ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT
Yolo Pavement Rehabilitation (03-4F650)

Resolution SHOPP-P-2021-06B
(will 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) for the *Yolo Pavement Rehabilitation (03-4F650)*, effective on, May 13, 2021 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, *Caltrans* , and the Implementing Agency, *Caltrans* , sometimes collectively referred to as the "Parties".

3. RECITAL

3.2 Whereas at its May 13, 2020 meeting the Commission approved the State Highway Operation and Protection Program, and included in this program of projects the *Yolo Pavement Rehabilitation (03-4F650)*, 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 and the Project Report attached hereto as Exhibit B, as the baseline for project monitoring by the Commission.

3.3 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 *Insert Number* , "Adoption of Program of Projects for the Active Transportation Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Local Partnership Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
- ☒ Resolution G-20-40, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated May 13, 2020
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated

4.3 All signatories agree to adhere to the Commission's State Highway Operation and Protection Program, 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 Caltrans agrees to secure funds for any additional costs of the project.

4.6 Caltrans agrees to report on a quarterly basis; after July 2019, reports will be on a semi-annual basis on the progress made toward the implementation of the project, including scope, cost, schedule, outcomes, and anticipated benefits.

4.7 Caltrans agrees to prepare program progress reports on a quarterly basis; after July 2019, reports will be 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 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 during the course of the project, and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.10 The Transportation 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 four 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 Other Project Specific Provisions and Conditions

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Yolo Pavement Rehabilitation (03-4F650)

Resolution SHOPP-P-2021-06B

Amarjeet S Benipal — Date: 3-18-2021

Amarjeet S Benipal

District 3 Director

Project Applicant

Amarjeet S Benipal — Date: 3-18-2021

Amarjeet S Benipal

District 3 Director

Implementing Agency

Amarjeet S Benipal — Date: 3-18-2021

Amarjeet S Benipal

District Director

California Department of Transportation

Toks Omishakin — Date: 4-26-2021

Toks Omishakin

Director

California Department of Transportation

Mitchell Weiss — Date

Mitchell Weiss

Executive Director

California Transportation Commission

Baseline agreement information was extracted from Caltrans' project data systems. Project description, funding and performance measures are from CTIPS. Project delivery milestones are from PRSM. All information is current and accurate.

STATE OF CALIFORNIA ● DEPARTMENT OF TRANSPORTATION

BASELINE AGREEMENT					Date:	04/08/21 05:46:23 PM
District	**EA**	**Project ID**		**PPNO**	**Project Manager**	
03	4F650	0314000233		8784	NESSAR, NAWID A	
County	**Route**	**Begin Postmile**	**End Postmile**	**Implementing Agency**		
YOL	80	4.3	R 11.4	PA&ED	Caltrans	
				PS&E	Caltrans	
				Right of Way	Caltrans	
				Construction	Caltrans	

Project Nickname
4F650 Yolo Pavement Rehab
Location/Description
In and near West Sacramento, from east of Mace Boulevard to Sacramento River Bridge; also on Route 50, from Route 80 to Jefferson Boulevard Overcrossing (PM 0.0/2.5). Rehabilitate pavement by placing Continuous Reinforced Concrete Overlay, reconstruct existing pavement, rehabilitate bridge decks, bridge median widening at two locations, and upgrade bridge railings. (G13 Contingency)

Legislative Districts					
Assembly:	04, 07	**Senate:**	03	**Congressional:**	03, 06

PERFORMANCE MEASURES							
	Primary Asset	**Good**	**Fair**	**Poor**	**New**	**Total**	**Units**
Existing Condition	Pavement	1.1	43.8	3.1		48	Lane-miles
Programmed Condition	Pavement	48				48	Lane-miles

Project Milestone	**Actual**	**Planned**
Project Approval and Environmental Document Milestone	02/01/21	
Right of Way Certification Milestone		04/18/22
Ready to List for Advertisement Milestone		04/28/22
Begin Construction Milestone (Approve Contract)		11/03/22

FUNDING (Allocated amounts are shaded)

Component	**Fiscal Year**	**SHOPP**					**Total**
PA&ED	18/19	10,337					10,337
PS&E	21/22	8,950					8,950
RW Support	21/22	200					200
Const Support	21/22	23,800					23,800
RW Capital	21/22	50					50
Const Capital	21/22	205,850					205,850
Total		249,187					249,187

03 - Yol – 50,80 – PM 0.0/2.5, 4.3/R11.4
03-4F650 – 0314000233 – PPNO 8784
20.XX.201.120 – Roadway Rehabilitation
December 2020

Project Report
For Project Approval

In Yolo County on Route 80 from 1.7 Miles East of Mace Blvd Overcrossing to Sacramento River Bridge Overhead (Bryte Bend) and on Route 50 from Route 80/50 Separation to Jefferson Boulevard Undercrossing.

