 Avenue 240, Tulare, California 93274

Prithi Paul, Singh, 1297 East Paige Avenue, Tulare, California 93274

Courtney & Hazel, Roche, 22674 Road 148, Tulare, California 93274

Love's Travel Stop, 2700 South Blackstone Street, Tulare, California 93274

Ridenour Enterprises, Incorporated 3239 West Ashlan Avenue, Fresno, California 93722

Robert West & Richard T. Bender, 283 East Estate Drive, Tulare, California 93274

Scott, Wilbourn, Wilbourn LLC, 1101 Security Court, Tulare, California 93274

Security Court Realty, 1100 Security Court, Tulare, California 93274

Philip M. & Jesslyn C. Santos, 5516 West Judy Avenue, Visalia, California 93277

Phelps & Santos Family LP, 2473 Presidential Drive, Tulare, California 93274

Oleta, Gomes, 1019 North Manor Drive, Tulare, California 93274

Abbona Family LP, 15236 Hawthorn Avenue, Chino Hills, California 91709

Faria Family II LP, P. O. Box 1137, Tipton, California 93272

Surinder Singh and Jasvir K. Kang, 1301 East Paige Avenue, Tulare, California 93274

Flying J Travel Center, 979 East Paige Avenue, Tulare, California 93274

Southern California Edison, 2425 South Blackstone Street, Tulare, California 93274

Tulare Inn Mobile Home Park, 636 Lakemead Way, Emerald Hills, California 94062

Tulare Inn Mobile Home Park, 1401 East Paige Avenue, Tulare, California 93274

John, Duron, Manager, Tulare Mobile Home Park, 320 North Blackstone Street, Tulare, California 93274

Tulare Mobile Home Park LLC, 3511 Del Paso Road, Suite 160, Sacramento, California 95835

JCH Family LP, 5917 West Elowin Drive, Visalia, California 93291

Luis and Maria Almodovar, 14619 Clark Avenue, Bellflower, California 90706

RNK Enterprises LLC, 2006 West Prosperity Avenue, Tulare, California 93274

Carol C. Coelho, 1200 North Margaret Street, Tulare, California 93274

Willard William Wilkins, 139 South Salida Place, Tulare, California 93274

Vincent G., Hovannisian, P.O. Box 3665, Fresno, California 93650

Frank, Arano, 1628 East Burton Avenue, Tulare, California 93274

Dana, Brummer, 1293 East Sequoia Avenue, Tulare, California 93274

Jorge, Molina, 339 South Dayton Street, Tulare, California 93274

Saputo Cheese, 800 East Paige Avenue, Tulare, California 93274

United Truck Service and Wash, 2811 South Blackstone Street, Tulare, California 93274

Seventh-Day Adventist Church, 494 North Blackstone Street, Tulare, California 93274

Tulare Church of Christ, 500 North Blackstone Street, Tulare, California 93274

Jesus Arambula & Damariz Mendoza Leon, 16613 Millwood Way, Bakersfield, California 93314

Darlene, Franco, Chairperson, Wukchumni Tribal Council, P.O Box 6576, Visalia, California 93291

Kenneth, Woodrow, Chairperson, Eshom Valley Band of Indians/Wuksachi Indian Community, 1179 Rockhaven Court, Salinas, California 93906

Julie, Turner, Secretary, Kern Valley Indian Council, P.O Box 1010, Lake Isabella, California 93240

Robert, Gomez Jr., Chairman, Tubatulabal of Kern County, P.O. Box 226, Lake Isabella, California 93240

Neil, Peyron, Chairman, Tule River Indian Tribe, P.O. Box 589, Porterville, California 93258

Octavio, Escobedo III, Chair, Tejon Indian Tribe, P.O. Box 640, Arvin, California 93203

Leo, Sisco, Chairperson, Santa Rosa Indian Community of the Santa Rosa Rancheria, P.O. Box 8, Lemoore, California 93245

Brenda, Lavall, Chairperson, Table Mountain Rancheria, P.O. Box 410, Friant, California 93626

Elected Officials

Devon J., Mathis, The Honorable, California State Assemblyman, 26th District, State Assemblyman, 100 West Willow Plaza, Suite 405, Visalia, California 93291

Dianne, Feinstein, The Honorable, U.S. Senator, Senator, 2500 Tulare Street, Suite 4290, Fresno, California 93721

Alex, Padilla, The Honorable, U.S. Senator, Senator, 2500 Tulare Street, Suite 5290, Fresno, California 93721

Devin, Nunes, The Honorable, U.S. House of Representatives, Congressman, 22nd, 113 North Church Street, Suite 208, Visalia, California 93291

Tribes

Tule River Indian Tribe, Kerri, Vera, Director, P.O. Box 589, Porterville, California 93258

Tule River Indian Tribe, William, Garfield, Chairperson, P.O. Box 589, Porterville, California 93258

Tule River Indian Tribe, Joey, Garfield, Tribal Archaeologist, P.O. Box 589, Porterville, California 93258

Santa Rosa Rancheria-Tachi Yokut Tribe, Shana, Powers, Director, 16998 Kent Ave., Lemoore, California 93245

Santa Rosa Rancheria-Tachi Yokut Tribe, Leo, Sisco, Chairperson, P.O. Box 8, Lemoore, California 93245

Wuksache Indian Tribe/Eshom Valley Band, Kenneth, Woodrow, Chairperson, 1179 Rock Haven Ct, Salinas, California 93906

Wukchumni Tribe, Darlene, Franco, Chairperson, 4737 West Concord Ave., Visalia, California 93277

Big Sandy Rancheria of Western Mono Indians, Elizabeth, Kipp, Chairperson, P.O. Box 337, Auberry, California 93602

Kern Valley Indian Community, Brandy, Kendricks, 30741 Foxridge Court, Tehachapi, California 93561

Kern Valley Indian Council/Community, Julie, Turner, Secretary, P.O. Box 1010, Lake Isabella, California 93240

Kern Valley Indian Council/Community, Robert, Robinson, Chairperson, P.O. Box 1010, Lake Isabella, California 93240

Library Plus News

Tulare Public Library, 475 North M Street, Tulare, California 93274

Tulare Advance-Register. 330 North West Street, Visalia, California 93291

Appendix A Section 4(f)

Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determinations

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S. Code 303, declares that "it is the policy of the U.S. Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the project area that do not trigger Section 4(f) protection because 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, or 4) the project does not permanently use the property and does not hinder the preservation of the property.

Properties Not Protected by Section 4(f)

Tulare Pedestrian Overcrossing (Caltrans Bridge Number 46-0040)

The Tulare Pedestrian Overcrossing (Caltrans Bridge Number 46-0040) is a modified railroad bridge. This structure, which formerly belonged to the Santa Fe Railroad, has been determined to not be eligible for the National Register of Historic Places. Therefore, the property is not a Section 4(f) property, and the provisions of Section 4(f) do not apply.

Properties Protected by Section 4(f)

Elk Bayou Regional Park

Elk Bayou Regional Park is within the City of Tulare and is part of its park system. Therefore, the property is a Section 4(f) property. However, the park would not be affected by the project, so there would be no "use" of this Section 4(f) resource. Therefore, the provisions of Section 4(f) do not apply.

Tulare Santa Fe Trail Park

The Tulare Santa Fe Trail Park is part of the city's park system. Section 4(f) applies because the affected area meets the criteria of a park or recreation area because it is publicly owned and open to the public, its major purpose is recreation, and it is a significant recreation area. The proposed construction will affect this resource.

During construction, one side of the trail crossing State Route 99 would remain open to the public at all times. The other side would be sectioned off

to construct the security fence. The work involved near the trail would include soil excavation to install footings for the posts and the use of machinery, such as a Bobcat, with forks to lift fence panels into place. Other impacts include removing vegetation and temporary noise and dust impacts. Vegetation that is removed will be replaced, and the area affected will be returned to its original state or better. The duration of work next to the Santa Fe Trail would require one side of the trail to be temporarily closed and the other side to remain open to the public. The work on the trail would last for approximately two weeks and would be intermittent during this time frame.

Temporary construction easements would be needed from the property to construct the security fencing that would adjoin the Tulare Pedestrian Overcrossing as its trail approaches. The types of walls or fencing under consideration are either concrete panel walls or concrete block walls with wrought iron fencing to be placed near the trail at the request of the city parks manager. Although the fence or wall would be within Caltrans' right-of-way, workers and heavy equipment would need to access the park side of the structure to construct it. However, this project is not expected to permanently “use” park facilities as defined by Section 4(f).

Caltrans anticipates that the temporary impacts on the Tulare Santa Fe Trail will meet the criteria of “temporary occupancy” described below.

If the following five conditions set forth in 23 CFR 774.13(d) can be satisfied, Section 4(f) will not apply:

- The duration of occupancy must be temporary, i.e., less than the time needed for the construction of the project, and there should be no change in ownership of the land;
- The scope of the work must be minor, i.e., both the nature and magnitude of the changes to the 4(f) resource must be minimal;
- There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource on either a temporary or permanent basis;
- The land being used must be fully restored, i.e., the resource must be returned to a condition that is at least as good as that which existed before the project, and;
- There must be documented agreement among the appropriate federal, state, or local officials having jurisdiction over the resource regarding the above conditions.

Caltrans has determined the work to be minor in scope and would not constitute “use” of the park after taking into account avoidance, minimization, and/or mitigation measures and because there is no net effect or no adverse effect on the Section 4(f) resource.

Caltrans contacted the City of Tulare Parks and Recreation Department on October 14, 2021, to initiate coordination between the city and Caltrans regarding the Section 4(f) coordination process. A summary of Caltrans' coordination with the City of Tulare Parks and Recreation Department is as follows:

- October 14, 2021: Caltrans called City of Tulare Parks Manager Ivan Nicar to confirm that he is the primary contact for any decisions regarding the trail facility and that information regarding Caltrans' security wall proposal would be emailed.
- November 5, 2021: A fact sheet with information about Section 4(f), the security wall proposal, and mapping was emailed to Mr. Nicar for review. Caltrans also requested to meet with Mr. Nicar.
- November 9, 2021, Caltrans received an email reply from Mr. Nicar indicating that the City of Tulare Parks and Recreation Department preferred the wrought iron fence option to keep visibility as open as possible and that Caltrans' request for construction easements would be accommodated.
- November 19, 2021: Caltrans held a Microsoft Teams virtual meeting with Mr. Nicar to discuss any concerns regarding the security fence proposal. He expressed the city’s desire for the wrought iron fence to be installed near the trail. Caltrans confirmed with Mr. Nicar that the project would be able to accommodate the city’s preference for a wrought iron fence. Caltrans will send a letter to Mr. Nicar to request written concurrence that the proposed impacts to the trail park do not constitute “use” as defined in 23 CFR 774.13(d) of the Section 4(f) policy.
- December 10, 2021: Caltrans emailed a letter to Mr. Nicar summarizing Caltrans' Section 4(f) coordination effort. The letter requested written concurrence that the proposed impacts on the Santa Fe Trail Park do not constitute “use” as defined in 23 CFR 774.13(d) of the Section 4(f) policy.
- December 14, 2021: Caltrans received written concurrence from Mr. Nicar (see letter below).

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DISTRICT 6 MANCHESTER OFFICE
2015 EAST SHIELDS AVENUE, SUITE A-100
FRESNO, CA 93726-5428
(559) 832-0051 | FAX 559-445-6236 | TTY 711
www.dot.ca.gov

December 10, 2021

Mr. Ivan Nicar
Park Manager
City of Tulare/Community Services/Parks & Recreation
830 South Blackstone
Tulare, CA 93274

Dear Mr. Nicar:

Caltrans proposes to install a security fence along the state right of way as part of the State Route 99 Tulare City Widening project in the city of Tulare. The Santa Fe Trail has been determined to be a resource that is protected by the U.S. Department of Transportation Act of 1966 or Section 4(f), codified as law in title 49 U.S.C. Section 303 and 23 U.S.C. Section 138. The proposed construction will affect this resource.

Section 4(f) applies because the affected area meets the criteria of a park or recreation area because it is publicly owned, open to the public, its major purpose is for recreation, and it is a significant recreation area.

The security wall construction will require temporary closure of the Santa Fe Trail crossing over State Route 99 to protect public safety due to the egress and ingress of earth-moving equipment. The work involved near the trail includes soil excavation to install footings for the posts and use of machinery such as a Bobcat with forks to lift fence panels into place. Other impacts include removal of vegetation and temporary noise and dust impacts. Vegetation that is removed will be replaced and the area affected will be returned to its original state or better. The duration of work adjacent to the Santa Fe Trail requiring its temporary closure would be intermittent and not continuous for approximately 2 weeks.

Caltrans has determined the work to be minor in scope after taking into account avoidance, minimization, and mitigation measures and because there is no net effect or no adverse effect to the Section 4(f) resource. A map of the proposed work near the trail is enclosed.

The work proposed would not constitute "use" of the resource because it is temporary, minor, and would not cause adverse changes to the park facility. To satisfy the provisions of a no "use" temporary occupancy as defined in 23 CFR 774.13(d) of the Section 4(f) policy, the following conditions must apply:

- The land use is of short duration (defined as less than the time needed for the construction of the project).
- There is no change in ownership of the land.
- The scope of work is minor.
- There are no anticipated permanent adverse physical impacts.
- The land must be fully restored to a condition at least as good as prior to the project.
- There must be documented agreement of the appropriate official(s) having jurisdiction over the resource regarding the above conditions.

Caltrans held a Microsoft Teams virtual meeting with you on November 19, 2021, to discuss any concerns regarding the security fence proposal. The city is amenable to granting temporary construction easements for the security wall installation. You also expressed the city's preference for a wrought iron fence to be installed near the trail to keep visibility as open as possible. Caltrans confirmed that the project would be able to accommodate the city's preference for a wrought iron fence near the trail area.

Caltrans is requesting written concurrence that the proposed impacts to the Santa Fe Trail park do not constitute "use" as defined in 23 CFR 774.13(d) of the Section 4(f) policy. Indicate your concurrence by signing below. Please make a copy of the signed letter for your records and return the original letter to me by January 10, 2022. A non-response from you will automatically be deemed a non-concurrence.

12/14/2021

Ivan Nicar
Park Manager
City of Tulare/Community Services/Parks & Recreation

Date

If you have any questions or concerns, please contact me at (559) 832-0051 or Som Phongsavanh, Associate Environmental Planner, at (559) 246-8601 or by e-mail to som.phongsavanh@dot.ca.gov.

Sincerely,

Juergen Vespermann

JUERGEN VESPERMANN
Senior Environmental Planner

Enclosure

c: Eric Karlson, Project Manager, Program/Project Management, Caltrans
Peter Chander, Project Engineer, District 6 Design, Caltrans



"Provide a safe and reliable transportation network that serves all people and respects the environment"

Appendix B Title VI Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS–49 | SACRAMENTO, CA 94273–0001
(916) 654-6130 | FAX (916) 653-5776 TTY 711
www.dot.ca.gov

September 2022

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 639-6392 or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

TONY TAVARES
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment"

Appendix C Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

RELOCATION ASSISTANCE ADVISORY SERVICES

DECLARATION OF POLICY

"The purpose of this title is to establish a ***uniform policy for fair and equitable treatment*** of persons displaced as a result of federal and federally assisted programs in order that such persons ***shall not suffer disproportionate injuries*** as a result of programs designed for the benefit of the public as a whole."

The Fifth Amendment to the U.S. Constitution states, "No Person shall…be deprived of life, liberty, or property without due process of law, nor shall private property be taken for public use without just compensation." The Uniform Act sets forth, in statute, the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and financial benefits, as discussed below.

FAIR HOUSING

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the U.S. to provide, within constitutional limitations, for fair housing. This act, as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing, regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require Caltrans to provide a person with a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee to see that all payments and benefits are fully utilized and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and are also given a

detailed explanation of the Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchasing or renting a replacement property without first contacting a Caltrans relocation advisor.

RELOCATION ASSISTANCE ADVISORY SERVICES

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the U.S. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are “decent, safe, and sanitary.” Nonresidential displacees will receive information on comparable properties for lease or purchase (see below for business, farm, and nonprofit organization relocation services).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, or national origin and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also supply information concerning federal- and state-assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days of written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable “decent, safe, and sanitary” replacement dwelling available on the market is offered to them by Caltrans.

RESIDENTIAL RELOCATION FINANCIAL BENEFITS

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

Moving Costs

Any displaced person who lawfully occupies the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until Caltrans obtains control of the property to be eligible for relocation payments.

Purchase Differential

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 90 days or more before the date of the initiation of negotiations (usually the first written offer to purchase the property) may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate.

Rent Differential

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by Caltrans before the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when Caltrans determines that the cost to rent a comparable “decent, safe, and sanitary” replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the Down Payment section below.

To receive relocation benefits, the displaced person must buy or rent and occupy a “decent, safe, and sanitary” replacement dwelling within one year from the date Caltrans takes legal possession of the property or from the date the displacee vacates the displacement property, whichever is later.

Down Payment

The down payment option has been designed to aid owner-occupants of less than 90 days and tenants in legal occupancy before Caltrans' initiation of negotiations. The one-year eligibility period in which to purchase and occupy a "decent, safe, and sanitary" replacement dwelling will apply.

Last Resort Housing

Federal regulations (49 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of a lack of available comparable replacement housing or when the anticipated replacement housing payments exceed the limits of the standard relocation procedure because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, Caltrans will, within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced.
- Specific arrangements are needed to accommodate any family member(s) with special needs.
- Financial ability to relocate into a comparable replacement dwelling that will adequately house all members of the family.
- Preferences in the area of relocation.
- Location of employment or school.

NONRESIDENTIAL RELOCATION ASSISTANCE

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms, and nonprofit organizations in locating suitable replacement property and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent suitable for a particular business's specific relocation needs. The types of payments available to eligible businesses, farms, and nonprofit organizations are searching and moving expenses, and possibly reestablishment expenses, or a fixed in lieu payment instead of any moving, searching, and reestablishment expenses. The payment types can be summarized as follows:

Moving Expenses

Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment, and similar business-related property, including dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items identified as real property may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displace.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to $2,500, for reasonable expenses actually incurred.

Reestablishment Expenses

Reestablishment expenses related to the operation of the business at the new location, up to $25,000 for reasonable expenses actually incurred.

Fixed In Lieu Payment

A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses that meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years before the relocation and may not be less than $1,000 or more than $40,000.

ADDITIONAL INFORMATION

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954 or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act or any other law, except for any federal law providing local “Section 8” Housing Programs.

Any person, business, farm, or nonprofit organization that has been refused a relocation payment by a Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment of lost goodwill that arises from the displacement of a public project. A list of ineligible expenses can be obtained from the Caltrans Division of Right of Way and Land Surveys. California’s law and the federal regulations covering relocation assistance provide that no

payment shall be duplicated by other payments being made by the displacing agency.

Appendix D Avoidance, Minimization and/or Mitigation Measures Summary

Environmental Justice

Complete Streets elements

- Add shoulders to accommodate bike lanes on Paige Avenue.
- Caltrans will use construction equipment available to reduce the main pollutants in emissions: carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter.
- Provide safer pedestrian crossings along Paige Avenue at Laspina Avenue and Blackstone Avenue by removing six ramp crossings, enhanced pedestrian pathways, and shoulders to accommodate bicycle lanes.
- Roundabout pedestrian and bicycle crossings would provide a safer passage.
- Improve or add pedestrian facilities such as crosswalks, sidewalks, and traffic calming devices (the roundabouts will calm and slow traffic down).
- Improve or add bicycle lanes that were not present.
- Add Complete Streets elements, such as benches at bus stops, lighting where it is not present, and/or bus shelters (keeping bus patrons out of direct sunlight or rain).
- Minimize excessive fossil fuel emissions that contribute to climate change due to large trucks and vehicles idling on the improved pathway.
- Improved infrastructure, highway landscaping, and soundwall aesthetics along the roadway will enhance the visual appeal for commuters and outside visitors.
- All pull boxes and electric service enclosures will be secured to reduce the occurrence of wire theft.
- The local communities could also experience temporary benefits from the construction project; this includes the generation of regional construction industry jobs and the revenue that will likely be generated directly from the construction workers in the local community. This local revenue and job generation could benefit the local minority and low-income populations.

[This section was added since the circulation of the draft environmental document]

- East of the Paige Avenue and Laspina St intersection, sidewalks will extend on both sides of Paige Avenue to connect to existing sidewalks on the east for approximately 900 feet.

- North of Paige Avenue and Laspina Street intersection, a sidewalk will connect to the existing sidewalk on the west side of Laspina Street. On the east side of Laspina street, an 800 feet long sidewalk will connect to the existing sidewalk. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.
- South of the Paige Avenue and Laspina Street intersection, sidewalk will be placed on both sides of Laspina Street for approximately 800 feet.
- On the north and south sides of the Blackstone Street and Paige Avenue intersection, sidewalks will connect to existing sidewalks.
- At the westside of Blackstone Street and Paige Avenue Intersection, the existing sidewalk on the southside of Paige Avenue to K Street will extend for approximately 2,500 feet. However, this will be coordinated with the City of Tulare during the Plan, Specification, and Estimate phase of the project to ensure to ensure the sidewalk is consistent with the development plan for the existing vacant lot.

Mitigation and minimization measures that will be incorporated by Tulare County.

- Locate sensitive receptors more than 500 feet of a freeway, 500 feet of urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
- Locate sensitive receptors more than 1,000 feet from a major diesel rail service or railyards. Where an adequate buffer cannot be implemented, implement the following: Install air filtration (as part of mechanical ventilation systems or stand-alone air cleaners) to reduce pollution exposure for residents and other sensitive populations in buildings that are close to transportation network improvement projects. Use air filtration devices rated MERV-13 or higher.
- Plant trees and/or vegetation suited to trapping roadway air pollution and/or soundwalls between sensitive receptors and the pollution source. The vegetation buffer should be thick, with full coverage from the ground to the top of the canopy. Install higher-efficacy public street and exterior lighting.
- Incorporate design measures and infrastructure that promote safe and efficient use of alternative modes of transportation (e.g., neighborhood electric vehicles, bicycles), pedestrian access, and public transportation use. Such measures may include the incorporation of electric vehicle charging stations, bike lanes, bicycle-friendly intersections, and bicycle parking and storage facilities.
- Incorporate design measures that promote ride-sharing programs (e.g., by designating a certain percentage of parking spaces for ride-sharing

vehicles, designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles, and providing a website or message board for coordinating rides).

Traffic and Transportation/Pedestrian and Bicycle Facilities

Traffic and Transportation/Transit

Construction of the Paige Avenue Interchange and the roundabout would require the closure of the existing Paige Avenue between Blackstone Street and Laspina Street. The proposed detour would be through the new Commercial Avenue Interchange, which would be constructed between Paige Avenue and Avenue 200 and would be open to traffic by the time the Tulare Six-Lane and Paige Avenue Interchange Improvement project is in construction.

A Transportation Management Plan would be developed for the project. The plan would include public information, motorist information, incident management, construction, demand management, and alternate routes or detours.

Vehicle Miles Traveled

Tulare County Regional Transit Agency Vanpool Program

Caltrans would provide $432,000 in funding to subsidize the vanpool program at the Tulare County Regional Transit Agency for five years. Caltrans' funding would subsidize the addition of 30 vanpools to the existing program in the first year and 15 vanpools to the program in the second year.

Increase Frequency on Tulare County Area Transit Route 20

Caltrans would provide five years of funding in the amount of $1,500,000 to subsidize the round-trip bus service for Route 20 on the Tulare County Area Transit.

Increase Frequency on Tulare County Area Transit Route 40

Caltrans would provide five years of funding in the amount of $1,500,000 to subsidize the round-trip bus service for Route 40 on the Tulare County Area Transit.

Increase Frequency on Tulare County Area Transit Route 11x

Caltrans would provide five years of funding of $1,250,000 to subsidize round-trip bus service for Route 11x on the Tulare County Area Transit.

Comprehensive Corridor Management Plan

[This section has been updated since the Recirculated Draft Environmental Document was circulated.] As discussed in Chapter 1, Caltrans Districts 6, 10, and 3 will collaborate with local agencies in the San Joaquin Valley to prepare a Comprehensive Multimodal Corridor Plan for State Route 99 through the Valley. The Comprehensive Multimodal Corridor Plan will prioritize identifying managed lane and mode shift opportunities in the corridor that will lead to reduced vehicle miles traveled. Implementation of a vehicle miles traveled reducing managed lane strategy through the corridor (or parts of the corridor that include this project) could eliminate about 80 percent of the vehicle miles traveled concern from the project because the only relevant capacity increase will result from the removal of trucks from the two general-purpose lanes. Since the Draft Environmental Document, the vehicle miles traveled reducing managed lane strategy has been identified as the preferred strategy to reduce significant vehicle miles traveled impacts. A project to establish a vehicle miles traveled reducing managed lane will be programmed before the project construction closeout in 2026.

Before the start of the State Planning and Research contract, Caltrans District 6 had done preliminary work toward the investigation and implementation of a managed lane in the project vicinity. Preliminary work includes:

- Review of the California Vehicle Code regarding the conversion of existing general-purpose lanes to managed lanes, such as truck-only lanes.
- Coordination with district management to identify and prepare a project delivery schedule for a State Highway Operation and Protection Program project to be initiated for a vehicle miles traveled reducing managed lane project.

The California Vehicle Code does not prevent the reallocation of a general-purpose lane to a managed lane using changes to signage and striping. Vehicle Code 21655 gives the Department of Transportation the authority to designate preferential highway lanes, allows the Department of Transportation to provide instructions to motorists on the use of those lanes, and states that a driver cannot drive on those lanes unless they follow the Department of Transportation's instructions. The rules allow the Department of Transportation to mark vehicle lanes as truck lanes. The California Manual on Uniform Traffic Control Devices (Section 2B.31) should be used for sign guidance, and changes in the California Vehicle Code may be needed for enforcement.

Below is a proposed schedule for a vehicle miles traveled reducing managed lane project. Two assumptions have been made in the development of the proposed schedule and are listed below.

1.) The project will mainly be signage and delineation for lane conversion.

2.) Approval will be granted to amend the project into the 2024 State Highway Operation and Protection Program.

The proposed schedule is as follows:

- Vehicle miles traveled reducing managed lane strategy will be provided to Asset Management in June 2024.
- Asset Management will add the mitigation project to the 10-Year Project Book in July 2024.
- K-phase will open for a vehicle miles traveled reducing managed lane project, and work will start on the Project Initiation Document in November 2024.
- The Project Initiation Document will be completed in May 2025.
- The project will be amended into the 2024 State Highway Operation and Protection Program in August 2025.
- The Project Approval and Environmental Document phase will begin in September 2025.
- Vehicle miles traveled reducing managed lane project will be ready to list for advertisement in the 2026/2027 or 2027/2028 fiscal year and will be funded in the 2024 State Highway Operation and Protection Program.

A preliminary traffic operational analysis was performed for a segment of State Route 99 within the limits of the Tulare Six-Lane and Paige Avenue Interchange Improvement project. The analysis showed that the facility would operate at an acceptable Level of Service with the implementation of a truck-only lane. The analysis assumed an existing condition that included the improvements from the Tulare Six-Lane and Paige Avenue Interchange Improvement project to be completed by 2029. The project proposes to widen the existing 4-lane freeway to a 6-lane facility on State Route 99 from post mile 25.2 to post mile 30.6 in Tulare County.

The segment of the Tulare Six-Lane and Paige Avenue Interchange Improvement project with the highest forecast volumes was selected for this preliminary analysis. Level of Service analysis was used to describe operational conditions, and forecasted weekday peak hour traffic volumes for the Year 2047 conditions were used. Highway Capacity Software was used to analyze the Level of Service for freeway segments. The results indicate that before the implementation of truck-only lanes, the Level of Service with three mixed-flow lanes would be ‘C.' After the implementation of a truck-only lane, the Level of Service in the two mixed-flow lanes and the single truck-only lane would be ‘C’ and ‘D,’ respectively.

The California Statewide Travel Demand Model will be used as a tool in the assessment of operations and vehicle miles traveled-reducing strategies on an interregional and statewide basis. Preliminary work has been done to

modify the transportation network used by the California Statewide Travel Demand Model. The 2050 base Travel Demand Model network was used to create a network with managed lanes on State Route 99 across District 6. This updated network includes parallel segments to all the segments across the district with coding that reflects a managed lane. The parallel segments connect to all the nodes of the existing 2050 network. This work has been done in collaboration with the California Department of Transportation Statewide Modeling Branch in the Division of Transportation Planning, Office of Data Analytics Services.

Visual

The following measures to avoid or minimize visual impacts can be incorporated into the project:

- Minimize tree removal by removing only trees and shrubs required for the construction of the new roadway facilities. Avoid removing trees and shrubs for temporary uses, such as construction staging areas or temporary stormwater conveyance systems.

The following mitigation measures to offset visual impacts would be incorporated into the project:

- [This section has been updated since the circulation of the draft environmental document]. Replacement planting would occur at a minimum ratio of 1:1. It is anticipated that replacement planting will amount to approximately 730 to 800 new trees. The locations of the planting may occur at the proposed stormwater basin sites and in the area where State Route 99 will be realigned at post mile 25.8.

Paleontology

A Paleontological Mitigation Plan would be prepared before construction by a Caltrans-supplied consultant. The plan would recommend the measures required to minimize potential impacts on paleontological resources. The mitigation measures would include:

- Identifying and acknowledging construction site safety protocols.
- Conducting paleontological Worker Environmental Awareness Training for all earth-moving personnel and supervisors.
- Conducting mitigation field monitoring of excavation into undisturbed sediments of the Modesto and Riverbank Formations. Excavations from 1 to 3 feet below the ground surface would be spot-checked. Continuous or full-time monitoring is required for excavations greater than 3 feet.
- Establishing a protective 25-foot radius buffer zone around fossil discovery locations.
- Processing bulk soil samples for microfossil identification.

- Curating salvaged fossils at a receiving museum or academic institution.
- Preparing a Paleontological Mitigation Report following completion of all paleontological monitoring activities, documenting compliance with all mitigation measures.

Hazardous Waste and Materials

Avoidance and minimization measures for the project would include:

- A lead compliance plan and an asbestos compliance plan would be required to be prepared by the contractor before the start of construction.
- Project-specific special provisions and/or nonstandard special provisions would be included in the construction contract to address proper handling and disposal of hazardous waste and to minimize exposure to potential hazards.

Noise

- Construct two soundwalls within the project limits for noise abatement. The construction of these walls may change based on input received from the public. If conditions have substantially changed during the final design, noise abatement may not be constructed.

Construction Noise

The following are possible control measures that can be implemented to minimize noise disturbances in sensitive areas during construction.

- All equipment shall have sound-control devices no less effective than those provided on the original equipment.
- Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine should be operated on the job site without an appropriate muffler.
- Construction methods or equipment that will provide the lowest level of noise impact should be used.
- Idling equipment shall be turned off.
- Truck loading, unloading, and hauling operations shall be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest extent possible.

The contractor would be required to adhere to the following administrative noise control measures:

- Once details of construction activities become available, the contractor shall work with local authorities to develop an acceptable approach to

minimize interference with the business and residential communities, traffic disruptions, and the total duration of the construction.

- Good public relations shall be maintained with the community to minimize objections to unavoidable construction impacts. Frequent activity updates of all construction activities shall be provided. A construction noise monitoring program to track sound levels and limit the impacts shall be implemented.
- In case of construction noise complaints by the public, the resident engineer shall coordinate with the construction manager, and the specific noise-producing activity may be changed, altered, or temporarily suspended if necessary.

The following measures would be used to minimize potential impacts from construction vibration:

- Restrict the hours of vibration-intensive equipment or activities, such as vibratory rollers, so that impacts on residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).
- The owner of a building close enough to a construction vibration source that damage to that structure due to vibration is possible would be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.
- Conduct vibration monitoring during vibration-intensive activities.

Energy

Per Caltrans' Best Management Practices, newer or well-maintained equipment that is more energy efficient would be used during construction. The amount of energy used by construction during the project would be temporary. The following Best Management Practices would be used to minimize energy use and would be incorporated into the contract specifications:

- The contractor would consolidate material delivery whenever possible to promote efficient vehicle and energy use. The contractor would schedule material deliveries during non-rush hours to minimize fuel loss during traffic congestion.
- The contractor would maintain equipment and machinery in good working condition and inspect it regularly. The contractor would also maintain inspection records.
- Operators would avoid leaving equipment and vehicles idling when parked or not in use.
- Equipment found operating on the project that has not been inspected or has oil leaks would be shut down and subject to citation.

The contractor would implement, to the extent feasible, the following measures to reduce greenhouse gas emissions from construction equipment:

- Use alternative-fueled (e.g., biodiesel and electric) construction vehicles and equipment, making up at least 15 percent of the fleet.
- Use at least 10 percent of local building materials during construction.
- Recycle at least 50 percent of construction waste or demolition materials.

Threatened or Endangered Species

Vernal Pool Fairy Shrimp

- Fairy shrimp surveys will be conducted during the final design phase of the project in a U.S. Fish and Wildlife Service protocol survey year to confirm visual observations that it is the non-listed species, versatile fairy shrimp, present in briefly ponded areas. If surveys detect vernal pool fairy shrimp in the action area, a Biological Opinion and avoidance, minimization, and/or mitigation measures would be required before completion of the project's design phase action.

San Joaquin Kit Fox

- Preconstruction surveys will be conducted within the action area within 30 days of beginning work on the project to ensure no listed species, including the San Joaquin kit fox, are present. Worker Environmental Awareness Training will also be included in the contract's special provisions.

Swainson's Hawk

With the implementation of the following avoidance and minimization measures, no impacts on Swainson's hawks are anticipated:

- Preconstruction surveys following the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (May 2000) would be conducted by qualified biologists within 500 feet of the project footprint during nesting season (February 1 to September 30) before groundbreaking activities.
- If nesting Swainson's hawks are discovered within 500 feet of the project footprint, the nest site would be designated an Environmentally Sensitive Area, and a 500-foot buffer (exclusion zone) would be established until a qualified biologist has determined that the nest is no longer active.
- A qualified biologist would monitor the active nest during construction activities within the buffer.
- Removal of any trees within the project area should be done outside of the nesting season; however, if trees within the project area need to be

removed during the nesting season, a qualified biologist will inspect the tree before removal to ensure that no nests are present.

Greenhouse Gas

Project-Level Greenhouse Gas Reduction Strategies

The following measures will also be implemented in the project to reduce greenhouse gas emissions and potential climate change impacts from the project.

- Truck and equipment idling is limited to five minutes for delivery and dump trucks and other diesel-powered equipment (with some exceptions).
- Schedule truck trips outside of peak morning and evening commute hours.
- Encourage improved fuel efficiency from construction equipment by maintaining equipment in proper working condition, using the right size equipment for the job, and using equipment with new technologies.
- The construction schedule will require lane closures for a longer period than in the past to reduce necessary mobilization efforts.
- Use recycled water for construction.

Appendix E Notice of Preparation

Notice of Preparation

Notice of Preparation

Notice of Preparation

To: State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814
(Address)

From: Caltrans - District 6 Environmental
2015 E. Shields Avenue, Suite 100
Fresno, CA 93703
(Address)

Subject: Notice of Preparation of a Draft Environmental Impact Report

California Department of Transportation (Caltrans) will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (☐ is ☒ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Juergen Vespermann at the address shown above. We will need the name for a contact person in your agency.

Project Title: Tulare City Widening EA 06-48950

Project Applicant, if any:

Date 04-19-2021

Signature Juergen Vespermann

Title Senior Environmental Planner

E-mail juergen.vespermann@dot.ca.gov

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Notice of Completion and Environmental Document Transmittal

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Tulare City Widening

Lead Agency: Caltrans — Contact Person: Juergen Vespermann

Mailing Address: 2015 E. Shields Ave, Suite 200 — Email: juergen.vespermann@dot.ca.gov

City: Fresno — Zip: 93726 — County: Fresno

Project Location: County: Tulare — City/Nearest Community: Tulare

Cross Streets: Ave 200, Paige Ave, Bardsley Ave, Tulare Ave (SR 137), Cross Ave, Prosperity Ave — Zip Code: 93274

Longitude/Latitude (degrees, minutes and seconds): ____° ____ ' ____ " N / ____° ____ ' ____ " W Total Acres: ____

Assessor's Parcel No.: ____ Section: ____ Twp.: ____ Range: ____ Base: ____

Within 2 Miles: State Hwy #: 137 — Waterways: Tulare Canal, Elkhorn Slough

Airports: Mefford Field — Railways: Union Pacific — Schools: all schools in city

Document Type:

CEQA: ■ NOP ☐ Draft EIR — NEPA: ☐ NOI — Other: ☐ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR ■ EA ☐ Final Document
☐ Neg Dec (Prior SCH No.) ____ ☐ Draft EIS ☐ Other: ____
☐ Mit Neg Dec Other: ____ ☐ FONSI

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☐ Other: ____

Development Type:

☐ Residential: Units ____ Acres ____
☐ Office: Sq.ft. ____ Acres ____ Employees ____
☐ Commercial: Sq.ft. ____ Acres ____ Employees ____
☐ Industrial: Sq.ft. ____ Acres ____ Employees ____
☐ Educational: ____
☐ Recreational: ____
☐ Water Facilities: Type ____ MGD ____
■ Transportation: Type Freeway widening & interchange improvement
☐ Mining: Mineral ____
☐ Power: Type ____ MW ____
☐ Waste Treatment: Type ____ MGD ____
☐ Hazardous Waste: Type ____
☐ Other: ____

Project Issues Discussed in Document:

■ Aesthetic/Visual ☐ Fiscal ☐ Recreation/Parks ■ Vegetation
☐ Agricultural Land ☐ Flood Plain/Flooding ☐ Schools/Universities ■ Water Quality
■ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
■ Archeological/Historical ☐ Geologic/Seismic ☐ Sewer Capacity ■ Wetland/Riparian
■ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☐ Coastal Zone ■ Noise ☐ Solid Waste ■ Land Use
■ Drainage/Absorption ☐ Population/Housing Balance ■ Toxic/Hazardous ■ Cumulative Effects
☐ Economic/Jobs ☐ Public Services/Facilities ■ Traffic/Circulation ■ Other: Paleontology

Present Land Use/Zoning/General Plan Designation:

transportation facility, light industrial, heavy industrial, commercial, residential, public land

Project Description: *(please use a separate page if necessary)*

The California Department of Transportation (Caltrans) proposes to widen State Route 99 in the City of Tulare from just south of Avenue 200 Overcrossing to just north of Prosperity Avenue Overcrossing (post miles 25.4/30.6). One lane would be constructed in each direction in the existing freeway median to create a six-lane freeway, divided by a concrete median barrier. The existing lanes, shoulders, and ramps would be rehabilitated. In addition, the existing Paige Avenue Interchange would be reconstructed. The Paige Avenue Overcrossing would be replaced with a wider structure to add one lane in each direction and a pedestrian/bicycle shared path.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2010

Reviewing Agencies Checklist

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

x Air Resources Board	x Office of Historic Preservation
___ Boating & Waterways, Department of	___ Office of Public School Construction
___ California Emergency Management Agency	___ Parks & Recreation, Department of
x California Highway Patrol	___ Pesticide Regulation, Department of
___ Caltrans District # ___	x Public Utilities Commission
x Caltrans Division of Aeronautics	x Regional WQCB # 5
___ Caltrans Planning	___ Resources Agency
___ Central Valley Flood Protection Board	___ Resources Recycling and Recovery, Department of
___ Coachella Valley Mtns. Conservancy	___ S.F. Bay Conservation & Development Comm.
___ Coastal Commission	___ San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
___ Colorado River Board	___ San Joaquin River Conservancy
___ Conservation, Department of	___ Santa Monica Mtns. Conservancy
___ Corrections, Department of	___ State Lands Commission
___ Delta Protection Commission	___ SWRCB: Clean Water Grants
___ Education, Department of	___ SWRCB: Water Quality
___ Energy Commission	___ SWRCB: Water Rights
x Fish & Game Region # 4	___ Tahoe Regional Planning Agency
___ Food & Agriculture, Department of	x Toxic Substances Control, Department of
___ Forestry and Fire Protection, Department of	x Water Resources, Department of
___ General Services, Department of	
___ Health Services, Department of	___ Other: ___
___ Housing & Community Development	___ Other: ___
x Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date ___ Ending Date ___

Lead Agency (Complete if applicable):

Consulting Firm: ___	Applicant: ___
Address: ___	Address: ___
City/State/Zip: ___	City/State/Zip: ___
Contact: ___	Phone: ___
Phone: ___	

Signature of Lead Agency Representative: Juergen Vespermann digitally signed by Juergen Vespermann Date: 2021.04.19 10:36:28 -07'00' **Date:** 04-19-2021

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Revised 2010

Appendix F Federal Highway Administration Air Quality Conformity

U.S. Department of Transportation
Federal Highway Administration

California Division

650 Capitol Mall, Suite 4-100
Sacramento, CA 95814
(916) 498-5001
(916) 498-5008 (FAX)

December 13, 2023

In Reply, Refer To:
HDA-CA

ELECTRONIC CORRESPONDENCE ONLY

Maya Hildebrand, Air Quality Coordinator
California Department of Transportation,
District 6
2015 East Shields Ave, Suite A-100
Fresno, CA 93726-5428

SUBJECT: Project Level Conformity Determination for the Tulare Six-Lane and Paige Avenue Interchange Improvements project (CTIPS ID# 15-0000-0285), EA 06-48950

Dear Ms. Hildebrand:

On October 24, 2023, the California Department of Transportation (Caltrans) submitted to the Federal Highway Administration (FHWA) a complete request for a project level conformity determination for the Tulare Six-Lane and Paige Avenue Interchange Improvements project (CTIPS ID# 15-0000-0285), EA 06-48950. The project is in an area that is designated Non-Attainment or Maintenance for Ozone, and Particulate Matter (PM 2.5/PM 10).

The project level conformity analysis submitted by Caltrans indicates that the project-level transportation conformity requirements of 40 CFR Part 93 have been met. The project is included in the Tulare County Association of Governments (TCAG) current Regional Transportation Plan (RTP) and Federal Transportation Improvement Program (FTIP), as amended. The design concept and scope of the preferred alternative have not changed significantly from those assumed in the regional emissions analysis.

As required by 40 CFR 93.116 and 93.123, the localized $PM_{2.5}$ and PM_{10} analyses are included in the documentation. The analyses demonstrate that the project will not create any new violations of the standards or increase the severity or number of existing violations.

Based on the information provided, FHWA finds that the Tulare Six-Lane and Paige Avenue Interchange Improvements Project conforms with the State Implementation Plan (SIP) in accordance with 40 CFR Part 93.

If you have any questions pertaining to this conformity finding, please contact Antonio Johnson at (916) 498-5889 or antonio.johnson@dot.gov.

Sincerely,

ANTONIO DESHAWN JOHNSON
Digitally signed by ANTONIO DESHAWN JOHNSON
Date: 2023.12.13 16:49:50 -08'00'

Antonio Johnson
Director of Planning, Environment,
& Right of Way
Federal Highway Administration

Appendix G Comment Letters and Responses

[This appendix has been added since the circulation of the Draft Environmental Document.]

This appendix contains the comments received during the public circulation and comment period from August 8, 2023, to September 22, 2023, retyped for readability. The comment letters are stated verbatim as submitted, with acronyms, abbreviations, and any original grammatical or typographical errors included. A Caltrans response follows each comment presented. Copies of the original comment letters and documents can be found in Volume 2 of this document.

A public notice in English and Spanish was posted in the Visalia Times-Delta on August 8, 2023. It stated that the public review and comment period for the Recirculated Draft Environmental Document would run from August 8, 2023, to September 22, 2023, and that a public hearing would be held on August 15, 2023, at Palo Verde Elementary School. There were 34 comment cards submitted at the public hearing at Palo Verde Elementary School on August 15, 2023.

In addition to the 34 comment cards from the public hearing, four comments were submitted via email during the public circulation and comment period. A total of 38 comments were received. Comments made in Spanish were responded to in English (refer to the Spanish version of the final environmental document for the responses in Spanish). All the comments are detailed below.

Comment letter from Juergen Vespermann

August 18, 2023
Javier Almaguer
Senior Environmental Scientist
District 6 Environmental Division
California Department of Transportation
2015 East Shields Avenue, Suite 100
Fresno, California 93726

Dear Mr. Almaguer

I would like to resubmit my comments from May 20th to the Draft EIR/Environmental Assessment and Section 4(f) Evaluation for the Tulare Six-Lane and Paige Avenue Interchange Improvement project on State Route 99 in Tulare County (EA 06-48950/Project ID 0614000040, State Clearinghouse Number 2021040498).

None of my previous comments were addressed in the recirculated document and therefore they are still true in its entirety.

I made a couple of minor changes in my previous comments that I am resubmitting below, and have added some additional comments.

As stated in the Draft EIR/EA, “This project is considered a capacity-increasing project and therefore falls into the group of projects that require an analysis of vehicle miles traveled (VMT) and an evaluation for potential mitigation measures.”

Governor’s Office of Planning and Research (OPR): “SB 743 (Steinberg, 2013) updates the way transportation impacts are measured in California for new development projects, making sure they are built in a way that allows Californians more options to drive less. This change will help us achieve our climate commitments, preserve our environment, improve our health and safety--particularly for our most vulnerable residents--and boost our economy by prioritizing co-located jobs, services, and housing. It will also reduce the time we need to spend in our cars to get places and provide more choices for how we travel, which will help to promote business, provide access to opportunity, and improve the quality of life across our state.”

SB 743 goals include reducing greenhouse gas emissions and air pollution, streamlining housing development near jobs and transit, and supporting a transportation system that moves people efficiently. VMT reduction from SB 743 will be essential to achievement of the State’s climate and air quality commitments as well as improving equity, providing greater access to housing, protecting the environment, bettering public health and safety, and providing access to economic opportunity.

The Governor's Office of Planning and Research (OPR) states in their 2018 technical advisory "VMT and Greenhouse Gas Emissions Reduction. Senate Bill 32 (Pavley, 2016) requires California to reduce greenhouse gas (GHG) emissions 40 percent below 1990 levels by 2030, and Executive Order B16-12 provides a target of 80 percent below 1990 emissions levels for the transportation sector by 2050. The transportation sector has three major means of reducing GHG emissions: increasing vehicle efficiency, reducing fuel carbon content, and reducing the amount of vehicle travel. The California Air Resources Board (CARB) has provided a path forward for achieving these emissions reductions from the transportation sector in its 2016 Mobile Source Strategy. CARB determined that it will not be possible to achieve the State's 2030 and post-2030 emissions goals without reducing VMT growth. Further, in its 2018 Progress Report on California's Sustainable Communities and Climate Protection Act, CARB found that despite the State meeting its 2020 climate goals, "emissions from statewide passenger vehicle travel per capita [have been] increasing and going in the wrong direction," and "California cannot meet its [long-term] climate goals without curbing growth in single-occupancy vehicle activity." CARB also found that "[w]ith emissions from the transportation sector continuing to rise despite increases in fuel efficiency and decreases in the carbon content of fuel, California will not achieve the necessary greenhouse gas emissions reductions to meet mandates for 2030 and beyond without significant changes to how communities and transportation systems are planned, funded, and built."

Thus, to achieve the State's long-term climate goals, California needs to reduce per capita VMT. This can occur under CEQA through VMT mitigation. Half of California's GHG emissions come from the transportation sector, therefore, reducing VMT is an effective climate strategy, which can also result in co-benefits.

Caltrans states on its webpages that "Caltrans aims to provide a safe and equitable state transportation network that serves all Californians and does not exacerbate climate change impacts" in order to achieve Sustainable Transportation. "The Sustainability Office leads the Department's commitments to people and the planet by: Championing Walking, Biking, and Transit; Advancing Zero-Emission Vehicles; Rethinking How We Build So Californians Can Drive Less". Caltrans explains how important this VMT issue is to the Department, yet the local District 6 project to widen SR 99 does not reflect this commitment.

Caltrans proposes to fund Tulare County Area Transit measures for five years to mitigate for generating an annual 19,759,200 vehicle miles traveled with this project. In addition, a Comprehensive Corridor Management Plan to mitigate 80 percent of the VMT impacts of this project is proposed by the completion of the Final EIR document. The following table was copied from the Draft EIR/EA showing the proposed mitigation measures and the suggested reduction in VMT.

Table 2.23 Proposed Mitigation, Mitigation Cost, and Annual Vehicle Miles Traveled Reduction

Proposed Mitigation	Proposed Funding Amount	Annual Vehicle Miles Traveled Reduction
Tulare County Regional Transit Agency Vanpool Program five years of funding.	$432,000	6,544,800
Increase frequency on Tulare County Area Transit Route 20. Five years of funding.	$1,500,000	4,505,600
Increase frequency on Tulare County Transit Route 40. Five years of funding.	$1,500,000	3,379,200
Increased frequency on Tulare County Transit Route 11x. Five years of funding.	$1,250,000	2,956,800
Funding and annual vehicle miles traveled reduction totals for mitigation measures listed above.	$4,682,000	17,386,400

My comments focus on the VMT analysis and the two types of mitigation measures (Local Transit increase and Comprehensive Corridor Management Plan) that are being proposed, and the design of the Paige Avenue Interchange.

Comment 1:

1. Comments to the VMT mitigation (Vanpool funding, Transit Route 20, Transit Route 40 and Transit Route 11x):

1.1. **Limited Duration:** The Draft EIR/EA proposes to provide funding to the local transit agencies to run and/or increase ridership for a limited time of 5 years. However, CEQA does not identify that temporary funding (2 years and 5 years) is acceptable to mitigate a permanent impact that will exist as long as the SR 99 is being used. Caltrans proposes mitigation that could potentially be eliminated by the local agency and at that point mitigation for continuing impacts would stop. But either way, VMT impacts of this project will not stop after 2 years or 5 years, they will impact the life of Californians as long as cars will be on the road that is being built. Please explain, why Caltrans believes temporary mitigation measures suffice for permanent and continuing impacts.

1.2 Enforcement: The Draft EIR/EA does not show how the cooperative agreement with the local transit agency can be enforced by Caltrans. There is only mention of a cooperative agreement between Caltrans and Tulare County (or Tulare County Transit?). Will there be reporting compliance requirements and consequences for inaction?

Since Caltrans states in the Draft EIR/EA, that it has no control over off-system mitigation measures, it is unclear from the discussion in the Draft

EIR/EA how much power Caltrans has over their local partners to accomplish the mitigation goals. What recourse would Caltrans have if the local partner decided after any number of years (either during the 2-year (van pools) or 5-year (transit) funding cycle or after the 2-year or 5-year funding cycle) to discontinue the routes that Caltrans uses for mitigating still existing VMT impacts? Please explain.

1.3. **Transit or Carpool Market Analysis:** It is assumed in the Draft EIR/EA for the VMT mitigation measures that the rural population in Tulare County is open to switching from personal vehicles to a vanpool or to the additional bus routes/frequency listed. How was this openness to switching determined? What is Caltrans' plan if this switch will not occur, and the population continues to drive their personal vehicles? What will Caltrans do to mitigate VMT if the bus routes and the vanpools remain unused or underused? What are the thresholds for success and failure? Please explain.

1.4. **Success Criteria:** In addition, it is not clear how Caltrans will measure the success of the mitigation even during these five years of funding. Caltrans does not identify in the Draft EIR/EA how each program/mitigation measure will be monitored by Caltrans. What are the measures/thresholds of success (performance criteria)? What are the measures/thresholds of failure? According to Caltrans' own guidance, "mitigation is memorialized in an environmental document, where it must meet CEQA standards for additionality – the need for mitigation must be caused by the project – and be enforceable – the mitigation must be firmly committed to by the relevant parties." Please explain.

How these mitigation measures are enforceable and measurable by Caltrans has not been clearly formulated in the Draft EIR/EA and therefore can't be reviewed by the public and decision makers. Caltrans can't be held accountable to the measures proposed in the Draft EIR/EA by the public or decision makers. Please provide this information when you recirculate the Draft EIR/EA.

1.5. **Timeline/Schedule:** What is the timeline for these mitigation measures? No timeline was identified in the Draft EIR/EA.

I suggest implementing the local transit mitigation measures prior to construction of the project to have the program running and monitored when the VMT increase actually occurs, rather than after the opening of the additional lanes. The mitigation funding can be programmed prior to construction of the project if Caltrans applies some flexibility. Please provide explanation and the schedule and funding logic.

1.6. **VMT Mitigation Only 2 percent Of Project Cost:** According to Caltrans' own guidance, the passage of SB 743 (Steinberg, 2013), vehicle miles traveled (VMT) became a metric for determining transportation impacts under

the California Environmental Quality Act (CEQA). The current project cost have been identified in the environmental document as $230,143,000. Caltrans has determined in their guidelines and policies that VMT is an important issue yet commits only $4,682,000 to VMT mitigation for this project. Considering the importance Caltrans and the Governor's Office of Planning and Research put onto this environmental issue, allocating a mere 2 percent of the project cost to VMT mitigation and limiting this mitigation to 5 years is contradictory to the voiced importance the Governor puts onto this climate change issue. This monetary mitigation commitment should be increased to at least 10 percent of the project cost to provide more effective mitigation measures and to show that Caltrans/District 6 is serious about minimizing transportation impacts on climate change and avoiding VMT increases on the highway system. Please explain.

2. Comments to the Comprehensive Corridor Management Plan:

2.1. **Incomplete Plan:** Caltrans proposes a Comprehensive Corridor Management Plan as an additional mitigation measure for VMT, yet no details are known at this point or were provided to the public in this Draft EIR/EA. Again, Caltrans can't be held accountable to their proposal and decision makers and the public won't know if this Comprehensive Management Plan will affect California residents and if so, how. Please provide this information in your updated Draft EIR/EA and explain. Please recirculate the environmental document so the public can review the lacking information you will provide.

Conclusions Without Supporting Data: Despite the lack of supporting data and details, Caltrans determined that this Comprehensive Corridor Management Plan could eliminate 80 percent of the VMT concerns. (Page 82 of the Draft EIR/EA, "Implementation of vehicle miles traveled - reducing managed lane strategies, such as truck-only and/or tolling lanes, through the corridor" (or parts of the corridor that include this project) could eliminate about 80 percent of the vehicle miles traveled concern from the project, as the only relevant capacity increase would result from the removal of trucks from the two general-purpose lanes. The lane-management strategy will be developed in more detail before the final environmental document is signed.").

How is it possible that Caltrans is certain that such a high percentage will be eliminated if the Comprehensive Corridor Management Plan was not finalized at the time of the circulation of this Draft EIR/EA? Which option was taken into consideration for this 80 percent reduction: the tolling lanes or the truck-only lanes? Are there any other managed-lane options Caltrans currently considers? How did Caltrans arrive at this conclusion? Please explain.

This is a very vague statement with no supporting information. It is not clear to the reader how this will be accomplished since the public has had no opportunity to review the Comprehensive Corridor Management Plan as part

of the circulation of the Draft EIR/EA. Yet Caltrans is using this as a mitigation measure for this project.

2.2. **Deferring Mitigation to Final Environmental Document:** It appears that in this case, Caltrans is using non-specific mitigation measures to determine a specific reduction in VMT impacts without giving the public the opportunity to review. Stating that the lane management strategy will be in place for the Final EIR/EA, is implementing a mitigation proposal without public input. In addition, stating that this mitigation measure will reduce VMT impacts by 80 percent without providing any details seems a glorified guess. According to Caltrans' own guidance, mitigation measures… "most relevant to this guide, it must be quantifiable and effective at reducing VMT." That is not supported by any information in the Draft EIR/EA. Please explain.

2.3. **Input and Buy-In on the Plan:** It is also not clear to the reader if this Comprehensive Corridor Management Plan will be finalized in its entirety or in steps. Does this include buy-in from the three mentioned districts (Districts 6, 10 and 3) and all the cities and counties along the SR 99 between Bakersfield and Sacramento? Will the public be able to comment as well? Please explain.

3. Comments to the Paige Avenue Interchange design:

3.1. **Incomplete Analysis:** According to the Draft EIR/EA, Options 1, 2, and 3 of the Paige Avenue Interchange are viable design options (alternatives) until District 6 Traffic Operations completes its evaluation to determine and recommend the option with the better overall performance rating. That rating, combined with cost and safety, will be the sole criteria for selecting the preferred option, according to the Draft EIR/EA. The environmental impacts are the same for Options 1, 2, and 3. A decision is expected after the circulation of the Draft Environmental Document and will be detailed in the Final EIR/EA.

Why does Caltrans circulate the environmental document with three design options for the Paige Avenue interchange, even though it is not clear what the ratings for each option will be? It appears that Caltrans rushed the public circulation of the Draft EIR/EA and didn't have the time to complete such an important document that will determine the future look and operation of a vital interchange. Does Caltrans not value public input? It does seem clear that no matter what comments the public will have on the Paige Avenue Interchange design, Caltrans will only use the ratings of the Traffic Operations Branch to determine the option most viable. This is misleading the public.

The rating by the Traffic Operations Branch should have been determined prior to the circulation of the Draft EIR/EA, so the public is informed about the decision and is not mislead into believing that the public's opinion on the design of the Paige Avenue Interchange matters. It appears as if the public can choose between three options, yet in reality, Caltrans will make the

decision based on the rating and therefore dismissing potential public input. This rating should have been completed prior to the circulation of the Draft EIR/EA to inform the public of the decision. Please explain why this traffic operations analysis (or potion of it) was not completed prior to public circulation.

3.2. **Mis-labeled:** It appears that the design options were mislabeled (Page 28), this reader assumes that Option 1 is meant in the first paragraph (Option 1—Three Roundabouts configuration with Paige Avenue overcrossing bridge With Option 2, the northbound and southbound ramps would connect into one larger roundabout at the Paige Avenue overcrossing bridge.) and Option 2 in the second paragraph (Option 2—Four Roundabouts configuration with Paige Avenue overcrossing bridge With Option 1, the ramps would begin at two separate circular roundabouts built on the east side and west side of the State Route 99 freeway.) and therefore Option 2 would only have a shared pedestrian and bicycle path on the south side while Option 1 has the path on both sides. Is that correct?

3.3. **Design Options:** "Option 1—Three Roundabouts configuration with Paige Avenue overcrossing bridge With Option 2, the northbound and southbound ramps would connect into one larger roundabout at the Paige Avenue overcrossing bridge.... A 10-foot-wide paved path for shared pedestrian and bicycle use would be placed on both sides of Paige Avenue, between Blackstone Street and Laspina Street."

"Option 2—Four Roundabouts configuration with Paige Avenue overcrossing bridge With Option 1, the ramps would begin at two separate circular roundabouts built on the east side and west side of the State Route 99 freeway……With this option, a 10-foot-wide paved path for shared pedestrians and bicycles would be placed only on the south side of Paige Avenue."

"Option 3—Four Roundabout configuration with Paige Avenue undercrossing bridge With Option 3, Paige Avenue would cross under State Route 99 and State Route 99 would pass over Paige Avenue on a new constructed bridge. A newly formed embankment on State Route 99 would raise the profile of the freeway to the new bridge structure. The four-roundabout configuration would be similar to option 1, except that the two roundabouts adjacent to the State Route 99 bridge would be located on ground level instead of on embankments. The benefits of this option would have the pedestrian and bicycle facilities crossing State Route 99 on ground level and lower levels of emissions for vehicles using the interchange ramps. The option would have a smaller project footprint compared to options 1 and 2."

It is not clear to the reader if Option 3 will have a pedestrian and bicycle path on both sides of Paige Avenue or only on one side. No argument is being presented why Option 2 is proposed with a path only on one side.

Considering that Caltrans stresses the promotion of non-vehicular traffic, it seems against Caltrans policy not to provide paths on both sides of Paige Avenue and therefore encouraging pedestrian and bicycle traffic. Why does Caltrans fail to disclose this clearly, and why do some of the options have a pedestrian and bicycle path only on one side? Please explain the rationale.

3.4. Contradiction: Page 77 of the EIR states that "A 10-foot-wide paved shared path for pedestrians and bicycles would be placed around all the roundabouts and on both sides of Paige Avenue between Blackstone Avenue and Laspina Street." This paragraph states that all design options would have a shared path on both sides of Paige Avenue. It seems that this information is contradictory to the information provided in Chapter 1, which states that this is not true for Option 2. Please correct or clarify.

3.5. According to page 27 of the Draft EIR:

"Unique Features of Paige Avenue Roundabout Design Options 1 and 2 are under consideration for ramp intersections, and one will be finalized based on public comment. The environmental impacts are the same for options 1 and 2. A decision is expected after the circulation of the Draft Environmental Document and will be detailed in the final environmental document."

No information was provided about the engineering advantages and disadvantages of the two options for the Paige Avenue Interchange. The public and decision makers have to be made aware of the environmental AND engineering reasons for an alternative or design option. Yet, the only information provided for the two design options are environmental impacts and the Draft EIR/EA states that they are equal. Yet, you state, that the selection for one of the two design options will be made "based on public comment." Since no detailed information was provided for these two options, I anticipate that Caltrans will not receive any comments from the public. Is this intended or why was no information provided? Please provide this information to the public and decision makers prior to finalizing the environmental document.

The EIR serves as a public disclosure document explaining the effects of the project on the environment, alternatives to the project, and ways to minimize adverse effects and to increase beneficial effects. As a result of information in the EIR, the Lead Agency should establish requirements or conditions on project design, construction, or operation in order to protect or enhance the environment

4. Logical Termini

Page 10 of the Draft EIR/EA: The 2018 average daily truck traffic is about 15,410 trucks (27.6 percent of all vehicles); more than half of these trucks are large, long-haul trucks (with five or more axles). When the average number of

trucks-per-lane-per-day exceeds 2,000 on a route (the existing condition), congestion is characterized by large, long-haul trucks using all lanes for travel and passing, which creates potential safety and capacity problems for all users of the freeway. This occurrence is common within the four-lane segments of State Route 99 in Tulare County and the City of Tulare.

Page 13 of the Draft EIR/EA: The southern limit is beyond the southernmost interchange (Avenue 200 Interchange) of the Tulare City urban area. The southern limit occurs near the city limits boundary at the urban fringe, where the land use transitions to a rural setting. Beginning the project limits just south of Avenue 200 is a logical point because it is the last urban interchange as traffic moves southbound and is the first urban interchange as traffic enters the city in the northbound direction.

Page 73 of the Draft EIR/EA: The existing average annual daily traffic on State Route 99 within the project limits is about 62,000.

Please provide a comparison of the truck volumes and total traffic volumes at the southern limits of the projects and the four-lane section south of this project to clearly identify that true “logical termini” exist at the south end of the project. According to the arguments made in the Draft EIR/EA, a clear drop in the volumes should be visible.

Conclusion:

It is requested that Caltrans recirculates the Draft EIR/EA with the Comprehensive Corridor Management Plan and results of the performance rating by District 6 Traffic Operations for public input.

Extend duration of funding for the mitigation measures with the local transit organization(s) beyond the current 2-year (for van pools) and 5-year limit (for transit). VMT mitigation measures should be for the life of the transportation project, which is potentially indefinite.

Provide thresholds for success and failure (performance criteria) for the vanpool/transit mitigation measures and a plan on how to mitigate in the case of failure.

Increase funding for VMT mitigation measures to at least 10 percent of the project cost.

Provide a reasonable timeline for the start of the mitigation measures so that those measures will be effective by the time the project’s VMT impacts are occurring.

Provide a timeline for monitoring of the success/failure of the mitigation measures and identify measures to mitigate failure (Provide a Plan B).

Identify performance criteria that can be followed by the public and decision makers and show that these criteria are being followed by Caltrans.

Caltrans needs to follow their own guidelines in mitigating for VMT impacts.

Please explain how Caltrans arrived at the stated 80 percent reduction in VMT increase due to the measures in the Comprehensive Corridor Management Plan.

The Comprehensive Corridor Management Plan needs to be finalized and made available to the public and decision makers for review. This has to be done with the recirculation of the Draft EIR/EA to receive proper input. This should be done for full disclosure and to show that Caltrans Districts 6, 3 and 10 and the local partners along this corridor agree on a strategy that mitigates for VMT impacts.

It is also requested that all design options for the Paige Avenue Interchange will be designed with pedestrian and bicycle paths on both sides of Paige Avenue to further promote people to walk and ride bicycles in Tulare. In addition, the engineering advantages and disadvantages of the two design options need to be identified and presented in the Recirculated Draft EIR/EA.

This reader suggests that Caltrans creates a system-level mitigation program (state-wide) that would be more effective than individual mitigation measures on a project-by-project level. Climate change is not a local problem but a much wider problem and therefore Caltrans needs to coordinate a state-wide program that reduces effectively VMT and the resulting climate change effects. While funding for each project is being generated locally and the local partners want the money spent in their areas, it would be spent more effectively on large scale projects than on small projects locally. Statewide projects could be implemented prior to VMT increasing projects construction and therefore the benefits of these mitigation measures would be more immediate.

Caltrans dismisses requests to move truck traffic to the rail for minor reasons. Caltrans is a large public organization in California that should shape transportation and move it in the right direction. To state that rail system is a private entity and Caltrans has no influence on this transportation system shows that Caltrans has not understood the dire situation the State, and the world, is in with climate change. Caltrans HQ and District 6 need to prepare a plan on how truck traffic can be moved to the rail system. It appears that Caltrans does not want to implement changes to the transportation system but keep the status quo. Railroads are roughly four times more fuel efficient than trucks. Shipping freight via rail limits greenhouse gas emissions and increases fuel efficiency, reducing the transportation carbon footprint.

Act now; prepare a plan on how the switch from truck to rail can be accomplished.

Caltrans' efforts to respond to these concerns and recirculate the Draft EIR/EA are much appreciated.

Sincerely, Juergen Vespermann

Caltrans Response to Juergen Vespermann: Thank you for your comments. Your comments have been reproduced below, with a Caltrans response provided after each comment.

Comment 1.1. Limited Duration

The Draft EIR/EA proposes to provide funding to the local transit agencies to run and/or increase ridership for a limited time of 5 years. However, CEQA does not identify that temporary funding (2 years and 5 years) is acceptable to mitigate a permanent impact that will exist as long as the SR 99 is being used. Caltrans proposes mitigation that could potentially be eliminated by the local agency and at that point mitigation for continuing impacts would stop. But either way, VMT impacts of this project will not stop after 2 years or 5 years, they will impact the life of Californians as long as cars will be on the road that is being built. Please explain, why Caltrans believes temporary mitigation measures suffice for permanent and continuing impacts.

Response to Comment 1.1 **(Caltrans Funding of VMT Mitigation Designed to Induce Long-Term Public Transportation Use):** Public transit operates based on public need and demand. The five-year funding will allow the transit agencies to build demand to meet route performance measures such as 10 to 12 passengers per trip. Route data are analyzed every year by the transit operator to determine if they are operating effectively and efficiently and meeting set performance measures. Every three years, the Metropolitan Planning Organization will audit the transit agency's ability to meet set performance measures and determine if performance measures need to be modified. Typically, new routes or expansions are exempt from meeting these performance measures for the first two years of operations, including farebox recovery percentages. State and federal annual funding is based on these performance measures, and it is expected that performance measures will be met by the fifth year of the mitigation funding to allow these transit expansions to continue. Caltrans identified feasible mitigation that collectively could avoid or reduce impacts to less than significant. The success of some mitigation measures are dependent on the travelling publics habits and preference, therefore they may not reduce significant VMT impacts to a less-than-significant level. Caltrans has prepared and adopted finding and a statement of overriding considerations that justifies the decision to approve the project.

Comment 1.2 Enforcement:

The Draft EIR/EA does not show how the cooperative agreement with the local transit agency can be enforced by Caltrans. There is only mention of a cooperative agreement between Caltrans and Tulare County (or Tulare County Transit?). Will there be reporting compliance requirements and consequences for inaction?

Since Caltrans states in the Draft EIR/EA, that it has no control over off-system mitigation measures, it is unclear from the discussion in the Draft EIR/EA how much power Caltrans has over their local partners to accomplish the mitigation goals. What recourse would Caltrans have if the local partner decided after any number of years (either during the 2-year (van pools) or 5-year (transit) funding cycle or after the 2-year or 5-year funding cycle) to discontinue the routes that Caltrans uses for mitigating still existing VMT impacts? Please explain

Response to Comment 1.2 (Cooperative Agreement Creating Legal Obligation For Expanding Public Transportation): Refer to "Response to Comment 1.1" on the continued funding plan. Cooperative agreements can be used to ensure mitigation measures. (Guideline section 15126.4(a)(2).) The vehicle miles traveled mitigation plan is reliant on our strong partnership with the Tulare County Regional Transit Agency. A Cooperative Agreement is a legal document that sets forth the parties' obligations, and consequences /legal repercussions in the unlikely event of default. There is strong incentive and substantial evidence for presuming Tulare County will abide by the terms of a Cooperative Agreement and continue with the added public transit after the Caltrans funding ceases. State and federal annual funding is based on these performance measures, and it is expected that performance measures will be met by the fifth year of the mitigation funding to allow these transit expansions to continue.

Off system mitigation would require cooperation with those jurisdictions that have influence or control of transportation systems outside of Caltrans control. Caltrans would enter into Cooperative Agreements with local partners to complete the proposed mitigation strategies. In Chapter 3, Section 3.2.17, Caltrans acknowledged the impacts from induced vehicle miles traveled and is prepared for the possibility of an unforeseen event that would prevent the mitigation from being completed.

The cooperative agreement will require the local implementing agency to report on the success of the mitigation and to provide adaptive management strategies if feasible.

Comment 1.3. Transit or Carpool Market Analysis

It is assumed in the Draft EIR/EA for the VMT mitigation measures that the rural population in Tulare County is open to switching from personal vehicles to a vanpool or to the additional bus routes/frequency listed. How was this openness to switching determined? What is Caltrans' plan if this switch will not occur, and the population continues to drive their personal vehicles? What will Caltrans do to mitigate VMT if the bus routes and the vanpools remain unused or underused? What are the thresholds for success and failure? Please explain

Response to Comment 1.3 (Promoting Further Public Willingness to Use Public Transit): Public openness to using public transportation instead vehicle use was based on Transit Agency information. Making decisions about transit routes, frequency, and bus stop locations are all part of the transit planning process, and thus not all specific details of this mitigation measure are practical or feasible until after project approval. (CEQA Guidelines section 15126.4(a)(B).) This process takes into account not only short-term forecasts but also long-term predictions while combining current ridership statistics and geographic and demographic data to optimize existing routes and identify the need for new routes or stops. Part of this process is annually soliciting comments from the public about transit needs. Fixed-route buses typically serve corridors connecting residential areas with areas of employment, shopping, education, and medical services, as well as municipal and government offices, and often connect to transit hubs or other transportation centers.

Specific performance standards the mitigation will achieve are accounted for because, as required by the California Transportation Development Act, transit agencies must establish goals and track and record the following five performance standards:

1. operating cost per passenger
2. operating cost per vehicle service hour
3. passengers per vehicle service hour
4. passenger per vehicle service mile
5. vehicle service hours per employee.

Every three years, transit agencies undergo an independent performance audit. These audits are designed to be an independent and objective evaluation of the transit operators' achievement of meeting the established goals, operating efficiently and effectively, and assuring legislative and governing bodies, as well as the public, that resources are being economically and efficiently used.

Transit agencies have demonstrated a need for bus routes through the transit planning process and will be independently audited every three years based on regulatory requirements on five key performance standards and farebox recovery.

In addition, Caltrans Districts 6, 10, and 3 will collaborate with local agencies in the San Joaquin Valley to prepare a Comprehensive Multimodal Corridor Plan for State Route 99 through the Valley. The Comprehensive Multimodal Corridor Plan will include the prioritization of identifying managed-lane and mode shift opportunities in the corridor that will lead to reduced VMT (refer to Comment 2.1 for additional information on the Comprehensive Multimodal Corridor Plan).

The goal is to fully mitigate the induced vehicle miles traveled. If bus routes or vanpools are not used, then adaptive management strategies would be applied to meet the Department's goal to fully mitigate. There is a possibility that, despite all efforts, full mitigation would not be possible; therefore, induced vehicle miles traveled was identified as a Significant and Unavoidable impact, Findings and a Statement of Overriding Considerations has been prepared.

Comment 1.4. Success Criteria

In addition, it is not clear how Caltrans will measure the success of the mitigation even during these five years of funding. Caltrans does not identify in the Draft EIR/EA how each program/mitigation measure will be monitored by Caltrans. What are the measures/thresholds of success (performance criteria)? What are the measures/thresholds of failure? According to Caltrans' own guidance, "mitigation is memorialized in an environmental document, where it must meet CEQA standards for additionality – the need for mitigation must be caused by the project – and be enforceable – the mitigation must be firmly committed to by the relevant parties." Please explain.

How these mitigation measures are enforceable and measurable by Caltrans has not been clearly formulated in the Draft EIR/EA and therefore can't be reviewed by the public and decision makers. Caltrans can't be held accountable to the measures proposed in the Draft EIR/EA by the public or decision makers. Please provide this information when you recirculate the Draft EIR/EA.

Response to Comment 1.4: Refer to the responses to Comment 1.1 and Comment 1.2.

Comment 1.5. Timeline/Schedule

What is the timeline for these mitigation measures? No timeline was identified in the Draft EIR/EA.

I suggest implementing the local transit mitigation measures prior to construction of the project to have the program running and monitored when the VMT increase actually occurs, rather than after the opening of the additional lanes. The mitigation funding can be programmed prior to construction of the project if Caltrans applies some flexibility. Please provide explanation and the schedule and funding logic.

Response to Comment 1.5 (Cooperative Agreements Prior to Increased VMT): The cooperative agreements between Caltrans and the transit agencies will be signed before construction and will be implemented when the project is open to traffic. There will not be an immediate increase in vehicle miles traveled; it will gradually increase over time (Source: Calculating and Forecasting Inducted Vehicle Miles of Travel Resulting from Highway Projects: Findings and Recommendations from an Expert Panel, September 2020).

Comment 1.6. VMT Mitigation Only 2 Percent Of Project Cost

According to Caltrans' own guidance, the passage of SB 743 (Steinberg, 2013), vehicle miles traveled (VMT) became a metric for determining transportation impacts under the California Environmental Quality Act (CEQA). The current project cost have been identified in the environmental document as $230,143,000. Caltrans has determined in their guidelines and policies that VMT is an important issue yet commits only $4,682,000 to VMT mitigation for this project. Considering the importance Caltrans and the Governor's Office of Planning and Research put onto this environmental issue, allocating a mere 2 percent of the project cost to VMT mitigation and limiting this mitigation to 5 years is contradictory to the voiced importance the Governor puts onto this climate change issue. This monetary mitigation commitment should be increased to at least 10 percent of the project cost to provide more effective mitigation measures and to show that Caltrans/District 6 is serious about minimizing transportation impacts on climate change and avoiding VMT increases on the highway system. Please explain.

Response to Comment 1.6 (Mitigation Effectiveness is not Measured by Percentage of Project Cost): Caltrans evaluated the project impacts and developed a mitigation strategy based on those impacts. Caltrans prepared the cost estimates based on the mitigation outlined in Section 2.1.9 and the ability of those strategies to fully mitigate vehicle miles traveled. Caltrans did not have a prescribed goal to expend a specific percentage or amount of funds. The percentage of the project's total costs used for mitigation does not determine the adequacy and usefulness of the mitigation measures proposed.

Comment 2.1. Incomplete Plan

Caltrans proposes a Comprehensive Corridor Management Plan as an additional mitigation measure for VMT, yet no details are known at this point

or were provided to the public in this Draft EIR/EA. Again, Caltrans can't be held accountable to their proposal and decision makers and the public won't know if this Comprehensive Management Plan will affect California residents and if so, how. Please provide this information in your updated Draft EIR/EA and explain. Please recirculate the environmental document so the public can review the lacking information you will provide.

Response to Comment 2.1(Time Line for Additional VMT Mitigation Measures): Caltrans districts 3, 6, and 10 are collaborating with the local agencies in the San Joaquin Valley to prepare a Comprehensive Multimodal Corridor Plan for State Route 99. Through the State Planning and Research program, funding was awarded to the Districts in March of 2022, Caltrans awarded a contract to a qualified consultants to lead the multi-district efforts. The State Planning and Research contract is scheduled to be initiated in the summer of 2023 and completed by 2025. The Comprehensive Multimodal Corridor Plan will include the prioritization of identifying managed lane and mode shift opportunities in the corridor that will lead to reduced vehicle miles traveled. The scope of work for the Comprehensive Multimodal Corridor Plan requires both a long-term vision of the corridor as a managed lane and alternative fuel corridor and a phased approach for implementing the vision. Implementation strategies identified in the phasing plan will require formal initiation of projects and environmental studies. Lane management recommendations are included in the Comprehensive Multimodal Corridor Plan contract scope of work as an early deliverable to be developed in more detail and provided by the consultant no later than December 31, 2023, with a managed lane corridor implementation plan due no later than the 19th month of the contract January 2025.

Among the considerations by the consultant for inclusion in the lane management strategy will be truck-only lanes and tolling lanes, with the latter also a key component of State Carbon Reduction Program-funded improvements anticipated to be amended into the 2022 State Highway Operations and Protection Program at the California Transportation Commission's December 2023 meeting.

Comment 2.2. Deferring Mitigation to Final Environmental Document

It appears that in this case, Caltrans is using non-specific mitigation measures to determine a specific reduction in VMT impacts without giving the public the opportunity to review. Stating that the lane management strategy will be in place for the Final EIR/EA, is implementing a mitigation proposal without public input. In addition, stating that this mitigation measure will reduce VMT impacts by 80 percent without providing any details seems a glorified guess. According to Caltrans' own guidance, mitigation measures… "most relevant to this guide, it must be quantifiable and effective at reducing VMT." That is not supported by any information in the Draft EIR/EA. Please explain.

Response to Comment 2.2 (Lane Management Strategy Mitigation Measure): The contract scope for the Comprehensive Multimodal Corridor Plan includes a Public Engagement Plan that is currently in development. Caltrans anticipates public outreach and engagement to begin in January 2024 once the development of the Public Engagement Plan is finalized.

Caltrans said the vehicle miles traveled-reducing managed lane strategies could eliminate 80 percent of the vehicle miles traveled. Currently, there are two general purpose lanes and assigning the third lane as a truck only lane won't increase general lane purpose capacity.

Comment 2.3. Input and Buy-In on the Plan

It is also not clear to the reader if this Comprehensive Corridor Management Plan will be finalized in its entirety or in steps. Does this include buy-in from the three mentioned districts (Districts 6, 10 and 3) and all the cities and counties along the SR 99 between Bakersfield and Sacramento? Will the public be able to comment as well? Please explain.

Response to Comment 2.3(Strategies and Implementation of Comprehensive Multimodal Corridor Plan): The Comprehensive Multimodal Corridor Plan for vehicle miles traveled reducing lane strategies will be completed in two parts, one being that the consultants will provide a recommended set of solutions (projects, concepts, and strategies), including managed lane strategies, by June 2024, and the other part being a plan for implementation of the aforementioned strategies on State Route 99 by January 2025. The final Comprehensive Multimodal Corridor Plan is anticipated to be completed by June 2025. As mentioned in the previous response, the contract scope includes a public engagement plan that is currently in development. Caltrans expects public outreach and engagement to start in January 2024.

Comment 3.1. Incomplete Analysis

According to the Draft EIR/EA, Options 1, 2, and 3 of the Paige Avenue Interchange are viable design options (alternatives) until District 6 Traffic Operations completes its evaluation to determine and recommend the option with the better overall performance rating. That rating, combined with cost and safety, will be the sole criteria for selecting the preferred option, according to the Draft EIR/EA. The environmental impacts are the same for Options 1, 2, and 3. A decision is expected after the circulation of the Draft Environmental Document and will be detailed in the Final EIR/EA.

Why does Caltrans circulate the environmental document with three design options for the Paige Avenue interchange, even though it is not clear what the ratings for each option will be? It appears that Caltrans rushed the public circulation of the Draft EIR/EA and didn't have the time to complete such an

important document that will determine the future look and operation of a vital interchange. Does Caltrans not value public input? It does seem clear that no matter what comments the public will have on the Paige Avenue Interchange design, Caltrans will only use the ratings of the Traffic Operations Branch to determine the option most viable. This is misleading the public.

The rating by the Traffic Operations Branch should have been determined prior to the circulation of the Draft EIR/EA, so the public is informed about the decision and is not mislead into believing that the public's opinion on the design of the Paige Avenue Interchange matters. It appears as if the public can choose between three options, yet in reality, Caltrans will make the decision based on the rating and therefore dismissing potential public input. This rating should have been completed prior to the circulation of the Draft EIR/EA to inform the public of the decision. Please explain why this traffic operations analysis (or potion of it) was not completed prior to public circulation.

Response to Comment 3.1 (Public Comments and Design Options): This comment is in reference to the first circulation period of the Draft Environmental Document. Since then, the recirculated draft environmental document has been revised to eliminate option three from further consideration.

Caltrans values input from the public. Public participation adds valuable insight into pros and cons to design options and features. Changes to design or features based on public input received during the circulation period are under further consideration. Caltrans designs are based on engineering standards.

Comment 3.2. Mis-labeled

It appears that the design options were mislabeled (Page 28), this reader assumes that Option 1 is meant in the first paragraph (Option 1—Three Roundabouts configuration with Paige Avenue overcrossing bridge With Option 2, the northbound and southbound ramps would connect into one larger roundabout at the Paige Avenue overcrossing bridge.) and Option 2 in the second paragraph (Option 2—Four Roundabouts configuration with Paige Avenue overcrossing bridge With Option 1, the ramps would begin at two separate circular roundabouts built on the east side and west side of the State Route 99 freeway.) and therefore Option 2 would only have a shared pedestrian and bicycle path on the south side while Option 1 has the path on both sides. Is that correct?