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:

JOHN BALLANTYNE, Chief, North Region Right of Way

APPROVAL RECOMMENDED:

JESS AVILA, Project Manager

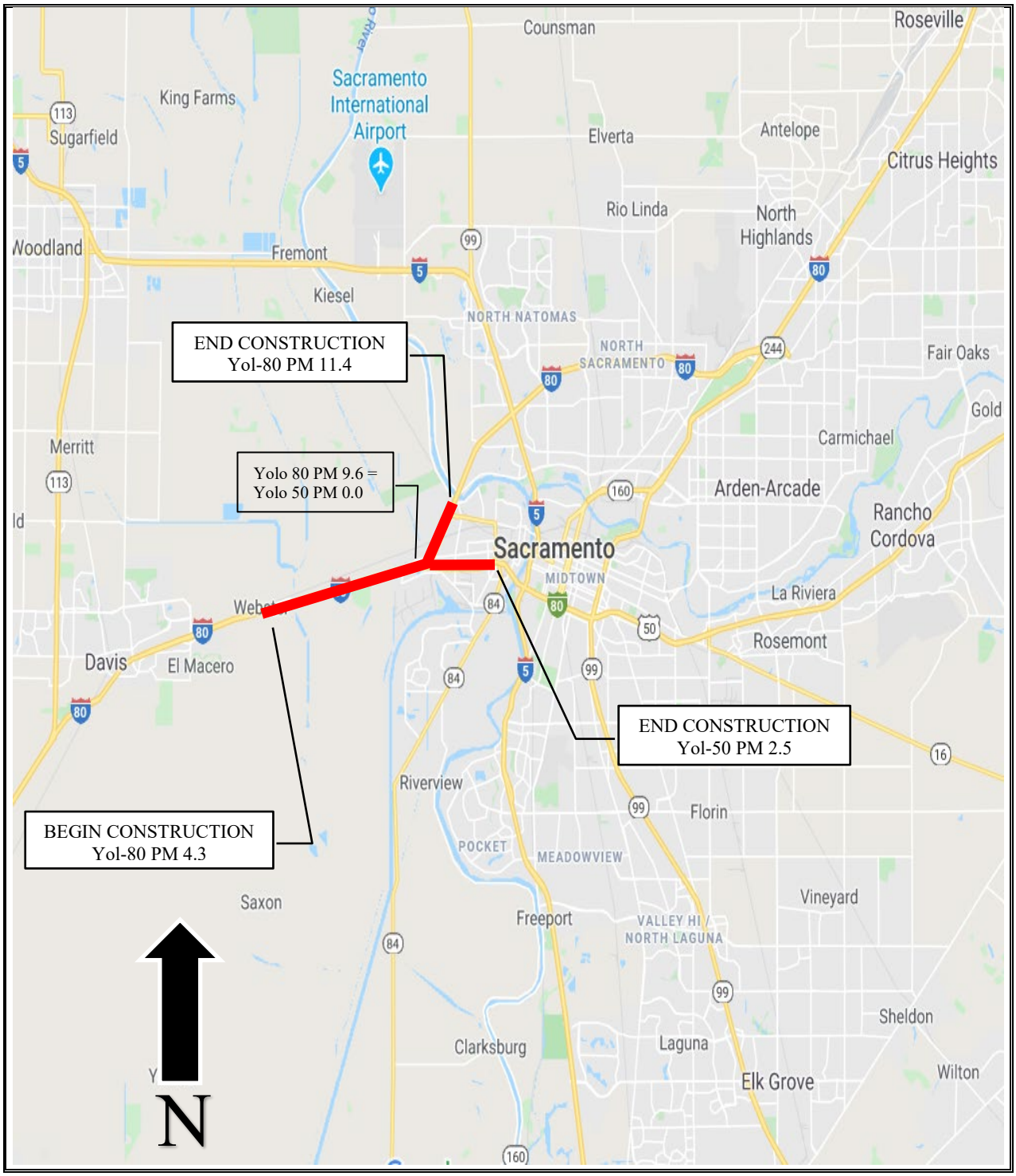
PROJECT APPROVED:

for

AMARJEET S. BENIPAL, District Director

2/1/2021
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.