Response to Comment 3.2 (Corrected Mis-labeled Design Option in First Draft Environmental Impact Report): This comment is in reference to the first circulation period of the Draft Environmental Document. Since then, the

recirculated environmental document has been revised to correct the mislabeling of the design options (refer to Section 2.1.9).

Comment 3.3. Design Options

"Option 1—Three Roundabouts configuration with Paige Avenue overcrossing bridge With Option 2, the northbound and southbound ramps would connect into one larger roundabout at the Paige Avenue overcrossing bridge.... A 10-foot-wide paved path for shared pedestrian and bicycle use would be placed on both sides of Paige Avenue, between Blackstone Street and Laspina Street."

"Option 2—Four Roundabouts configuration with Paige Avenue overcrossing bridge With Option 1, the ramps would begin at two separate circular roundabouts built on the east side and west side of the State Route 99 freeway……With this option, a 10-foot-wide paved path for shared pedestrians and bicycles would be placed only on the south side of Paige Avenue."

"Option 3—Four Roundabout configuration with Paige Avenue undercrossing bridge With Option 3, Paige Avenue would cross under State Route 99 and State Route 99 would pass over Paige Avenue on a new constructed bridge. A newly formed embankment on State Route 99 would raise the profile of the freeway to the new bridge structure. The four-roundabout configuration would be similar to option 1, except that the two roundabouts adjacent to the State Route 99 bridge would be located on ground level instead of on embankments. The benefits of this option would have the pedestrian and bicycle facilities crossing State Route 99 on ground level and lower levels of emissions for vehicles using the interchange ramps. The option would have a smaller project footprint compared to options 1 and 2."

It is not clear to the reader if Option 3 will have a pedestrian and bicycle path on both sides of Paige Avenue or only on one side. No argument is being presented why Option 2 is proposed with a path only on one side. Considering that Caltrans stresses the promotion of non-vehicular traffic, it seems against Caltrans policy not to provide paths on both sides of Paige Avenue and therefore encouraging pedestrian and bicycle traffic. Why does Caltrans fail to disclose this clearly, and why do some of the options have a pedestrian and bicycle path only on one side? Please explain the rationale.

Response to Comment 3.3 (Clarification of Design Option 2 and Eliminated Design Option 3): This comment is in reference to the first circulation period of the Draft Environmental Document. Since then, the recirculated draft environmental document has been revised to eliminate Option 3 from further consideration. The Recirculated Draft Environmental Document corrected the description of the bicycle and pedestrian path for option 2. The two design options included a bicycle and pedestrian path on

either side of Paige Avenue between Blackstone Street and Laspina Street and around the roundabouts (refer to Section 1.4).

Comment 3.4. Contradiction

Page 77 of the EIR states that “A 10-foot-wide paved shared path for pedestrians and bicycles would be placed around all the roundabouts and on both sides of Paige Avenue between Blackstone Avenue and Laspina Street.” This paragraph states that all design options would have a shared path on both sides of Paige Avenue. It seems that this information is contradictory to the information provided in Chapter 1, which states that this is not true for Option 2. Please correct or clarify.

Response to Comment 3.4 (Correction of Ambiguity in First Draft Environmental Impact Report on Option 2): This comment is in reference to the first circulation period of the Draft Environmental Document. Since then, the recirculated draft environmental document has been revised to correct the description of the bicycle and pedestrian path for option 2. The two design options included a bicycle and pedestrian path on either side of Paige Avenue between Blackstone Street and Laspina Street and around the roundabouts (refer to Section 1.4).

Comment 3.5. According to page 27 of the Draft EIR

“Unique Features of Paige Avenue Roundabout Design Options

Options 1 and 2 are under consideration for ramp intersections, and one will be finalized based on public comment. The environmental impacts are the same for options 1 and 2. A decision is expected after the circulation of the Draft Environmental Document and will be detailed in the final environmental document.”

No information was provided about the engineering advantages and disadvantages of the two options for the Paige Avenue Interchange. The public and decision makers have to be made aware of the environmental AND engineering reasons for an alternative or design option. Yet, the only information provided for the two design options are environmental impacts and the Draft EIR/EA states that they are equal. Yet, you state, that the selection for one of the two design options will be made “based on public comment.” Since no detailed information was provided for these two options, I anticipate that Caltrans will not receive any comments from the public. Is this intended or why was no information provided? Please provide this information to the public and decision makers prior to finalizing the environmental document.

The EIR serves as a public disclosure document explaining the effects of the project on the environment, alternatives to the project, and ways to minimize adverse effects and to increase beneficial effects. As a result of information in

the EIR, the Lead Agency should establish requirements or conditions on project design, construction, or operation in order to protect or enhance the environment

Response to Comment 3.5 (Elevated and Undercrossing Similar Design Options): The two design options are similar in that both have four roundabouts proposed at the Paige Avenue Interchange. The only difference between the two options would be that Paige Avenue is elevated over State Route 99 for Option 2. The advantages of the elevated option were mentioned, and the design of the roundabouts is discussed in Chapter 1 of the environmental impact report. Caltrans had a public meeting and a comment period on the Recirculated Draft Environmental Impact report, during which the public had the opportunity to ask questions regarding the design options.

Comment 4. Logical Termini

Please provide a comparison of the truck volumes and total traffic volumes at the southern limits of the projects and the four-lane section south of this project to clearly identify that true “logical termini” exist at the south end of the project. According to the arguments made in the Draft EIR/EA, a clear drop in the volumes should be visible.

Response to Comment 4 (Comparison Justifying Southern Logical Termini): The Table below shows a comparison of the annual average daily traffic and truck volumes for existing year 2018 and the associated interchanges at the southern limits of the project from post mile 25.2 to 30.6. The truck volume numbers were calculated by taking 27.6 percent of the traffic volume. At post mile 30.6, there are 61,828 annual average daily traffic. Thus, in the southern direction of traffic travel, this number decreases to 56,100 at post mile 25.2. The same is true for the truck volume, which has 16,792 and decreases to 15,236.

Project Limits Post Miles (25.2 to 30.6)	Annual Average Daily Traffic Existing Year 2018	Annual Average Daily Traffic Existing Year 2018 for Trucks
Mainline State Route 99	61,828	16,792
Prosperity Avenue	56,226	15,270
Mainline State Route 99	65,496	17,788
Tulare Avenue Interchange	59,162	16,068
Mainline State Route 99	62,640	17,013
Bardsley Avenue Interchange	54,300	14,747
Mainline State Route 99	57,670	15,663
Paige Avenue Interchange	49,870	13,544
Mainline State Route 99	56,170	15,255
Rankin Road Drive Interchange (Avenue 200)	54,250	14,734
Mainline State Route 99	56,100	15,236

This table has been added to the final environmental document; refer to Logical Termini and Independent Utility in Chapter 1, Section 1.2.2.

Comment Card from Marc Mondell

Comment 1:

It's our understanding that it has been in the state adopted plan for decades to widen Hwy 99 to 6 lanes for its full extent. This is a promise that was made to the citizens of Tulare and the state. How can Caltrans now consider going back on that promise.

Response to Comment 1: Thank you for your comment.

Comment Card from Kevin Mooney

Comment 1:

For many years we have waited patiently for a solution to the safety, congestions and access problems that result from the 2-lane restriction on 99 through South Tulare. The current Paige Interchange is deficient in both safety and congestion to the point of severely restricting economically sustainable development, even though other utility access (sewer, power, etc.) would allow it. California has grown considerable since Hwy 99 was built and it is long past time to bring the 2-lane section up to modern safety and congestion and access standards.

Response to Comment 1: Thank you for your comment.

Comment Card from Jose Munoz, Tulare Irrigation District

Comment 1:

Tulare Irrigation District has not been given sufficient information to speak on any current designs. Our previous engineer has engaged w/ the design team but we have not been made aware of any changes. Please contact Aaron Fultuda for further design comments.

Response to Comment 1: Thank you for your comment. Caltrans will coordinate with the Tulare Irrigation District on the design of the Tulare Canal during the final design phase of the project.

Comment Card from Mary Hightower

Comment 1:

How will this project improve the living conditions of the residents in Matheney Tract.

Response to Comment 1: Thank you for your comment. Caltrans traffic studies have shown the project is needed to address the worsening traffic conditions. All the intersections at the Paige Avenue Interchange are predicted to deteriorate to an unacceptable Level of Service by 2047 if the No-Build Alternative is selected and improvements to the interchange are not made. The improved operations will reduce truck idling and reduce out-of-direction travel, leading to improvements in air quality over the existing interchange.

Comment from Omar Halim

Comment 1:

I came here today to determine what impact this project will have on my business listed above. We have already dealt with the overpass (Ave 200) being re-constructed a few years ago, which has a major impact on my business. I am concerned that this improvement would hinder my business far greater. Concerned business owner.

Response to Comment 1: Thank you for your comment. There will be no relocation of the Chevron gas station on Avenue 200 and State Route 99. Caltrans will make improvements at the Paige Avenue Interchange and also widen State Route 99 from four lanes to six lanes within Caltrans' existing right-of-way.

Comment Card from Yolanda Garcia

Comment 1:

I saw your project and I like the project on sheet.

Response to Comment 1: Thank you for your comment.

Comment Card from Sara N. Salas

Comment 1:

As a resident of Tulare for many years, I think I speak for many of Tulare when I say that we are opposed to this project. As it will without a doubt increase air pollution through vehicle emissions. The safety measures do not include Matheny Tract, I believe that this air pollutions with other noxious gases will affect our community. Studies through NIEHS confirm that pollution will greatly put our citizens at risk for: cancer, cardiovascular disease, respiratory disease, pulmonary disease, alzheimer's disease as well as neurological disorders.

Response to Comment 1: Thank you for your comment. The purpose of the project is to improve traffic operations at the existing Paige Avenue Interchange by adding roundabouts and widening State Route 99 from four lanes to six lanes. The existing Paige Avenue Interchange is not in compliance with current Caltrans design standards. Caltrans traffic studies show the operation and performance of the interchange and State Route 99 would need updating because traffic conditions and the subsequent air quality will continue to worsen if no improvements are made (see Section 2.2.3 Air Quality). The project conforms with the State Implementation Plan in accordance with U.S. Environmental Protection Agency Transportation Conformity Regulations 40 Code of Federal Regulations Part 93, which determines the conformity of transportation plans to the Clean Air Act Section 176(c). According to the conformity determination, the project will not create any new air quality violations.

Comment Card from Juan Diego Martinez

Comment 1:

Take into consideration all the people & kids who live in the mobile home park. I understand this project is good for economy but its not good for environment. A lot of people have asthma & heart conditions. With those $200 million you can fix roads & bike lanes. If you chose to go through w/ project please relocate us. We live in the valley, pollution will stay in our communities.

Response to Comment 1: Thank you for your comment. The purpose of the project is to improve traffic operations at the existing Paige Avenue Interchange by adding roundabouts and widening State Route 99 from four lanes to six lanes. The existing Paige Avenue Interchange is not in compliance with current Caltrans design standards. Caltrans traffic studies show the operation and performance of the interchange and State Route 99 would need updating because traffic conditions and the subsequent air quality will continue to worsen if no improvements are made (see Section 2.2.3, Air Quality). The project conforms with the State Implementation Plan in accordance with the U.S. Environmental Protection Agency Transportation Conformity Regulations 40 Code of Federal Regulations Part 93, which determines the conformity of transportation plans to the Clean Air Act Section 176(c). According to the conformity determination, the project will not create any new air quality violations.

The project does not require the relocation of residential homes.

Comment Card from Susan Duyst

Comment 1:

This is going to severely affect our property at 1120 E Paige Ave. It could possibly put us out of business.

Response to Comment 1: Thank you for your comment. Caltrans proposes to acquire property at 1120 East Paige Avenue due to the realignment of the Tulare Canal. The final decision on the proposed two variation options (discussed in Section 1.4.1) will depend on Tulare Irrigation District's requirements and Caltrans design feasibility. The final decision would be made during the Plans, Specifications, and Estimates phase, which will follow the final environmental document.

Caltrans will work with affected businesses through the relocation assistance program outlined in Appendix C. In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the U.S. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are "decent, safe, and sanitary." Nonresidential displacees will receive information on comparable properties for lease or purchase (for business, farm, and nonprofit organization relocation services).

Comment Card from Steve Duyst

Comment 1:

The location of the canal is a problem reconsider another option.

Responses to Comment 1: Thank you for your comment. The final decision on the proposed two variation options (discussed in Section 1.4.1) will depend on Tulare Irrigation District's requirements and Caltrans design feasibility. The final decision will be made during the Plans, Specifications, and Estimates phase, which will follow the final environmental document.

Comment Card from Unknown

Comment 1:

Can we think about making the roundabouts beautiful? Perhaps offer the space in the middle to the County Arts Council to commission statues or mural panels. Traditionally American are afraid of roundabouts-having them be artful could help the transition.

Responses to Comment 1: Thank you for your comment. Aesthetic treatments will be added to the roundabouts, and the City of Tulare will have the final decision on the design.

Comment from Rosalinda Alexander, Representing Assemblyman Mathis

Comment 1:

The office of Assemblyman Mathis is in full support of the project. We are here to help support and help in any way we can.

Responses to Comment 1: Thank you for your comment.

Comment Card from Joseph Cortez

Comment 1:

As a longtime transportation safety manager and previous truck driver with more than 2 million safe miles driven. I am in support of the SR 99 widening and reconfiguration of Paige. This is much needed for safety of goods movement, residents, and travelers. We feed the world out of this region and deserve to have the safest roads to do so. Move this project forward as planned. Thank you.

Response to Comment 1: Thank you for your comment.

Comment Card from Lucio Meza received in Spanish

Comment 1:

La comunidad de Matheny Tract no va a beneficiar con nada. Deben de proteger a la comunidad. Me da preocupación que no protejan a la comunidad. Les pido cambien de zona el área alrededor de Matheny.

Comment was translated into English: The community of Matheny Tract will not benefit from this at all. They must protect the community. It worries me that the community would not be protected. I ask for the relocation of the zone to be around Matheny.

Response to Comment 1: Thank you for your comment. Caltrans traffic studies have shown the project is needed to address the worsening traffic conditions. All the intersections at the Paige Avenue Interchange are predicted to deteriorate to an unacceptable Level of Service by 2047 if the No-Build Alternative is selected and improvements to the interchange are not made.

Local cities and counties have legal authority to designate zoning and approve development within their local jurisdictions. Your comment was forwarded to the Tulare County Resource Management Agency.

Comment Card from Jose Luis Ramirez received in Spanish

Comment 1:

Yo pienso que va a quitarnos la tranquilidad. Pienso que estaría bien que primero compongan las calles y hagan banquetas para caminar y el drenaje y luego empezar con el proyecto. Nosotros quisiéramos que tomaran en cuenta nuestros comentarios para poder quedar tranquilos.

Comment was translated into English: I believe that this will disturb our peace. I believe it would be best if they fix the roads, build sidewalks, fix the sewers systems, and then continue with the project. We would like our comments to be considered so that we could live in peace.

Response to Comment 1: Thank you for your comment. Local cities and counties have legal authority to maintain roads, sewer services, and streetlights under their local jurisdiction. The Tulare County Resource Management Agency offers residents the opportunity to submit requests to report problems and concerns with county-maintained roads online at https://tularecounty.ca.gov/rma/public-works/roads/report-a-problem/. Your comment was forwarded to the Tulare County Resource Management Agency.

Comment Card from Gerardo A. Salas received in Spanish

Comment 1:

Como residente de Tulare, creo que hablo por la mayoría de su/la población de Matheny Tract cuando digo que oponemos este proyecto. Sin duda aumentara la contaminación del aire a través de las emisiones de los vehículos. Las medidas de seguridad no incluyen a Matheny Tract y esta contaminación del aire con otros gases nocivos afectara a nuestra comunidad. Los estudios a través de NIEHS tocante contaminación de aire vienen con riesgos como: cáncer, enfermedades cardiovasculares, respiratorias, enfermedades pulmonares, e incluso Alzheimer y trastornos neurológicos.

Comment was translated into English: As a Tulare resident, I believe I speak for the majority of the population in Matheny Tract when I say that we oppose this project. Without doubt, this would increase air pollution through vehicles. The safety measure does not include/apply to Matheny Tract, and the air pollution due these toxic gases will affect our community. Studies by NIEHS regarding air pollution suggest that people could be at risk of developing health problems such as: cancer, cardiovascular diseases, respiratory diseases, lung diseases, as well as Alzheimer's and neurological disorders.

Response to Comment 1: Thank you for your comment. The purpose of the project is to improve traffic operations at the existing Paige Avenue Interchange by adding roundabouts and widening State Route 99 from four lanes to six lanes. The existing Paige Avenue Interchange is not in compliance with current Caltrans design standards. Caltrans traffic studies show the operation and performance of the interchange and State Route 99 need updating now because traffic conditions and the subsequent air quality will continue to worsen if no improvements are made (see Section 2.2.3 Air Quality). The project conforms with the State Implementation Plan in accordance with U.S. Environmental Protection Agency Transportation Conformity Regulations 40 Code of Federal Regulations Part 93, which determines the conformity of transportation plans to the Clean Air Act Section 176(c). According to the conformity determination, the project will not create new air quality violations.

Comment Card from Emma de la Torre received in Spanish

Comment 1:

La preocupación para nosotros en la comunidad de Matheny Tract es el cambio, el incremento de tráfico, de contaminación, y la destrucción de las carreteras. Me gustaría saber cuáles serían las mejoras para nuestra comunidad. Hemos esperado por muchos años mejoras para nuestra comunidad, pero no hemos visto nada. Necesitamos banquetas, drenaje, mejores carreteras, iluminar las calles, o crear algún parque para la recreación de los niños.

Comment was translated into English: The concern for us in the community of Matheny Tract is the change that will happen, the traffic increase, pollution increase, and the destruction of the roads. I would like to know what the improvement/benefits are for our community. We've beem waiting many years for improvements to our community, but we have not seen anything. We need sidewalks, drainage, better roads, light up the streets or create a new playground for the children for recreational activities.

Response to Comment 1: Thank you for your comment. The purpose of the project is to improve traffic operations at the existing Paige Avenue Interchange by adding roundabouts and widening State Route 99 from four lanes to six lanes. The existing Paige Avenue Interchange is not in compliance with current Caltrans design standards. Caltrans traffic studies show the operation and performance of the interchange and State Route 99 need updating now because traffic conditions and the subsequent air quality will continue to worsen if no improvements are made (see Section 2.2.3 Air Quality). The project conforms with the State Implementation Plan in accordance with the U.S. Environmental Protection Agency Transportation Conformity Regulations 40 Code of Federal Regulations Part 93, which determines the conformity of transportation plans to the Clean Air Act Section 176(c). According to the conformity determination, the project will not create new air quality violations.

Local cities and counties have legal authority to maintain roads, sewer services, and streetlights under their local jurisdiction. The Tulare County Resource Management Agency offers residents the opportunity to submit requests to report problems and concerns with county-maintained roads online at https://tularecounty.ca.gov/rma/public-works/roads/report-a-problem/. Your comment was forwarded to the Tulare County Resource Management Agency.

Comment Card from Norma Marquez received in Spanish

Comment 1:

Este proyecto me afectara a mí y a 120 personas que viven en esta comunidad. Ahorita el ruido y la vibración del tren afectan mucho. Casi todos sufrimos de alergias u otras enfermedades. Este proyecto contaminaría más y afectaría más con los semis y zona industrial. Yo les pido que nos reubiquen de casa a una área limpia y sana y hagan algo para mitigar los efectos de la contaminación. No es justo, no sean inconsiderados. Vean todos los efectos del proyecto. Viven muchos niños en esta comunidad.

Comment was translated into English: This project will affect me and 120 other people that live in this community. Currently the noise and the vibration from the train affects us significantly. Almost everyone in this community suffers from different allergies or other health problems. This project would pollute even more because of the semitrucks and the industrial zones. I ask you to relocate us from our homes to a safe and cleaner zone and for you to do something in order to mitigate the effect of pollution. It is not fair, don't be inconsiderate. Look at all the effects that this project will create. A lot of kids live in this community.

Response to Comment 1: Thank you for your comment. The purpose of the project is to improve traffic operations at the existing Paige Avenue Interchange by adding roundabouts and widening State Route 99 from four lanes to six lanes. The existing Paige Avenue Interchange is not in compliance with current Caltrans design standards. Caltrans traffic studies show the operation and performance of the interchange and State Route 99 need updating now because traffic conditions and the subsequent air quality will continue to worsen if no improvements are made (see Section 2.2.3 Air Quality). The project conforms with the State Implementation Plan in accordance with U.S. Environmental Protection Agency Transportation Conformity Regulations 40 Code of Federal Regulations Part 93, which determines the conformity of transportation plans to the Clean Air Act Section 176(c). According to the conformity determination, the project will not create new air quality violations.

Local cities and counties have legal authority to designate zoning and approve development within their local jurisdictions. Regardless of any future action to add more industrial development in the project vicinity, new interchanges will improve current operations at the interchange. The improved operations will reduce truck idling and reduce out-of-direction travel, leading to improvements in air quality over the existing interchange. See Section 2.2.3, Air Quality, for more information. Relocation of residential homes is not part of this project.

Comment Card from Unknown received in Spanish

Comment 1:

Matheny es un lugar con mucha oportunidad de mejora, como pavimentación, DRENAJE, alumbrado, un parque donde jueguen los niños (la comunidad tiene muchos niños, Palo Verde Tigers). Matheny es un lugar tranquilo, rodeado de acres y algunas calles tranquilas. La idea de su proyecto de “Movilidad Vial” afectaría a nuestra comunidad por el buyicio, trafico, y ruido. La TRANQUILIDAD de la comunidad se vería afectada y quedaríamos rodeados de grandes construcciones. La calidad de vida seria otra (impactando de manera negativa). La contaminación auditiva, visual, de aire seria cosa de todos los días. Ojalá la decisión que tomen sea pensada. También en el impacto ambiental, los 5 años de “beneficio” de bus, no nos beneficiaran. La mayoría usa coche y el autobús que pasa por aquí siempre va vacío, máximo 3 o 4 personas, así que no queremos su “beneficio”.

Comment was translated into English: Matheny is a place with a lot of potential for improvements such as paving, sewer system/drainage, lighting, or a playground for children (there are a lot of children in this community, Palo Verde Tigers). Matheny is a peaceful place, surrounded by acres and peaceful roads. The new idea of “Road Mobility” would affect our community by creating traffic and noise. The communities PEACE would be affected, and we would be surrounded by construction sites. Our quality of life would be impacted in a negative way. Noise, visual and air pollution would be an everyday thing. Hopefully the decision taken would be thought thoroughly. Also, the environmental impact, the 5 years of “benefit” from the buses would not benefit us. The majority of the people use their own vehicle, and the bus that takes this route is always empty, maximum 3 or 4 people, so we don’t want your “benefit.”

Response to Comment 1: Thank you for your comment. The purpose of the project is to improve traffic operations at the existing Paige Avenue Interchange by adding roundabouts and widening State Route 99 from four lanes to six lanes. The existing Paige Avenue Interchange is not in compliance with current Caltrans design standards. Caltrans traffic studies show the operation and performance of the interchange and State Route 99 need updating now because traffic conditions and the subsequent air quality will continue to worsen if no improvements are made (see Section 2.2.3, Air Quality). The project conforms with the State Implementation Plan in accordance with U.S. Environmental Protection Agency Transportation Conformity Regulations 40 Code of Federal Regulations Part 93, which determines the conformity of transportation plans to the Clean Air Act Section 176(c). According to the conformity determination, the project will not create new air quality violations.

Caltrans evaluated the project's noise impacts and proposed three soundwalls at locations where the project noise levels exceed the noise abatement criteria (Section 2.2.5). Caltrans outlines noise control measures that will be implemented during project construction (Section 2.2.5).

The five-year funding will allow the transit agencies to build demand to meet route performance measures such as 10 to 12 passengers per trip. Route data are analyzed every year by the transit operator to determine if routes are operating effectively and efficiently and meeting set performance measures. Every three years, the Metropolitan Planning Organization will audit the transit agency's ability to meet set performance measures and determine if performance measures need to be modified. State and federal annual funding is based on these performance measures, and it is expected that performance measures will be met by the fifth year of the mitigation funding to allow these transit expansions to continue.

Local cities and counties have legal authority for maintaining local roads, sewer services, and

Comment Card from Adolfo Contrera received in Spanish

Comment 1:

1. Mi preocupación es el ambiente
2. El trafico
3. No más industria

Comment was translated into English:

1. My concern is the environment
2. The traffic
3. No more industries

Response to Comment 1: Thank you for your comment. Traffic studies have shown the project is needed to address the worsening traffic conditions. All the intersections at the Paige Avenue Interchange are predicted to deteriorate to an unacceptable Level of Service by 2047 if the No-Build Alternative is selected and improvements to the interchange are not made.

Local cities and counties have legal authority to designate zoning and approve development within their local jurisdictions. Regardless of any future action to add more industrial development in the project vicinity, new interchanges will improve current operations at the interchange. The improved operations will reduce truck idling and reduce out-of-direction travel, leading to improvements in air quality over the existing interchange. See Section 2.2.3, Air Quality, for more information.

Comment Card from Pedro Murillo received in Spanish

Comment 1:

Mi nombre es Pedro. Lo que a mi me concierne el proyecto se ve muy bien. Creo en un próximo futuro se van a ocupar otros carriles extra, pero por ahora se ve muy bien. Buena suerte. Gracias.

Comment was translated into English: My name is Pedro. The project looks good. I believe in the future more lanes will be needed, but for now it looks good. Good luck. Thanks.

Response to Comment 1: Thank you for your interest in the project.

Comment Card from Javier Medina received in Spanish

Comment 1:

Por favor de tomar en cuenta a la comunidad de Matheny Tract. No sigan la industria alrededor de nuestra comunidad. Pongan tiendas o casas, pero no industria. Con este proyecto y el proyecto de la Paige pedimos que monitoreen el aire. Por favor de ayudar la calle porque va a haber mucha congestión de tráfico. Por favor de arreglar la condición de las carreteras K y I y trabajen con el condado para mejorar las carreteras y mantenerla.

Comment was translated into English: Please consider the Matheny Tract community. Do not continue with the industry around our community. Build stores or new houses, but not an industry. With this project and the Paige project, we ask air quality to be monitored. Please help the roads because there would be a lot of vehicle congestion. Please fix the road condition of K and I street. Work with the county to improve the roads and maintain them.

Response to Comment 1: Thank you for your comment. Local cities and counties have legal authority to designate zoning and approve development within their local jurisdictions. Regardless of any future action to add more industrial development in the project vicinity, new interchanges will improve current operations at the interchange. The improved operations will reduce truck idling and reduce out-of-direction travel, leading to improvements in air quality over the existing interchange. See Section 2.2.3, Air Quality, for more information.

Local cities and counties have legal authority to maintain roads. The Tulare County Resource Management Agency offers residents the opportunity to submit requests to report problems and concerns with county-maintained roads online at https://tularecounty.ca.gov/rma/public-works/roads/report-a-problem/. Your comment was forwarded to the Tulare County Resource Management Agency.

Comment Card from Hugo Trujillo received in Spanish

Comment 1:

Soy de la comunidad de Matheny Tract. Me gustaría que tomen en cuenta la preocupación por nuestra comunidad. Vamos a necesitar ayuda con las carreteras y con el impacto ambiental, el flujo de trafico en nuestra comunidad por troques de carga y otros problemas más. Espero que no nos ignoren pues la ciudad de Tulare lo único que quiere es rodearnos de industrias y ustedes les están ayudando con todos estos proyectos. Yo sé que se necesita, pero también quiero que piensen en nosotros.

Comment was translated into English: I am part of the community of Matheny Tract. I would like you to take in to account the concern for our community. We will need help with the roads and the environmental impact, the flow of traffic in our community caused by commercial semitrucks and other problems. I hope that we are not ignored because the city of Tulare wants to surround us with industries, and you are helping them with all this projects. I know it is needed, but I want you to think about us.

Response to Comment 1: Thank you for your comment. Local cities and counties have legal authority to designate zoning and approve development within their local jurisdictions. Regardless of any future action to add more industrial development in the project vicinity, new interchanges will improve current operations at the interchange (see Section 2.1.4 Growth). The improved operations will reduce truck idling and reduce out-of-direction travel.

Comment Card from Susan Henard

Comment 1:

I am in support of this project moving forward as currently proposed. This project will allow traffic to flow smoothly. There will be less accidents. I live 1 mile from Matheny Tract, and I absolutely believe there will be no impact on the Matheny Tract residents. I drive Paige Ave every day to and from work. So once again, I heartly support this project going forward.

Response to Comment 1: Thank you for your support.

Comment Card from Marc Mondell

Comment 1:

Widening of Hwy 99 (Full Extent) and reconstruction of Paige interchange are essential. Matter of statewide significance, safety, access, movement of good in and out.

Response to Comment 1: Thank you for your interest in the project.

Comment Card from Terry A. Syre

Comment 1:

This project is important to Tulare, the Central Valley and all of California. The Valley produces commodities that are shipped worldwide. Having and adequate way to move products to parts is crucial. Promoting Industry and commerce on the 99 corridor will provide revenues and jobs for Tulare County. Economic Development provides growth, providing a healthy and productive system for the residents of Tulare and Tulare Co. the project at Paige Ave will provide safe access for industry traffic as well as for access to the city of Tulare. This project is a win/win project and has my support as the Mayor of Tulare.

Response to Comment 1: Thank you for your support.

Comment Card from Renu Soto

Comment 1:

I have been a resident in Tulare since 1981. I am a State Farm agent and deal with many accidents, some very serious due to congestion in the Tulare County. I believe widening of the 99 as well repaving on Paige would greatly assist in saving lives. Thank you.

Response to Comment 1: Thank you for your support.

Comment from Randy Dodd

Comment 1:

I support this project. I believe that it will improve traffic flow on a very busy 99. It will also create a safer environment by removing the lane merges from 3 to 2 as all as from 2 to 3.

Response to Comment 1: Thank you for your support.

Comment from Eric Coyne, Letter submitted at the Public Meeting

Comment 1:

Dear Secretary Buttigieg.

I am writing to express my strong support for the California Department of Transportation's (Caltrans) $123 million grant application designed to fund the city of Tulare Six-Lane and Paige Avenue Multimodal Interchange Improvement Project.

This project, submitted by Caltrans in partnership with the Tulare County Association of Governments (TCAG), is a critical link for statewide and international good movement along State Route 99- the busiest truck freight corridor within the State of California.

The improvement to the main lanes provides improvements to support public transportation bus service, and the new interchange provides multimodal access across State Route 99 between neighborhoods, commercial and employment centers.

The interchange improvements- reconstructing four hook ramps, adding roundabouts and building wider shared-use paths on both sides of Paige Avenue – will greatly improve transportation safety and will advance equity for surrounding Areas of Persistent Poverty and Historically Disadvantaged Communities.

State Route 99 is primary interregional corridor within California's Central Valley, connecting core cities and surrounding areas of Sacramento, Stockton, Modesto, Merce, Madera, Fresno, Tulare and Bakersfield with the rest of the state and nation. This corridor provides a critical linkage for shipment of agriculture goods to makers outside of the Central Valley via freight trucks and provides for through traffic between California's major seaports and metropolitan areas of California and the greater US West Coast.

The City of Tulare Six-Lane and Paige Avenue Multimodal Interchange Improvement Project aligns with MPDG program criteria by constructing infrastructure that provides national economic benefits, creates living wage jobs, and reduces travel time.

For these reasons I am proud to support the Caltrans $123 million grant application designed to fund the city of Tulare Six Lane and Paige Avenue Multimodal Interchange Improvement Project. Should you have any questions of concerns, please do not hesitate to reach out to my Chief of Staff, Aaron Brieno at aaron.brieno@sen.ca.gov.

Response to Comment 1: Thank you for your support of the project.

Comment Card from Art Van Beek

Comment 1:

When are they going to open up the Tulare-Tipton rest area?? Closed for 3 years!!

Response to Comment 1: Thank you for your comment. The construction of the rest area is not part of this project scope. However, the rest area is expected to open in January 2024.

Comment Card from Evangelist Rosemary Wade

Comment 1:

This project will greatly impact our small community our main road “I” street will be torn up with the heavy traveling of truck having to get off 99 and travel down our main “I” street. They are going it now anyways. I hate to see that day when it starts. But that alright because God got my back and he will not put more on me than I can bear. All things work together in Christ Jesus. You got to have “Jesus” to make it in to God Kingdom Amen!!!

Response to Comment 1: Thank you for your comment. The project will not direct trucks to travel on I Street. The purpose of the project is to improve the existing Paige Avenue Interchange by adding roundabouts and widening State Route 99 from four lanes to six lanes. Without improvements to the interchange, traffic will continue to use local roads such as Blackstone Street to go southbound onto or off the freeway. During construction of the Paige Avenue Interchange, traffic will be directed to use the new interchange at Commercial Avenue by driving south on Blackstone Street to Commercial Avenue.

Comment from Donnette Silva Carter, Tulare Chamber of Commerce. Letter submitted at the public meeting.

Comment 1:

August 10, 2023

The Honorable Pete Buttigieg

Secretary of the United States Department of Transportation 1200 New Jersey Avenue, SE

Washington, DC 20590

Dear Secretary Buttigieg:

The Tulare Chamber of Commerce, representing 675 members with over 12,000 employees in the greater Tulare area, is writing in strong support of the California Department of Transportation's (Caltrans) 2023-2024 Multimodal Project Discretionary Grant (MPDG) Program $123 million funding application for the Tulare Six-Lane and Paige Avenue Multimodal Interchange Improvement Project. The application is being submitted in partnership with the Tulare County Association of Governments (TCAG).

The Project will improve goods movement, create express transit service, and allow for future lane management along a critical interregional corridor, State Route 99, by providing a consistent six-lane cross section. The Project will also reconstruct four hook ramps into a consolidated interchange on Paige Avenue in the City of Tulare, featuring roundabouts at the ramp termini and adjacent local street intersections. Wide shared-use paths will be constructed along both sides of Paige Avenue to improve safety and provide a critical east-west multimodal corridor for users, including the disadvantaged community of Matheny Tract. The improvements allow for greater safety for all accessing the interchange and SR99 for goods movement, resident travel, tourism travelers, etc.

State Route 99 (SR 99) is a primary interregional corridor within California's Central Valley, connecting core cities and surrounding areas of Sacramento, Stockton, Modesto, Merced, Madera, Fresno, Tulare, and Bakersfield with the rest of the state and the nation. The project's corridor provides a critical linkage for shipment of agricultural goods to markets outside of the Central Valley via freight trucks and provides for through traffic between major seaports and metropolitan areas of California and the greater US West Coast.

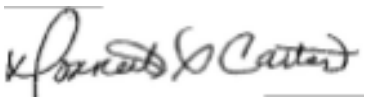
Enhancement of this section of SR 99, which runs through the heart of Tulare County, is needed to improve truck freight mobility and travel time reliability, reserve acceptable facility operation, improve safety, and reduce congestion. The Annual Average Daily Traffic (AADT) for trucks is up to 28 percent within

this corridor as compared with the State average of 9 percent for truck AADT. The proposed 6-lane freeway would improve the flow and travel-time reliability along this segment of SR 99 for current volumes of traffic and provide enough capacity to manage the projected increases to both freight and passenger vehicle volumes.

The project will improve freight, transit, and passenger travel time reliability, ensure a state of good repair, and improve safety for all modes. The Project aligns with MPDG program criteria by constructing infrastructure improvements that will contribute to national economic benefits, create, and foster well-paying jobs, and bolster system reliability and resiliency. Through multimodal improvements, the project will enhance the quality of life and advance equity for surrounding Areas of Persistent Poverty and Historically Disadvantaged Communities.

The Tulare Chamber of Commerce appreciates the opportunity to express its strong support. If you have any further questions, please contact me at donnette@tularechamber.org or 559-686-1547.

Sincerely,



Donnette Silva Carter, IOM

Chief Executive Officer

WE, THE UNDERSIGNED MEMBERS OF THE TULARE CHAMBER OF COMMERCE, SUPPORT THE STATE ROUTE 99 WIDENING PROJECT AND THE RECONFIGURATION OF THE PAIGE AVENUE INTERCHANGE.

Chamber GAC Meeting DATE: 8/14/23

	PRINT NAME	SIGNATURE	COMPANY
1	Frank A Daniels Jr		Frank's Automotive
2	Lucy Van Sayoc		Tulare Joint Union High School District
3	Noemi Schaefers		Chamber Board member
4	Kathy Orgeron		The Collaborating Table
5	Shauna Guerrero		Valley Strong Credit Union
6	Renee Soto		State Farm
7	LeeAnn Hakl		INTERNATIONAL AGRI-CENTER
8	JERRY SMITH		Intra Agriculture Tulare
9	Kevin Mooney		Retired
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WE, THE UNDERSIGNED MEMBERS OF THE TULARE CHAMBER OF COMMERCE, SUPPORT THE STATE ROUTE 99 WIDENING PROJECT AND THE RECONFIGURATION OF THE PAIGE AVENUE INTERCHANGE.

DATE: _____

	PRINT NAME	SIGNATURE	COMPANY
1	Terry A. Sayre	Terry A. Sayre	Self Employed Consultant
2	Patty Rhodes	Patty Rhodes	CSET
3		Marquisa Pickens	—
4	Eric Sustaita		—
5	Tania Gythiel	Tania Gythiel	—
6			—
7	Susan Howard	Susan Howard	—
8	Araceli Espinoza		
9	Cardoso, Alvin		—
10	Armando Apodaca		—
11	Miriam Garcia	Miriam Garcia	—
12	Kevin Nunes		—
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Response to Comment 1: Thank you for your interest in the project.

Comment from Mac Mondell, Comment left with Court Reporter

Comment 1:

And so I'm here tonight representing the City of Tulare, which is fully in support of the proposed expansion and widening of Highway 99 and the reconstruction of the Paige Interchange. We view this project as a completion of what was a prior commitment to the citizens of Tulare and the State of California. This isn't really a widening project per se; this is the completion of what was always intended to be a six-lane roadway. The problem that exists today on Highway 99 is that it's a mishmash of four-lane and six-lane cross sections, and that creates a real safety hazard for those that are driving on Highway 99.

We also believe that the completion of this six-lane cross section is allowing greater access for citizens into our community as well as the movement of goods through our community, to our community, and our agricultural products from our community to the rest of the world. We also believe the reconstruction of the Paige interchange achieves both its goals of improving safety and access as well. So for us, both of these projects are essential, we see them as one project.

Some folks have raised concerns about these projects, like the impact on the environment. And while we recognize that with any progress can come change, and with change sometimes can bring negative impacts, we are committed at the City to work hand in hand with Caltrans to try to address those impacts over time. For example, we know that there has been groups that are focused on the impacts to the Matheny Tract. We don't believe that the impacts to the Matheny Tract are going to be as great as those groups have represented. However, we have reached out to those groups and have met with them already once to talk about how to help them solve the challenges that they see in their community. We've recommended that they annex into the city so that they have a greater voice and that we can also work to expend tax dollars in their community.

We're not able to do that now because they're not in the city limits. Although, we have worked with them in the state and the county to bring them water to their community, we were successful in achieving about a$7 million grant to build a new well that will provide potable water to the community that we're working on right now. And we've also committed to providing them sewer facilities at our sewer treatment plant, but there is some work to do on that area.

So we don't -- we hope that the concerns raised by some individuals don't overshadow the serious and important positive impacts that this project will have on our community and the communities in the Central Valley. And we're committed to doing both, help this project move forward through Caltrans as

well as help to address any of the negative impacts or perceived negative impacts that others may see as far as this project is concerned.

Response to Comment 1: Thank you for your interest in the project.

Comment from Ana Maria Garcia, Comment left with Court Reporter

Comment 1:

The old 14 way, the cars coming in to 99, it's kind of short and there's a lot of car wrecks right there. It keeps happening, because they don't have the distance to get in, and we have vehicles lined up in the canal, so we're fortunate we have the canal to help block the cars from coming in. But the noise is bad already as it is, so we know we need to expand, and we're not crazy and naive that we don't need improvements, we do. But the neighbors, all they were concerned about is the height of that wall to help with the noise. They said the wall could be between 12 and 20 feet. What do I want? The higher the better, the thing is the higher the better, because the smoke of these diesel trucks, it comes our direction from the road, and I think that with the wall -- not just me, my neighbors believe that it's going to keep much of it from coming over. Because the wind direction blows one way, so we always get the smell. But the main thing is I'm not going to be seeing no more wrecks on 99.

We had a lot of people elderly people living on Tamarack, and they're not people that want to move. So yes, I'm happy with the way they made this second presentation, I like the way they plan to do with the bridge and everything, but it's that wall that's going to save the day. The other businesses are going to have a little problem, I know, and I feel sorry for them, but hey, improvements were made.