1/15/2021

REGISTERED CIVIL ENGINEER *DATE*

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1. INTRODUCTION

Project Description:

The project proposes to rehabilitate pavement in Yolo County, on Interstate 80 (I-80) from east of the Mace Boulevard Interchange in Davis to the Sacramento River Bridge Overhead (Bryte Bend), and on US Highway 50 (US 50) in West Sacramento from the I-80/US 50 Separation to the Jefferson Boulevard Undercrossing. This project will also be addressing Americans with Disabilities Act (ADA) curb ramp upgrades, installing fiber optic lines and ramp meters. The Location Map is Attachment A of this report.

Project Limits	03-Yol-50, PM 0.0/2.5 03-Yol-80, PM 4.3/R11.4	
Number of Alternatives	2 (Including No Build Alternative)	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay Support	$ 40,200,000	$ 43,230,000
Capital Outlay Construction	$ 187,264,000	$ 205,820,000
Capital Outlay Right-of-Way	$ 43,125	$ 50,000
Funding Source	20.XX.201.120	
Funding Year	2022*	
Type of Facility	6 to 8 Lane Freeway	
Number of Structures	10	
SHOPP Project Output	48 Lane Miles	
Environmental Determination or Document	CEQA: Categorical Exemption NEPA: Categorical Exclusion	
Legal Description	In Yolo County on Route 80 from 1.7 Miles East of Mace Blvd Overcrossing to Sacramento River Bridge Overhead (Bryte Bend) and on Route 50 from Route 80/50 Separation to Jefferson Boulevard Undercrossing	
Project Development Category	4B	

*A Project Change Request (PCR) is in the process to advance project's delivery Fiscal Year from 2023/2024 to 2021/2022.

2. RECOMMENDATION

It is recommended that the project be approved and proceed to the design phase.

3. BACKGROUND

Project History:

The Project Scope Summary Report (PSSR) was approved on June 30, 2015 as a 2R Pavement Rehabilitation Project with three pavement rehabilitation strategies. The rehabilitation alternatives are 1) lane and slab replacement, 2) crack, seat and overlay, and 3) full lane and shoulder replacement with Portland Cement Concrete (PCC). A Supplemental PSSR was approved on June 29, 2017 with a pavement rehabilitation strategy of placing Continuously Reinforced Concrete Pavement (CRCP) Overlay within the project limits. The Supplemental No. 2 PSSR was approved on July 3, 2018 with pavement rehabilitation strategies of 1) placing CRCP overlay on I-80 and 2) reconstructing pavement on US 50 with CRCP on the outside lanes and Hot Mix Asphalt on the remaining lanes and shoulders.

Existing Facility:

The project is in Yolo County on I-80 from east of the City of Davis to the Sacramento River Bridge Overhead (Bryte Bend), and on US 50 in West Sacramento from I-80/US 50 Separation to the Jefferson Boulevard Undercrossing.

The portion of the project on I-80 is a divided multilane freeway with an unpaved median constructed in the 1960's and 1970's. The freeway consists of three 12 ft wide traveled lanes in each direction with 10 ft wide outside shoulders and inside shoulders widths varying from 5 ft to 8 ft. The roadway pavement consists of PCC traveled lanes and asphalt concrete shoulders, and the ramps at all the interchanges are asphalt concrete. The west most section of I-80 beginning at post mile 4.3 is in flat terrain and elevates to conform with the Yolo Causeway on the Yolo Bypass Wildlife Area. The PCC pavement within this section has been overlaid with asphalt concrete. The east most section of I-80 beginning at post mile 10.2 is on an elevated fill area with bridges above local roads and a railroad.

The section of US 50 is a divided multilane highway with concrete barrier on paved median. There are three to four 12 ft wide PCC traveled lanes in each direction with auxiliary lanes between interchanges. The shoulders, median and ramps have asphalt concrete pavement. The outside shoulders are 10ft wide and the paved median width varies from 13 ft to 18 ft.

4. PURPOSE AND NEED

Purpose:

The purpose of this project is to rehabilitate and restore the pavement to a state of good repair.

Need:

The existing PCC pavement has surpassed its service life. The condition of the pavement has degraded resulting in a poor quality of ride and increasing maintenance for repair and preservation of the pavement.

A. Justification

The pavement on I-80 from the beginning of the project, PM 4.3, to Webster Undercrossing, PM 5.8, is nearly 40 years old and has only had three Highway Maintenance (HM) projects since the pavement was rehabilitated in 1982. The pavement section between the Yolo Causeways, PM 5.8 to 7.25, has not been rehabilitated since it was realigned in 1960. This section has not been addressed with a robust pavement strategy since 1960 and has surpassed its life expectancy.

The 2016 Pavement Condition Survey for I-80 from west of Chiles Road Interchange to Yolo Causeway East indicates longitudinal and fatigue cracking on the existing asphalt concrete pavement. The fatigue cracking (Alligator B) percentage is from 0% to 37 %. The pavement is mostly in fair condition. The existing PCC pavement on I-80 from the I-80/US 50 Separation to Sacramento River Bridge Overhead (Bryte Bend) shows 0% to 41.3% third stage cracking and 0% to 87.2% faulting. The existing PCC pavement on US 50 shows 0% to 20.6% third stage cracking and 0% to 26.9% faulting. The pavement on both segments is mostly in fair condition. Several projects have replaced individual concrete slabs within the project limits. The slab replacements do not provide a long-term solution and the Roadside Maintenance Crew eventually ends up repairing the new individual slabs in addition to deteriorating pavements.

B. Regional and System Planning

I-80 is a primary freeway that serves interregional travel between the San Francisco Bay Area, Sacramento, and Nevada. The work on I-80 is in Segments 2 and 3 of the 2017 I-80 Transportation Concept Report (TCR). Segment 2 is a six-lane freeway from the Mace Boulevard Interchange, PM 2.68, to I-80/US 50 Separation, PM 9.55. Segment 3 is six-lane freeway from the I-80/US 50 Separation, PM 9.55, to the Yolo/Sacramento County Line, PM R11.718. Segment 2 operated at Level of Service (LOS) F and Segment 3 operated at LOS C in the year 2014 and will both have a LOS E in 2035.

US 50 serves the large Sacramento metropolitan area up to just east of Placerville, where it primarily serves recreational travel to the Sierra Nevada and Lake Tahoe. The work on US 50 is in Segment 1 of the 2014 US 50 Transportation Concept Report (TCR) and Corridor System Management Plan (CSMP). Segment 1 is from the I-80/US 50 Separation, PM 0.0, to the Yolo/Sacramento County Line, PM 3.16. The existing facility is an eight-lane freeway and the ultimate facility consists of 8 general purpose lanes, 2 High Occupancy Vehicle (HOV) lanes, Auxiliary lanes, as

well as Intelligent Transportation System (ITS) and Intelligent Corridor Management (ICM) elements. Segment 1 operated at LOS E in the year 2012 and will have a LOS F in 2035.

Other projects that are in or near this project are listed below:

1. 03-3H900 – Yolo 80/50 Managed Lanes: On I-80 just west of Davis in both directions from the Kidwell Road Interchange in Solano County (District 4) to the US 50/I-5 Interchange and I-80/West El Camino Interchange in Sacramento. The project will construct improvements consisting of managed lanes, pedestrian/bicycle facilities, and Intelligent Transportation System elements. Planned construction in November 2024.
2. 03-0F250 – Yol/Sac 80 Bryte Bend Bridge Rehabilitation: In Yolo and Sacramento Counties in and near West Sacramento from 0.1 mile west of Reed Avenue Overcrossing to 0.1 mile east of the Sacramento River Bridge and Overhead. The project will rehabilitate the Sacramento River Bridge Overhead (Bryte Bend). The project was awarded on September 11, 2020 and planned to start construction in early 2021 through November 2022.
3. 03-1H870 US 50 MBGR Upgrade: In Yolo County in US 50 from PM 0 to PM 3 and I-80 from PM 9 to PM R10.7. The project will replace guardrail and place vegetation control. The planned start of construction is Spring of 2021.
4. 03-3H330 US 50 ICM Infrastructure: In and near the cities of Sacramento, Rancho Cordova, and Folsom from Yolo County line to Folsom Boulevard; also, in Yolo County in West Sacramento from I-80 to Sacramento County line and on I-80 from Enterprise Boulevard to US 50. The project will install Transportation Management System (TMS) field elements. The planned start of construction is Fall of 2021.
5. 03-1H100 Sac 5/50 IC Painting: In the City of Sacramento from the Sacramento River Viaduct (Pioneer Bridge) to 4th Street; also, on I-5 from 0.2 mile south of Broadway to S Street (PM 22.15 to 22.91). The project will clean and paint steel bridges within I-5/US 50 Interchange. The planned start of construction is Fall of 2021.