99 to Tulare, there's a lot of dangerous spots. I've been in Tulare all my life, mostly, and I know. As soon as you come off of the on ramp, into the freeway, there's nowhere to go. And needless to say, some of these drivers, they panic when they're going to go in, and that's what causes wrecks. I know. I go through there, so I know. It's scary.

As a matter of fact, a lot of times, I do the detour, and I go over here to Bardsley to take that entryway or the exit off Bardsley instead of exiting over here to be on my safe side. and thank you very, very much I was going to show you something here I got this.

I'm looking for my neighbors' addresses. They're nice people, there's just a lot of elderly people there, and they don't want to move. Moving is getting more expensive. Well, I think the lady took my list, but that's okay. I had all the people who had written their names and addresses on there.

I estimate I'm representing over ten people, and they all want the tall wall. We don't want to move. We like our little neighborhood.

I'm happy, I'm very happy. I like the improvements from the last hearing we had, I really like the improvements, so thank you people for your time.

Response to Comment 1: Thank you for your comment. The proposed soundwall (identified in the environmental document as Soundwall 4) will provide noise abatement for the 12 residences along Tamarack Avenue. The wall would need to be at least 12 feet high to provide the required attenuation of 5 decibels and meet the required design goal attenuation of 7 decibels. The height recommendation for the proposed soundwall is 12 feet to break the line of sight of an 11.5-foot truck stack.

Comment from the California Department of Fish and Wildlife

Comment 1:

September 15, 2023

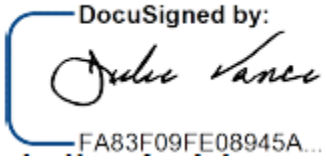
Javier Almaguer
District 6 Environmental Division
California Department of Transportation
2015 East Shields Avenue, Suite 100
Fresno, California 93726

Subject: Tulare Six-Lane and Paige Avenue Interchange Improvement (Project) Recirculated Draft Environmental Impact Report/Environmental Assessment (DEIR/EA), SCH No: 2021040498

Dear Javier Almaguer:

The California Department of Fish and Wildlife (CDFW) received a recirculated DEIR/EA for the above referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.1 CDFW previously submitted comments in response to the DEIR/EA (comment letter provided to Caltrans on May 24, 2023). Because the Biological Resources sections of recirculated DEIR/EA has not changed, CDFW is hereby resubmitting that letter, by attachment, to represent CDFW comments on this recirculated document.

Sincerely,



Julie A. Vance
Regional Manager
Attachment: CDFW Comment Letter on the State Route 99 Tulare City Widening Project Draft Environmental Impact Report/Environmental Assessment

May 24, 2023

Javier Almaguer
District 6 Environmental Division
California Department of Transportation
2015 East Shields Avenue, Suite 100
Fresno, California 93726

**Subject: State Route 99 Tulare City Widening Project (Project)
Draft Environmental Impact Report/Environmental Assessment (DEIR/EA)
SCH No.: 2021040498**

Dear Javier Almaguer:

The California Department of Fish and Wildlife (CDFW) received a DEIR/EA for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife resources. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish and Game Code, section 711.7, subdivision (a) and section 1802; California Public Resources Code, section 21070; CEQA Guidelines, section 15386, subdivision (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of hose species (Fish and Game Code section 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (California Public Resources Code, section 21069; CEQA Guidelines, section 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish and Game Code section 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by

State law of any species protected under the California Endangered Species Act (CESA) (Fish and Game Code section 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

In this role, CDFW is responsible for providing, as available, biological expertise during public agency environmental review efforts (i.e., CEQA), focusing specifically on project activities that have the potential to adversely affect fish and wildlife resources. CDFW provides recommendations to identify potential impacts and possible measures to avoid or reduce those impacts.

Water Pollution: Pursuant to Fish and Game Code section 5650, it is unlawful to deposit in, permit to pass into, or place where it can pass into "Waters of the State" any substance or material deleterious to fish, plant life, or bird life, including non-native species. It is possible that without appropriate mitigation measures, implementation of the Project could result in pollution of Waters of the State from stormwater runoff or construction-related erosion. Potential impacts to the wildlife resources that utilize these watercourses include the following: increased sediment input from road or structure runoff; toxic runoff associated with development activities and implementation; and/or impairment of wildlife movement along riparian corridors. The Regional Water Quality Control Board and United States Army Corps of Engineers also have jurisdiction regarding discharge and pollution to Waters of the State.

Bird Protection: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include, sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Unlisted Species: Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or Federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T, as specified in the CEQA Guidelines, section 15380, CDFW recommends it be fully considered in the environmental analysis for the Project.

PROJECT DESCRIPTION SUMMARY

Proponent: California Department of Transportation (Caltrans)

Objective: Caltrans, in cooperation with the Tulare County Association of Governments, proposes to widen State Route (SR) 99 in the City of Tulare from just south of the Avenue 200 Overcrossing to just north of the Prosperity Avenue Overcrossing, between post miles 25.2 and 30.6. One lane would be

built in each direction in the existing freeway median to create a six-lane freeway, divided by a concrete median barrier for about 5.4 miles. In addition, the existing Paige Avenue Interchange would be rebuilt. One build alternative and a no-build alternative are under consideration. The build alternative has three design options for the Paige Avenue Interchange: a three-roundabout configuration with a Paige Avenue overcrossing bridge; four-roundabout configuration with a Paige Avenue overcrossing bridge; and a four-roundabout configuration with a Paige Avenue undercrossing bridge. Each option has a variation of realigning the Tulare Canal or installing box culverts at locations where the highway crosses the canal, creating two new drainage basins and installing new sound walls and 8-foot-high security fencing on SR 99.

Location: The Project involves a 5.4-mile-long segment of SR 99 between postmiles 25.2 and 30.6, within the City of Tulare, Tulare County.

Timeframe: The Project is currently scheduled to begin construction in 2027 and would open to the public in 2030. The Project would take 400 working days to complete, including approximately 150 nights of construction work.

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations to assist Caltrans in adequately identifying the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document. A Recommended Mitigation Monitoring and Reporting Program is attached (Attachment 1).

CDFW submitted comments to Caltrans on the Notice of Preparation on May 14, 2021 that indicated that CDFW was concerned regarding potential impacts to the following special-status species: State threatened Swainson's hawk (Buteo swainsoni), the State threatened and federally endangered San Joaquin kit fox (Vulpes macrotis mutica), and the State species of special concern burrowing owl (Athene cunicularia). CDFW is also concerned about potential project impacts to bats, including the following special status species: pallid bat (Antrozous pallidus), Townsend's big-eared bat (Corynorhinus townsendii), spotted bat (Euderma maculatum), and western mastiff bat (Eumops perotis californicus).

I. Environmental Setting and Related Impact

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the United States Fish and Wildlife Service (USFWS)?

COMMENT 1: Swainson's Hawk (SWHA)

Issue: SWHA are known to nest in the vicinity of the project area which contains and adjoins both nesting and foraging habitat for the species. CNDDB has several records of nesting in the region, including a nest location within one mile of the south end of the Project (CDFW 2023). Swainson's hawk are known to nest and forage in agricultural areas which occur in the southern portion of the project area. The DEIR/EA identified that the project area contains potentially suitable nesting and foraging habitat for SWHA and identified avoidance and minimization measures to conduct pre-construction surveys and establish 500-foot buffers around active nests. However, the proposed avoidance buffer is not as broad as the half-mile buffer typically recommended by CDFW and the DEIR/EA did not address the need for mitigation if nest trees are removed. SWHA nest in lone trees in agricultural fields or pastures, roadside trees adjacent to suitable foraging habitat, or within riparian trees (CDFW 2016). Because project activities will involve a level of disturbance that is greater than standard traffic and agricultural activities in the region, CDFW considers it possible that the project activities would represent a novel stimulus which could result in nest abandonment if they occur within half-mile of an active SWHA nest. If nesting in or near the project area, project activities have the potential to result in nest abandonment or loss of foraging habitat, significantly impacting local nesting SWHA.

Recommended Avoidance, Minimization, and/or Mitigation Measures for SWHA:

Due to the potential that SHWA will be found nesting on or near the project area and likelihood that project activities will be required during the nesting season, CDFW recommends that Caltrans consult with CDFW regarding the acquisition of an ITP for SWHA, pursuant to Fish and Game Code section 2081 subdivision (b). CDFW advises that a qualified biologist conduct protocol surveys for SWHA following the entire survey methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) in the survey season immediately prior to project implementation. If project activities will take place during the nesting season (March 1 to September 15), and active nests are identified, CDFW recommends that a minimum half-mile no-disturbance buffer be delineated and maintained around each nest. The no-disturbance buffer should be maintained until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, to prevent nest abandonment and other take of SWHA due to project activities. If an active SWHA nest is detected, and a no-disturbance buffer is not feasible, consultation with CDFW is warranted to discuss how to implement the Project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.

As mitigation, CDFW recommends that the removal of known SWHA nest trees, even outside of the nesting season, be replaced with an appropriate native tree species at a ratio of 3:1 at or near the project area or in another area that will be protected in perpetuity. This mitigation would offset the local and temporal impacts of nesting habitat loss. Additionally, CDFW recommends compensation for the loss of SWHA foraging habitat as described in CDFW's "Staff Report Regarding Mitigation for Impacts to Swainson's Hawks" (CDFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. CDFW has the following recommendations based on the Staff Report:

- For projects within 1 mile of an active nest tree, a minimum of 1 acre of habitat management (HM) land for each acre of development.
- For projects within 5 miles of an active nest but greater than 1 mile, a minimum of ¾ acre of HM land for each acre of development.
- For projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree, a minimum of ½ acre of HM land for each acre of development.

COMMENT 2: San Joaquin Kit Fox (SJKF)

Issue: The DEIR/EA concluded that SJKF are not expected to occur within the project area due to presumed poor habitat conditions and low prey base. However, SJKF historically occurred within the City of Tulare, and are currently known to occur in other highly developed urban areas in the San Joaquin Valley (CDFW 2023). Although SJKF are not currently known to occur in this portion of Tulare County, SJKF population sizes are known to fluctuate over time, and absence in any one year does not necessarily indicate a negative finding. In addition to native habitats, SJKF are also known to den in right of ways, vacant lots, parks, landscaped areas, golf courses, oil fields, etc. SJKF may be attracted to the Project site due to the type and level of ground disturbing activities and the loose, friable soils resulting from intensive ground disturbance. Further, SJKF are more active at night, and night work has been proposed for this Project. While habitat loss resulting from land conversion to agricultural, urban, and industrial development is the primary threat to SJKF (Cypher et al. 2013), impacts to the species can occur due to construction activities near denning individuals, and individuals being attracted to ground disturbance. If present within or near the project area, project activities have the potential to significantly impact local SJKF populations.

Roadways and development may increase population fragmentation, reduce survival by impeding movement to refugia habitat (i.e., disperse to adjacent habitat, locate food sources) or reproductive habitat (i.e., breeding habitat), and impede recolonization of potential habitat (Haddad et al. 2015). Limiting movement and passage of species can lead to the reduction of genetic fitness

in populations making them more vulnerable to changing or extreme conditions, the inability for populations to recolonize habitat after disturbance events (e.g. fires, floods, droughts), the loss of resident wildlife populations by altered community structure (e.g. species composition, distribution), and/or partial or complete loss of populations of migrant species due to blocked access to critical habitats (Haddad et al. 2015; Nicholson et al. 2006). CDFW considers that expansion of SR 99 without improving wildlife passage may represent a significant impact to SJKF or other wildlife. Increasing or preserving the current barrier without a wildlife movement analysis limits the opportunity that this project has to design structures that allow for improved habitat connectivity.

Recommended Avoidance, Minimization, and/or Mitigation Measures for SJKF:

Den Type	Buffer (feet)	Protective Measure
Potential	50	No-disturbance markers
Atypical	50	No-disturbance markers
Known	100	Exclusionary fencing
Natal/Pupping	Contact USFWS and CDFW	

COMMENT 3: Burrowing Owl (BUOW)

Issue: The DEIR/EA did not include an assessment of potential presence of, or potential impacts on BUOW. The project area is within the known range of BUOW and based on review of aerial imagery, BUOW has the potential to occur within or adjacent to the project area. BUOW inhabit open grassland or adjacent canal banks, rights-of-ways, vacant lots, containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover (Gervais et al. 2008). BUOW rely on burrow habitat year-round for their survival and reproduction.

Habitat loss and degradation are considered the greatest threats to BUOW in California (Gervais et al. 2008). Potentially significant direct impacts associated with project activities include burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals. In addition, and as described in CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), excluding and/or evicting BUOW from their burrows is considered a potentially significant impact under CEQA. Construction activities near active burrows could result in potentially significant impacts to nesting or overwintering owls.

Recommended Avoidance, Minimization, and/or Mitigation Measures for BUOW:

CDFW recommends that a qualified biologist assess if suitable BUOW habitat features are present within or adjacent to the Project site (e.g., burrows). If suitable habitat features are present, CDFW recommends assessing presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium's "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and CDFW's Staff Report on Burrowing Owl Mitigation" (CDFG 2012). Specifically, CBOC and CDFW's Staff Report suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding season (April 15 to July 15), when BUOW are most detectable. CDFW recommends no-disturbance buffers, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), be implemented prior to and during any ground-disturbing activities. Specifically, CDFW's Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance and Recommended Buffers (meters)		
		Low	Medium	High
Nesting sites	April 1-Aug 15	200	500	500
Nesting sites	Aug 16-Oct 15	200	200	500
Nesting sites	Oct 16-Mar 31	50	100	500

COMMENT 4: Special Status Bats

Issue: The DEIR/EA did not provide an assessment of potential impacts to special status or other bats and suitable roosting habitat is present for bats within and near the project area. Pallid, Townsend's big-eared, spotted and western red bats may roost in a variety of natural and man-made habitats that are present in the project area, including trees, cliffs, and man-made structures such as buildings, bridges and culverts. Bats are particularly more likely to utilize man-made structures even near busy highways and urban areas when natural habitat is limited, such as in the project area. Without appropriate avoidance and minimization measures for bats, project activities may result in potentially significant impacts to roosting or maternal bats, including potential inadvertent entrapment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

Recommended Avoidance, Minimization, and/or Mitigation Measures for Bats:

CDFW advises that a qualified biologist conduct focused surveys for bats and potential roosting habitat within 400 feet of the project area prior to project activities. Avoidance whenever possible is encouraged via delineation and observance of no-disturbance buffers according to activity and species, as recommended in Table 7-1 of "Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions" (H. T. Harvey & Associates 2021), ranging from 100 feet to 400 feet. If roosting bats are observed on the project area and buffer areas, CDFW recommends that Caltrans stop work in the buffer area and coordinate with CDFW for site-specific impact minimization recommendations. To mitigate for potential project impacts on bats, CDFW encourages Caltrans to incorporate bat habitat into the Project design.

II. Editorial Comments and/or Suggestions

CDFW requests that the EIR/EA fully identify potential impacts to biological resources, including the above-mentioned species. To adequately assess any potential impacts to biological resources, focused biological surveys should be conducted by qualified wildlife biologists/botanists during the appropriate survey period(s) for each species to determine whether any special-status species and/or suitable habitat features may be present within the project area. Properly conducted biological surveys, and the information assembled from them, are essential to identify any mitigation, minimization, and avoidance measures and/or the need for additional or protocol level surveys, and to identify any project-related impacts under CESA and other species of concern. CDFW recommends the EIR/EA address potential impacts to these species and provide measurable mitigation measures that, as needed, will reduce impacts to less than significant levels. Information on survey and monitoring protocols for sensitive species can be found at CDFW's website (https://www.wildlife.ca.gov/conservation/surveyprotocols).

Nesting birds: CDFW encourages that project implementation occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February 1 through September 15), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground or vegetation disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the project area to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. In addition

to direct impacts (i.e., nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends having a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist counsel and support any variance from these buffers and notify CDFW in advance of implementing a variance.

Federally Listed Species: CDFW recommends coordinating with the USFWS on potential impacts to federally listed species including, but not limited to vernal pool fairy shrimp *(Branchinecta lynchi)* and SJKF. Take under the federal Endangered Species Act (ESA) is more broadly defined than CESA; take under ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting/denning. CDFW advises consulting with the USFWS well in advance of any ground-disturbing activities.

Cumulative Impacts: CDFW recommends that a cumulative impact analysis be conducted for all biological resources that will either be significantly or potentially significantly impacted by implementation of the Project, including those whose impacts are determined to be less than significant with mitigation incorporated or for those resources that are rare or in poor or declining health and will be impacted by the Project, even if those impacts are relatively small (i.e., less than significant). Cumulative impacts are recommended to be analyzed using an acceptable methodology to evaluate the impacts of past, present, and reasonably foreseeable future projects on resources and be focused specifically on the resource, not the Project. An appropriate resource study area would need to be identified and mapped for each resource being analyzed and utilized for this analysis. CDFW staff is available for consultation in support of cumulative impacts analyses as a trustee and responsible agency under CEQA.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Public Resources Code, section 21003, subdivision (e)). Accordingly, please report any special-status species and natural communities detected during project surveys to CNDDB. The CNDDB field survey form can be found at the following link: https://www.wildlife.ca.gov/data/cnddb/submitting-data. The completed form can be mailed electronically to CNDDB at the following email address: cnddb@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/data/cnddb/plants-and-animals.

FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required for the underlying Project approval to be operative, vested, and final (California Code of Regulations, Title 14, section 753.5; Fish and Game Code, section 711.4; Public Resources Code, section 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the Project to assist Caltrans in identifying and mitigating the project's impacts on biological resources.

If you have any questions, please contact Mindy Trask, Senior Environmental Scientist (Specialist), at the address provided on this letterhead, by telephone at (559) 939-0282, or by electronic mail at mary.trask@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Sarah Paulson
E9964E60293D40A...

For Julie A. Vance

Regional Manager

Attachment 1: Recommended Mitigation Monitoring and Reporting Program (MMRP)

REFERENCES

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CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

RECOMMENDED MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

PROJECT: State Route 99 Tulare City Widening Project

CDFW provides the following measures be incorporated into the MMRP for the Project:

RECOMMENDED MITIGATION MEASURE	STATUS/ DATE/ INITIALS
Before Disturbing Soil or Vegetation	
Potential Swainson's Hawk (SWHA) Section 2081 Incidental Take Permit	
SWHA Surveys	
SAN Joaquin kit fox (SJKF) surveys	
Potential SJKF Section 2081 Incidental Take Permit	
Burrowing Owl (BUOW) Surveys	
Bat surveys	
Incorporate Bat Habitat into the Project Design	
During Construction	
SWHA Avoidance	
SJKF Avoidance	
BUOW Avoidance	
Bat Avoidance	

Caltrans Responses to the California Department of Fish and Wildlife's Comments: Thank you for your comments. Your comments have been reproduced below, with a Caltrans response provided after each comment.

Comment 1 (Swainson's Hawk): SWHA are known to nest in the vicinity of the project area which contains and adjoins both nesting and foraging habitat for the species. CNDDB has several records of nesting in the region, including a nest location within one mile of the south end of the Project (CDFW 2023). Swainson's hawk are known to nest and forage in agricultural areas which occur in the southern portion of the project area. The DEIR/EA identified that the project area contains potentially suitable nesting and foraging habitat for SWHA and identified avoidance and minimization measures to conduct pre-construction surveys and establish 500-foot buffers around active nests. However, the proposed avoidance buffer is not as broad as the half-mile buffer typically recommended by CDFW and the DEIR/EA did not address the need for mitigation if nest trees are removed. SWHA nest in lone trees in agricultural fields or pastures, roadside trees adjacent to suitable

foraging habitat, or within riparian trees (CDFW 2016). Because project activities will involve a level of disturbance that is greater than standard traffic and agricultural activities in the region, CDFW considers it possible that the project activities would represent a novel stimulus which could result in nest abandonment if they occur within half-mile of an active SWHA nest. If nesting in or near the project area, project activities have the potential to result in nest abandonment or loss of foraging habitat, significantly impacting local nesting SWHA.

Recommended Avoidance, Minimization, and/or Mitigation Measures for SWHA: Due to the potential that SHWA will be found nesting on or near the project area and likelihood that project activities will be required during the nesting season, CDFW recommends that Caltrans consult with CDFW regarding the acquisition of an ITP for SWHA, pursuant to Fish and Game Code section 2081 subdivision (b). CDFW advises that a qualified biologist conduct protocol surveys for SWHA following the entire survey methodology developed by the SWHA Technical Advisory Committee (SWHA TAC 2000) in the survey season immediately prior to project implementation. If project activities will take place during the nesting season (March 1 to September 15), and active nests are identified, CDFW recommends that a minimum half-mile no-disturbance buffer be delineated and maintained around each nest. The no-disturbance buffer should be maintained until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, to prevent nest abandonment and other take of SWHA due to project activities. If an active SWHA nest is detected, and a no-disturbance buffer is not feasible, consultation with CDFW is warranted to discuss how to implement the Project and avoid take. If take cannot be avoided, take authorization through the acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b) is necessary to comply with CESA.

As mitigation, CDFW recommends that the removal of known SWHA nest trees, even outside of the nesting season, be replaced with an appropriate native tree species at a ratio of 3:1 at or near the project area or in another area that will be protected in perpetuity. This mitigation would offset the local and temporal impacts of nesting habitat loss. Additionally, CDFW recommends compensation for the loss of SWHA foraging habitat as described in CDFW's "Staff Report Regarding Mitigation for Impacts to Swainson's Hawks" (CDFG 1994) to reduce impacts to foraging habitat to less than significant. The Staff Report recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites. CDFW has the following recommendations based on the Staff Report:

- For projects within 1 mile of an active nest tree, a minimum of 1 acre of habitat management (HM) land for each acre of development.

- For projects within 5 miles of an active nest but greater than 1 mile, a minimum of ¾ acre of HM land for each acre of development.
- For projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree, a minimum of ½ acre of HM land for each acre of development.

Response to Comment 1(Swainson's Hawk): Preconstruction protocol-level surveys following the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (May 2000)* have been recommended for this project in the Environmental Impact Report. While the buffer that California Department of Fish and Wildlife recommends for this species is 0.5 mile, Caltrans has successfully avoided impacts to Swainson's Hawk nesting along the State Highway System throughout the Central Valley with the implementation of a 600-foot radius no-disturbance buffer. Caltrans agrees that if the presence of Swainson's Hawk is detected and a no-disturbance buffer is not feasible, consultation with California Department of Fish and Wildlife is warranted to discuss how to implement the project and avoid take. If take is unavoidable, Caltrans adheres to acquire an Incidental Take Permit pursuant to Fish and Game Code Section 2081 Subdivision (B), which is necessary to comply with California Endangered Species Act.

Comment 2 (San Joaquin Kit Fox): The DEIR/EA concluded that SJKF are not expected to occur within the project area due to presumed poor habitat conditions and low prey base. However, SJKF historically occurred within the City of Tulare, and are currently known to occur in other highly developed urban areas in the San Joaquin Valley (CDFW 2023). Although SJKF are not currently known to occur in this portion of Tulare County, SJKF population sizes are known to fluctuate over time, and absence in any one year does not necessarily indicate a negative finding. In addition to native habitats, SJKF are also known to den in right of ways, vacant lots, parks, landscaped areas, golf courses, oil fields, etc. SJKF may be attracted to the Project site due to the type and level of ground disturbing activities and the loose, friable soils resulting from intensive ground disturbance. Further, SJKF are more active at night, and night work has been proposed for this Project. While habitat loss resulting from land conversion to agricultural, urban, and industrial development is the primary threat to SJKF (Cypher et al. 2013), impacts to the species can occur due to construction activities near denning individuals, and individuals being attracted to ground disturbance. If present within or near the project area, project activities have the potential to significantly impact local SJKF populations.

Roadways and development may increase population fragmentation, reduce survival by impeding movement to refugia habitat (i.e., disperse to adjacent habitat, locate food sources) or reproductive habitat (i.e., breeding habitat), and impede recolonization of potential habitat (Haddad et al. 2015). Limiting movement and passage of species can lead to the reduction of genetic fitness

in populations making them more vulnerable to changing or extreme conditions, the inability for populations to recolonize habitat after disturbance events (e.g. fires, floods, droughts), the loss of resident wildlife populations by altered community structure (e.g. species composition, distribution), and/or partial or complete loss of populations of migrant species due to blocked access to critical habitats (Haddad et al. 2015; Nicholson et al. 2006). CDFW considers that expansion of SR 99 without improving wildlife passage may represent a significant impact to SJKF or other wildlife. Increasing or preserving the current barrier without a wildlife movement analysis limits the opportunity that this project has to design structures that allow for improved habitat connectivity.

Response to Comment 2 (San Joaquin Kit Fox): Pre-activity surveys using transects by a qualified biologist will be conducted 30 days before project implementation. No-disturbance buffers, as described in the protocol by the U.S. Fish and Wildlife Service's "Standardized Recommendations for Protection of the San Joaquin Kit Fox Before or During Ground Disturbance" (U.S. Fish and Wildlife Service 2011), will be implemented around suitable or known San Joaquin Kit Fox den sites. If no-disturbance buffers are not feasible, Caltrans adheres to consultation with California Department of Fish and Wildlife regarding an Incidental Take Permit, pursuant to Fish and Game Code Section 2081, subdivision (b), to comply with California Endangered Species Act.

Comment 3 (Burrowing Owl): The DEIR/EA did not include an assessment of potential presence of, or potential impacts on BUOW. The project area is within the known range of BUOW and based on review of aerial imagery, BUOW has the potential to occur within or adjacent to the project area. BUOW inhabit open grassland or adjacent canal banks, rights-of-ways, vacant lots, containing small mammal burrows, a requisite habitat feature used by BUOW for nesting and cover (Gervais et al. 2008). BUOW rely on burrow habitat year-round for their survival and reproduction.

Habitat loss and degradation are considered the greatest threats to BUOW in California (Gervais et al. 2008). Potentially significant direct impacts associated with project activities include burrow collapse, inadvertent entrapment, nest abandonment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals. In addition, and as described in CDFW's "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), excluding and/or evicting BUOW from their burrows is considered a potentially significant impact under CEQA. Construction activities near active burrows could result in potentially significant impacts to nesting or overwintering owls.

Recommended Avoidance, Minimization, and/or Mitigation Measures for BUOW: CDFW recommends that a qualified biologist assess if suitable BUOW habitat features are present within or adjacent to the Project site (e.g.,

burrows). If suitable habitat features are present, CDFW recommends assessing presence/absence of BUOW by having a qualified biologist conduct surveys following the California Burrowing Owl Consortium's "Burrowing Owl Survey Protocol and Mitigation Guidelines" (CBOC 1993) and CDFW's Staff Report on Burrowing Owl Mitigation" (CDFG 2012). Specifically, CBOC and CDFW's Staff Report suggest three or more surveillance surveys conducted during daylight with each visit occurring at least three weeks apart during the peak breeding season (April 15 to July 15), when BUOW are most detectable. CDFW recommends no-disturbance buffers, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), be implemented prior to and during any ground-disturbing activities. Specifically, CDFW's Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Response to Comment 3 (Burrowing Owl): Caltrans agrees that a qualified biologist should assess if suitable burrowing owl habitat features are present within or next to the project site. If habitat is present, Caltrans adheres to conducting surveys following the California Burrowing Owl Consortium's "Burrowing Owl Survey Protocol and Mitigation (CDFG 2012)." If burrowing owls are detected, a no-disturbance buffer, as outlined in the "Staff Report on Burrowing Owl Mitigation" (CDFG 2012), will be implemented before and during any ground disturbance activities.

Comment 4 (Special Status Bats): The DEIR/EA did not provide an assessment of potential impacts to special status or other bats and suitable roosting habitat is present for bats within and near the project area. Pallid, Townsend's big-eared, spotted and western red bats may roost in a variety of natural and man-made habitats that are present in the project area, including trees, cliffs, and man-made structures such as buildings, bridges and culverts. Bats are particularly more likely to utilize man-made structures even near busy highways and urban areas when natural habitat is limited, such as in the project area. Without appropriate avoidance and minimization measures for bats, project activities may result in potentially significant impacts to roosting or maternal bats, including potential inadvertent entrapment, reduced reproductive success, reduction in health and vigor of eggs and/or young, and direct mortality of individuals.

Recommended Avoidance, Minimization, and/or Mitigation Measures for Bats: CDFW advises that a qualified biologist conduct focused surveys for bats and potential roosting habitat within 400 feet of the project area prior to project activities. Avoidance whenever possible is encouraged via delineation and observance of no-disturbance buffers according to activity and species, as recommended in Table 7-1 of "Caltrans Bat Mitigation: A Guide to Developing

Feasible and Effective Solutions" (H. T. Harvey & Associates 2021), ranging from 100 feet to 400 feet. If roosting bats are observed on the project area and buffer areas, CDFW recommends that Caltrans stop work in the buffer area and coordinate with CDFW for site-specific impact minimization recommendations. To mitigate for potential project impacts on bats, CDFW encourages Caltrans to incorporate bat habitat into the Project design.

Response to Comment 4 (Special Status Bats): Caltrans agrees that a qualified biologist should conduct focused surveys for bats and potential roosting habitats within 400 feet of the project area before the start of project activities. Caltrans will avoid where possible via delineation and observance of no-disturbance buffers according to the activity and species, as recommended in Table 7-1 of "Caltrans Bat Mitigation: A Guide to Developing Feasible and Effective Solutions" (H.T. Harvey & Associates 2021).

Comment 5 (Editorial Comments and/or Suggestions): CDFW requests that the EIR/EA fully identify potential impacts to biological resources, including the above-mentioned species. To adequately assess any potential impacts to biological resources, focused biological surveys should be conducted by qualified wildlife biologists/botanists during the appropriate survey period(s) for each species to determine whether any special-status species and/or suitable habitat features may be present within the project area. Properly conducted biological surveys, and the information assembled from them, are essential to identify any mitigation, minimization, and avoidance measures and/or the need for additional or protocol level surveys, and to identify any project-related impacts under CESA and other species of concern. CDFW recommends the EIR/EA address potential impacts to these species and provide measurable mitigation measures that, as needed, will reduce impacts to less than significant levels. Information on survey and monitoring protocols for sensitive species can be found at CDFW's website (https://www.wildlife.ca.gov/conservation/surveyprotocols).

Response to Comment 5 (Editorial Comments and/or Suggestions): Caltrans agrees that qualified wildlife biologists and/or botanists should conduct focused biological surveys during the appropriate survey period(s) for each species to determine whether any special-status species and/or suitable habitat features may be present within the project site.

Comment 6 (Nesting birds): CDFW encourages that project implementation occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the breeding season (February 1 through September 15), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground or vegetation disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the project area to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. In addition to direct impacts (i.e., nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends that a qualified biologist conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, CDFW recommends having a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist counsel and support any variance from these buffers and notify CDFW in advance of implementing a variance.

Response to Comment 6 (Nesting birds): Both general preconstruction surveys and protocol Swainson's Hawk surveys would capture any other migratory birds or raptors. Caltrans will implement monitoring for active nests detected in the area and will coordinate with CDFW if behavioral changes occur. Disturbance buffers of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors will remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival.

Comment 7 (Federally Listed Species): CDFW recommends coordinating with the USFWS on potential impacts to federally listed species including, but not limited to vernal pool fairy shrimp *(Branchinecta lynchi)* and SJKF. Take under the federal Endangered Species Act (ESA) is more broadly defined than CESA; take under ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or

nesting/denning. CDFW advises consulting with the USFWS well in advance of any ground-disturbing activities.

Response to Comment 7 (Federally Listed Species): Caltrans will consult with the U.S. Fish and Wildlife Service to comply with the Endangered Species Act well in advance of any ground-disturbing activities.

Comment 8 (Cumulative Impacts): CDFW recommends that a cumulative impact analysis be conducted for all biological resources that will either be significantly or potentially significantly impacted by implementation of the Project, including those whose impacts are determined to be less than significant with mitigation incorporated or for those resources that are rare or in poor or declining health and will be impacted by the Project, even if those impacts are relatively small (i.e., less than significant). Cumulative impacts are recommended to be analyzed using an acceptable methodology to evaluate the impacts of past, present, and reasonably foreseeable future projects on resources and be focused specifically on the resource, not the Project. An appropriate resource study area would need to be identified and mapped for each resource being analyzed and utilized for this analysis. CDFW staff is available for consultation in support of cumulative impacts analyses as a trustee and responsible agency under CEQA.

Response to Comment 8 (Cumulative Impacts): Caltrans acknowledges the recommendation that a cumulative impact analysis be conducted for biological resources potentially impacted to varying degrees by project implementation. In the Final Environmental Impact Report/Environmental Assessment, Chapter 2, Section 2.3, Caltrans addressed impacts from the various aspects of construction and provided avoidance and minimization measures to address impacts to any species that are likely to be in the area. Caltrans feels that adequate analysis has been completed considering the location of the project combined with the scope of work.

Comment from the Leadership Counsel of Justice and Accountability

September 22, 2023

Javier Almaguer,
Senior Environmental Scientist,
District 6 Environmental Division,
California Department of Transportation,
2015 East Shields Avenue, Suite 100,
Fresno, California 93726

Submitted via email: javier.almaguer@dot.ca.gov

RE: Comments on Tulare Six-Lane and Paige Avenue Interchange and the Recirculated

DEIR & Associated Air Quality Conformity Analysis and Determination

Dear Javier Almaguer,

Leadership Counsel for Justice and Accountability ("LCJA") and Matheny Tract Committee ("MTC") write to express concerns with the California Department of Transportation's ("Caltrans") Recirculated Draft Environmental Impact Report/Environmental Assessment ("Recirculated DEIR or RDEIR"), and the corresponding air quality conformity analysis and determinations made pursuant to the Clean Air Act for the Tulare Six-lane and Paige Avenue Interchange project ("Project"). The Project, RDEIR, and supporting documents raise serious environmental justice issues and potential violations of civil rights laws.

Based on our review of the RDEIR, Caltrans is failing to abide by the legal requirements in the California Environmental Quality Act, Public Resources Code § 21000 et seq., ("CEQA"), the National Environmental Policy Act, 42 U.S.C. §§ 4321 et seq., ("NEPA"), the Clean Air Act, 42 U.S.C. 7401 et seq., ("CAA") and other federal and state civil rights laws, including but not limited to, the Fair Employment and Housing Act, (§§12900 - 12996) ("FEHA"), Caltrans duty to Affirmatively Further Fair Housing ("AFFH"), and California Government Code Section 11135.

Caltrans is required to do a full Environmental Impact Statement ("EIS") for the Project; include additional reasonable alternatives; fully disclose all environmental impacts; comply with state and local plans; adopt all available mitigation measures that will reduce and avoid Project impacts, including to ensure the avoidance and reduction of impacts on residents living in the Matheny Tract; conduct a hotspot analysis; accurately analyze the Projects conformity with air quality plans; and ensure this Project does not violate State or federal civil rights laws.

To help alleviate the environmental impacts of the Project and address fair housing, environmental justice, and civil rights issues, prior to approval of the EIR or the Project, Caltrans must enter into an agreement with the City of Tulare requiring Tulare to rezone the land adjacent to Matheny to a zone district that does not allow industrial uses, but rather allows parks, community or recreational facilities, and/or housing. Rezoning to a district that does not allow industrial uses can prevent the increased VMT and ensure that this Project does not deprive Matheny Tract of the opportunities for resources and amenities necessary to meet the community's existing and future needs.

Currently, land under City jurisdiction north, east, and south of Matheny Tract are light and heavy industrial zone districts. Since the Project's purpose is to accommodate freight and goods movement, Caltrans is positioning the City of Tulare to continue expanding its industrial development, as the RDEIR acknowledges (RDEIR at p. 50). The graphic below depicts the community of Matheny Tract, outlined in red, and the City of Tulare's industrial zone in purple.1 As shown below, the community borders the City's industrial district without any buffers to mitigate impacts from industrial land uses. Some land north of Matheny still sits undeveloped, posing the opportunity for further industrialization, which the Project intends to accommodate and induce. However, altering the zoning would create a buffer around Matheny and lessen environmental impacts onto an already severely burdened and underserved community.



I. Background

LCJA is a Community Based Organization ("CBO") focused on working alongside the most impacted communities to advocate for sound policy and eradicate injustice to secure equal access to opportunity regardless of wealth, race, income, and place. The communities LCJA works alongside are severely burdened with disproportionate environmental harms and unequal access to opportunity. LCJA raises awareness of the needs and opportunities

for investment in and protection of historically neglected communities, like Matheny Tract, as well as, other disadvantaged communities in the County of Tulare and the San Joaquin Valley. LCJA works to ensure inclusion of rural, low income communities in key discussions, policies, and programs.

MTC is composed of residents of Matheny Tract, an unincorporated community located adjacent to the City of Tulare city limits and less than two miles from the Project site. MTC has long fought to achieve healthy environmental conditions, clean air, clean and sustainable water, and community infrastructure such as: drainage, lighting, sidewalks, bike lanes, greenspaces for children and the community, community amenities, such as youth centers and housing, as well as buffer zones near agricultural and industrial operations. MTC is concerned about the health and safety impact that future industrial and transportation projects will have on their communities.

Matheny Tract is a disadvantaged unincorporated community, a community which began as a place of refuge for African American farmworkers in the mid 20th century, which has continued to be overlooked and ignored by the City of Tulare.2 According to CalEnviroScreen the current race/ethnic demographic of Matheny Tract consists of 75 percent Hispanic/Latinx, 21 percent White, and less than 2 percent African American residents. The City's recalcitrance to residents of Matheny Tract has resulted in the current lack of basic infrastructure3 and exposure to various sources of polluting land uses, including the City of Tulare's wastewater plant, which residents do not have access to.4 Matheny Tract is enclosed by the City's industrial zone. Despite the close proximity to the City of Tulare, Matheny Tract continues to be an unincorporated community with limited basic infrastructure such as wastewater, lights, and sidewalks. As an unincorporated community, Matheny Tract does not benefit from City services; however, the community does have to bear the burden from the City's land use decisions.

Residents in Matheny Tract experience poor quality of life and health issues exacerbated largely by the ramifications of living near a variety of polluting sources. Based on CalEnviroScreen5 Matheny residents experience greater pollution burdens than 94 percent of all census tracts in the state; Matheny Tract ranks in the 85th percentile for ozone, 95th percentile for Particulate Matter 2.5, 31st percentile for toxic releases, and in the 80th percentile for pesticide exposure. Residents experience health issues such as asthma, allergies, nose bleeds, headaches, and respiratory issues. In fact, the community ranks in the 75th percentile for asthma, and higher than the 70th percentile for low birth weight. (Id.).

Given the existing sources of emissions and community health conditions, MTC is particularly concerned about the induced industrial development and increased emissions from heavy duty trucks and freight as a result of the Paige Ave Interchange Project. Matheny Tract is located less than two miles

away from the Paige Avenue Interchange, and less than a mile away from proposed detour routes. It is located adjacent to the area comprising the City of Tulare's "I Street Specific Plan,"6 an area which is zoned for industrial land uses, including warehouse distribution facilities, among other industrial uses. I Street runs adjacent to Matheny Tract and would serve industrial development that is facilitated by this Project. Given Matheny Tract's close proximity to the industrial zone and this Project the community will suffer impacts from the Project during and after construction.

Caltrans in the RDEIR is proposing to widen State Route 99 in the City of Tulare from just south of the Avenue 200 Overcrossing to the Prosperity Avenue Overcrossing (post miles 25.2-30.6). One lane would be built in each direction in the freeway median to create a six-lane freeway. The existing interchange at Paige Avenue would be reconfigured. One of the main purposes of this Project is to "improve access to local trucking-related facilities and the neighboring industrial area" and improve freight movement (RDEIR at p. 5). The RDEIR acknowledges that the project will "accelerate" industrial development in the area (RDEIR at p. 50). The ability of the Project to "improve access" is ambiguous and not supported with substantial evidence in the RDEIR. Regarding the effects of the Project the RDEIR analyzes most of the Project's effects as congestion reduction, without confronting the impacts of accelerating industrial development. Caltrans' purpose for this Project is directly contrary to the desires of Matheny Tract residents who have long advocated for the City and other government agencies to address poor health and community conditions caused by the proliferation of industrial development and the lack of investment and consideration of their needs.

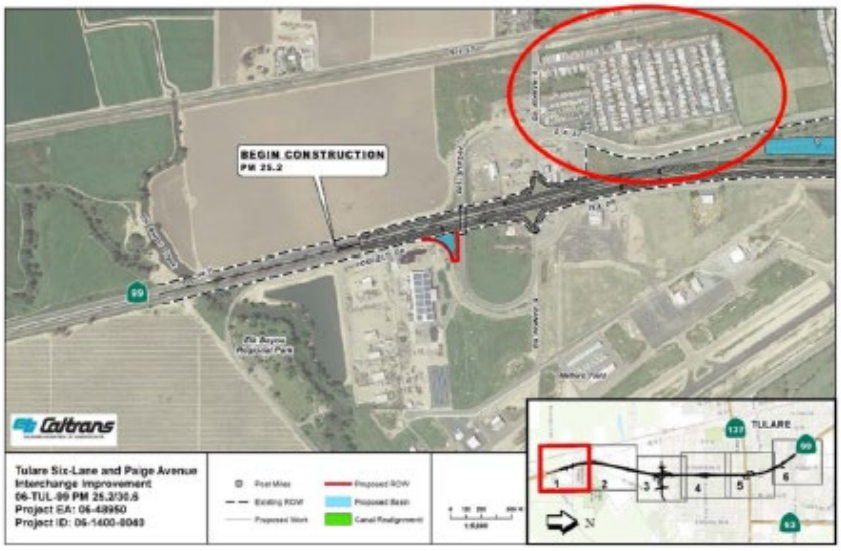
This Project will detrimentally impact and burden residents of Matheny while undermining the potential to address disparities in access to various forms of opportunity that impact Matheny Tract. As a result of this Project Matheny residents, who already suffer from an incredibly high pollution burden, will be exposed to additional air emissions from the nearly 20 million additional miles traveled a year, without including miles from trucks that travel to industrial facilities that the Project will attract in the I Street Specific Plan Area. These emissions will detrimentally impact the health and wellbeing of Matheny residents. Residents will also be exposed to light, noise, and vibration pollution from new industrial facilities and truck and car traffic close to their homes, further deteriorating their health. The table below from the RDEIR shows the existing declining conditions of the community and yet, this Project proposes to worsen those conditions even further.

Table 2.40 Resources in the Study Area

Resource Study Areas and Resource Evaluations Environmental Issues	Geographic Scope of Resource Study Area	Resource Health/Status	Project Contribution to Cumulative Impacts
Air Quality	Surrounding Project Area	Declining	Considerable
Visual/Aesthetics	Proposed Project Corridor	Stable	Not Considerable
Noise and Vibration	Proposed Project Corridor	Declining	Not Considerable
Traffic Circulation/Growth	Proposed Project Corridor	Declining	Not Considerable
Greenhouse Gas	Surrounding Project Area	Declining	Considerable

Also included in the same census tract as Matheny are two mobilehome parks, Sun and Fun RV Park and the Country Estates Manufactured Home Community (consisting of over 100 households) located on Rankin Road, and single family homes located on I st. Similar to Matheny Tract, these communities already face pollution burden due to their close proximity to industrial land uses, and particularly, heavy duty truck traffic. Located less than half a mile from the beginning of the Project site and about 530 ft from the 99, construction and increased traffic will further exacerbate conditions for these communities. Figure 1-4 from the RDEIR, included below, depicts the start of the construction site relative to the mobilehome parks.

Figure 1-4 Design Layout 1: Begin Construction Segment



This Project is designed to further induce warehouse and industrial development, which alone and cumulatively will further burden these communities. This Project raises serious environmental justice issues and conflicts with Caltrans' duties to affirmatively further fair housing, and should only go forward with the goal and intention to improve the safety issues and current demand at the Paige Avenue interchange, but not be designed in a

way which induces and encourages further industrial development near Matheny Tract and other vulnerable communities such as nearby mobilehome parks.

II. Failure to Provide Opportunities for Public Participation

Public participation is an essential part of the CEQA process. (14 C.C.R. § 15201). Not only is public participation essential under CEQA, it is a core component of Caltrans' duty to affirmatively further fair housing under state law and is essential under many other applicable laws and agency guidance which apply to the review and approval of this Project. (Gov. Code § 8899.50(a)&(b); HCD's AFFH Guidance, p. 217; See also Title VI, Civil Rights Act of 1964; Executive Order 12898; Limited English Proficiency Executive Order 13166, (requires Federal agencies to examine the services they provide, identify any need for services to those with limited English proficiency ("LEP"), and develop and implement a system to provide those services so LEP persons can have meaningful access to them); 40 C.F.R. § 1506.6; 40 C.F.R. § 93.105 ("Affected agencies making conformity determinations on transportation plans, programs, and projects shall establish a proactive public involvement process which provides opportunity for public review and comment by, at a minimum, providing reasonable public access to technical and policy information considered by the agency at the beginning of the public comment period and prior to taking formal action on a conformity determination for all transportation plans and TIPs, consistent with these requirements and those of 23 C.F.R. 450.316(a).")).

Unfortunately, Caltrans has failed to ensure that all relevant information about the Project and its environmental effects are made available to the public by failing to acknowledge the existence of impacted vulnerable communities and by failing to include adequate discussion of environmental justice, air quality, and other impacts in the Recirculated DEIR, as described below. (See 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1500.1(a)). Specifically, Caltrans removed two Census Tracts that were previously identified as environmental justice communities in the first Draft EIR, but were removed without explanation. Caltrans also has failed to make technical information, studies, and reports relied on and incorporated into the Recirculated DEIR and data underlying the Recirculated DEIR's findings and conclusions readily available to the public. For example, none of these studies and reports are published on Caltrans' website for this Project nor were made available to the public in any other way of which we are aware. These documents had to be requested from Caltrans and it took a few days for these documents to be obtained. Caltrans also failed to make readily available Spanish-language versions of studies and reports relied on by and incorporated into the RDEIR. However, we do appreciate that Caltrans did release a Spanish version of the Recirculated DEIR.

The lead Agencies for this Project have failed to engage frontline and vulnerable communities, including Matheny Tract and the nearby mobilehome parks to solicit feedback on the creation of this Project. Contrary to the commitments made in Caltrans Equity Statement, Caltrans did not meaningfully engage underserved communities in a transparent, inclusive manner nor did Caltrans engage in consultation and collaboration with underserved residents in the creation of this Project. Caltrans failed to conduct proactive outreach and consult with residents of Matheny Tract and mobilehome parks prior to developing the RDEIR. Country Estate Manufactured Home Community residents for example, were not notified about the Project directly, but rather received notice about the second open house by the property manager. Information about the Project was limited to the Project description and did not include information about the potential impacts of this Project. Caltrans should have sent mailers to each individual homeowner in the nearby communities. Similarly, residents of Matheny Tract were not notified about the first open house.

Caltrans did conduct two public workshops on the Project. During the first open house workshop on April 26, 2023, which covered the first Draft EIR, and not the RDEIR, Caltrans did not provide the informational boards displaying information such as a description of VMTs, environmental studies, right of way, and project design in Spanish; all informational boards were solely in English. While Caltrans provided an interpreter, there was only one interpreter for everyone who spoke Spanish. The interpreter did not have the equipment or tools to ensure Caltrans staff heard or answered attendees' questions and given the format of the open house, one interpreter did not suffice to ensure Spanish-speaking attendees were receiving Spanish translation of the boards while they visited. Ultimately, the eleven Spanish-speaking attendees crowded around the translator near the comment table grasping pieces of the presented information.

The second open house workshop, and only one for the RDEIR, held on August 15, 2023 was more accessible to residents; it was held in Palo Verde Elementary and the presentation was given in English and Spanish. However, some residents–such as the ones from County Estates Manufactured Home Community who live within 500 ft of the Project–expressed a pressing need for more extensive outreach for workshop events so all impacted residents can be given a significant opportunity to participate in the decision making process. MTC expressed concerns with the style of the workshop; the presentations were given at the same time as people navigated informational boards and discussed each one, making it difficult for attendees to hear the presentation. MTC also conveyed concerns about how Caltrans presented the project and its design as if the project had already been approved and they were planning on moving forward, rather than wanting to hear community feedback on impacts to traffic, contamination, and use decisions, and hear suggested mitigation measures in order to make a decision on how to proceed with the Project or not.

Further there has been a lack of a public engagement process regarding the Air Quality Conformity Analysis that was done for the Project. The public was not notified of a public comment period for the Air Quality Analysis, and even if a comment period occurred it was not accessible to the public and residents were not made aware of the decisions being made regarding the Project. MTC had no way of knowing, receiving, or finding the air quality analysis without directly reaching out to multiple agency staff. There was no direct outreach to impacted vulnerable communities about the public process or ability to comment on the decision.

As stated above, given the Project will directly impact the disadvantaged unincorporated community of Matheny Tract and mobile home park residents, the lead Agencies should act upon their commitments to equity, and work in consultation and collaboration with residents to prevent future harms from this Project moving forward. The lead Agencies for this Project should complete a thorough environmental impact analysis, incorporate mitigation measures reflective of community input and priority, and engage in ongoing communication with impacted communities to update them on the status of the Project and take further input before approval.

The lead Agencies must maintain ongoing communication and collaboration with the community during the implementation phase of this Project to allow opportunity to raise and address concerns and impacts not identified or properly mitigated. MTC looks forward to meeting with Caltrans staff and local partners as an avenue to significantly and meaningfully provide input for this Project. MTC is hopeful that by meeting with Caltrans, the department can better understand the impact this Project may have, which is integral to agencies' public outreach obligations and Caltrans' own racial and equity commitments.

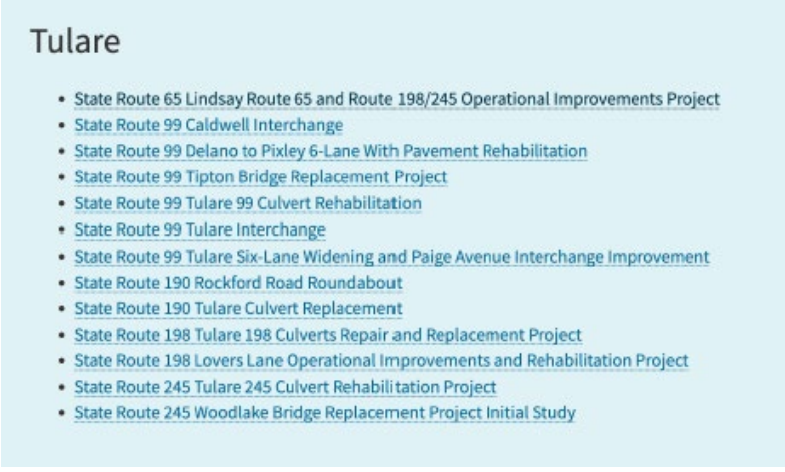
III. The Project's Environmental Impacts Trigger the Need to Prepare a Full EIS under NEPA

Caltrans is required to prepare an Environmental Impact Statement ("EIS") for this Project given the substantial evidence on the record that the Project is likely to cause significant impacts on the environment. (23 C.F.R. § 771.123(a)). Multiple factors, such as adverse effects on air quality, public health, and safety, and possible violation of federal and state laws and local planning processes meant to protect the environment necessitate a full EIR be completed for this Project. (40 C.F.R. § 1501.3(b); see Ocean Advocates v. U.S. Army Corps of Eng'rs, 402 F.3d 846, 864 (9th Cir. 2005), 402 F.3d at 864 (requiring that an "[i]mpact statement must be prepared if substantial questions are raised as to whether a project may cause significant degradation of some human environmental factor")). These impacts are discussed in further detail in this letter below.

Further, a substantial dispute exists between Leadership Counsel, Matheny Tract Committee, and residents of Matheny Tract on the one hand and Caltrans on the other hand about the size, nature, and effects of this action, as evidence by our comments below, input provided to Caltrans at public workshops, and other public correspondence to Caltrans about the Project. A number of residents showed up to the first Caltrans workshop raising issues and concerns they had with the Project and many more attended the second workshop. The comments they submitted raised concerns with traffic, air quality, and induced industrial growth of this Project. LaFlamme v. FERC, 852 F.2d 389, 400-01 (9th Cir. 1988). A Finding of No Significant Impact ("FONSI") is not appropriate, or legally permissible, in this case given the evidence in the record showing the existence of significant adverse environmental effects, including but not limited to Caltrans' findings that the Project would have significant and unavoidable impacts on greenhouse gas (GHG) emissions. We encourage the lead Agencies for the Project to follow the November 17, 2021 Interagency Consultation Memorandum from Maya Hildebrand, which states on page 21, "[t]he NEPA document will be an EIR."

IV. Caltrans is Unlawfully Piecemealing Environmental Review

Caltrans is unlawfully piecemealing environmental review of the Project in its entirety by failing to consider environmental impacts of related approvals under Caltrans' State Route 99 Business Plan and State Route 99 Corridor Enhancement Master Plan and the numerous highway and interchange widening projects that Caltrans has pursued and is pursuing on State Route 99 across the San Joaquin Valley. Caltrans District 6's website lists 13 ongoing projects just in Tulare County, which does not include many additional projects going on in Fresno, Kern or Madera. Further there is another interchange project, the International Agri-Center Way Interchange, which is only .8 miles from this Project, which is not yet completed, yet Caltrans separated out its environmental review.



Section 15378 of the CEQA Guidelines define a project under CEQA as "the whole of the action" that may result either directly or indirectly in physical changes to the environment. This broad definition is intended to provide the maximum protection of the environment. Piecemealing or segmenting occurs when an agency divides a project into two or more pieces and evaluates each piece in a separate environmental document, rather than evaluating the whole of the project in one environmental document. This is explicitly forbidden by CEQA, because dividing a project into a number of pieces would allow an agency to minimize the apparent environmental impacts of a project by evaluating individual pieces separately, each of which may have a less than significant impact on the environment, but which together may result in a significant impact. Segmenting a project may also hinder developing comprehensive mitigation strategies. NEPA has similar requirements against piecemealing. (See Daly v. Volpe, 514 F.2d 1106, at p. 1109 (3d Cir. 1975), ("[p]iecemealing proposed highway improvements in separate environmental statements should be avoided")). Here rather than analyze the full impact of Caltrans' State Route 99 Business Plan and State Route 99 Corridor Enhancement Master Plan and its numerous recent, ongoing, and anticipated co-dependent projects to expand and modify Highway 99 to handle more industrial and freight traffic, the Agency is piecemealing its environmental review by only reviewing small segments at a time and failing to acknowledge their common, interdependent objectives and relationship. For a phased development project, even if details about future phases are not known, future phases must be included in the project description if they are a reasonably foreseeable consequence of the initial phase and will significantly change the initial project or its impacts. Laurel Heights Improvement Association v Regents of University of California 47 Cal. 3d 376 (1988). Further expansion of the 99 is a foreseeable consequence of this Project and further development of Highway 99 would increase the vehicle miles traveled ("VMT") and air quality impacts on this segment of Highway 99.

Further, the RDEIR states that the State Route 99 Business Plan (issued in 2005 and updated in 2013) aims to improve the goods movement throughout California. Other goals were to expand State Route 99 to a minimum six-lane facility to facilitate economic growth. The plan determined that correcting gaps in flow, or choke points, along this route is needed to improve safety, reduce vehicle hours traveled, increase travel-time reliability for the goods movement and general traffic on the freight mobility system, and preserve acceptable facility operation. (See RDEIR at 6-8.). The RDEIR makes clear this Project is part of a larger effort to transform Highway 99 into a shipping corridor and update the entire Highway, not just this one section. The widespan efforts to improve and transform Highway 99 have much broader and more significant environmental impacts, for example, increased VMTs, increased hot spots, increase in air pollutants, and traffic safety impacts.

Courts have relied on federal regulations under NEPA to guide CEQA interpretations of piecemealing. Courts have stated that a highway section

which would be entitled to separate environmental review is one which is (a) of substantial length and (b) between logical terminal points (defined as major crossroads, population centers, major traffic generators, or similar major highway control elements). (Daly v. Volpe, supra p. 1109). Additionally, as a second criterion, the court stated that case law has required a separately reviewable highway section to have "independent utility." (Daly v. Volpe, supra p. 1109). Third, "[a]nother criterion for determining the reasonableness of a proposed highway segment 'is whether the length selected assures adequate opportunity for the consideration of alternatives '….' [Citations.]" (Daly v. Volpe, supra p. 1110). Fourth, it must be addressed whether the segment under consideration seems to fulfill important state and local needs, such as relieving particular traffic congestion. (Id.).

Here the Project fails to meet the factors addressed above. 'irst, there are no logical terminal points for the Project. The Project expansion of State Route 99 in the City of Tulare is from just south of the Avenue 200 Overcrossing to the Prosperity Avenue Overcrossing (post miles 25.2-30.6). There are no logical terminal points at the start or end of this Project, it is not defined by major crossroads, population centers, or highway control elements. Second, the Project environmental review does not assure adequate opportunity for the consideration of alternatives. Because environmental review of the 99 is being piecemealed instead of analyzed as a whole alternatives such as rail improvements and other transportation options are not reasonably considered. Instead Caltrans is able to transform Highway 99 into a large freight shipping corridor without properly considering alternatives, which would mitigate those impacts.

Additionally, Caltrans underestimates the cumulative effect of these highway expansion projects by piecemealing review, resulting in a failure to disclose to the public and decision-makers the true magnitude of the expansions' environmental and public health impact and Caltrans' incorporation of less and weaker mitigation measures. As a result Caltrans' highway expansion projects, including the Paige Avenue Interchange Project, are contributing to the continued degradation of environmental quality in the San Joaquin Valley – an area that is already home to the some of the nations and state's most environmentally-burdened communities – while imposing the most acute impacts on disadvantaged communities located along highways and where industrial development is planned. CEQA and NEPA require that Caltrans analyze the entirety of the Project, which is the transformation of Highway 99 as a freight shipping corridor and not piecemeal its environmental review.

V. The Recirculated DEIR Fails to Adequately Describe the Environmental Baseline of the Project

"Establishing [an environmental] baseline at the beginning of the CEQA process is a fundamental requirement so that changes brought about by a project can be seen in context and significant effects can be accurately

identified." (Communities for a Better Environment v. City of Richmond, 184 Cal.App.4th 70, 89 (2010); see also CEQA Guidelines, § 15125(c)). "If the description of the environmental setting 'is inaccurate, incomplete or misleading, the EIR does not comply with CEQA.'" (Cleveland National Forest Foundation v. San Diego Assn. of Governments, 17 Cal.App.5th 413, 439 (2017)). An accurate description of the environmental setting is also critical, because the significance of an activity may vary with the setting. (CEQA Guidelines, § 15064(b)). A "project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant." (Kings County Farm Bureau v. City of Hanford, 221 Cal.App.3d 692, 718, 721 (1990); CEQA Guidelines, § 15300.2(a)).

The RDEIR unlawfully fails to acknowledge the presence of sensitive receptors in close proximity to the Project including: Palo Verde Elementary School, the Sun and Fun RV Park, and the County Estates Manufactured Home Community (consisting of over 100 households) – none of which the RDEIR acknowledges or takes into consideration for its environmental setting or environmental impacts analysis. In the previous DEIR Caltrans identified seven Environmental Justice communities, whereas in the Recirculated DEIR Caltrans without explanation no longer classifies parts of Census Tract 24 or Census Tract 29.03 as Environmental Justice communities despite their high percentage of racial minorities and significant population of families living below the poverty line.

In addition, the RDEIR fails to describe the existing environmental conditions of Matheny Tract. Matheny ranks in the 94th percentile for pollution burden and faces various public health and socioeconomic vulnerabilities. The community's population living below twice the poverty level is 68 percent according to CalEnviroScreen 4.0. Moreover Matheny Tract ranks in the 3.6 percentile on the Healthy Places Index, as the community has less access to healthcare facilities, access to greenspaces, and a low educational attainment. Public health concerns will lead to the long term effects as Matheny Tract continues to face disinvestment for climate adaptation and resilience. In fact, the HPI: Extreme Heat Edition projects 149 days of extreme heat with temperatures above 90 degrees fahrenheit by 2035 - 2064 in Matheny Tract.

The incomplete and inaccurate baseline description infects and invalidates the entirety of the Recirculated DEIR's environmental analysis. By failing to acknowledge the presence of multiple vulnerable communities and populations near the Project and failing to identify existing conditions of environmental degradation, the RDEIR fails to accurately acknowledge or analyze the nature or magnitude of the Project's substantial impacts on human beings and its significant impacts on public health, among other impacts. Because RDEIR fails to analyze the environmental baseline it also fails to adequately consider the full scope of the Project's direct and indirect effects on the environment. (CEQA Guidelines § 15126.2(a)).

Again, the Recirculated DEIR must include an accurate description of the physical and environmental conditions in the vicinity of the Project, which serves as the baseline against which the lead agency determines whether an impact is significant. (CEQA Guidelines. § 15125(a)). This baseline must ordinarily reflect conditions "as they exist at the time the [CEQA] notice of preparation is published." (Id. § 15125(a)(1)). Without an adequate baseline description, "analysis of impacts, mitigation measures and project alternatives becomes impossible." (Save our Peninsula Comm. v. Monterey Cnty. Bd. of Supervisors, 87 Cal.App.4th 99, 124 (2001) (citation omitted)). Caltrans failed to "include a description of the physical environmental conditions in the vicinity of the project" that reflects conditions "as they exist at the time the notice of preparation is published." (CEQA Guidelines § 15125(a), (a)(1)).

VI. The Recirculated DEIR Fails to Include Reasonable and Feasible Alternatives

The RDEIR fails to consider a reasonable range of alternatives, as required by NEPA, CEQA, and their implementing regulations. The RDEIR only considers the Project itself and a no build alternative. Further, the Reciculated DEIR violates CEQA and NEPA by defining the Project's objectives so narrowly as to exclude a meaningful analysis of reasonable, less impactful, alternatives.

CEQA Guidelines Section 15126.6(a) states:

"An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation."

The Project proposes one build alternative, with two design options at the Paige Avenue Interchange and a no-build alternative. All design options include widening the State Route 99 mainline from four lanes to six lanes. The two design options proposed for the Paige Avenue Interchange would have the same environmental impacts and only differ in that one design is an overpass and the other is an underpass. (Recirculated DEIR at p. 29). This is not a reasonable range of alternatives, as all the alternatives, except the no project alternative, have identical environmental impact, and the only differences are slight design changes to one of the interchange expansions. The slight design changes do not qualify as alternatives, and are not presented as alternatives in the RDEIR. Caltrans must describe alternatives which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. Caltrans presents two alternative designs both with the same environmental

impact. Three other alternatives were considered but eliminated from consideration in the scoping process in 2009, making it unclear if any technological advancements or improvements since then were considered. These rejected alternatives are not being considered in this RDEIR. Lastly, agency staff unilaterally eliminating alternatives, without a public process, deprives the public from meaningfully engaging in the NEPA and CEQA process.

Given, the current range of alternatives listed are not reasonable, MTC requests that the following alternative be added for consideration: Redesign the Project to address existing congestion and safety constraints associated with the Paige Avenue Interchange but to not enable, facilitate or accelerate additional industrial development in the South I Street Specific Plan Area.

This proposed alternative would require Caltrans to conduct studies to determine an appropriate design and consider whether and how the above-referenced goal could be accomplished without lane additions to the freeway and/or interchange, or for example, restricting the use of any additional lanes to only car traffic and not light or heavy- duty trucks. We request below that Caltrans require the City to enter into a binding agreement to rezone land near Matheny Tract and other sensitive uses for non-industrial uses as mitigation for several Project impacts; Caltrans should also consider whether such a rezoning commitment could be included as a component of this requested alternative.

This alternative would meet the needs and purpose of the Project. It would relieve traffic congestion along State Route 99 from Avenue 200 to Prosperity Avenue via road improvements; improve traffic operational deficiencies at the Paige Avenue Interchange; and the neighboring industrial area need would be mitigated by the rezoning. This alternative would significantly reduce VMT, air pollutants from heavy duty trucks, improve congestions, and improve traffic safety. The alternative would also meet Caltrans environmental justice and civil rights obligations.

A. Environmental Justice and National Environmental Policy Act

The Federal Highway Administration Guidance on Environmental Justice and National Environmental Policy Act states that if the affected population is a minority population protected under Title VI, the proposed action will not be approved unless:

1) There is a substantial need for the project, based on the overall public interest; and

2) Alternatives that would have less adverse effects on protected populations have either:

a) Adverse social, economic, environmental, or human health impacts that are more severe; or

b) Would involve increased costs of an extraordinary magnitude.

The RDEIR at page vi recognizes that Environmental Justice communities will be adversely impacted by this Project, and as such under the Federal Highway Administration Guidance on Environmental Justice and National Environmental Policy Act this Project can only move forward if there is a significant public interest for the Project and no reasonable alternatives exists. There is not clear public interest for this Project, and it is not shown in the RDEIR that this Project would address congestion, when it will be accelerating industrial development which will induce traffic congestion.

The alternative presented above perfectly falls in line with the Federal Highway Administration's guidance meaning that this Project can not move forward unless it is with the proposed alternative outlined above, which is not cost prohibitive and lessens impacts on Environmental Justice communities. As described above, this alternative would lessen traffic congestion, lessen air quality impacts, and lessen noise, light, and sound pollution, without increasing costs.

VII. The Recirculated DEIR Fails to Adequately Disclose and Analyze the Project's Significant Environmental Impacts

NEPA is intended to ensure that all federal agencies consider the environmental impacts of their actions in their decision-making processes, thereby making environmental protection part of the mandate of every federal agency. (40 C.F.R. § 1500.1(a)). NEPA fulfills this purpose by requiring that agencies take a "hard look" at environmental impacts of federal action before the action occurs and by ensuring that "relevant information will be made available to the larger audience that may also play a role in both the decision making process and the implementation of that decision." (Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349-50 (1989)).

CEQA requires an EIR to identify and describe the project's potential direct and indirect significant effects on the environment, as well the project's cumulative impacts when viewed in connection with the effects of past, present, and probable future projects. (CEQA Guidelines §§ 15126.2(a), 15065(a)(3), 15130(a)). In doing so, the EIR must describe and disclose the "whole of [the] action," CEQA Guidelines § 15378(a), thereby ensuring that "environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences." (Laurel Heights Improvement Assn., 47 Cal.3d at 396 (citation omitted)). Environmental effects that the agency must consider include, but are not limited to, adverse impacts on aesthetics, noise, housing, land use, traffic,

pedestrian and bicyclist facilities, climate change, and air quality. (See CEQA Guidelines, App. G).

A. Limited "Project Area"

The Recirculated DEIR fails to consider the full extent of direct, indirect, and cumulative effects of the Project by arbitrarily limiting consideration of impacts to only those within the "Project area," which the Recirculated DEIR narrowly defined as within 500 ft of the Project. (RDEIR at p. 64). This narrow definition fails to acknowledge the impacts of the Project extend beyond its immediate physical footprint. As a result, the Recirculated DEIR improperly omits from its description of environmental impacts any air quality impacts to residents in Matheny and other impacted communities, and it fails to acknowledge residential dwellings within 500 ft as sensitive receptors or consider impacts on residents, other sensitive receptors and land uses farther than 500 ft of the Project, including schools, places of worship, and businesses. Further, the Recirculated DEIR fails to consider the unique risks of the Project to impacted disadvantaged communities whose members are particularly vulnerable to environmental effects and accordingly fails to include appropriate mitigation to avoid and reduce those impacts.

The RDEIR cites the California Air Resources Board Air Quality and Land Use Handbook (2005) as justification for the 500 ft limit. However, the handbook lists a range between 300-1700 feet as the appropriate range to study cancer risks. (Handbook at p. 6). The Handbook states, "in traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet." (p. 6). The handbook does not discuss that when sensitive receptors, environmental justice communities, or nearby induced expanded industrial development will occur that those impacts or cumulative effects will be felt beyond those distances. Caltrans decision to go with a limited 500 ft range violates the precautionary principle. Caltrans should expand the study area to at least 1000 feet, which still falls in line with CARB's Handbook, but would include nearby sensitive receptors.

B. The Recirculated RDEIR Fails to Adequately Analyze Air Quality Impacts

The area in which the project is located is subject to some of the worst air quality in the entire country. Tulare County is classified as nonattainment for the federal 8-hour ozone and fine particulate matter standards. Matheny residents suffer from severe exposure and vulnerability to air pollution and are more impacted by asthma and cardiovascular disease than 75 percent and 87 percent of the state respectively. Rapid introduction of warehouses and other industrial development into the area spurred on by this Project will contribute to further deterioration of local air quality.

The poor air quality baseline makes a thorough analysis of the project's potential air quality impacts as a result of Project construction and the facilitation and inducement of even more truck and car traffic into Matheny crucial. However, the RDEIR fails to connect air emissions from the Project to public health impacts. The Recirculated DEIR's discussion of health impacts of the named pollutants provides only a general description of symptoms that are associated with exposure to the ozone, particulate matter (PM), carbon monoxide (CO), and nitrogen dioxide (NOx), and the discussion of health impacts regarding each type of pollutant is at most a few sentences of general information. The disclosures of the health effects related to PM, CO, and sulfur dioxide fail to indicate the concentrations at which such pollutants would trigger the identified symptoms. As in Bakersfield Citizens for Local Control v. City of Bakersfield, 124 Cal.App.4th 1184, 1197 (2004), "[a]fter reading the EIR's, the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin." (Bakersfield, supra, 124 Cal.App.4th at p. 1220.). As such the Recirculated DEIR must be amended to include human health studies to inform residents what the health impacts will be to them from this Project. Additionally, the RDEIR relies on raw data and units per ton to try and communicate health impacts. This information does not give residents any sense of what the health impacts of the Project are going to be. See (Sierra Club v. Cty. of Fresno, 6 Cal. 5th 502, 520, 241 Cal. Rptr. 3d 508, 524, 431 P.3d 1151, 1164 (2018) (The raw numbers estimating the tons per year of ROG and NOx from the Project do not give any information to the reader about how much ozone is estimated to be produced as a result.).

The DREIR's analysis of air quality impacts is further insufficient for several reasons. As previously discussed above the analysis uses CARB's land use handbook as saying 500 feet is the area of greatest concern for air quality impacts, whereas the Handbook states, "in traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet." (p. 6, emphasis added). The handbook does not discuss that when sensitive receptors, environmental justice communities, or nearby induced expanded industrial development will occur that those impacts or cumulative effects will be felt beyond those distances. Further, the air quality analysis also does not address impacts from accelerated industrial development which the RDEIR acknowledges the project will induce. So the RDEIR should analyze potential air quality impacts from buildout of the I St Specific Plan and along local roadways off the freeway to that area which will be used by traffic generated by the Project. Additionally, the air quality analysis fails to analyze NOx emissions, a serious and detrimental omission. Lastly, the air quality analysis associated with construction relies on the Fugitive Dust rule and Caltrans application of certain undefined measures to reduce emissions to say they will be less than significant. The San Joaquin Valley Air Pollution Control District Guidance for Assessing and Mitigating Air Quality Impacts ("GAMAQI") says the fugitive

dust rule alone shouldn't be relied on to reduce impacts to less than significant. (p. 78).

C. The Recirculated DEIR Fails to Adequately Analyze GHG Emissions and Impacts

The RDEIR's greenhouse gas ("GHG") analysis states that the Project will have less than significant impacts. (RDEIR at p. 196). However, the RDEIR fails to fully account for VMT impacts of the Project, including from induced truck traffic and other traffic and industrial facility operations and buildout. The VMT analysis deletes induced truck traffic citing SB 743, however that doesn't apply to analyzing other impacts like air quality and GHG impacts from induced truck traffic, and industrial facility operations and buildout. Therefore, the RDEIR underestimates GHG and air quality emissions from induced truck traffic, industrial operation and buildout.

The RDEIR further states that GHG impacts will be mitigated; despite offering no evidence of that and despite the fact the mitigation measures do not estimate any GHG reductions. As described later, the RDEIR also does not discuss how this Project is in compliance with AB32, the State's GHG emissions goals, or the State's SIPs. A full analysis of the GHG emissions from this Project and from its cumulative impact of spurred on industrial development must occur. The impacts must also be mitigated in a way that is enforceable and calculable.

Given the sensitive context in which the project site is located and recent pollution-generating projects, any incremental increase in air pollution exposure of sensitive populations as a result of the Project must be deemed individually and cumulatively significant and mitigated. Unfortunately, the Recirculated DEIR fails to acknowledge the sensitive environmental setting in which the Project is located, conduct a thorough analysis of the Project's potential air quality impacts, or identify feasible mitigation measures to avoid and reduce those impacts. CalTrans must revise the Recirculated DEIR to correct these deficiencies.

D. The Recirculated DEIR Fails to Fully Account for VMT Generated by the Project

CEQA establishes vehicle-miles traveled as the relevant focus on analysis of a project's transportation impacts in general. (Pub. Res. Code § 21099(b); CEQA Guidelines § 15064.3(a)). Vehicle miles traveled refers to the amount and distance of automobile travel attributable to a project. (CEQA Guidelines § 15064.3(a)). The Caltrans Memorandum, "Caltrans Policy On Transportation Impact Analysis and CEQA Significance Determinations for Projects On the State Highway System" ("Caltrans Memo"), dated September 10, 2020 states that the "determination of significance of a VMT impact will require a supporting induced travel analysis for capacity-increasing

transportation projects on the [state highway system].” p. 1.12 The memo provides that, “[t]he potential for projects to induce additional travel will be the basis for determination of significance,” and that methods of VMT analysis used “should reflect the potential for capacity additions to induce vehicle travel.” (Id.).

The Governor’s Office of Planning and Research (“OPR”) states that, “[f]or any project that increases vehicle travel, explicit assessment and quantitative reporting of the amount of additional vehicle travel should not be omitted from the [CEQA] document.” This VMT analysis is necessary to make reasonably accurate estimates of the Project’s greenhouse gas emissions, air pollution, noise, vibration, light pollution and housing impacts and its impacts on human beings and public health. Id. Here, Caltrans has not evaluated the associated impacts that may be caused by expanding the capacity of the highway and Paige Avenue interchange and spurring industrial buildout in the surrounding area which the RDEIR acknowledges will occur.

The RDEIR does a VMT analysis, however, there are several issues with that analysis. The RDEIR’s description of the Project and its purpose and need make clear that the Project is a “capacity-increasing” project, but the RDEIR fails to include a full analysis of the Project’s potential to induce travel and increase VMT to determine the significance of the Project’s transportation impacts. The RDEIR makes clear that the Project’s purpose is to allow for the buildout of industrial land uses in Tulare, where hundreds of acres are designated and pre-designated for industrial development which will generate significant volumes of truck and car traffic. The Project is designed to expand the capacity of the Paige Avenue interchange to accommodate increased volumes of traffic that may occur as a result of continued industrial development in the Project area. Based on the vehicle miles traveled analysis done for the Project, vehicle miles traveled would increase by 19,759,200 miles per year after the RDEIR’s deductions for truck vehicle trips. (RDEIR at p. 87). As this Project would increase capacity through the addition of lanes and new overcrossings and the construction of new interchange configurations and dimensions which will accommodate greater volumes of truck traffic and induce industrial development, those additional miles must be incorporated into the estimate. CEQA does not permit Caltrans to simply ignore a project’s potential to increase significant volumes of truck traffic and its associated impact, including but not limit to on air quality and public health in nearby disadvantaged communities. As such, CEQA Guidelines Section 15064.3(b) and Caltrans policy require that the environmental review for this Project include an analysis of the Project’s induced travel impacts.

E. The Project Fails to Analyze and Mitigate Growth Inducing Impacts

CEQA and NEPA both require the analysis of a project’s potential to induce growth. CEQA Guidelines Section 15126.2(d) require that environmental documents “…discuss the ways in which the project could foster economic or

population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…."

Here, the RDEIR provides conflicting information about the growth inducing potential of the Project, and fails to properly analyze those impacts. The RDEIR conclusory states without providing substantial justification that the Project is not growth inducing. The Recirculated DEIR states, " Caltrans' Guidance for Preparers of Growth-Related, Indirect Impact Analysis describes this project as having moderate potential for influencing growth. However, the project would not add new accessibility, and the capacity that is added would be needed to match development trends and projected growth forecasted by the local planning agencies."

(Recirculated DEIR at p. 46, emphasis added). The agency at first admits that this Project has moderate potential for influencing growth, but tries to hide that finding by saying the Project is supporting planned growth. (RDEIR at p. 50, 176). This logic is flawed as supporting planned growth still fosters economic or population growth. The fact that some of that growth is planned does not alleviate the Agencies duty to fully analyze the impacts of potential unplanned growth. Further, the RDEIR states the interchange improvements could indirectly lead to growth in the area after the improvements are made, but would not increase population growth substantially. This statement is made with no supporting evidence. Further, it ignores economic growth and the impact of the planned industrial growth. Contrary to the RDEIR, it is reasonable to believe that a highway expansion project to support the buildout of an industrial area, resulting in nearly 20 million more miles driven a year, and hundreds of acres of new industry would result in growth in that area. There was no discussion of how much or how little growth the City and County is planning for and if the Project meets or exceeds that expectation. The buildout of the I Street SP area will induce jobs and therefore also population. The failure to analyze growth inducing impacts undercuts the environmental analysis for air quality, VMT, impacts on human beings, noise, light and other impacts. As such the RDEIR is faulty and needs to analyze this Project's potential to influence economic and population growth, and mitigate those impacts if needed.

F. The Recirculated DEIR Fails to Consider Significant Noise and Groundborne Vibration Impacts of Vehicle Traffic on Sensitive Land Uses

The RDEIR states that the Project will not result in substantial increases in ambient noise levels in excess of applicable standards with mitigation, and that the Project would not generate excessive groundborne vibration or noise during construction or operation. The RDEIR does not provide any information or analysis to support its conclusions regarding the Project's potential noise and vibration impacts, other than to state that construction noise would be reduced in accordance with local ordinances and to reference

a Noise Study Report completed on October 22, 2020, and updated on November 8, 2021. But the Noise Study Report was not attached, included, released or translated depriving the public an opportunity to comment.

It is important to analyze the potential noise and vibration impacts associated with Project construction because the surrounding neighborhood is already affected by noise pollution. The Project area is impacted by intersecting freeways, freight lines, and the construction and future operation of high speed rail. The City has approved multiple warehouse and other industrial projects in Matheny and both the City and County currently have policies in place to attract more industrial land uses to the area. Noise from the construction of these projects causes intrusive impacts to nearby sensitive receptors and can have a detrimental impact on human health. Additionally, construction is expected to take three years, which could cause both long and short term health impacts. Thus, Caltrans must evaluate the Project's construction noise impacts and cumulative impacts.

In addition, studies show that motor vehicles are usually the primary source of noise pollution, and that VMT increases are correlated with negative noise impacts. Heavy-duty trucks, in particular, increase disruptive noise substantially. A diesel truck moving 40 miles per hour, 50 feet away, produces 84 decibels of sound. The California Attorney General recently observed that trucks can be loud, bringing disruptive noise levels that can cause hearing damage after prolonged exposure. The introduction of additional traffic into Matheny due to the increased capacity as a result of this Project and increased warehouse and industrial development that occurs in response will exacerbate the noise and groundborne vibration impacts of truck and car traffic and warehouse construction and operation near Matheny Tract. The RDEIR also does not justify that the inclusion of three sound walls will limit noise impacts to less than significant levels. Given the significant existing noise and groundborne vibration in the area, this Project's additional noise and vibration impacts are likely to be significant. (See CEQA Guidelines, § 15064(b); Kings County Farm Bureau v. City of Hanford, 221 Cal.App.3d 692, 718, 721 (1990). CalTrans must revise the RDEIR to thoroughly and accurately analyze the Project's potential noise and groundborne vibration impacts and include feasible mitigation measures to avoid and reduce those impacts.

G. The Project Will Create New Sources of Substantial Light or Glare That Adversely Impact Views

Truck and car trips generated in Tulare as a result of this Project will create substantial light and glare impacts on local streets and homes at night. Light from vehicle traffic increases the amount of light impacting residences. Light pollution causes adverse health impacts. For instance, an increased amount of light exposure at night lowers melatonin production, which results in sleep deprivation, fatigue, headaches, stress, anxiety, and other health problems.19

In fact, evidence of the health effects of light pollution has convinced the American Medical Association to support efforts to control light pollution and conduct research on the potential risks of exposure to light from vehicles and other sources.

Matheny residents have concerns that truck and car headlights that travel to and from recently developed and proposed warehouse distribution centers induced by this Project will reduce nighttime darkness and in the homes of residents on streets used by heavy vehicle traffic. In addition, new warehouses and industrial facilities enabled by the Project will require outdoor lighting during nighttime operations. Construction lighting for this Project and for warehouse and industrial projects built as a result of this Project similarly impacts public and private views. Caltrans must revise the RDEIR to thoroughly study the Project's potential light impacts on residences in Matheny and incorporate all feasible mitigation measures to avoid and reduce those impacts

VIII. The Project Will Have Substantial Adverse Impacts on Human Beings

CEQA Guidelines Section 15065(a)(4) establishes a mandatory finding of significance for projects that will have substantial adverse impacts on human beings. As addressed throughout this letter, this Project will result in both direct and indirect substantial adverse, individual and cumulative impacts on residents of Matheny Tract, children at Palo Verde Elementary School, the Sun and Fun RV Park, among others sensitive receptors, by exposing them to significant light, glare, air pollution, noise, vibration and other impacts and by negatively impacting their health as a result of these exposures. Yet, the RDEIR does not analyze or mitigate these impacts, and takes a narrow view for air quality impacts to sensitive receptors within 500 ft of the Project. To the contrary as described in the letter residents in Matheny and others farther than 500 ft would be greatly impacted and affected by this Project.