This project is being coordinated with project 03-1H870 and 03-3H330 to not duplicate any work efforts.

C. Traffic

Current and Forecasted Traffic

The traffic data are summarized in the tables below.

Traffic Data: Yolo-50, PM 0.0/3.1

Year		Annual ADT	Peak Hour	Traffic Index
Base Year	2018	121,000	11,300	9
Construction Year	2025	133,700	12,400	9
20-Year	2045	170,000	15,800	13.5
40-Year	2065	206,300	19,200	14.5

US 50 has a directional split of 65% and 5% truck traffic during mainline peak hour.

Traffic Data: Yolo-80, PM 0.0/R9.9

Year		Annual ADT	Peak Hour	Traffic Index
Base Year	2018	155,300	12,300	10
Construction Year	2025	171,600	13,600	10
20-Year	2045	218,200	17,200	14
40-Year	2065	264,800	20,900	15.5

I-80 has a directional split of 59% and 5% truck traffic during mainline peak hour at this segment.

Traffic Data: Yolo-80, PM R9.9/R11.4

Year		Annual ADT	Peak Hour	Traffic Index
Base Year	2018	92,200	7,470	9.5
Construction Year	2025	101,900	8,250	9.5
20-Year	2045	129,500	10,500	13.5
40-Year	2065	157,200	12,700	14.5

I-80 has a directional split of 65% and 7% truck traffic during mainline peak hour at this segment.

Collision Analysis

The accident data analyzed on the mainline were from the period of June 30, 2017 and June 30, 2020.

County-Route	Post Mile	Total Collisions	Fatal	Fatal + Injury	Actual			Average		
			(F)	(F+I)	(F)	(F+I)	Total	(F)	(F+I)	Total
Yolo-50	0.0/2.5	292	4	97	0.013	0.41	0.98	0.003	0.26	0.82
Yolo-80	4.3/11.4	722	3	249	0.003	0.23	0.68	0.006	0.22	0.65

There was a total of 292 accidents on Yol-50 from PM 0.0 to 2.5, with 4 fatal and 119 injury accidents. The collision data indicate that primary collision factors are related to motorist's driving behaviors with 60% due to speeding and 13% due to improper turns by vehicles. The type of collisions includes 59% rear end, 19% sideswipe, 16% hitting objects, and 2% broadside.

There was a total of 722 accidents on Yol-80 from PM 4.3 to 11.4, with 3 fatal and 246 injury accidents. The collision data indicate that primary collision factors are related to motorist's driving behaviors with 54% due to speeding and 14% due to improper turns by vehicles. The type of collisions includes 57% rear end, 26% sideswipe, and 14% hitting objects.

The actual collision rates for both routes are slightly higher than the statewide average rates but are not considered statistically significant. The majority of the collisions on I-80 and US 50 occurred during the morning and afternoon commute times, which indicates congestion related collision pattern. This project will rehabilitate existing pavement and may address non-congestion related accidents by providing a smoother and more rideable pavement, replacing existing open grade asphalts, upgrading guardrails and replacing traffic signs and stripes.

5. ALTERNATIVES

5A. Viable Alternatives

On I-80, from west of Chiles Road Interchange to Yolo Causeway East, and from I-80/US 50 Separation to Sacramento River Bridge Overhead (Bryte Bend), this project proposes to place Continuously Reinforced Concrete Pavement Overlay on existing lanes and shoulders.

On I-80 from the Yolo Causeway East to the I-80/US 50 Separation, and on US 50, this project proposes to reconstruct the existing two outer lanes with Continuously Reinforced Concrete Pavement and remaining lanes and shoulders with Hot Mix Asphalt Pavement.

Other Scope of work

-Rehabilitate ramps by cold planing existing asphalt pavement and placing Rubberized Hot Mix Asphalt (RHMA)
-Remove median concrete barrier, thrie beam barriers and Place Concrete Barrier (Type 60M)
-Remove guardrailings and Place Midwest Guardrail Systems with vegetation control
-Remove and replace dikes
-Place shoulder backing
-Reconstruct curb ramps
-Replace textured gore pavements
-Replace traffic stripes and roadside signs
-Remove and replace existing overhead sign structure at Enterprise Blvd I/C to a new location to the east with two sign structures
-Replace overhead signs in the median
-Replace electrical pull boxes
-Install fiber optic lines

-Replace Closed Circuit Television (CCTV) and Emergency Message Sign (EMS)
-Replace ADA push buttons

Structures

The project proposes to replace the bridge median concrete barriers and widen two structures in the median on I-80 to facilitate staging and traffic handling during construction. The conditions of the existing bridge rails, decks and the need of approach slabs were assessed in defining the bridge health and identifying the scope of work. The Advance Planning Studies (APS) prepared by Structures Design are in Attachment D of this report. The existing structures within the project limits and proposed scope of work are listed in the table below.