IX. The Recirculated DEIR Fails to Adequately Analyze the Project's Cumulative Impacts

The RDEIR fails to adequately identify and analyze cumulative effects of the Project by ignoring its incremental effects "in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (CEQA Guidelines §§15065(a)(3), § 15130(a)). The RDEIR's cumulative impacts analysis considered only a handful of selected projects. It wholly ignores numerous closely related past, present, and probable future projects, including related Caltrans District Six highway expansion activities and many industrial development projects in the Project area including the Paige Avenue Industrial Project. The RDEIR acknowledges that the Project will accelerate industrial development on hundreds of acres of land in the South I Street Specific Plan area, but does not consider this development in

its cumulative impacts analysis. As to the related cumulative impacts the RDEIR did consider, like aesthetics, visuals, noise, light, and vibration, the cumulative impacts analysis was conclusory and lacked reasoning, analysis, or supporting documentation. This failure is particularly concerning due to the Project's likely cumulative impacts on Matheny Tract and other nearby sensitive receptors.

Further, the RDEIR states construction will continue for three years. (RDEIR at p. 15). Yet, the RDEIR downplays the environmental impacts as short in duration despite construction taking three years. Three years of construction impacts would likely be cumulatively significant especially to noise, light, and vibration and other impacts for that duration of time on nearby sensitive populations.

X. The Recirculated DEIR Fails to Show Conformity with Federal, State and Local Plans

CEQA requires an examination of whether the Project would be consistent with existing zoning, plans, and other applicable land use controls. (Cal. Code Regs. tit. 14 § 15063). NEPA also requires the lead agency to better integrate environmental impact statements into state or local planning processes, by ensuring EIR's discuss any inconsistency of a proposed action with any approved state or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law. (40 C.F.R. §1506.2(d)).

A. The Project is Not in Compliance with the City of Tulare's General Plan

The Project is not in compliance with several General Plan Policies and requirements. For example, General Plan Policy AQ-P1.2 Cumulative Air Quality Impacts states the City "shall require developments to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Developers shall be required to present alternatives that reduce air emissions and enhance, rather than harm, the environment." However, the RDEIR does not fully analyze cumulative air quality impacts, or present alternatives that would reduce air emissions. As such, Caltrans should consider the alternative we have suggested which would lessen environmental impact, yet improve the Paige Avenue interchange.

The Noise Study Reports solely studies noise levels at 50 ft from the construction site without considering noise level impacts resulting from detours at more than 50 ft.

B. The Project Does Not Meet the City's and Matheny Tract Climate Adaptation Plan Goals

CEQA requires that Projects do not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The City of Tulare adopted a Climate Action Plan in 2011.21 This Project does not meet many of the goals and targets of the Plan and therefore conflicts with a local land use plan, making the Project have a significant impact which must be mitigated and reconciled.

Specifically, the City's Climate Action Plan states as Goal 3 to shift single-occupancy vehicle trips to alternative modes. Yet, this Project would increase vehicle miles traveled by over 20 million miles a year, and does very little to mitigate those miles or encourage alternative modes of transportation. It instead entrenches a system of single occupancy vehicle trips. This Project will also lead to increased vehicle emissions, making it impossible for the City to meet its emissions reduction targets.

In efforts to reduce greenhouse gas emissions, and improve air quality and transportation infrastructure, Tulare County adopted the Matheny Tract Climate Adaptation Plan in 2020 from a Transformative Climate Communities ("TCC") grant.22 The Project conflicts with the Matheny Tract Climate Adaptation Plan as it will increase emissions, further exacerbating poor air quality and causing disproportionately high and adverse effects on a pollution burden community; counter to the goals of the Climate Adaptation Plan and TCC program goals. Specifically, the Project conflicts with various policies and programs aimed to reduce emissions and improve pedestrian safety including, Policies AQ -2.3, HS - 9.1, HS -9.2, LU - 7.3, TC - 5.2, TC - 5.5 and the Urban Greening Program. Despite efforts from MTC and Tulare County, and investments from the California Strategic Growth Council to develop the Climate Adaptation to improve the overall health of the community, the Project will worsen air quality conditions in Matheny Tract, further deteriorating the community's health and vitality. The RDEIR must not conflict with this plan, and it clearly does.

C. The Project Does Not Conform with Clean Air Act Requirements or State Implementation Plans

CEQA and NEPA requires EIRs to discuss any inconsistencies between the proposed project and applicable air quality plans. (See 40 C.F.R. §1506.2(d); CEQA Guidelines § 15125(d)). Additionally, section 176(c) of the Clean Air Act, 42 U.S.C. § 7506(c), prohibits any department, agency, or instrumentality of the federal government from engaging in, approving, financing, or otherwise supporting any activity which does not conform to a State Implementation Plan ("SIP") to achieve and maintain federal air quality standards.

The Project was submitted for Interagency Consultation on January 27, 2022. It was deemed not a "Project of Air Quality Concern" by the Environmental Protection Agency on January 24, 2022, and by the Federal Highway Administration on January 27, 2022. However, that analysis and interagency consultation report was not shared in the RDEIR depriving commentators the ability to address if this Project conforms with local and state air quality plans and if it is a project of air quality concern. The RDEIR concludes with no supporting evidence the Project will not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay timely attainment of any National Ambient Air Quality Standards ("NAAQS"). (RDEIR at p. 134). To the contrary the Recirculated DEIR discusses the nearly 20 million additional VMTs that will result from this Project, and how it will induce further industrial development. So, it is reasonable to conclude this project would cause a significant increase in PM, Ozone, NOx, and SOx emissions from the additional vehicles and spurred industrial growth. Given the San Joaquin Valley has had a very difficult time meeting attainment goals, it is very likely this Project would delay timely attainment. Also, Caltrans and the Federal Highway Administration failed to engage the community or take appropriate steps to meaningfully solicit public input on its air quality conformity determination.

1. Caltrans is Required to Do a Hot Spot Analysis

A project may not cause or contribute to any new localized carbon monoxide or particulate matter violations, increase the severity of existing violations, or delay timely attainment of the NAAQS or any required interim emissions reduction or other milestones from these nonattainment and maintenance areas. (40 C.F.R. § 93.116(a)). Demonstrating that these criteria are satisfied will ordinarily require a localized air or "hot-spot" analysis. Such an analysis must show, among other things, that during the time frame of the project no new local violations will be created and the severity or number of existing violations will not be increased as a result of the project. Id. The hot-spot analysis need only consider operational emissions and temporary increases in emissions resulting from construction-related activities. (40 C.F.R. § 93.123(c)(5).

As set forth above, a hot-spot analysis is required, inter alia, where the expanded highway project would have a "significant increase in the number of diesel vehicles," "affect[] intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;" or affect areas identified as possible sites of violations the applicable PM SIP. (40 C.F.R. § 93.123(b)(1)). Here the Recirculated DEIR states the Project "was deemed not a "Project of Air Quality Concern" by the interagency consultation partners and, therefore, did not require a Particulate Matter 10 hot-spot analysis."

(DEIR at p. 132). However, certainly one is required given this Project is a highway expansion that would significantly increase the number of diesel vehicles, and increase PM, as discussed above, and given the Level of Service of the Paige Avenue interchange. As such, Caltrans is required to do a hot spot analysis, and share the analysis and its findings in the Recirculated DEIR and take proactive steps to affirmatively engage Matheny Tract and other nearby sensitive uses to disclose and accept input on its analysis and findings.

Lastly, there was a lack of public consultation on the Air Quality Conformity determination and Hot Spot analysis because documents were not made readily available. Furthermore, the agencies failed to provide a clear public comment opportunity, no notice was given to residents about opportunities to comment before the determinations were made regarding the Project's air quality conformity and hot spot analysis.

D. The Project Fails to Comply with the Air District Indirect Source Rule

Caltrans is required to ensure compliance with San Joaquin Air Pollution Control District Rule 9510 (Indirect Source Rule) in its approval of this Project. The purpose of District Rule 9510 is to reduce NOx and PM10 emissions associated with construction and operation of development and transportation projects. Because the Project's construction exhaust emissions exceed two tons of NOx or PM10, the Project is subject to the rule, and Caltrans is therefore required to submit an application to the Air District prior to Project approval with documentation supporting an Air Impact Assessment to quantify NOx and PM10 emissions and ensure appropriate mitigations. The RDEIR states the construction contractor will submit an ISR application, however that indicates Project application will not be applied "prior to Project approval" as required by the ISR. (RDEIR at p. 65).

XI. The Recirculated DEIR Fails to Include All Feasible Mitigation Measures and Ensure that Mitigation Measures Included Comply with CEQA

An EIR must describe and adopt all feasible mitigation measures to avoid or minimize the significant environmental impacts of a project. (Pub. Resources Code, § 21002; CEQA Guidelines, § 15126.4, subd. (a)(1)). "Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified."(CEQA Guidelines, § 15126.4, subd. (a)(1)(B)). The lead agency is expected to develop mitigation measures in an open process and consider measures proposed by other interested agencies and the public. Communities for a Better Environment v. City of Richmond, 184 Cal.App.4th 70, 93 (2010)).

The measures included in the Recirculated DEIR fail to comply with CEQA's requirements that they be enforceable and are inadequate. Some of the

measures are vague, undefined, improperly deferred. For example, the mitigation measures regarding replacement planting do not indicate when the measure would be implemented. Nor does the mitigation measure on the Comprehensive Corridor Management Plan appear enforceable or have an implementation timeline. The RDEIR does commit to some five year investments in public transportation, but that measure will do little to address the very large induced truck traffic from the Project. The proposed mitigation measures also do not calculate the quantitative emissions reductions to support findings of less than significant with mitigation.

Further, according to the Federal Highway Administration Guidance on Environmental Justice and National Environmental Policy Act (2011), if there is a disproportionately high and adverse effect on an environmental justice population, after taking benefits and mitigation into account, the DEIR must evaluate whether there is a further practicable mitigation measure or practicable alternative that would avoid or reduce the disproportionately high and adverse effect(s). Therefore, Caltrans must consider the below suggested mitigation measures.

It is particularly important to reduce impacts on the surrounding community of Matheny given their current high environmental pollution burden. The Recirculated DEIR fails to adopt many important measures that would reduce impacts on the community. Below is a list of mitigation measures which residents have identified as high priorities to reduce the impacts of the proposed projects. These and other mitigation measures should be added before project approval:

- Rezone to Promote AFFH Compliance and Mitigate Impacts. To help comply with AFFH and to provide access to opportunity, while also mitigating the Project's impacts, such asVMTs, and ensure the Paige Avenue interchange can handle current capacity and potential growth, the Caltrans should require that the City of Tulare enter into an agreement committing it to rezone, prior to the initiation of Project construction, the land around Matheny Tract from industrial to public lands which would generate less VMTs, and thus less pollution from diesel and truck emissions. Rezoning will lead to a reduction of lighting, noise, and vibration lowering public health impacts as it will lead to community serving land uses such as parks and recreational centers, rather than high emitting industries. The picture below shows in purple where the City has zoned for industrial use, north of Mathenty. Rezoning this land to a less intensive land use would create a buffer to protect Matheny residents, and would greatly reduce the impacts of this Project, and future developments.



- Invest in Local Transportation Infrastructure. Although Commercial Avenue will be the official detour route during construction, MTC is concerned that K St. and other local streets will still be used during and after Project construction as heavy duty semi-trucks travel to industrial projects induced by this Project. To mitigate road deterioration by heavy duty semi-trucks, Caltrans should set aside funding for local road maintenance.
- Investment for Implementation of Matheny Climate Adaptation Plan. The Matheny Climate Adaptation Plan identified local community priorities like street lights, bike lanes/street improvements/sidewalks, transit projects such as zero emission ridesharing programs, home improvements and weatherization (energy efficiency), stormwater drainage, air/water quality, housing safe and sanitary, public health, infrastructure, and solar to reduce energy costs. Implementation of community priorities from the survey will reduce impacts from GHG and air emissions associated with the Project and as such, would be an appropriate mitigation measure.

Zero Emission Rideshare Program. Currently, Caltrans proposes to fund a Vanpool program for no more than five years. This then would be a temporary mitigation measure for a Project that is expected to last decades. The mitigation measure does not indicate how it will mitigate impacts for the community of Matheny Tract and other vulnerable communities such as the mobilehome parks, specifically. Funding must be used to provide adequate services to these communities. Instead, Caltrans should fund a Zero-Emission Rideshare Program (identified as a top community priority in the Matheny Climate Adaptation Plan created with a Transformative Climate Communities Planning Grant) to provide a transportation alternative that has the potential to reduce VMT. Caltrans must conduct robust community engagement to ensure that the zero-emission rideshare program is designed and tailored to meet specific transportation needs of the local community impacted by this Project.

- Increase Transit Opportunities. Similar to the previous mitigation measure, Caltrans proposes to subsidize increased frequency for Route 20 for only five years though impacts will be long term. This mitigation measure should begin during construction and last until the lifetime of the Project.

- Active Transportation Infrastructure. The community of Matheny Tract is isolated from active transportation infrastructure such as sidewalks and bike lanes. Residents have to work/bike on the road to access the City. Pedestrian and cyclist commuting will become even more dangerous with an increase in traffic flow, particularly with heavy duty semi-trucks. To mitigate this issue, Caltrans should fund active transportation infrastructure for the community of Matheny Tract for connectivity and safety. This will also help ensure the Complete Streets aspects of this Project actually connect to local communities.
- Comprehensive Corridor Management Plan. CEQA requires that mitigation measures provide "specific performance standards the mitigation will achieve." (Guidelines § 15126.4(a)(1)(B)). However, it is unclear what this plan is and how it will be used to mitigate impacts. It is contradictory for Caltrans to commit resources for Highway 99 buildout and construction of freight lanes that will create approximately 20 million VMT then retroactively try to reduce those same 20 million VMT and manage the corridor. Caltrans should coordinate with the County and City of Tulare to create a truck route study and analysis to mitigate VMT in the corridor and determine what projects are necessary and needed in the corridor. Caltrans should also indicate how it will achieve its goals to create multimodal transportation opportunities including walking, biking, and public transit, consistent with its Racial Equity Statement to improve access for and provide meaningful benefits to underserved communities. We must note, while this Project includes walking and bike paths, those do not extend to the community of Matheny Tract and the nearby mobile home parks. This management plan should specifically state how impacts from the Project will be reduced and should clearly state the timeline associated with its implementation.
- Replacement Planting. The Recirculated DEIR states, "replacement planting will occur at a 1-1 ratio for all vegetation removed. It is estimated that over a thousand trees would be replaced or replanted." (Recirculated DEIR at p. 264). A 1-1 ratio maintains the status quo and ignores the fact that this Project will deteriorate visuals, air quality, increase GHG emissions and worsen cumulative air quality so a 5-1 planting replacement program is more appropriate. This will help reduce air impacts, visual impacts, and restore habitat for sensitive species.
- Vegetative Barriers and Green Space. Currently, the Recirculated DEIR only proposes to plant trees around the stormwater basins and at post mile 25.8. Caltrans should also invest in vegetative barriers and green spaces around the perimeter of Matheny Tract to help mitigate visual impacts from increased traffic flow during and post construction, in addition to mitigate air quality and heat island impacts. Caltrans should also invest in vegetative barriers for the mobilehome parks located on Rankin Road to mitigate air quality impacts. Caltrans should work with residents from both communities to develop plans for vegetative barriers.

XII. Recirculated DEIR Fails to Consider Environmental Justice Impacts of the Project

As discussed in detail above, Matheny Tract is identified by the State and City of Tulare as a disadvantaged community and is disproportionately composed of people of color compared to the City, County and state as a whole. Executive Order 12898 amplifies Title VI by providing that, "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." President Biden's Executive Order to Revitalize Our Nation's Commitment to Environmental Justice for All further commits federal agencies to take environmental justice into consideration. Department of Transportation EJ Order sets forth guidance for determining whether a DOT program, policy, or activity or a DOT-funded program, policy, or activity (DOT action) is likely to have disproportionately high and adverse human health or environmental effects on minority or low-income populations. (Departmental Order 5610.2(a) (Actions to Address Environmental Justice in Minority Populations and Low-Income Populations). The determination process includes providing timely and meaningful opportunities for participation and comment by representatives of potentially affected communities. The DOT EJ Order directs the Department to consider EJ objectives when administering the requirements of NEPA; Title VI and related statutes; the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended; planning statutes in Title 23, U.S. Code and Title 49, U.S. Code; and other statutes, regulations, and Executive Orders that address or affect transportation infrastructure planning and decision-making; social, economic or environmental matters; public health; or public involvement.

The Recirculated DEIR did find several environmental justice populations near the Project site. (See Recirculated DEIR at p. 61, Table 2.6). The Recirculated DEIR also states that Particulate Matter 10 and Oxides of Nitrogen emissions are likely to exceed the San Joaquin Valley Air Pollution Control District's Rule 9510/Indirect Source Review Rule. "Therefore, the build alternative will cause disproportionately high and adverse effects on any minority or low income populations" (p. 66). Yet, the only mitigation measure offered is for the construction contractor to pay any required fees then the DEIR goes on to discount any environmental impacts on these sensitive receptors. As discussed previously, the Recirculated DEIR states, "[f]or sensitive receptors, the zone of greatest concern near roadways is within 500 feet (or 150 meters). (Recirculated DEIR at p. 64). However, CEQA and NEPA don't just require analysis of the zone for greatest concern, but rather all environmental impacts from the Project especially to nearby sensitive receptors. Air pollution and other types of pollution like light and sound pollution travel much farther than 500 ft. Given the already existing poor air quality in the region and this project will induce industrial development its

clear this Project will result in cumulatively significant air, light, noise, and vibration impacts, which will harm and effect these environmental justice communities.

The RDEIR states that according to NEPA, if there is substantial need for projects based on overall public interest, the project can still be constructed. (23 U.S.C. 109[h]). Public interest means the community in which the Project is located, not Caltrans or the City's financial interests in industrializing this region. As the DEIR states, the Project development team determined that there is a need for the Project and Caltrans coordinated with other agencies, that, again, is not "public interest." As stated above however, Caltrans failed to provide meaningful opportunities for the public to participate and provide input on whether or not there is significant need for this Project, if the benefits provided by this Project will outweigh impacts to environmental justice communities, or if all practicable mitigation measures or practicable alternatives were considered. These impacts must be studied, analyzed, and fully mitigated. Failure to do so would run afoul of environmental justice commitments and would render the Recirculated DEIR's analysis arbitrary and capricious in violation of NEPA and the Administrative Procedure Act, 5 U.S.C. §§ 551–559.

The Recirculated DEIR further states, "the build alternative will cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of Executive Order 12898 and Federal Highway Administration Order 6640.23A."(DEIR at p. 66). When there is a disproportionately high and adverse effect on an environmental justice population, after taking benefits and mitigation into account, the DEIR must evaluate whether there is a further practicable mitigation measure or practicable alternative that would avoid or reduce the disproportionately high and adverse effect(s). The proposed action will be approved only if it is determined that no such practicable measures exist.

This letter lists several reasonable and practicable mitigation measures Caltrans should consider and adopt, and this Project can not move forward because such measures exist. The RDEIR does list several "benefits" from this Project as evidence for less than significant impacts on Environmental Justice communities. The RDEIR states the Project would bring In Complete Streets and pedestrian paths, however those paths as designed currently, will not connect or lead to other paths, making them less beneficial. The RDEIR lists carbon dioxide emissions reductions as a benefit, even though that would not come until 20 years after the Project would be built, and those emission reductions would happen regardless because as the RDEIR admits"[t]hese improvements in lessened air pollutants are attributed to technological advancements that will come about in the form of more efficiently combustion engines and fuels, and the continuance of hybrid and electric vehicles (zero emission vehicles)" not the actually Project itself. Arguing this Project will lessen emissions in 20 years is very disingenuous and not supported by

substantial evidence in the RDEIR. Further, based on public feedback from community meetings this Project is not in the public interest and the Projects' facilitation of industrial development will likely increase congestion not lessen it.

The 2022 Regional Transportation Plan/Sustainability Communities Strategy Environmental Impact Report (Section 4.3 Air Quality) outlines mitigation and minimization measures that will be incorporated by Tulare County. The RDEIR cites this Report as mitigation to environmental justice communities and as general mitigation measures, yet it is unclear if any of the measures cited are applicable to this Project as some of them refer to railyards. Additionally, the rest are vague and unenforceable as CEQA or NEPA mitigation measures.

Lastly, as already discussed, a large portion of residents near the Project site speak Spanish, and yet supporting documents are yet to be released, depriving residents an equal opportunity to comment and participate in the decision making process.

Table 2.6 Environmental Justice Populations by Census Tract in the Socioeconomic Study Area of Tulare County

Geographic Area	Aggregate Minority Percentage	Percentage of Families Below Poverty Level	Median Family Income	Environmental Justice Population?
Tulare County	71.3	20.4	$53,330	Not Applicable
City of Tulare	70.8	17.3	$59,401	Not Applicable
Census Tract 23.02	57.6	11.7	$61,188	Yes
Census Tract 23.03	41.2	6.4	$88,017	No
Census Tract 23.04	54.6	23.0	$58,148	Yes
Census Tract 24*	61	7.9	$86,250	Yes
Census Tract 29.01	93.9	24.4	$46,477	Yes
Census Tract 29.03	56.6	6.1	$76,037	Yes
Census Tract 29.04	64.9	23.4	$47,019	Yes
Census Tract 31	78	20.3	$40,842	Yes

Source: U.S. Census Bureau, 2015-2019 American Community Survey Five-Year Estimates.

*Tract 24 has been split into Tracts 24.01 and 24.02; however, 2015-2019 American Community Survey demographics data are only available for Tract 24.

XIII. Caltrans' Approval of the Project Would Conflict with its Racial Equity

Commitment and Violate Caltrans' and the State of California' Duties Not to Discriminate and to Affirmatively Further Fair Housing

In December 2020, Caltrans adopted a Statement of Commitment to racial equity which declares that Caltrans will "meaningfully engage communities most impacted by structural racism in the creation and implementation of the programs and projects that impact their daily lives" and "will reform [its] programs, policies, and procedures based on this engagement to avoid harm to frontline and vulnerable communities."23 In addition, as a state agency, Caltrans is subject to various civil rights and fair housing laws which apply in the context of this Project. Pursuant to Government Code section 11135, Caltrans is prohibited from subjecting persons to discrimination based on their race, ethnicity, national origin, age, and other projected characteristics. The Fair Employment and Housing Act ("FEHA") prohibits Caltrans from engaging in any action or inaction that adversely impacts the use or enjoyment of housing opportunities based on protected characteristics without a legally sufficient justification. (2 C.C.R. §§ 12005(z)(3); 12162).

In order to establish that a legally sufficient justification for discrimination exists, a public agency must prove that the practice is (1) necessary to achieve a substantial, non-discriminatory purpose of the public agency, (2) the practice effectively carriers out the identified purpose, (3) the purpose is sufficiently compelling to override the discriminatory effect, and (4) there is no feasible alternative practice that would equally or better accomplish the identified purpose with a less discriminatory effect. (2 C.C.R. § 12062). Further, Government Code section 8899.50 requires that all state agencies and departments to affirmatively further fair housing by taking meaningful actions that overcome patterns of segregation and foster communities free from barriers that restrict access to opportunity based on protected characteristic and to take no action that is materially inconsistent with that duty.

As discussed above, this Project, if approved, will, by design, expand roadway capacity to accommodate increased truck traffic in the environmentally-burdened community of Matheny as well as several other identified environmental justice communities, which are disproportionately composed of people of color, as well as other protected classes, including children and people originating from countries other than the United States. By allowing for the introduction of increased volumes of truck traffic and thereby supporting the continued targeted development of industrial facilities in these communities – communities which have steadfastly and vocally opposed their further industrialization, Caltrans approval of the Project would undermine Caltrans' Statement of Commitment to racial equity and will result in a discriminatory impact on Matheny residents by further degrading

environmental conditions in their neighborhood; increasing public health risks associated with industrial development and truck traffic, including but not limited to air pollution exposure; and adversely impacting residents' use and enjoyment of their housing who experience air pollution, noise, vibration, light and glare, and other impacts in their homes. It would also undermine the possibility of developing the land in the I Street Specific Plan area for uses that reduce disparities in access to opportunity impacting Matheny Tract, including with respect to access to parks, green space, trails, grocery stores, retail, and quality affordable housing among other potential uses of the land.

Caltrans cannot and has not demonstrated that it has a legally sufficient justification for the Project under FEHA, including among other reasons, because neither the City, County, or Caltrans has demonstrated that it is infeasible to pursue its industrial development goals on any other land in the City that is farther away and would have a less direct impact on highly-vulnerable lower-income communities of color. As a result, Caltrans' approval of the Project would likely violate section 11135, 8899.50 and FEHA, as well as other civil rights and fair housing laws.

XIV. Conclusion

Thank you for considering our request that Caltrans adopt our project alternative in light of the important environmental justice issues raised in this letter. To reiterate our suggested alternative, Caltrans should improve the Paige Avenue interchange to address existing need and safety issues, but not in a way which will induce further industrial development. Caltrans needs to enter into an agreement with the City of Tulare to rezone the land around Matheny to ensure further improvements of the interchange will not be needed. We hope Caltrans considers and adopts our suggested mitigation measures. We look forward to your response.

Sincerely,



Perry Elerts
Staff Attorney
Leadership Counsel for Justice and Accountability

Response to Leadership Counsel for Justice and Accountability: Thank you for commenting on the Tulare Six-Lane and Paige Avenue Interchange Improvement Recirculated Draft Environmental Impact Report/Environmental Assessment. Engaging with the public is an essential part of the environmental process. Public participation for this project has been accomplished through public hearings, public notices, and door to door outreach.

Our responses attempt to mirror your general and specific concerns set forth in your letter.

General Response to Assertions that Caltrans did not comply with Fair Employment and Housing Act, Affirmative Furthering Fair Housing Act, Zoning Laws, and Government Code section 11135

Your letter asserts that Caltrans's actions underlying the project violated the following laws: (1) "the Fair Employment and Housing Act (§§ 12900 - 12996); (2) the Affirmative Furthering Fair Housing Fair Housing Act; (3) planning and zoning laws; and (4) "Government Code Section 11135."

a. Fair Employment and Housing Act is not applicable.

Fair Employment and Housing Act violations are not applicable in transportation projects. As a transportation agency Fair Employment and Housing Act violations can only be relevant when Caltrans employees or job applicants allege discrimination.

b. Affirmative Furthering Fair Housing Fair Housing Act is not applicable.

Similarly, the Affirmative Furthering Fair Housing Act duties are not applicable to Caltrans because it does not engage in housing or community development programs or services. We have found no statute, regulation, or legal duty imposing these duties on Caltrans. Affirmative Furthering Fair Housing Act is applicable to public agencies which address housing and community development issues (e.g., California Department of Housing and Community Development, cities and counties, colleges and universities that provide housing, etc.) The Affirmative Furthering Fair Housing Act is not a blanket statute making every public agency (e.g., state hospitals, state prisons, education institutions, law enforcement agencies, water boards, transportation agencies, health care agencies, etc.) responsible for affirmatively furthering fair housing.

c. Planning and Zoning laws are not applicable.

Your letter asserts "Caltrans must enter into an agreement with the City of Tulare requiring Tulare to rezone the land adjacent to Matheny to a zone district that does not allow industrial uses, but rather allows parks, community or recreational facilities, and/or housing." This assertion has no legal basis. Further, it presupposes that a transportation agency such as Caltrans has the same duties and responsibilities of a city or county in creating and amending their general plans or revising their ordinances. Zoning and planning law require cities and counties to address multiple issues including natural resources, economic development, transportation, and housing, but these statutes do not impose legal duties on a transportation agency. (Government Code §§ 65000 – 65499.) Additionally, land use decisions are primarily made at the local level. (Government Code § 65030.1.)

d. The project does not result in a violation of Government Code section 11135).

The Government Code section 11135 is applicable to all agencies receiving state funds, including Caltrans. It prohibits unlawful discrimination, which includes discrimination based on race, ethnic group identification, or disability. Your letter identifies a protected community (Matheny Tract with "75% Hispanic/Latinx" which you allege is "less than a mile away from the proposed detour routes") which Caltrans has considered in its environmental review. There has been no showing or allegation how the Matheny Tract community will be unlawfully subject to discrimination due to the project.

The letter also mentions the project may negatively affect this protected community's "health and safety [due to] future industrial and transportation projects." (Section 2.1.7). The Tulare Six-Lane and Paige Avenue Interchange Improvement environmental review is not required to address Government Code section 11135 future industrial buildout or transportation projects. Such future endeavors would require additional environmental review.

General Response to Failure to Provide Opportunities for Public Participation

a. Compliance with Notice Content Requirement

Caltrans has gone beyond the "substantial compliance with the notice content requirements" to ensure public participation. (Public Resources Code §21092(b)(2).) Caltrans has consistently reached out and collaborated with the community and your organization. As set forth below, Caltrans has complied with all the legal requirements required for public notice and participation on the proposed project. (Public Resources Code §21092.)

The Draft Environmental Impact Report/Environmental Assessment was released on April 12, 2023. Based on public comments from the first circulation period, the environmental document was revised and recirculated on August 8, 2023. Caltrans provided the public with "a reasonable period of time" to provide additional comments on the Recirculated Draft Environmental Impact Report/Environmental Assessment as the circulation period was from August 8, 2023, to September 22, 2023. (Public Resources Code §21092(a).) Furthermore, the Recirculated Draft Environmental Impact Report/Environmental Assessment Spanish translation was released on August 8, 2023.

Caltrans' public notice was posted on its website and widely disseminated in compliance with the law. (Public Resources Code §21092(b)(3).) In addition to posting on its website, a lead agency must also do at least one of the following: (1) publish in a newspaper, (2) post notice "on-and off-site" in the

project area, or (3) directly mail notice to contiguous property owners/occupants. (Public Resources Code §21092(b)(3)(A),(B),(C).) Additionally, a public agency can provide "additional notice by other means." (Public Resources Code §21092(e).) Caltrans' compiled with its legal notice requirements by taking the following actions:

- Advertising a Notice of Availability in the Visalia Times-Delta in English and Spanish on August 8, 2023. This newspaper is one "of general circulation in the area affected by the proposed project." (Public Resources Code §21092(b)(3)(A). Government Code § 6061.)
- Mailing letters with the Notice of Availability to the Matheny Tract and the County Manufactured Home Community. In addition to the mailers, the Notice of Availability was posted at nearby businesses, poles, and bus stops surrounding the Matheny Tract community. (Public Resources Code §21092(e).)
- Posting the Notice of Availability on Caltrans District 6 social media pages, including Facebook, Twitter, and Nextdoor. (Public Resources Code §21092(e).)
- Caltrans staff conducted door-to-door outreach on August 11, 2023, handing out the Notice of Availability in English and Spanish to businesses and residents along Paige Avenue between I Street and Blackstone Avenue. Caltrans left public notices at the Sun and Fun RV Park and the County Manufactured Home Community. Hence, Caltrans provided "additional notice by other means" to ensure participation from these community members. (Public Resources Code §21092(e).)
- Caltrans posted the Notice of Availability on the Palo Verde Elementary School student information system (allowing the school to send messages to parents). (Public Resources Code §21092(e).)

a. Compliance with access to technical information, studies, and reports

Your letter states that Caltrans "failed to make technical information, studies and reports relied on" in the Recirculated Draft Environmental Impact Report/Environmental Assessment readily available to the public." This is inaccurate. Caltrans has complied with all of the legal requirements on notice and documentation access to studies and reports relied on. Legally, the notice is to state "the address where copies of the Recirculated Draft Environmental Impact Report/Environmental Assessment or negative declaration, and all documents referenced in the Recirculated Draft Environmental Impact Report/Environmental Assessment or negative declaration are available for review, and a description of how the Recirculated Draft Environmental Impact Report/Environmental Assessment or negative declaration, can be provided in an electronic format." (Public Resources Code §21092(b)(1).) Caltrans met these legal requirements by the following conduct:

- The notice stated that the technical studies were made available at the Tulare Library and the Caltrans District 6 Office. As set forth in the notice these documents were made available at these locations during the recirculation period.
- The notice also provided a website, a telephone number (559) 287-9320 (Javier Almaguer) and email address (javier.almaguer@dot.ca.gov) to have documents sent or emailed, and another telephone number (559) 246-7337 (Eric Karlson) and email address (eric.karlson@dot.ca.gov) for any information about the project.

Your letter states “none of these studies and reports are published on Caltrans website for this Project nor were made available to the public in any way of which we are aware.” There is no legal requirement for Caltrans to publish the studies on the website. The legal requirement is to put the Recirculated Draft Environmental Impact Report/Environmental Assessment on the website, and to indicate where the documents referenced in the Recirculated Draft Environmental Impact Report/Environmental Assessment “are available for review”, which was done. (Public Resources Code §21092(b)(1).)

In addition to Caltrans’ wide-spread notice, we have taken the following steps to support and continue engagement with the community and your organization and meet our legal requirements:

A public meeting was held on Tuesday, August 15, 2023, at Palo Verde Elementary School from 5:30 p.m. to 7:30 p.m. Project staff members were available from 5:30 p.m. to 7:30 p.m. the evening of the event to interact with the attendees. The following were made available to the community:

- A pre-recorded presentation that was continuously playing in English and Spanish discussing the project and its potential impacts.
- Poster boards were on display (in English and Spanish).
- Comment cards were available (in English and Spanish).
- Name tags were created to identify Caltrans staff as Spanish speakers.
- A Spanish-language interpreter was on hand during the open house.
- A court reporter was available to assist those with literacy, writing, visual, or language issues (via an interpreter or a linguist with LanguageLine Solutions).

On October 5, 2023, Caltrans attended a neighborhood meeting hosted by the Leadership Council in the Matheny Tract community.

Chapter 4 of the Final Environmental Impact Report/Environmental Assessment summarizes the results of Caltrans’ efforts to engage and coordinate with the public.

Your specific comments have been reproduced below, with a Caltrans response provided after each comment.

Comment 1:

Unfortunately, Caltrans has failed to ensure that all relevant information about the project and its environment effects are made available to the public by failing to acknowledge the existence of impacted vulnerable communities and by failing to include adequate discussion of environmental justice, air quality, and other impacts in the Recirculated DEIR, as described below.

Response to Comment 1: Caltrans identified environmental justice communities within a 1-mile radius of the project by census tract (Section 2.1.7, Environmental Justice). Caltrans adequately discloses the environmental effects of the build alternative for environmental justice communities in regards to community cohesion, visual impact, noise impact, and air quality.

Comment 2:

Specifically, Caltrans removed two Census Tracts that were previously identified as environmental justice communities in the first Draft EIR but were removed without explanation.

Response to Comment 2: In the first circulation period of the Draft Environmental Document, Caltrans used data from eight census tracts which showed the presence of environmental justice communities. This was based on the demographic data available at that time (U.S. Census 2010, American Community Survey Five-Year Estimates 2015-2019.) When the second Draft Environmental Document was recirculated, the Environmental Justice section was revised to show that the project would cause disproportionately high and adverse effects on minority or low-income populations for cumulative air quality impact. The recirculated Draft Environmental Document relied on more current and available census tract data which split census tract 24 into tracts 24.01, 24.02, and 24.03 (U.S. Census Bureau, 2021 American Survey Community data 1-Year Estimates.) In light of your comment, Caltrans has revised the Environmental Impact Report/Environmental Assessment Table 2.6 under Section 2.1.7 to accurately reflect all of the census tracts with Environmental Justice communities.

Comment 3: Caltrans also has failed to make technical information, studies, and reports relied on and incorporated into the Recirculated DEIR and data underlying the Recirculated DEIR's findings and conclusions readily available to the public. For example, none of these studies and reports are published on Caltrans' website for this Project nor were made available to the public in any other of which we are aware. These documents had to be requested from Caltrans and it took a few days for these documents to be obtained.

Response to Comment 3: Caltrans acknowledges the Leadership Counsel's comment and will take the suggestion into consideration. However, related technical studies were made available at the Tulare Public Library and the Caltrans District 6 Office or by emailing a request to the Senior Environmental Scientist (instructions outlined in the Recirculated Environmental Document). The Notice of Availability included information on where to access the technical studies. Caltrans compiled with all of its legal requirements (See also the General Response to Failure to Provide Opportunities for Public Participation at the beginning of Caltrans Responses to Leadership Counsel).

Comment 4: Caltrans failed to conduct proactive outreach and consult with residents of Matheny Tract and mobilehome park prior to developing the RDEIR.

Response to Comment 4: Based on public comment from the first circulation of the draft environmental document, Caltrans revised the environmental document to provide supplemental and clarifying information regarding the project and its potential environmental effects. As outlined in the second general response to the Leadership Counsel comments, Caltrans has undertaken significant measures to support and continue engagement with the community and residents of Matheny Tract and mobilehome park.

Comment 5:

The public was not notified of a public comment period for the Air Quality Analysis and even if a comment period occurred it was not accessible to the public and residents were not made aware of the decision being made regarding the Project.

Response to Comment 5: The Notice of Availability provided notification to the public of the air quality analysis and was part of the circulation period (Refer to the beginning of Caltrans response to Leadership Counsel for a list of outreach efforts and Chapter 4 of the Comments and Coordination). The Notice of Availability specifically stated the following:

"Project-level conformity analysis for air quality shows that the project will conform to the State Implementation Plan, including localized impact analysis with interagency consultation for particulate matter (PM10 and PM2.5) required by 40 CFR 93.116 and 93.123. This project is not considered a Project of Air Quality Concern regarding particulate matter (PM10 and PM2.5) as defined in 40 CFR 93.123(b)(1). A detailed PM10 and PM2.5 hot-spot analysis was not completed because Clean Air Act and 40 CFR 93.116 requirements are met with explicit hot-spot analysis. The project comes from a conforming Regional Transportation Plan and Transportation Improvement Program. Public comment is requested regarding the project-level conformity analysis."

Comment 6:

Caltrans is required to prepare an Environmental Impact Statement ("EIS") for this Project given the substantial evidence on the record that the Project is likely to cause significant impacts on the environment. (23 C.F.R. § 771.123(a)). Multiple factors, such as adverse effects on air quality, public health, and safety, and possible violation of federal and state laws and local planning processes meant to protect the environment necessitate a full EIR be completed for this Project. (40 C.F.R. § 1501.3(b); see Ocean Advocates v. U.S. Army Corps of Eng'rs, 402 F.3d 846, 864 (9th Cir. 2005), 402 F.3d at 864 (requiring that an "[i]mpact statement must be prepared if substantial questions are raised as to whether a project may cause significant degradation of some human environmental factor")). These impacts are discussed in further detail in this letter below. Further, a substantial dispute exists between Leadership Counsel, Matheny Tract Committee, and residents of Matheny Tract on the one hand and Caltrans on the other hand about the size, nature, and effects of this action, as evidence by our comments below, input provided to Caltrans at public workshops, and other public correspondence to Caltrans about the Project. A number of residents showed up to the first Caltrans workshop raising issues and concerns they had with the Project and many more attended the second workshop. The comments they submitted raised concerns with traffic, air quality, and induced industrial growth of this Project. LaFlamme v. FERC, 852 F.2d 389, 400-01 (9th Cir. 1988). A Finding of No Significant Impact ("FONSI") is not appropriate, or legally permissible, in this case given the evidence in the record showing the existence of significant adverse environmental effects, including but not limited to Caltrans' findings that the Project would have significant and unavoidable impacts on greenhouse gas (GHG) emissions. We encourage the lead Agencies for the Project to follow the November 17, 2021 Interagency Consultation Memorandum from Maya Hildebrand, which states on page 21, "[t]he NEPA document will be an EIR."

Response to Comment 6: Caltrans prepared an Environmental Impact Report because the California Environmental Quality Act necessitates a significance determination for each resource/impact, the significance determination that the comment cities were made. The environmental assessment prepared for this project focuses on the context and intensity of the impacts to determine if the project as a whole is significant and warrants the preparation of an Environmental Impact Statement. Based on our environmental studies and after public circulation, further consultation, and analyses, Caltrans has determined that, for the purposes of NEPA, an Environmental Impact Statement is not warranted.

Comment 7:

A Finding of No Significant Impact ("FONSI") is not appropriate, or legally permissible, in this case given the evidence in the record showing the

existence of significant adverse environmental effects, including but not limited to Caltrans' findings that the Project would have significant and unavoidable impacts on greenhouse gas (GHG) emissions

Response to Comment 7: See response to comment 6.

Comment 8:

Here rather than analyze the full impact of Caltrans' State Route 99 Business Plan and State Route 99 Corridor Enhancement Master Plan and its numerous recent, ongoing, and anticipated co-dependent projects to expand and modify Highway 99 to handle more industrial and freight traffic, the Agency is piecemealing its environmental review by only reviewing small segments at a time and failing to acknowledge their common, interdependent objectives and relationship.

Response to Comment 8: Caltrans' State Route 99 Business Plan and State Route 99 Corridor Enhancement Master Plan do not approve projects but help guide the state's transportation planning. Projects are prepared individually and undergo their own environmental procedures.

Comment 9:

Here the Project fails to meet the factors addressed above. First, there are no logical terminal points for the Project. The Project expansion of State Route 99 in the City of Tulare is from just south of the Avenue 200 Overcrossing to the Prosperity Avenue Overcrossing (post miles 25.2-30.6). There are no logical terminal points at the start or end of this Project, it is not defined by major crossroads, population centers, or highway control elements.

Response to Comment 9: The project has logical terminal points. The northern limits of this project at post mile 30.6 are reasonable because they will tie into the Tagus 6-Lane Widening Project. The Tagus 6-Lane Widening Project is a four-lane to six-lane widening of State Route 99 between post miles 30.6 and 35.2 that began construction in 2021 and is expected to open to traffic in Spring 2024.

The southern limit occurs near the city limits boundary at the urban fringe, where the land use transitions to a rural setting. The project limits just south of Avenue 200 are a logical point because it is the last urban interchange in the southern direction of traffic travel and the first urban interchange as traffic enters the city in the northbound direction. This information was based on annual average daily traffic and truck volumes.

The table below compares the annual average daily traffic and truck volumes for the existing year 2018 and the associated interchanges at the southern limits of the project from post miles 25.2 to 30.6. The truck volume numbers were calculated by taking 27.6 percent of the traffic volume. At post mile

30.6, the annual average daily traffic is 61,828. Thus, in the southern direction of travel, this number decreases to 56,100 at post mile 25.2. The same is true for the truck volume, which has 16,792 and decreases to 15,236.

Project Limits Post Miles (25.2 to 30.6)	Annual Average Daily Traffic Existing Year 2018	Annual Average Daily Traffic Existing Year 2018 for Trucks
Mainline State Route 99 (Post Miles 30.6)	61,828	16,792
Prosperity Avenue	56,226	15,270
Mainline State Route 99	65,496	17,788
Tulare Avenue Interchange	59,162	16,068
Mainline State Route 99	62,640	17,013
Bardsley Avenue Interchange	54,300	14,747
Mainline State Route 99	57,670	15,663
Paige Avenue Interchange	49,870	13,544
Mainline State Route 99	56,170	15,255
Rankin Road Drive Interchange (Avenue 200)	54,250	14,734
Mainline State Route 99 (Post Miles 25.2)	56,100	15,236

This table has been added to the final environmental document; refer to Logical Termini and Independent Utility in Chapter 1.

Comment 10:

Additionally, Caltrans underestimates the cumulative effect of these highway expansion projects by piecemealing review, resulting in a failure to disclose to the public and decision-makers the true magnitude of the expansions' environmental and public health impact and Caltrans' incorporation of less and weaker mitigation measures.

Response to Comment 10: Cumulative impact was analyzed for the project and discussed the past, present, and reasonably foreseeable future actions combined with the potential impacts of the projects (Section 2.4). The cumulative impact analysis was based on known projects that are currently proposed, approved, or under construction with Caltrans, Tulare County, and the City of Tulare. The results show that air quality would be cumulatively considerable and would contribute to an already identified significant cumulative effect, as described in the 2022 Regional Transportation Plan/Sustainable Communities Strategy Environmental Impact Report. Adverse impacts on environmental justice populations in the socioeconomic study area would occur from cumulative impacts on air quality.

Comment 11:

The RDEIR unlawfully fails to acknowledge the presence of sensitive receptors in close proximity to the Project including: Palo Verde Elementary School, the Sun and Fun RV Park, and the County Estates Manufactured

Home Community (consisting of over 100 households) – none of which the RDEIR acknowledges or takes into consideration for its environmental setting or environmental impacts analysis.

Response to Comment 11: Caltrans identified the census tracts within a 1-mile radius of the project area that include those communities (Section 2.1.7). During the public circulation period, Caltrans conducted outreach at the Sun and Fun RV Park and the County Estates Manufactured Home Community on August 11, 2023. A summary of outreach efforts is discussed at the beginning of Caltrans' response to Leadership Counsel comments and in Chapter 4, Comments and Coordination.

Comment 12:

In the previous DEIR Caltrans identified seven Environmental Justice communities, whereas in the Recirculated DEIR Caltrans without explanation no longer classifies parts of Census Tract 24 or Census Tract 29.03 as Environmental Justice communities despite their high percentage of racial minorities and significant population of families living below the poverty line.

Response to Comment 12: In the first circulation period of the Draft Environmental Document, Caltrans used data from eight census tracts which showed the presence of environmental justice communities. This was based on the demographic data available at that time (U.S. Census 2010, American Community Survey Five-Year Estimates 2015-2019.) When the second Draft Environmental Document was recirculated, the Environmental Justice section was revised to show that the project would cause disproportionately high and adverse effects on minority or low-income populations for cumulative air quality impact. The recirculated Draft Environmental Document relied on more current and available census tract data which split census tract 24 into tracts 24.01, 24.02, and 24.03 (U.S. Census Bureau, 2021 American Survey Community data 1-Year Estimates.) In light of your comment, Caltrans has revised the Environmental Impact Report/Environmental Assessment Table 2.6 under Section 2.1.7 to accurately reflect all of the census tracts with Environmental Justice communities.

Comment 13:

In addition, the RDEIR fails to describe the existing environmental conditions of Matheny Tract. Matheny ranks in the 94th percentile for pollution burden and faces various public health and socioeconomic vulnerabilities. The community’s population living below twice the poverty level is 68 percent according to CalEnviroScreen 4.0. Moreover Matheny Tract ranks in the 3.6 percentile on the Healthy Places Index as the community has less access to healthcare facilities, access to greenspaces, and a low educational attainment. Public health concerns will lead to the long term effects as Matheny Tract continues to face disinvestment for climate adaptation and

resilience. In fact, the HPI: Extreme Heat Edition projects 149 days of extreme heat with temperatures above 90 degrees Fahrenheit by 2035 - 2064 in Matheny Tract.

Response to Comment 13: Caltrans identified Matheny Tract as a disadvantaged, unincorporated community in the environmental document (Section 2.1.7). Also, Table 2.6 in Section 2.1.7 shows the socioeconomic conditions of the following census tracts, which include Matheny Tract in Census Tract 31.

Comment 14:

The incomplete and inaccurate baseline description infects and invalidates the entirety of the Recirculated DEIR's environmental analysis. By failing to acknowledge the presence of multiple vulnerable communities and populations near the Project and failing to identify existing conditions of environmental degradation, the RDEIR fails to accurately acknowledge or analyze the nature or magnitude of the Project's substantial impacts on human beings and its significant impacts on public health, among other impacts. Because RDEIR fails to analyze the environmental baseline it also fails to adequately consider the full scope of the Project's direct and indirect effects on the environment. (CEQA Guidelines § 15126.2(a)).

Response to Comment 14: Caltrans identified the census tracts within a 1-mile radius of the project area that include multiple vulnerable communities (Section 2.1.7). Cumulative impact was analyzed for the project and discussed the past, present, and reasonably foreseeable future actions combined with the potential impacts of the projects (Section 2.4). The cumulative impact analysis was based on known projects that are currently proposed, approved, or under construction with Caltrans, Tulare County, and the City of Tulare. The results show that air quality would be cumulatively considerable and would contribute to an already identified significant cumulative effect, as described in the 2022 Regional Transportation Plan/Sustainable Communities Strategy Environmental Impact Report. Adverse impacts on environmental justice populations in the socioeconomic study area would occur from cumulative impacts on air quality.

Comment 15:

The RDEIR fails to consider a reasonable range of alternatives, as required by NEPA, CEQA, and their implementing regulations. The RDEIR only considers the Project itself and a no build alternative. Further, the Recirculated DEIR violates CEQA and NEPA by defining the Project's objectives so narrowly as to exclude a meaningful analysis of reasonable, less impactful, alternatives. CEQA Guidelines Section 15126.6(a) states:

"An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation."

The Project proposes one build alternative, with two design options at the Paige Avenue Interchange and a no-build alternative. All design options include widening the State Route 99 mainline from four lanes to six lanes. The two design options proposed for the Paige Avenue Interchange would have the same environmental impacts and only differ in that one design is an overpass and the other is an underpass. (Recirculated DEIR at p. 29). This is not a reasonable range of alternatives, as all the alternatives, except the no project alternative, have identical environmental impact, and the only differences are slight design changes to one of the interchange expansions. The slight design changes do not qualify as alternatives, and are not presented as alternatives in the RDEIR. Caltrans must describe alternatives which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. Caltrans presents two alternative designs both with the same environmental impact. Three other alternatives were considered but eliminated from consideration in the scoping process in 2009, making it unclear if any technological advancements or improvements since then were considered. These rejected alternatives are not being considered in this RDEIR. Lastly, agency staff unilaterally eliminating alternatives, without a public process, deprives the public from meaningfully engaging in the NEPA and CEQA process.

Response to Comment 15: Your evaluation of the project is noted. Please refer to Section 1.7, Alternatives Considered but Eliminated From Further Discussion. Prior to the Draft Environmental Impact Report/Environmental Assessment Alternatives, three alternatives that were considered but eliminated from further discussion are presented, including one that did not propose widening but rather investing in freight rail. These alternatives differ in displacement impacts, right-of-way acquisition needs, cost, and ability to meet the purpose and need of the project. Caltrans scoped three build alternatives in the Project Initiation Document signed in 2009. In 2019, the alternatives were further assessed for feasibility. Alternatives 1 and 2 were eliminated because of excessive right-of-way acquisition, high costs, and the large number of people who would have been displaced and required relocation. Other community impacts, included from Alternative 1 and 2 were direct impacts on environmental justice neighborhoods and impacts on Tulare Santa Fe Trail Park, would have required an Individual Section 4(f) analysis and mitigation.

The Project Development Team chose to move forward with Alternative 3 and pursue design options that would meet the purpose and need of the project while considering environmental factors.

According to CEQA, an alternative may be eliminated for any of the following reasons:

- The alternative fails to meet most of the basic project objectives.
- The alternative is infeasible.
- The alternative does not avoid significant environmental impacts.
- An alternative for which the implementation is remote and speculative and for which the effects cannot be reasonably ascertained.

Comment 16:

Given, the current range of alternatives listed are not reasonable, MTC requests that the following alternative be added for consideration:

Redesign the Project to address existing congestion and safety constraints associated with the Paige Avenue Interchange but to not enable, facilitate or accelerate additional industrial development in the South I Street Specific Plan Area.

This proposed alternative would require Caltrans to conduct studies to determine an appropriate design and consider whether and how the above-referenced goal could be accomplished without lane additions to the freeway and/or interchange, or for example, restricting the use of any additional lanes to only car traffic and not light or heavy- duty trucks. We request below that Caltrans require the City to enter into a binding agreement to rezone land near Matheny Tract and other sensitive uses for non-industrial uses as mitigation for several Project impacts; Caltrans should also consider whether such a rezoning commitment could be included as a component of this requested alternative.

This alternative would meet the needs and purpose of the Project. It would relieve traffic congestion along State Route 99 from Avenue 200 to Prosperity Avenue via road improvements; improve traffic operational deficiencies at the Paige Avenue Interchange; and the neighboring industrial area need would be mitigated by the rezoning. This alternative would significantly reduce VMT, air pollutants from heavy duty trucks, improve congestions, and improve traffic safety. The alternative would also meet Caltrans environmental justice and civil rights obligations.

Response to Comment 16: Caltrans acknowledges the Leadership Counsel's proposed alternative. The commenter mentions the South I Street Specific Plan Area, for which an Environmental Impact Report (State Clearinghouse Number 2007111080) was certified in 2009. The Specific Plan

was adopted in 2009, resulting in the annexation of 458 acres from the county into the Tulare City limits. The planned development proposes that the area will be divided into 2 acres of Light Industrial (M-1), 361 acres of Heavy Industrial (M-2), and 83 acres of Urban and Suburban Residential. Caltrans does not have the authority to require the city to enter into a binding agreement to rezone land, as suggested by the commenter.

The commenter suggests an alternative that would restrict light- or heavy-duty trucks from using the Paige Avenue Interchange. This would not meet one of the identified purposes of the project, which is to improve access to local trucking-related facilities and the neighboring industrial growth. This would also be inconsistent with local plans and policies, such as the South I Street Specific Plan and the Transportation and Circulation Element of the City of Tulare General Plan 2035. The City of Tulare shall establish appropriate streets to be designated as truck routes, to be consistent with the circulation element of the General Plan. I Street, from the intersection of Bardsley Avenue to the south city limits, and Paige Avenue, the entire length within the city limits, are designated truck routes. The Paige Avenue/State Route 99 interchange improvements are identified in the 2022 Regional Transportation Plan and Sustainable Communities Strategy Environmental Impact Report (State Clearinghouse Number 2021030198).

Restricting light- or heavy-duty trucks from using the Paige Avenue/State Route 99 interchange would burden existing businesses that service or are serviced by light- and heavy-duty trucks. Light- and heavy-duty trucks would still need access to these existing and planned industrial areas, and restricting their use of Paige Avenue interchanges would force truck traffic to use interchanges to the north and south of Paige Avenue. These increased volumes would degrade the operation of these facilities and increase congestion, resulting in worse air quality. Additionally, local roads are not designed to handle the additional truck volumes that would result from restricting light- and heavy-duty trucks from using the Paige Avenue/SR 99 interchange.

Caltrans has determined that the alternative proposed by the commenter is not capable of being accomplished successfully, considering economic, environmental, social, and technological factors; therefore, it is not feasible.

The selected design option, Option 2, a four-roundabout configuration with a Paige Avenue undercrossing bridge, was chosen after careful consideration of the project's purpose and need. The primary purpose of this project is to improve traffic flow, address current and future traffic operational needs, and alleviate congestion along State Route 99 from Avenue 200 to Prosperity Avenue. The selected design option achieves these goals effectively and provides several advantages:

- Approximately 20 percent lower imported borrow to form interchange embankment.
- Pedestrian and bicycle facilities crossing SR 99 will be located on ground level, enhancing accessibility and safety.
- A slightly smaller project footprint, reducing overall environmental impacts.
- Lower levels of emissions from vehicles using the ramps contribute to improved air quality.

The selection of Option 2 aligns with the project's purpose and need by enhancing the efficiency and safety of traffic operations in the project area while considering environmental factors and cost-effectiveness.

The project aims to address the increasing traffic volumes, congestion, and operational issues along State Route 99 from Avenue 200 to Prosperity Avenue. The need for this project is grounded in long-standing planning and transportation needs. Several planning documents and studies have identified the critical requirements to enhance this section of the State Route 99 corridor. Over the years, the region has experienced growth in both population and economic activities, leading to elevated traffic demands.

The project's compliance with longstanding planning needs is demonstrated by its alignment with established goals and objectives for improving the transportation infrastructure in the area. The project aims to foster informed decision-making and public participation while addressing the critical need for better traffic flow and safety along the State Route 99 corridor.

Comment 17:

The RDEIR at page vi recognizes that Environmental Justice communities will be adversely impacted by this Project, and as such under the Federal Highway Administration Guidance on Environmental Justice and National Environmental Policy Act this Project can only move forward if there is a significant public interest for the Project and no reasonable alternatives exists. There is not clear public interest for this Project, and it is not shown in the RDEIR that this Project would address congestion, when it will be accelerating industrial development which will induce traffic congestion.

Response to Comment 17: Since the recirculation of the Draft Environmental Document, Caltrans has received 13 comments from businesses, community members, and elected officials in support of the project. One of the comments attached a signature page with 21 signatures from members of the Tulare Chamber of Commerce supporting the project. The Environmental Justice Section 2.1.7 was updated to include this information, and the comments submitted during the public circulation period can be found at the beginning of Appendix G.

Caltrans acknowledges that it is reasonably foreseeable that vacant land within the South I Street Industrial Park Specific Plan boundaries will experience accelerated growth with the implementation of the interchange and widening project. To clarify, the project will not induce industrial growth because industrial growth has already been planned in the South I Street Industrial Park Specific Plan that was approved in 2009 (refer to Section 2.1.4, Growth).

Comment 18:

CEQA requires an EIR to identify and describe the project's potential direct and indirect significant effects on the environment, as well the project's cumulative impacts when viewed in connection with the effects of past, present, and probable future projects. (CEQA Guidelines §§ 15126.2(a), 15065(a)(3), 15130(a)). In doing so, the EIR must describe and disclose the "whole of [the] action," CEQA Guidelines § 15378(a), thereby ensuring that "environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences." (Laurel Heights Improvement Assn., 47 Cal.3d at 396 (citation omitted)). Environmental effects that the agency must consider include, but are not limited to, adverse impacts on aesthetics, noise, housing, land use, traffic, pedestrian and bicyclist facilities, climate change, and air quality. (See CEQA Guidelines, App. G).

Response to Comment 18: Caltrans analyzed the project's cumulative impact and discussed the past, present, and reasonably foreseeable future actions combined with the potential impacts of the projects (Section 2.3.4). The cumulative impact analysis was based on known projects that are currently built, proposed, approved, or under construction with Caltrans, Tulare County, and the City of Tulare. The analysis concluded there may be cumulative impacts on several resources: air quality, environmental justice, visuals and aesthetics, noise and vibration, traffic and growth, and greenhouse gases. The results show that air quality would be cumulatively considerable and would contribute to an already identified significant cumulative effect, as described in the 2022 Regional Transportation Plan/Sustainable Communities Strategy Environmental Impact Report. Adverse impacts on environmental justice populations in the socioeconomic study area would occur from cumulative impacts on air quality.

Comment 19:

The Recirculated DEIR fails to consider the full extent of direct, indirect, and cumulative effects of the Project by arbitrarily limiting consideration of impacts to only those within the "Project area," which the Recirculated DEIR narrowly defined as within 500 ft of the Project. (RDEIR at p. 64). This narrow definition fails to acknowledge the impacts of the Project extend beyond its immediate

physical footprint. As a result, the Recirculated DEIR improperly omits from its description of environmental impacts any air quality impacts to residents in Matheny and other impacted communities, and it fails to acknowledge residential dwellings within 500 ft as sensitive receptors or consider impacts on residents, other sensitive receptors and land uses farther than 500 ft of the Project, including schools, places of worship, and businesses.

Response to Comment 19: Caltrans verified no sensitive receptors (hospitals, schools, day care facilities, elderly housing, and convalescent facilities) within 500 feet of the project for air quality according to the recommendations from the California Air Resources Board Air Quality and Land Use Handbook (2005). These recommendations were based on analyses that suggested that health risks are associated with mobile sources within 300 feet of a major freeway and that a 70 percent reduction in ambient particulate levels occurs at 500 feet from the source.

In addition, air quality impacts are evaluated at a regional level by demonstrating that the project comes from a conforming Regional Transportation Plan and Federal Transportation Improvement Program. The Regional Transportation Plan and Federal Transportation Improvement Program show that the project has a design concept and scope that have not changed significantly from those shown in the Plan and Program. The regional emissions analysis, which is part of the Regional Transportation Plan, shows that the analysis and Plan meet the Federal Highway Administration requirements to lower emissions in Tulare County.

The Federal Highway Administration and the Environmental Protection Agency agreed that the project would not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay the timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the time frame of the transportation plan (or regional emissions analysis).

Caltrans considered the direct and indirect impacts for cumulative impacts (refer to Section 2.4).

Comment 20:

The RDEIR cites the California Air Resources Board Air Quality and Land Use Handbook (2005) as justification for the 500 ft limit. However, the handbook lists a range between 300-1700 feet as the appropriate range to study cancer risks. (Handbook at p. 6). The Handbook states, “in traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet.” (p. 6). The handbook does not discuss that when sensitive receptors, environmental justice communities, or nearby induced expanded industrial development will occur that those impacts or cumulative effects will be felt beyond those

distances. Caltrans decision to go with a limited 500 ft range violates the precautionary principle. Caltrans should expand the study area to at least 1000 feet, which still falls in line with CARB's Handbook, but would include nearby sensitive receptors.

Response to Comment 20: The study area for each resource is determined by the extent of the potential impact and is not constrained to the area of the project. Caltrans searched but did not identify sensitive receptor locations, which are areas where sensitive receptors may congregate and may include hospitals, schools, and day care centers. The table on page 6 cited from the California Air Resources Board Air Quality and Land Use Handbook, where 300 to 1,700 is used, is not a recommendation on the appropriate range to study cancer risk; rather, it provides a range of relative cancer risk, which is defined on page 7 of the handbook and currently recommends that new sensitive land not be located within 500 feet of a freeway, urban roadways with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.

Comment 21:

The poor air quality baseline makes a thorough analysis of the proposed Project's potential air quality impacts as a result of Project construction and the facilitation and inducement of even more truck and car traffic into Matheny crucial. However, RDEIR fails to connect air emissions from the Project to public health impacts. The Recirculated DEIR's discussion of health impacts of the named pollutants provides only a general description of symptoms that are associated with exposure to the ozone, particulate matter (PM), carbon monoxide (CO), and nitrogen dioxide (NOx), and the discussion of health impacts regarding each type of pollutant is at most a few sentences of general information. The disclosures of the health effects related to PM, CO, and sulfur dioxide fail to indicate the concentrations at which such pollutants would trigger the identified symptoms. As in Bakersfield Citizens for Local Control v. City of Bakersfield, 124 Cal.App.4th 1184, 1197 (2004), "[a]fter reading the EIR's, the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin." (Bakersfield, supra, 124 Cal.App.4th at p. 1220.). As such the Recirculated DEIR must be amended to include human health studies to inform residents what the health impacts will be to them from this Project.

Response to Comment 21: Caltrans will not conduct a health risk assessment because the project is considered less than significant with regard to air quality impacts. Based on the results of the mobile source air toxics emissions within the studied roadway, a decrease in mobile source air toxics emissions can be expected to be lower through all future year levels because of improved technology. This finding is consistent with the Federal Highway Administration-projected trend. For more information regarding project air

quality impacts, please refer to Section 2.2.3 of the final environmental document.

Comment 22: The DREIR's analysis of air quality impacts is further insufficient for several reasons. As previously discussed above the analysis uses CARB's land use handbook as saying 500 feet is the area of greatest concern for air quality impacts, whereas the Handbook states, "in traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet." (p. 6, emphasis added).

Response to Comment 22: The study area for each resource is determined by the extent of the potential impact and is not constrained to the area of the project. Caltrans searched but did not identify sensitive receptor locations, which are areas where sensitive receptors may congregate and may include hospitals, schools, and day care centers. The table on page six, where 300 to 1,700 is used, is not a recommendation on the appropriate range to study cancer risk but rather provides a range of relative cancer risk, which is defined on page seven of the Handbook. The California Air Resources Board land use handbook currently recommends that new sensitive land not be located within 500 feet of a freeway, urban roadways with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.

Comment 23:

Further, the air quality analysis also does not address impacts from accelerated industrial development which the RDEIR acknowledges the project will induce. So the RDEIR should analyze potential air quality impacts from buildout of the I St Specific Plan and along local roadways off the freeway to that area which will be used by traffic generated by the Project.

Response to Comment 23: Caltrans acknowledges that it is reasonably foreseeable that vacant land within the South I Street Industrial Park Specific Plan boundaries will experience accelerated growth with the implementation of the interchange and widening project. That accelerated industrial-related growth between I Street and State Route 99 would be expected as access improves to and from the area from the north at Paige Avenue and to the south at Commercial Avenue. To clarify, the project will not induce industrial growth since industrial growth has already been planned with what is outlined in the South I Street Industrial Park Specific Plan that was approved in 2009 (refer to Growth Section 2.1.4).

Any proposed industrial building project to be built within the I Street Specific Plan boundary would be subject to complying with local laws and regulations pertaining to air quality. Caltrans identifies in Section 2.3.4, Cumulative Impacts, that the air quality would be cumulatively considerable and would contribute to the already identified significant cumulative effect as described

in the 2022 Regional Transportation Plan/Sustainable Communities Strategy Environmental Impact Report.

Comment 24:

Lastly, the air quality analysis associated with construction relies on the Fugitive Dust rule and Caltrans application of certain undefined measures to reduce emissions to say they will be less than significant. The San Joaquin Valley Air Pollution Control District Guidance for Assessing and Mitigating Air Quality Impacts ("GAMAQI") says the fugitive dust rule alone shouldn't be relied on to reduce impacts to less than significant. (p. 78).

Response to Comment 24: Caltrans does not solely rely on the air district requirements of the fugitive dust rule. Caltrans has standard specifications, stormwater requirements, and construction best management practices that address fugitive dust. The standard specifications in the Storm Water Pollution Prevention Plan are required and will be used during construction of the Tulare Six Lane and Paige Avenue Interchange Improvement project.

Comment 25:

The RDEIR's greenhouse gas ("GHG") analysis states that the Project will have less than significant impacts. (RDEIR at p. 196). However, the RDEIR fails to fully account for VMT impacts of the Project, including from induced truck traffic and other traffic and industrial facility operations and buildout. The VMT analysis deletes induced truck traffic citing SB 743, however that doesn't apply to analyzing other impacts like air quality and GHG impacts from induced truck traffic, and industrial facility operations and buildout. Therefore, the RDEIR underestimates GHG and air quality emissions from induced truck traffic, industrial operation and buildout.

Response to Comment 25: Caltrans acknowledges truck traffic was not included in the VMT analysis, citing Senate Bill 743. However, the Air Quality Report and Climate Change Memorandum completed for this project include truck traffic in their respective analyses.

Caltrans disclosed that Greenhouse Gas is a significant and unavoidable impact in Section 3.2.8 and in the Climate Change memo under the CEQA Conclusion.

Comment 26:

The RDEIR further states that GHG impacts will be mitigated; despite offering no evidence of that and despite the fact the mitigation measures do not estimate any GHG reductions. As described later, the RDEIR also does not discuss how this Project is in compliance with AB32, the State's GHG emissions goals, or the State's SIPs. A full analysis of the GHG emissions from this Project and from its cumulative impact of spurred on industrial

development must occur. The impacts must also be mitigated in a way that is enforceable and calculable.

Response to Comment 26: As stated in the Recirculated Draft Environmental Impact Report/Environmental Assessment, this project does include features and measures that reduce greenhouse gas emissions, and by all regulatory standards, this project complies with requirements for regional air quality conformity, carbon monoxide, ozone, Particulate Matter 2.5 and 10, mobile source air toxics, emissions during construction, and reporting for carbon dioxide.

The improvements to local roads and the construction of complete interchanges would reduce stop-and-go traffic and provide more direct access to and from State Route 99. As air studies have documented, the highest vehicle emissions occur in stop-and-go traffic, while free-flowing traffic produces the least amount of vehicle emissions, regardless of the criteria pollutant.

Caltrans disclosed that without established regulatory, industry-wide methods to accurately measure whether the project features and measures would reduce emissions enough to mitigate the project impacts Greenhouse Gas is a significant and unavoidable impact, this is discussed in Section 3.2.8 and in the Climate Change memo under the CEQA Conclusion.

Comment 27:

Unfortunately, the Recirculated DEIR fails to acknowledge the sensitive environmental setting in which the Project is located, conduct a thorough analysis of the Project's potential air quality impacts, or identify feasible mitigation measures to avoid and reduce those impacts. CalTrans must revise the Recirculated DEIR to correct these deficiencies.

Response to Comment 27: As stated in the Recirculated Draft Environmental Impact Report/Environmental Assessment, Caltrans identified the census tracts within a 1-mile radius of the project area that include multiple vulnerable communities (Section 2.1.7).

The project was submitted for interagency consultation on January 7, 2022. It was deemed not a "Project of Air Quality Concern" by the interagency consultation partners and, therefore, did not require a Particulate Matter 10 hot-spot analysis. Concurrence for "Not a Project of Air Quality Concern" was granted by the Environmental Protection Agency on January 24, 2022, and by the Federal Highway Administration on January 27, 2022 (Section 2.2.3. of Air Quality).

Comment 28:

The RDEIR's description of the Project and its purpose and need make clear that the Project is a "capacity-increasing" project, but the RDEIR fails to include a full analysis of the Project's potential to induce travel and increase VMT to determine the significance of the Project's transportation impacts. The RDEIR makes clear that the Project's purpose is to allow for the buildout of industrial land uses in Tulare, where hundreds of acres are designated and pre-designated for industrial development which will generate significant volumes of truck and car traffic. As this Project would increase capacity through the addition of lanes and new overcrossings and the construction of new interchange configurations and dimensions which will accommodate greater volumes of truck traffic and induce industrial development, those additional miles must be incorporated into the estimate. CEQA does not permit Caltrans to simply ignore a project's potential to increase significant volumes of truck traffic and its associated impact, including but not limit to on air quality and public health in nearby disadvantaged communities. As such, CEQA Guidelines Section 15064.3(b) and Caltrans policy require that the environmental review for this Project include an analysis of the Project's induced travel impacts.

Response to Comment 28: Caltrans does not handle land use issues. That is the purview of the local agencies. They do the land use planning and forecasting for its planning documents (General Plans, Specific Plans, etc.). The Travel Demand Model is developed and maintained by the Tulare County Association of Governments, which then uses the local agency plans to develop the socio-economic datasets used in the transportation demand model. The model is designed to address the safety and operational impacts of the interchange, not address land use issues.

Comment 29:

Here, the RDEIR provides conflicting information about the growth inducing potential of the Project, and fails to properly analyze those impacts. The RDEIR conclusory states without providing substantial justification that the Project is not growth inducing. The Recirculated DEIR states, " Caltrans' Guidance for Preparers of Growth-Related, Indirect Impact Analysis describes this project as having moderate potential for influencing growth. However, the project would not add new accessibility, and the capacity that is added would be needed to match development trends and projected growth forecasted by the local planning agencies." (Recirculated DEIR at p. 46, emphasis added). The agency at first admits that this Project has moderate potential for influencing growth, but tries to hide that finding by saying the Project is supporting planned growth. (RDEIR at p. 50, 176). This logic is flawed as supporting planned growth still fosters economic or population growth. The fact that some of that growth is planned does not alleviate the Agencies duty to fully analyze the impacts of potential unplanned growth. Further, the RDEIR states the interchange improvements could indirectly lead to growth in the area after the improvements are made, but would not increase population

growth substantially. This statement is made with no supporting evidence. Further, it ignores economic growth and the impact of the planned industrial growth. Contrary to the RDEIR, it is reasonable to believe that a highway expansion project to support the buildout of an industrial area, resulting in nearly 20 million more miles driven a year, and hundreds of acres of new industry would result in growth in that area. There was no discussion of how much or how little growth the City and County is planning for and if the Project meets or exceeds that expectation. The buildout of the I Street SP area will induce jobs and therefore also population. The failure to analyze growth inducing impacts undercuts the environmental analysis for air quality, VMT, impacts on human beings, noise, light and other impacts. As such the RDEIR is faulty and needs to analyze this Project's potential to influence economic and population growth, and mitigate those impacts if needed.

Response to Comment 29: As the comment acknowledges, Caltrans has identified that the project would have a moderate potential for impacting growth. Caltrans has identified the growth that is planned to occur and how this project would fit into the local plans. Caltrans does not have any local land use or planning authority.

The State CEQA Guidelines do not require that an Environmental Impact Report predict (or speculate) specifically where such growth would occur, in what form it would occur, or when it would occur. The answers to such questions require speculation, which CEQA discourages; refer to State CEQA Guidelines Section 15145.

Comment 30:

The RDEIR states that the Project will not result in substantial increases in ambient noise levels in excess of applicable standards with mitigation, and that the Project would not generate excessive groundborne vibration or noise during construction or operation. The RDEIR does not provide any information or analysis to support its conclusions regarding the Project’s potential noise and vibration impacts, other than to state that construction noise would be reduced in accordance with local ordinances and to reference a Noise Study Report completed on October 22, 2020, and updated on November 8, 2021. But the Noise Study Report was not attached, included, released or translated depriving the public an opportunity to comment.

Response to Comment 30: Caltrans conducted field investigations to identify land uses that could be subject to traffic noise impacts from the project. The land uses within the project limits and their representative receivers are divided into segments and described in detail in Section 2.2.5 based on roadway topography with respect to the identified receivers. Soundwalls were evaluated for this project at locations where the design year build noise levels exceeded the noise abatement criteria, and three soundwalls were found to be reasonable and feasible.

The Noise Study Report was included in the technical study document and made available at the Tulare Public Library and District 6 office. Also, technical studies can be requested through email by sending an email to the senior environmental scientist (instructions are provided in the environmental document).

Comment 31:

The City has approved multiple warehouse and other industrial projects in Matheny and both the City and County currently have policies in place to attract more industrial land uses to the area. Noise from the construction of these projects causes intrusive impacts to nearby sensitive receptors and can have a detrimental impact on human health. Additionally, construction is expected to take three years, which could cause both long and short term health impacts. Thus, Caltrans must evaluate the Project's construction noise impacts and cumulative impacts.

Response to Comment 31: The Environmental Impact Report/Environmental Assessment evaluated the construction noise impacts and outlined the minimization measure in Section 2.2.5. Projects that are not carried out by Caltrans will have separate noise studies conducted in compliance with local and federal ordinances.

Comment 32:

The RDEIR also does not justify that the inclusion of three sound walls will limit noise impacts to less than significant levels.

Response to Comment 32: Caltrans' *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. The feasibility of noise abatement is an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 decibels at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, the presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure.

Based on the studies completed to date and input from the public, Caltrans intends to incorporate noise abatement in the form of the three barriers described above: Soundwall 1, Soundwall 2, and Soundwall 4. If conditions have substantially changed during final design, noise abatement may not be constructed. The final decision on noise abatement will be made upon completion of the project design

Comment 33:

Caltrans must revise the RDEIR to thoroughly study the Project's potential light impacts on residences in Matheny and incorporate all feasible mitigation measures to avoid and reduce those impacts.

Response to Comment 33: Construction lighting is temporary and is focused on construction zones, not on local streets. Caltrans is not responsible for the light pollution caused by new developments around the Matheny Tract community.

Comment 34:

As addressed throughout this letter, this Project will result in both direct and indirect substantial adverse, individual and cumulative impacts on residents of Matheny Tract, children at Palo Verde Elementary School, the Sun and Fun RV Park, among others sensitive receptors, by exposing them to significant light, glare, air pollution, noise, vibration and other impacts and by negatively impacting their health as a result of these exposures. Yet, the RDEIR does not analyze or mitigate these impacts, and takes a narrow view for air quality impacts to sensitive receptors within 500 ft of the Project. To the contrary as described in the letter residents in Matheny and others farther than 500 ft would be greatly impacted and affected by this Project.

Response to Comment 34: The study area for each resource is determined by the extent of the potential impact and is not constrained to the area of the project. Caltrans uses the 500-foot recommendation from the California Air Resources Board handbook for land use and planning.

Air quality impacts are evaluated at a regional level by demonstrating that the project comes from a conforming Regional Transportation Plan and Federal Transportation Improvement Program. The Regional Transportation Plan and Federal Transportation Improvement Program show that the project has a design concept and scope that have not changed significantly from those shown in the Plan and Program. The regional emissions analysis, which is part of the Regional Transportation Plan, shows that the analysis and Plan meet the Federal Highway Administration requirements to lower emissions in Tulare County.

In addition, the Federal Highway Administration and the Environmental Protection Agency agreed that the project would not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay the timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the time frame of the transportation plan (or regional emissions analysis).

The project is evaluated for project-level air quality impacts as well as regional-level air quality impacts, as mentioned above. Approval from the Federal Highway Administration and the Environmental Protection Agency is

required for both regional impacts and project-level impacts (refer to Air Quality Section 2.2.4).

A Noise Study Report was completed for the project, and a field investigation was conducted to identify land uses that could be subject to traffic noise impacts from the project. The project would result in noise impacts that would require the consideration of noise abatement for three soundwalls (refer to Noise and Vibration Section 2.2.5).

Comment 35:

The RDEIR fails to adequately identify and analyze cumulative effects of the Project by ignoring its incremental effects "in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (CEQA Guidelines §§15065(a)(3), § 15130(a)). The RDEIR's cumulative impacts analysis considered only a handful of selected projects. It wholly ignores numerous closely related past, present, and probable future projects, including related Caltrans District Six highway expansion activities and many industrial development projects in the Project area including the Paige Avenue Industrial Project. The RDEIR acknowledges that the Project will accelerate industrial development on hundreds of acres of land in the South I Street Specific Plan area, but does not consider this development in its cumulative impacts analysis. As to the related cumulative impacts the RDEIR did consider, like aesthetics, visuals, noise, light, and vibration, the cumulative impacts analysis was conclusory and lacked reasoning, analysis, or supporting documentation. This failure is particularly concerning due to the Project's likely cumulative impacts on Matheny Tract and other nearby sensitive receptors. Further, the RDEIR states construction will continue for three years. (RDEIR at p. 15). Yet, the RDEIR downplays the environmental impacts as short in duration despite construction taking three years. Three years of construction impacts would likely be cumulatively significant especially to noise, light, and vibration and other impacts for that duration of time on nearby sensitive populations.

Response to Comment 35: The Recirculated Environmental Impact Report/Environmental Assessment did analyze and disclose the cumulative impacts of the project (refer to the Cumulative Impact Section 2.4). The analysis used a hybrid approach, using both a project list and a plan approach. The hybrid approach is common professional practice for CEQA cumulative analyses, as discussed in the Association of Environmental Professionals CEQA Portal Topic Paper Cumulative Impacts (https://ceqaportal.org/tp/AEP%20CEQA%20Portal_Cumulative%20Impacts.pdf).

As stated in the document, because the impacts of the project will be fully mitigated with respect to visual/aesthetics, noise and vibration, and traffic circulation and growth, Caltrans has concluded that the project would not

have a considerable cumulative contribution to the cumulative conditions concerning those impact types. In accordance with the CEQA Guidelines, the analysis need not examine options for mitigating or avoiding impacts not attributable to the project's contribution to the significant cumulative effects identified in the Environmental Impact Report, but only the project's contribution to those effects.

With respect to air quality and greenhouse gases, the environmental document relied on and incorporated, by reference, the Tulare County Regional Transportation Plan Environmental Impact Report. This is consistent with the "plan" method described in CEQA Guideline Section 15130(b). Section 15130(d) allows an Environmental Impact Report to use previously approved land use documents, "including, but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans," in the analysis of cumulative impacts. A pertinent discussion of cumulative impacts contained in one or more such previously certified Environmental Impact Reports may be incorporated by reference, pursuant to provisions in the Guidelines for Tiering and Program Environmental Impact Reports. (See 14 California Code of Regulations Sections 15152, 15168.) The analysis need not examine options for mitigating or avoiding impacts not attributable to the project's contribution to the significant cumulative effects identified in the Environmental Impact.

Comment 36:

The Project is not in compliance with several General Plan Policies and requirements. For example, General Plan Policy AQ-P1.2 Cumulative Air Quality Impacts states the City "shall require developments to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Developers shall be required to present alternatives that reduce air emissions and enhance, rather than harm, the environment." However, the RDEIR does not fully analyze cumulative air quality impacts, or present alternatives that would reduce air emissions.

As such, Caltrans should consider the alternative we have suggested which would lessen environmental impact, yet improve the Paige Avenue interchange.

Further, the RDEIR does not discuss how it is consistent with Goal AQ-2, which is to improve air quality by reducing single-occupancy vehicle trips and encouraging the use of alternative transportation. Large financial investments in interchanges and highways will only further encourage single occupancy vehicle trips, and not encourage alternative transportation.

Lastly, the City's General Plan policies such as COS P7.2 and COS P7.3 requires the City to ensure that air quality impacts identified during the CEQA review process are fairly and consistently mitigated. It is evident by the listed

mitigation measures for this Project that the impacts are not fairly and consistently mitigated. Finally, the RDEIR is not consistent with policies TR P2.24 and NOI P1.7 which aim to minimize excessive noise impacts on sensitive land uses from circulation systems, and mitigate noise impacts.

Response to Comment 36: The Tulare Six-Lane and Paige Avenue Interchange Improvement Project is included in the Tulare County 2022 Regional Transportation Plan, which is consistent with local plans.

Comment 37:

The Noise Study Reports solely studies noise levels at 50 ft from the construction site without considering noise level impacts resulting from detours at more than 50 ft.

Response to Comment 37: Caltrans evaluated noise impacts from the proposed detour and determined no long-term abatement will be provided. The detour path is commercial/industrial except for the mobile home park at the corner of Paige and Laspina. The mobile home park was studied for noise impacts and found to be less than significant.

Comment 38:

CEQA requires that Projects do not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The City of Tulare adopted a Climate Action Plan in 2011. This Project does not meet many of the goals and targets of the Plan and therefore conflicts with a local land use plan, making the Project have a significant impact which must be mitigated and reconciled.

Specifically, the City's Climate Action Plan states as Goal 3 to shift single-occupancy vehicle trips to alternative modes. Yet, this Project would increase vehicle miles traveled by over 20 million miles a year, and does very little to mitigate those miles or encourage alternative modes of transportation. It instead entrenches a system of single occupancy vehicle trips. This Project will also lead to increased vehicle emissions, making it impossible for the City to meet its emissions reduction targets.