Structure Information

Structure Name and Number		Route	Post Mile	Structure Work
Webster UC	22-0043	80	5.78	Place fiber optic conduit
Yolo Causeway West	22-0044	80	5.81	Place fiber optic conduit
Yolo Causeway East	22-0045	80	7.25	Place fiber optic conduit
Enterprise Boulevard Undercrossing	22-0100	80	9.18	Replace median barrier Place fiber optic conduit Treat bridge deck
Westacre Road Undercrossing	22-0102	50	2.18	Replace median barrier Place fiber optic conduit Treat bridge deck (westbound)
Lake Washington Overhead	22-0131 L/R	80	R10.62	Place fiber optic conduit Place approach slab (Abutment 1)
Route 80/50 Separation	22-0140R	80	R9.86	Place approach slabs
W80-E50 Connector	22-0141F	80	R10.02	Replace Slope Paving at Abutment 1
West Capitol Avenue Undercrossing	22-0142 L/R	80	R10.16	Median widening Replace outside barriers Remove inside barriers Place median barrier Place approach slabs Treat bridge deck Slope Paving
Reed Avenue Undercrossing	22-0149 L/R	80	R11.21	Median widening Replace outside barriers Remove inside barriers Place median barrier Place approach slabs Treat bridge deck

Ramp Metering

The project proposes to install ramp metering and provide Maintenance Vehicle Pullouts (MVP) at WB-80 Loop Onramp from West Capitol Avenue, WB-50 Onramp from Jefferson Boulevard, and WB-50 Onramp from State Route 275. An Exception to Ramp Metering Policy was approved for these ramps since widening for an HOV preferential lane and California Highway Patrol (CHP) Enforcement Areas are not provided.

The WB-80 Slip Onramp from West Capitol Avenue will be metered and widened to provide an HOV preferential lane and MVP. There is enough shoulder pavement to provide for a CHP Enforcement Area at this location. A Design Standard Decision Document will be prepared for this ramp due to the exclusion of the auxiliary lane after the ramp convergence point.

Railroad Involvement

The PSSR included median widening on I-80 to facilitate staging of construction. The Lake Washington Overhead that spans over the Union Pacific Railroad (UPRR) was proposed to be widened in the median by constructing a bridge between the existing left and right structures. The proposal did not include improvements on the existing non-standard vertical clearance over the rail tracks and horizontal clearance to the UPPR right of way. The median widening proposal was presented to UPRR and discussed in the field with a UPRR representative on February 26, 2020. This proposal was rejected by UPRR. There were several alternatives that were analyzed and described below for Lake Washington Overhead with PID Level cost estimate (bridge only).

a. Alternative 1 ($11 Million) – Construct median bridge between left and right structure with new bents aligned with existing bents.
b. Alternative 2 ($11 Million) – Construct median bridge between left and right structure with new bents 25 feet clear of centerline of rail.
c. Alternative 3 ($27 Million) – Replace left and right structure with new bents 25 feet clear of centerline of rail.
d. Alternative 4 ($22 Million) – Replace left and right structure with new structure clear of railroad right of way.
e. Alternative 5 – No bridge widening. This is the selected alternative for this project.

5B. Rejected Alternatives

No Build Alternative. This alternative does not address the purpose and need of the project.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

A Hazardous Waste Initial Site Assessment (ISA) Memo was prepared and provided recommendations on bridge rail removal, Aerially Deposited Lead (ADL) investigation, and bid items and specifications that will be included in the project. The ISA Memo is in Attachment E of this report.