In efforts to reduce greenhouse gas emissions, and improve air quality and transportation infrastructure, Tulare County adopted the Matheny Tract Climate Adaptation Plan in 2020 from a Transformative Climate Communities ("TCC") grant. The Project conflicts with the Matheny Tract Climate Adaptation Plan as it will increase emissions, further exacerbating poor air quality and causing disproportionately high and adverse effects on a pollution burden community; counter to the goals of the Climate Adaptation Plan and TCC program goals. Specifically, the Project conflicts with various policies and programs aimed to reduce emissions and improve pedestrian safety

including, Policies AQ -2.3, HS - 9.1, HS -9.2, LU - 7.3, TC - 5.2, TC - 5.5 and the Urban Greening Program.

Response to Comment 38: The mitigation measures outlined in Section 2.1.9 can significantly mitigate the project's VMT impacts through an increase in the frequency of transit routes and vanpools. Caltrans will collaborate with the local agencies in the San Joaquin Valley to prepare the Comprehensive Multimodal Corridor Plan. The project will establish a vehicle miles traveled-reducing managed lane and will be programmed before project construction is completed in 2026. The VMT section was updated since the Recirculated Draft Environmental Document to provide detailed information on the Comprehensive Multimodal Corridor Plan and a project schedule.

Comment 39:

The Project was submitted for Interagency Consultation on January 27, 2022. It was deemed not a "Project of Air Quality Concern" by the Environmental Protection Agency on January 24, 2022, and by the Federal Highway Administration on January 27, 2022. However, that analysis and interagency consultation report was not shared in the RDEIR depriving commentators the ability to address if this Project conforms with local and state air quality plans and if it is a project of air quality concern. The RDEIR concludes with no supporting evidence the Project will not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay timely attainment of any National Ambient Air Quality Standards ("NAAQS"). (RDEIR at p. 134).

Response to Comment 39: The air quality report was made available to the public at the Tulare Public Library and the Caltrans District 6 office. The public can request that the documents be sent to them by email, as stated in the Recirculated Draft Environmental Document. Air quality conformity was included in the Notice of Availability that was sent to the public for comment (refer to Chapter 4, Comments and Coordination). Section 2.2.4, Air Quality, discusses that the project was not a project of air quality concern.

Comment 40:

The RDEIR concludes with no supporting evidence the Project will not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay timely attainment of any National Ambient Air Quality Standards ("NAAQS"). (RDEIR at p. 134).

Response to Comment 40: The project was submitted for interagency consultation on January 7, 2022. It was deemed not a "Project of Air Quality Concern" by the interagency consultation partners and, therefore, did not require a Particulate Matter 10 hot-spot analysis. Concurrence for "Not a Project of Air Quality Concern" was granted by the Environmental Protection

Agency on January 24, 2022, and by the Federal Highway Administration on January 27, 2022. Below is the reasoning for why the project met the criteria for not being a project of air quality concern:

- Mainline Build/No-Build Annual Average Daily Traffic and Truck Annual Average Daily Traffic for the project are the same for the Existing, Open to Traffic, and Design Years. Traffic and truck volumes are not expected to increase significantly over the life of the project.
- Operational improvements to the freeway and Paige Avenue will not induce out-of-area traffic in the vicinity. The increased mainline capacity will allow more free flow in traffic and lessen the chance of lane overcrowding and gridlock. The Paige Avenue operational improvements will improve safety for local and regional traffic. Truck transport will become more efficient if the project is implemented.
- Significant improvements would be made to improve safety along this segment of State Route 99. Hazardous features that impede line-of-sight would be removed, including the realignment of a nonstandard curve in the roadway.
- Time delays due to waiting at stop- or signal-controlled intersections would be reduced by substituting them with roundabouts. Trucks navigating the Paige Avenue intersections would not have to stop completely, while surrounding traffic would be able to freely flow through the roundabout lanes. Project construction would reduce harmful emissions. Travel time could be shortened due to increased capacity on the freeway. Replacing the intersections with roundabouts would eliminate the need for vehicles to come to a complete stop, idle, and reaccelerate. (Refer to Section 2.2.3., Air Quality.)

Comment 41:

To the contrary the Recirculated DEIR discusses the nearly 20 million additional VMTs that will result from this Project, and how it will induce further industrial development. So, it is reasonable to conclude this project would cause a significant increase in PM, Ozone, NOx, and SOx emissions from the additional vehicles and spurred industrial growth. Given the San Joaquin Valley has had a very difficult time meeting attainment goals, it is very likely this Project would delay timely attainment.

Response to Comment 41: The South I Street Industrial Park Specific Plan was approved in 2009 and will guide development throughout the vacant land along the west and southwest areas next to the project. It is reasonably foreseeable that vacant land within the South I Street Industrial Park Specific Plan boundaries will experience accelerated growth with the implementation of the interchange and widening project. Accelerated industrial-related growth between I Street and State Route 99 would be expected as access improves to and from the area from the north at Paige Avenue and to the south at

Commercial Avenue. It is reasonably foreseeable that infrastructure development and further improvement on local roads will continue as planned in the South I Street Industrial Park Specific Plan (refer to Growth Section 2.1.4).

Comment 42:

Also, Caltrans and the Federal Highway Administration failed to engage the community or take appropriate steps to meaningfully solicit public input on its air quality conformity determination.

Response to Comment 42: The project level conformity analysis for air quality was included in the Notice of Availability and part of the circulation period (Refer to the beginning of Caltrans response to Leadership Counsel for a list of outreach efforts and Chapter 4 of the Comments and Coordination). The Notice of Availability specifically stated the following:

“Project-level conformity analysis for air quality shows that the project will conform to the State Implementation Plan, including localized impact analysis with interagency consultation for particulate matter (PM10 and PM2.5) required by 40 CFR 93.116 and 93.123. This project is not considered a Project of Air Quality Concern regarding particulate matter (PM10 and PM2.5) as defined in 40 CFR 93.123(b)(1). A detailed PM10 and PM2.5 hot-spot analysis was not completed because Clean Air Act and 40 CFR 93.116 requirements are met with explicit hot-spot analysis. The project comes from a conforming Regional Transportation Plan and Transportation Improvement Program. Public comment is requested regarding the project-level conformity analysis.”

Comment 43:

Here the Recirculated DEIR states the Project “was deemed not a “Project of Air Quality Concern” by the interagency consultation partners and, therefore, did not require a Particulate Matter 10 hot-spot analysis.” (DEIR at p. 132). However, certainly one is required given this Project is a highway expansion that would significantly increase the number of diesel vehicles, and increase PM, as discussed above, and given the Level of Service of the Paige Avenue interchange. As such, Caltrans is required to do a hot spot analysis, and share the analysis and its findings in the Recirculated DEIR and take proactive steps to affirmatively engage Matheny Tract and other nearby sensitive uses to disclose and accept input on its analysis and findings.

Response to Comment 43: The project was submitted for interagency consultation on January 7, 2022. It was deemed not a “Project of Air Quality Concern” by the interagency consultation partners and, therefore, did not require a Particulate Matter 10 hot-spot analysis. Concurrence for “Not a Project of Air Quality Concern” was granted by the Environmental Protection

Agency on January 24, 2022, and by the Federal Highway Administration on January 27, 2022. (Refer to Section 2.2.3, Air Quality.)

Comment 44:

Lastly, there was a lack of public consultation on the Air Quality Conformity determination and Hot Spot analysis because documents were not made readily available. Furthermore, the agencies failed to provide a clear public comment opportunity, no notice was given to residents about opportunities to comment before the determinations were made regarding the Project's air quality conformity and hot spot analysis.

Response to Comment 44: The air quality conformity determination was included in the Notice of Availability and part of the circulation period (refer to the beginning of the Caltrans response to Leadership Council comments for a list of outreach efforts and Chapter 4, Comments and Coordination). The air quality report was made available to the public at the Tulare Public Library and the Caltrans District 6 office. The public can request that the documents be sent to them by email, as stated in the Recirculated Draft Environmental Document. Air quality conformity was included in the Notice of Availability that was sent to the public for comment (refer to Chapter 4, Comments and Coordination).

Comment 45:

The RDEIR states the construction contractor will submit an ISR application, however that indicates Project application will not be applied "prior to Project approval" as required by the ISR. (RDEIR at p. 65).

Response to Comment 45: Caltrans projects are considered transportation development projects under Rule 9510, and therefore, the statement only applies to large development projects and not transportation development projects.

Comment 46:

The measures included in the Recirculated DEIR fail to comply with CEQA's requirements that they be enforceable and are inadequate. Some of the measures are vague, undefined, improperly deferred. For example, the mitigation measures regarding replacement planting do not indicate when the measure would be implemented. Nor does the mitigation measure on the Comprehensive Corridor Management Plan appear enforceable or have an implementation timeline

Response to Comment 46: Per your observation, the document has been reviewed and updated with additional details for the mitigation proposals provided. The timing of tasks has been incorporated so the reader is aware of the relationship of the mitigation task to the project's construction time frame.

Section 2.1.9 provides a timeline for the implementation of a project within the early stages of Caltrans' Comprehensive Multimodal Corridor Plan. The document states that after public comment and during final engineering, the mitigation strategies would be incorporated into the project, establishing cooperative agreements with local governmental partners. The cooperative agreements would be finalized before project construction is complete.

Comment 47:

The RDEIR does commit to some five year investments in public transportation, but that measure will do little to address the very large induced truck traffic from the Project.

Response to Comment 47: Caltrans disagrees with the assertion that the project induces truck traffic. There are a multitude of factors within the State of California that contribute to the increase in truck traffic experienced in the San Joaquin Valley. Section 1.2.2 summarizes the factors. As mentioned in Section 1.2.2, State Route 99 is functionally classified as a principal arterial in the State of California. It runs in the north and south directions with a high percentage of truck traffic, as it accounts for 27.6 percent of all vehicles. Truck traffic routes are those that carry 25 percent of the total traffic, according to the U.S. Department of Transportation's Bureau of Transportation Statistics' website. It is part of the National Highway System as a Strategic Highway Network route under the Federal-Aid Surface Transportation Program. State Route 99 is also on the National Truck Network for the Surface Transportation Assistance Act. It is a primary highway freight system, part of the National Highway Freight Network, from its junction with Interstate 5 in Kern County to Sacramento County. The largest trucks allowed on interstate freeways are allowed on this segment of State Route 99.

Caltrans' Interregional Transportation Strategic Plan 2015 identified State Route 99 as a priority interregional highway. It is a critical north-south interregional freight corridor and an important highway for California's economy. This corridor serves as a major farm-to-market route for most agricultural products from the Central Valley. Most commercial and personal travel between cities within the San Joaquin Valley uses State Route 99. This route also serves as the main access route from towns to urban services available in the larger urbanized areas.

The San Joaquin Valley Interstate 5/State Route 99 Goods Movement Corridor Study, prepared for the San Joaquin Valley Council of Governments in 2016, identified improvements to State Route 99 and Paige Avenue Interchange to achieve strategic goals for mobility and reliability. Among the goods movement projects listed for Tulare County, widening State Route 99 through Tulare is in the California 2014 Freight Mobility Plan. In addition,

improving the State Route 99/Paige Avenue Interchange is in the 2014 and 2018 Tulare County Regional Transportation Plan.

Describing regional needs for goods movement system improvements, the Tulare County Association of Governments' Regional Transportation Plan (2018) noted that agriculture accounts for a large percentage of commodity movement and truck traffic within and through Tulare County. Milk and produce are time-sensitive items that need to ship reliably to ensure profitability. Other major types of commercial truck travel in the region include retail distribution, construction, gravel mining, delivery to and from industrial facilities, household goods movement, and gasoline and fuel distribution.

The main goal of the State Route 99 Business Plan (issued in 2005 and updated in 2013) was to improve the goods movement throughout California. Other goals were to expand State Route 99 to a minimum six-lane facility to facilitate economic growth. The plan determined that correcting gaps in flow, or choke points, along this route is needed to improve safety, reduce vehicle hours traveled, increase travel-time reliability for the goods movement and general traffic on the freight mobility system, and preserve acceptable facility operation.

Comment 48:

The proposed mitigation measures also do not calculate the quantitative emissions reductions to support findings of less than significant with mitigation.

Response to Comment 48: It is not completely clear what mitigation measures the leadership council is referring to. The statement makes reference to emissions reduction mitigation, but the topics discussed in this comment are related to vehicle miles traveled and truck traffic volumes and not emissions. Section 2.1.9 summarizes the anticipated benefits to traffic operations within this segment of Tulare County and presents mitigation solutions.

Comment 49:

Further, according to the Federal Highway Administration Guidance on Environmental Justice and National Environmental Policy Act (2011), if there is a disproportionately high and adverse effect on an environmental justice population, after taking benefits and mitigation into account, the DEIR must evaluate whether there is a further practicable mitigation measure or practicable alternative that would avoid or reduce the disproportionately high and adverse effect(s). Therefore, Caltrans must consider the below suggested mitigation measures.

Response to Comment 49: Caltrans conducted an environmental justice evaluation as required under Executive Order 12898. This evaluation showed

within and surrounding the project area, (using a one-mile radius from the project) there were minority and low-income populations that would be affected by the project. The project will have both beneficial and adverse effects (Section 2.1.7.) The effects of the project are experienced by the residents of Tulare County as a cohesive group, as the information presented in Section 2.1.7 shows this segment of the San Joaquin Valley being somewhat uniform in population. The project will cause disproportionately high and adverse effects on minority and low-income populations from cumulative impacts to the air quality. Tulare County has mitigation measures to address this. (Section 2.4) Additionally, Caltrans engaged in significant outreach to the community at large and the underserved populations. To reduce the adverse effects, mitigation measures will be taken. Soundwalls will be constructed to mitigate against noise and vibration (Section 2.2.5), and managed lanes and increased public transportation will be implemented to reduce the Vehicle Miles Traveled (Section 2.1.9.)

Comment 50:

The Recirculated DEIR fails to adopt many important measures that would reduce impacts on the community. Below is a list of mitigation measures which residents have identified as high priorities to reduce the impacts of the projects. These and other mitigation measures should be added before project approval:

Rezone to Promote AFFH Compliance and Mitigate Impacts. To help comply with AFFH and to provide access to opportunity, while also mitigating the Project's impacts, such as VMTs, and ensure the Paige Avenue interchange can handle current capacity and potential growth, the Caltrans should require that the City of Tulare enter into an agreement committing it to rezone, prior to the initiation of Project construction, the land around Matheny Tract from industrial to public lands which would generate less VMTs, and thus less pollution from diesel and truck emissions. Rezoning will lead to a reduction of lighting, noise, and vibration lowering public health impacts as it will lead to community serving land uses such as parks and recreational centers, rather than high emitting industries. The picture below shows in purple where the City has zoned for industrial use, north of Matheny. Rezoning this land to a less intensive land use would create a buffer to protect Matheny residents, and would greatly reduce the impacts of this Project, and future developments.

Response to Comment 50: Land use planning is beyond the scope of responsibilities afforded to Caltrans by the State of California. These matters will need to be conveyed to the local Planning and Development Departments for Tulare County and the City of Tulare. As a responsible agency for highway assets of the state, Caltrans is periodically tasked with reviewing and commenting on city and county development projects and their effects on the transportation system.

Comment 51:

Invest in Local Transportation Infrastructure. Although Commercial Avenue will be the official detour route during construction, MTC is concerned that K St. and other local streets will still be used during and after Project construction as heavy duty semi-trucks travel to industrial projects induced by this Project. To mitigate road deterioration by heavy duty semi-trucks, Caltrans should set aside funding for local road maintenance.

Response to Comment 51: The industrial projects that have been approved near the Matheny Tract community have not been induced by Caltrans. Caltrans does not have approval authority on city and/or county development plans or land use approval authority within Tulare County or the City of Tulare. Maintenance of local city streets and roads is a responsibility handled by local public agencies. Local roads impacted by project construction have been included in the scope of the project and will be restored to existing conditions following the proposed modifications as identified in Section 1.4.1.

Comment 52:

Investment for Implementation of Matheny Climate Adaptation Plan. The Matheny Climate Adaptation Plan identified local community priorities like street lights, bike lanes/street improvements/sidewalks, transit projects such as zero emission ridesharing programs, home improvements and weatherization (energy efficiency), stormwater drainage, air/water quality, housing safe and sanitary, public health, infrastructure, and solar to reduce energy costs. Implementation of community priorities from the survey will reduce impacts from GHG and air emissions associated with the Project and as such, would be an appropriate mitigation measure.

Response to Comment 52: The Matheny Tract is not directly impacted by the project and is outside the direct impact of project construction and related improvements. Caltrans is working with Tulare County on implementing mitigation measures to minimize the indirect impacts identified in the Recirculated Draft Environmental Impact Report/Environmental Assessment on the Matheny Tract community.

Comment 53:

Zero Emission Rideshare Program. Currently, Caltrans proposes to fund a Vanpool program for no more than five years. This then would be a temporary mitigation measure for a Project that is expected to last decades. The mitigation measure does not indicate how it will mitigate impacts for the community of Matheny Tract and other vulnerable communities such as the mobilehome parks, specifically. Funding must be used to provide adequate services to these communities. Instead, Caltrans should fund a Zero-Emission Rideshare Program (identified as a top community priority in the

Matheny Climate Adaptation Plan created with a Transformative Climate Communities Planning Grant) to provide a transportation alternative that has the potential to reduce VMT. Caltrans must conduct robust community engagement to ensure that the zero-emission rideshare program is designed and tailored to meet specific transportation needs of the local community impacted by this Project.

Response to Comment 53: Caltrans acknowledges your comment and has taken it into consideration. The appropriate section of the document has been updated to reflect additional details on how this mitigation measure will be structured. The document mentioned that after public comment and during final engineering, the mitigation strategies would be incorporated into the project using a cooperative agreement instrument with local partners, in this case, Tulare County and the City of Tulare. The cooperative agreement would be finalized before the start of project construction.

Comment 54:

Active Transportation Infrastructure. The community of Matheny Tract is isolated from active transportation infrastructure such as sidewalks and bike lanes. Residents have to work/bike on the road to access the City. Pedestrian and cyclist commuting will become even more dangerous with an increase in traffic flow, particularly with heavy duty semi-trucks. To mitigate this issue, Caltrans should fund active transportation infrastructure for the community of Matheny Tract for connectivity and safety. This will also help ensure the Complete Streets aspects of this Project actually connect to local communities.

Response to Comment 54: As shown in Section 1.4 of the document, the project will develop such infrastructure within the project limits and make the appropriate transitions to nearby facilities. The Matheny Tract is quite a distance away from the actual project limits. It would be the responsibility of the local agency's public works department to make such community improvements. Section 2.1.9 summarizes the project impacts related to traffic and transportation/pedestrian facilities. These impacts are associated with State Route 99 and connecting roads to interchanges along State Route 99. Your recommendations will be forwarded to Tulare County and the City of Tulare so they can evaluate the need for future development projects within Tulare County and/or the City of Tulare.

Comment 55:

Comprehensive Corridor Management Plan. CEQA requires that mitigation measures provide “specific performance standards the mitigation will achieve.” (Guidelines § 15126.4(a)(1)(B)). However, it is unclear what this plan is and how it will be used to mitigate impacts. It is contradictory for Caltrans to commit resources for Highway 99 buildout and construction of

freight lanes that will create approximately 20 million VMT then retroactively try to reduce those same 20 million VMT and manage the corridor. Caltrans should coordinate with the County and City of Tulare to create a truck route study and analysis to mitigate VMT in the corridor and determine what projects are necessary and needed in the corridor. Caltrans should also indicate how it will achieve its goals to create multimodal transportation opportunities including walking, biking, and public transit, consistent with its Racial Equity Statement to improve access for and provide meaningful benefits to underserved communities. We must note, while this Project includes walking and bike paths, those do not extend to the community of Matheny Tract and the nearby mobile home parks. This management plan should specifically state how impacts from the Project will be reduced and should clearly state the timeline associated with its implementation.

Response to Comment 55: Section 2.1.9 summarizes such efforts to establish multimodal transportation opportunities along the State Route 99 corridor. The section also presents the proposed mitigation strategies related to induced vehicle miles traveled. After public comment and during final engineering, the mitigation strategies will be incorporated into the project, establishing a cooperative agreement between Caltrans and the County and/or City of Tulare. The cooperative agreement would be finalized before the start of project construction.

Comment 56:

Replacement Planting. The Recirculated DEIR states, “replacement planting will occur at a 1-1 ratio for all vegetation removed. It is estimated that over a thousand trees would be replaced or replanted.” (Recirculated DEIR at p. 264). A 1-1 ratio maintains the status quo and ignores the fact that this Project will deteriorate visuals, air quality, increase GHG emissions and worsen cumulative air quality so a 5-1 planting replacement program is more appropriate. This will help reduce air impacts, visual impacts, and restore habitat for sensitive species.

Response to Comment 56: Your recommendation has been taken into consideration and will be provided to our landscape architect on the project. The landscape architect works in coordination with the design engineers on the project to design an effective solution to satisfy the intended objectives of the project. Impacts on air quality, visuals, habitat, and greenhouse gas emissions have been evaluated in the corresponding sections of the Recirculated Draft Environmental Impact Report/Environmental Assessment, and appropriate minimization and/or mitigation measures have been identified.

Comment 57:

Vegetative Barriers and Green Space. Currently, the Recirculated Draft Environmental Impact Report/Environmental Assessment only proposes to plant trees around the stormwater basins and at post mile 25.8. Caltrans should also invest in vegetative barriers and green spaces around the perimeter of Matheny Tract to help mitigate visual impacts from increased traffic flow during and post construction, in addition to mitigate air quality and heat island impacts. Caltrans should also invest in vegetative barriers for the mobilehome parks located on Rankin Road to mitigate air quality impacts. Caltrans should work with residents from both communities to develop plans for vegetative barriers.

Response to Comment 57: Your recommendation has been taken into consideration and will be provided to our local partners, the City of Tulare and Tulare County. The Matheny Tract is quite a distance away from the actual project limits. It would be the responsibility of local agencies to make such community improvements. Section 2.1.9 summarizes the project impacts related to traffic and transportation/pedestrian facilities. These impacts are associated with State Route 99 and connecting roads to interchanges along State Route 99.

Comment 58:

By allowing for the introduction of increased volumes of truck traffic and thereby supporting the continued targeted development of industrial facilities in these communities – communities which have steadfastly and vocally opposed their further industrialization, Caltrans approval of the Project would undermine Caltrans' Statement of Commitment to racial equity and will result in a discriminatory impact on Matheny residents by further degrading environmental conditions in their neighborhood; increasing public health risks associated with industrial development and truck traffic, including but not limited to air pollution exposure; and adversely impacting residents' use and enjoyment of their housing who experience air pollution, noise, vibration, light and glare, and other impacts in their homes.

Response to Comment 58: Caltrans does not agree with your statement that the project will have a discriminatory impact on the Matheny Tract residents. Section 2.1.5 of the Recirculated Draft Environmental Impact Report/Environmental Assessment summarizes the community character of the project limits. The project lies within the City of Tulare, with a portion of the work being performed on Paige Avenue, a city street. The land use on Paige Avenue (east of State Route 99 toward Blackstone Street) is heavy industrial and light industrial. Regional chains and businesses (fast food establishments, mini-marts, and gas stations) that cater to the traveling public are concentrated near State Route 99 and Paige Avenue. Low-density residential and neighborhood commercial uses are located west of State

Route 99 toward Laspina Street. This is a cohesive community with public facilities and services overseen by the city council and administered by various city departments, such as city services, planning and economic development, public safety, and human resources. Table 2.2 of the Recirculated Draft Environmental Impact Report/Environmental Assessment presents how the project is consistent with the goals of the City of Tulare for an integrated transportation system that provides for the safe and efficient movement of people and goods.

As stated in Section 2.1.7, Community Cohesion and Relocation Impacts, access to stores and services providing the amenities that the community is accustomed to will remain relatively unchanged. Relocation assistance will be provided for those businesses being displaced, resulting in no adverse effects on community cohesion. Table 2.6 of the Recirculated Draft Environmental Impact Report/Environmental Assessment establishes through census data that the aggregate minority percentage of the Tulare County population is very similar to Census Tract 31, which incorporates the Matheny Tract.

Environmental justice at the Federal Highway Administration means identifying and addressing the disproportionately high and adverse effects of the agency's programs, policies, and activities on minority populations and low-income populations to achieve an equitable distribution of benefits and burdens. The project, as proposed, is not disproportionally affecting Census Tract 31 in relation to the other census tracts identified within the project study area and the 1-mile radius from the proposed right-of-way. The anticipated benefits from the project, as identified in Section 2.1.9, will be shared and experienced by State of California motorists, California's freight transportation, Tulare County, the City of Tulare, and community members of the Matheny Tract.

Comment 59:

It would also undermine the possibility of developing the land in the I Street Specific Plan area for uses that reduce disparities in access to opportunity impacting Matheny Tract, including with respect to access to parks, green space, trails, grocery stores, retail, and quality affordable housing among other potential uses of the land.

Response to Comment 59: Land use plans and development approvals are responsibilities that are not assigned to Caltrans as a state agency. Section 2.1.2 summarizes Caltrans' consistency with state, regional, and local plans and programs. The 2022 Regional Transportation Plan and Sustainable Communities Strategy prepared by the Tulare County Association of Governments, which covers the years 2022-2028, has included widening to a 6-lane freeway and the proposed work to the interchange on Paige Avenue. Per the City of Tulare Adopted General Plan, dated October 7, 2014, the city shall coordinate with Caltrans regarding freeway improvements and

interchange design coordination within the City of Tulare. This project is included in the 2022 and 2023 Federal Statewide Transportation Improvement Program and is proposed for funding from the Tulare County Association of Governments' Regional Transportation Plan.

Comment Letter from the U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency has reviewed the California Department of Transportation's combined Recirculated Draft Environmental Impact Report/Environmental Assessment for the Tulare to Paige Avenue project. Our comments are provided pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The project proposes to relieve traffic congestion along 5.4 miles of State Route 99 from the Avenue 200 Overcrossing to north of the Prosperity Avenue Overcrossing by adding two general use vehicle lanes and reconfigure the Paige Avenue Interchange. The Draft Environmental Assessment considers a No Build and a Build Alternative with two design options with four-roundabout configurations with either an overcrossing or an undercrossing bridge at Paige Avenue. The Build Alternative also considers whether the project will temporarily realign up to 2 acres of the Tulare Canal, or install box culverts under the new roadway. We offer the following recommendations for consideration as Caltrans prepares a final environmental analysis and proposes a determination of a Finding of No Significant Impact.

Additional State Route 99 Expansion and Induced Demand

The proposed project is one of many interchange improvements and vehicle lane expansions in the State Route 99 corridor. According to the Draft EA (p. 90), Caltrans anticipates developing a Comprehensive Multimodal Corridor Plan to reduce VMT growth impacts with managed lanes and transit throughout the corridor that includes projects like the proposed Tulare to Paige Avenue segment. The Draft EA states that the proposed project would increase total annual vehicle miles traveled by 19,759,200 after the deductions for truck vehicle miles traveled are included. The Draft EA further states that induced VMT growth would be mitigated below a significant threshold through the implementation of managed lanes, to be developed in the Multimodal Corridor plan and included in the final environmental document.

We note that in the CEQA portion of the environmental document, Caltrans also discloses "the possibility of an unforeseen event that would prevent the mitigation from being completed," and that Caltrans would consider completing the project "with a Statement of Overring Consideration for unmitigated impacts." (p.204) In a potential scenario whereby the mitigation identified to comply with CEQA may not be completed, and Caltrans continues to pursue a Finding of No Significant Impact, EPA recommends that Caltrans clearly indicate in the final environmental document how remaining impacts are not significant pursuant to NEPA, and/or if there is sufficient mitigation in order to support a FONSI, rather than needing to

conclude that remaining significant impacts may result. For example, if the Multimodal Corridor Plan effort is being relied upon to reduce potential induced demand impacts to less than significant, please clarify what multimodal plan elements will be commitments as either part of the proposed action or as mitigation.

Prior to signing a FONSI, EPA recommends that Caltrans identify and commit to specific corridor-scale mitigation measures that would reduce induced demand effects in the opening year of this segment of State Route 99, including mitigation measures that can be practically applied to this project and adjacent highway and interchange segments. Identify mitigation measures that could be implemented ahead of and adopted in the subsequent Comprehensive Multimodal Corridor Plan.

As the proposed project's logical termini and independent utility lie within the limits of the City of Tulare, it is critical to commit, as early as possible, to mitigation measures that encourage reduced VMT and facilitate implementation of the eventual Comprehensive Multimodal Corridor Plan.

Project Level Transportation Conformity

Based on information previously provided to EPA through interagency working group coordination, the EPA agreed on January 24, 2022 with Caltrans' determination that the project is not a "Project of Air Quality Concern" as defined through project level transportation conformity.1 We understand that there are multiple ongoing and future actions, approvals, and plans that will be at more advanced stages prior to the final environmental document being completed, including the Multimodal Corridor Plan effort. EPA recommends that Caltrans identify if new information that has become available since January 24, 2022, as a result of other regional planning efforts, would affect the prior Project of Air Quality Concern determination.

Environmental Justice

As of April 21, 2023, Executive Order 12898 has been amended by Executive Order 14096, "Revitalizing Our Nation's Commitment to Environmental Justice for All." 2 We note that environmental justice concerns informed the 2019 Caltrans decision to discontinue Build Alternatives 1 and 2 from further consideration. The new Executive Order challenges all governments to "meaningfully involve" people so that they "are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers." (Sec. 2 (b)(1)) We recommend Caltrans add information identifying public meetings held and comments responded to over the years of project development to fully document community engagement.

Climate Adaptation

Caltrans District 6 published a Climate Adaptation Priorities report in June 2020, 3 which includes recommendations for bridges, culverts, and roadways. We note that the Climate Adaptation Priorities Report was not referenced in the Draft EA. EPA recommends Caltrans confirm that the proposed Tulare Canal realignment or box culvert design options are consistent with the District's Climate Adaptation Priorities report. Include in the final environmental analysis any changes to canal and culvert design that may be necessary to meet the goals and objective of the most recent District 6 climate adaptation considerations.

Thank you for the opportunity to review this combined Recirculated Draft Environmental Impact Report/Environmental Assessment. We would appreciate receiving an electronic copy of the final environmental document once it is publicly available. If you have any questions, please contact Zac Appleton, the lead reviewer for this project, at 415-972-3321 or appleton.zac@epa.gov.

Sincerely,

Dunning, Connell

Digitally signed by Dunning, Connell
Date: 2023.09.22 11:07:27 -07'00'

for Jean Prijatel

Manager, Environmental Review Branch

Caltrans Response to Environmental Protection Agency: Thank you for your comments. Your comments have been reproduced below, with a Caltrans response provided after each comment.

Comment 1 (Additional State Route 99 Expansion and Induced Demand):

The proposed project is one of many interchange improvements and vehicle lane expansions in the State Route 99 corridor. According to the Draft EA (p. 90), Caltrans anticipates developing a Comprehensive Multimodal Corridor Plan to reduce VMT growth impacts with managed lanes and transit throughout the corridor that includes projects like the proposed Tulare to Paige Avenue segment. The Draft EA states that the proposed project would increase total annual vehicle miles traveled by 19,759,200 after the deductions for truck vehicle miles traveled are included. The Draft EA further states that induced VMT growth would be mitigated below a significant threshold through the implementation of managed lanes, to be developed in

the Multimodal Corridor plan and included in the final environmental document.

We note that in the CEQA portion of the environmental document, Caltrans also discloses “the possibility of an unforeseen event that would prevent the mitigation from being completed,” and that Caltrans would consider completing the project “with a Statement of Overring Consideration for unmitigated impacts.” (p.204) In a potential scenario whereby the mitigation identified to comply with CEQA may not be completed, and Caltrans continues to pursue a Finding of No Significant Impact, EPA recommends that Caltrans clearly indicate in the final environmental document how remaining impacts are not significant pursuant to NEPA, and/or if there is sufficient mitigation in order to support a FONSI, rather than needing to conclude that remaining significant impacts may result. For example, if the Multimodal Corridor Plan effort is being relied upon to reduce potential induced demand impacts to less than significant, please clarify what multimodal plan elements will be commitments as either part of the proposed action or as mitigation.

Prior to signing a FONSI, EPA recommends that Caltrans identify and commit to specific corridor-scale mitigation measures that would reduce induced demand effects in the opening year of this segment of State Route 99, including mitigation measures that can be practically applied to this project and adjacent highway and interchange segments. Identify mitigation measures that could be implemented ahead of and adopted in the subsequent Comprehensive Multimodal Corridor Plan.

As the proposed project’s logical termini and independent utility lie within the limits of the City of Tulare, it is critical to commit, as early as possible, to mitigation measures that encourage reduced VMT and facilitate implementation of the eventual Comprehensive Multimodal Corridor Plan.

Response to Comment 1: Caltrans Response to Comment 1 (Induced Demand/Mitigation): Caltrans acknowledges the EPA recommendation and has updated the final environmental document Chapter 3, Section 3.2.17 to state that the Vehicle Miles Traveled (VMT), without mitigation measure, would be a significant impact under the California Environmental Quality Act but not significant under the National Environmental Policy Act. The National Environmental Policy Act does not make significance determinations on individual resources (transportation) but rather the significance of the action as a whole

The multimodal plan elements are part of the mitigation measure.

Using Caltrans’ SB 743 Program Mitigation Playbook, Caltrans has identified and committed to two mitigation measures that would reduce induced demand and significantly decrease VMT: (1) using lane management

strategies under the Comprehensive Multimodal Corridor Plan; and (2) expanding transit services and vanpooling routes by partnering with transit agencies should fully or significantly decrease VMT. These are addressed below and set forth in the DEIR section 2.1.9.

1. Comprehensive Multimodal Corridor Plan

Caltrans Districts 6, 10, and 3 will collaborate with local agencies in the San Joaquin Valley to prepare a Comprehensive Multimodal Corridor Plan for State Route 99 through the Valley. The Comprehensive Multimodal Corridor Plan will include the identifying managed-lane and mode shift opportunities in the corridor that will lead to reduced VMT. Since the draft environmental document, the VMT-reducing managed lane strategy has been identified as the preferred strategy to reduce significant VMT impacts. A project to establish a VMT-reducing managed lane will be programmed prior to project construction closeout in 2026.

Caltrans has made two assumptions about the VMT-reduced managed lane project: (1) that it will be mainly a signage and delineation for lane conversion; and (2) that project can be amended to be included into the 2024 State Highway Operation.

Before the start of the SP&R contract, Caltrans District 6 has done preliminary work toward the investigation and implementation of a managed lane in the project vicinity. The preliminary work completed includes the following:

- Caltrans has reviewed the California Vehicle Code to see if it has authority to convert existing-purpose lanes to managed lanes, such as truck-only lanes. The California Vehicle Code allows Caltrans to reallocate a general-purpose lane to a managed lane using changes to signage and striping. Vehicle Code 21655 gives Caltrans the authority to designate preferential highway lanes, with instructions to motorists on the use of those lanes. The California Manual on Uniform Traffic Control Devices (Section 2B.31) will be used for sign guidance, and changes in the California Vehicle Code may be needed for enforcement.
- Caltrans has contracted with a consultant to provide “engineering and traffic investigations” for designating specific lanes for vehicle travel that restricts trucks. It is anticipated this work will be completed in 2024.
- Caltrans has coordinated with district management to identify and prepare a project delivery schedule for a State Highway Operation and Protection Program project to be initiated for a VMT-reducing managed lane project.

The Comprehensive Multimodal Corridor Plan proposed schedule is as follows:

- Vehicle miles traveled-reducing managed lane strategy will be provided to Asset Management in June 2024

- Asset Management will add the mitigation project to the Ten-Year Project Book in July 2024
- K-phase will open for a VMT-reducing managed lane project, and work will commence on the Project Initiation Document in November 2024
- Project Initiation Document will be completed in May 2025
- Project will be amended into the 2024 State Highway Operation and Protection Program in August 2025
- Project Approval and Environmental Document phase will begin in September 2025
- Vehicle miles traveled-reducing managed lane project will be ready to list for advertisement in the fiscal year 2026/2027 or 2027/2028 and will be funded in the 2024 State Highway Operation and Protection Program.

2. Expanding the Tulare County Bus Routes and Vanpool

As set forth in the Recirculated Draft Environmental Document/Environmental Assessment section 2.1.9, Caltrans will mitigate 19,759,200 annual VMT by entering into cooperative agreements with Tulare County Regional Transit Agency and Tulare County Area Transit to promote increased use of public transportation. This will substantially reduce the 19,759,200 annual VMT attributed to the project.

Caltrans commitment to subsidizing Tulare County Area Transit's bus service for Routes 20, 40, and 11x can reduce the annual VMT by 10,841,600. Caltrans commitment to subsidizing Tulare County Regional Transit Agency's vanpool program can reduce the annual VMT by 6,544,800.

It is unlikely that these mitigation measures will go unimplemented. Assuming one or both are mitigation measures are not implemented, Caltrans has determined that the infrastructure improvement is necessary and outweighs the environmental risk from the project (i.e., 19,759,200 increased annual VMT). The statewide benefits from the project include the necessary and efficient movement of goods on a Primary Highway Freight System.

Comment 2 (Project Level Transportation Conformity):

Based on information previously provided to EPA through interagency working group coordination, the EPA agreed on January 24, 2022 with Caltrans' determination that the project is not a "Project of Air Quality Concern" as defined through project level transportation conformity.1 We understand that there are multiple ongoing and future actions, approvals, and plans that will be at more advanced stages prior to the final environmental document being completed, including the Multimodal Corridor Plan effort. EPA recommends that Caltrans identify if new information that has become available since January 24, 2022, as a result of other regional planning efforts, would affect the prior Project of Air Quality Concern determination.

Response to Comment 2 (Update on Project Level Conformity): Since January 24, 2022, there is no new information resulting from other regional planning efforts, that would affect the prior Project of Air Quality Concern determination.

Comment 3 (Environmental Justice):

As of April 21, 2023, Executive Order 12898 has been amended by Executive Order 14096, “Revitalizing Our Nation’s Commitment to Environmental Justice for All.” 2 We note that environmental justice concerns informed the 2019 Caltrans decision to discontinue Build Alternatives 1 and 2 from further consideration. The new Executive Order challenges all governments to “meaningfully involve” people so that they “are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers.” (Sec. 2 (b)(1)) We recommend Caltrans add information identifying public meetings held and comments responded to over the years of project development to fully document community engagement.

Response to Comment 3 (Updating the Environmental Justice to Reflect Additional Community Engagement): The Final Environmental Document, Chapter 4 (Comments and Coordination) was updated to a summarized the community engagement and public hearings that took place during the two public circulation periods for the draft environmental document and the recirculated draft environmental document.

Comment 4 (Climate Adaptation):

Caltrans District 6 published a Climate Adaptation Priorities report in June 2020, 3 which includes recommendations for bridges, culverts, and roadways. We note that the Climate Adaptation Priorities Report was not referenced in the Draft EA. EPA recommends Caltrans confirm that the proposed Tulare Canal realignment or box culvert design options are consistent with the District’s Climate Adaptation Priorities report. Include in the final environmental analysis any changes to canal and culvert design that may be necessary to meet the goals and objective of the most recent District 6 climate adaptation considerations.

Response to Comment 4 (Climate Adaptation): The canal was not included in the Climate Adaptation Priorities Report. Only assets determined to be potentially exposed to a climate hazard are included in the analysis.

List of Technical Studies

Draft Relocation Memorandum: November 2020

Air Quality Report: September 2022

Noise Study Report: November 2021

Addendum Noise Study Report: June 2023

Water Quality Assessment Report: July 2021

Natural Environment Study (Minimal Impacts): November 2021

Historic Property Survey Report: November 2020

Supplementary Historical Property Survey Report: June 2021

Supplemental Archaeological Survey Report: March 2022

Paleontology Evaluation Report and Preliminary Mitigation Measures: July 2021

Initial Site Assessment: November 2021

Preliminary Site Investigation: September 2022

Scenic Resource Evaluation/Visual Impact Assessment: December 2021

Induced VMT Analysis: September 2021

To obtain a copy of one or more of these technical studies/reports or the Environmental Impact Report/Environmental Assessment, please send your request to:

Javier Almaguer
District 6 Environmental Division
California Department of Transportation
2015 East Shields Avenue, Suite 100, Fresno, California 93726

Or send your request via email to: javier.almaguer@dot.ca.gov
Or call: 559-287-9320

Please provide the following information in your request:

Project title: Tulare Six-Lane and Paige Avenue Interchange Improvement

General location information: Widen State Route 99 from four to six lanes from post miles 25.2 to 30.6 and reconstruct the Paige Avenue Interchange in the City of Tulare in Tulare County

District number-county code-route-post mile: 06-TUL-99-PM 25.2-30.6

Project ID number: 0614000040