6B. Value Analysis

The project qualifies for a Value Analysis (VA) study since the project cost is over $25 million. The VA study was conducted from June 15-20, 2020 and was sponsored by Caltrans District 3 and facilitated by Value Management Strategies, Inc. A VA implementation meeting was held on September 8, 2020 to identify the alternatives that will be implemented in the project. The VA Study Summary Report is in Attachment F of this report. The VA Alternatives 3 and 4 will be included in the project Traffic Management Plan Specifications. The VA Alternative 5 will be implemented on the roadway median widening on I-80 from the W. Capitol Avenue UC to the Sacramento River Bridge Overhead (Bryte Bend). The 60-foot-wide median widening will include a 14-foot-wide Continuously Reinforced Concrete Pavement in each direction for future lanes and the remaining as Hot Mix Asphalt inside shoulders. Eliminating the sliver outside widening and shifting traffic towards the median will not be implemented due nonstandard shoulders at the Lake Washington Overhead. To maintain the existing shoulder widths at the bridge, traffic will need to be shifted and will require most of the sliver widening.

6C. Resource Conservation

This project proposes to preserve existing materials by salvaging guard railings that will be removed from this project. The existing pavement section will be recycled as part of the new pavement. The new structural section incorporates the use of rubber in the Hot Mix Asphalt as recommended by the District 3 Materials Engineer in Attachment G of this report.

6D. Right-of-Way Issues

The Right of Way Data Sheet is in Attachment H of this report. There are no anticipated right of way acquisitions or utility conflicts for this project. Railroad Coordination is anticipated for work at the Lake Washington Overhead. An agreement with the UPRR will be required for the installation of the fiber optic conduit on the bridge barrier.

6E. Environmental Compliance

The project is Categorically Exempt per the California Environmental Quality Act of 1970 (CEQA) and Categorically Excluded under the National Environmental Policy Act (NEPA). The document is in Attachment I of this report.

6F. Air Quality Conformity

This project is exempt from all air quality analysis per Code of Federal Regulations

(CFR), Title 40: Protection of Environment, Section 93.126, Table 2-Safety. Air quality conformity is not required on this pavement resurfacing and rehabilitation project.

6G. Title VI Considerations
This project complies with the Title VI requirements.

6H. Noise Abatement Decision Report
Not applicable to this project as there is no change to the horizontal or vertical alignment, change to the highway capacity or prediction for an increase in traffic volume because of this project in accordance with Title 23, CFR, Part 772 of the Federal Highway Administration (FHWA) standards.

6I. Life-Cycle Cost Analysis
The Life-Cycle Cost Analysis (LCCA) Summary is in Attachment J of this report. The LCCA analyzed two alternatives for I-80 and US 50 and provided the recommendation for the design pavement life with the lowest agency and user cost.

7. OTHER CONSIDERATIONS AS APPROPRIATE

Transportation Management Plan
A Transportation Management Plan (TMP) Data Sheet is in Attachment K of this report. The TMP recommends use of Portable Changeable Message Signs (PCMS) during construction, and provides night time traffic control restrictions on freeway, connector, and ramp closures. The traffic volumes are high within the project limits and does not allow reducing the number of lanes during construction.

Stage Construction
Preliminary Stage Construction and Traffic Handling Plans are in Attachment L of this project. The stage construction includes utilizing Temporary Railing (Type K) and Temporary Traffic Screen in construction to separate traffic and construction activities. Long term closures are included in the stage construction plans to complete work on the ramps and transition areas. The staging will allow work to be completed on the existing pavement and not reduce the number of lanes during construction. The Stage 1 will include widening or reconstructing the median section of the roadway that will be utilized in the subsequent stages. Traffic will be shifted towards the median while work is completed on the existing pavement. The median pavement constructed for stage construction will remain in place when the project is complete but will not be striped to allow for traffic.

Asset Management
The SHOPP Performance Report in Attachment M of this report. The report provides the performance and accomplishments of all the assets included in this project. The primary asset for this project is the pavement which will have an improved condition due to pavement rehabilitation. The other assets included in the project are bridge,

culvert, overhead sign structures, Transportation Management Systems (TMS), and ADA Pedestrian Infrastructure.

Pedestrian Facilities
This project will remove existing non-standard curb ramps and place curb ramps that are compliant to the American Disabilities Act (ADA). This includes relocating or placing new pedestrian push buttons. The curb ramps are located at the ramp connections to local streets.

Broadband and Advance Technologies
This project will include placement of fiber optic lines within the project limits. The communication performance will be improved since all existing ITS elements and signals will be connected to the fiber optic network. The Office of Traffic Operations (Electrical Design) identified the preliminary layout of the fiber optic line and provided the cost estimate.

Landscape Architect
The Landscape Architecture Assessment Study (LAAS) in Attachment N of this report. The study provided highway planting and erosion control recommendations and cost estimates.

Stormwater
The project will involve earthwork activities and disturbed soil areas where median and bridge widenings are proposed. A Long-Form Storm Water Data Report was prepared for this project and is in Attachment O of this report.

Hydraulics
A Preliminary Drainage Report prepared by a consultant (Wood Rodgers) is in Attachment P of this report. The report provided recommendations for improvements due to increase of impervious area and culvert inventory assessment. Additional analysis and calculations will be required during the design phase to account for the change in impervious area and to ensure that the drainage systems are adequate.

Geotechnical
The District Preliminary Geotechnical Report (DPGR) is in Attachment Q of this report. The report provided geotechnical recommendations for fill slopes on I-80 due to the pavement rehabilitation and ramp widening.

Pavement Structural Section
A Preliminary Structural Section Recommendation is in Attachment G of this report. The R-values included in the recommendation were results from the laboratory testing of soil samples taken from the field. A Subgrade Enhancement Geogrid is included in the pavement structural section to mitigate for the existing moisture issues under the PCC pavement on US 50 encountered during construction of previous projects.

Climate Change Considerations
There is no anticipated Operational increase in Greenhouse Gas (GHG) Emissions for this project. The Construction GHG was calculated using the Caltrans Construction Emissions (CAL-CET) 2018 analysis tool. The Construction GHG emissions for CO_2e will be 1,600 US tons.

8. FUNDING, PROGRAMMING AND ESTIMATE

Funding

It has been determined that this project is eligible for Federal-aid funding.

Programming

Fund Source	Fiscal Year Estimate								Programmed Amount*
20.XX.201.120	Prior	20/21	21/22	22/23	23/24	24/25	Future	Total	
Component	In thousands of dollars ($1,000)								
PA&ED Support	6,790	3,520	0	0	0	0	0	10,310	10,337
PS&E Support	0	2,200	6,350	380	0	0	0	8,930	14,820
Right-of-Way Support	0	110	10	10	15	15	40	200	4,010
Construction Support	0	0	0	4,440	6,990	7,190	5,140	23,760	25,530
Right-of-Way			50					50	866
Construction			205,820					205,820	239,000
Total	6,790	5,830	212,230	4,830	7,005	7,205	5,180	249,070	294,563

*A PCR is being prepared to right size the project prior to fiscal year 21/22. Construction Capital, Right-of-Way and Construction support are currently programmed as G-13 contingency.

The support to capital cost ratio is 21%. The Programming Sheet is in Attachment R of this report.

Estimate

The significant items of the construction estimate are the Roadway Pavement Structural and Traffic Items. The Roadway Cost estimate is $176,578,000 and the Structure Cost is $10,686,00. The Project Report Cost Estimate is in Attachment S of this report.

9. DELIVERY SCHEDULE

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	5/16/2018	Actual
BEGIN ENVIRONMENTAL	M020	9/4/2018	Actual
BEGIN PROJECT	M040	6/29/2018	Actual
PA & ED	M200	12/11/2020	Target
RECEIVE COMPLETE	M221	11/16/2020	Actual
GENERAL PLANS	M275	2/1/2021	Target
CIRCULATE PLANS IN DISTRICT	M300	10/22/2021	Target
60% CONSTRUCTABILITY REVIEW	M313	7/22/2021	Target
PS&E TO DOE	M377	1/11/2022	Target
DRAFT STRUCTURES PS&E	M378	12/16/2021	Target
PROJECT PS&E	M380	4/15/2022	Target
RIGHT OF WAY CERTIFICATION	M410	4/18/2022	Target
READY TO LIST	M460	5/5/2022*	Target
FUND ALLOCATION	M470	6/22/2022	Target
HEADQUARTERS ADVERTISE	M480	7/5/2022	Target
AWARD	M495	10/6/2022	Target
APPROVE CONTRACT	M500	11/3/2022	Target
CONTRACT ACCEPTANCE	M600	12/5/2025	Target
END PROJECT EXPENDITURES	M800	2/5/2028	Target
FINAL PROJECT CLOSEOUT	M900	11/5/2029	Target

*A PCR is being processed to deliver this project two years ahead of the original schedule. The delivery schedule shown is the revised schedule.

10. RISKS

There is no risk to the project cost and schedule. All of the risks identified during Phase 0 were resolved and retired.

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)

This project is considered to be an Assigned Project in accordance with the current Federal Highway Administration (FHWA), Californian Division and State of California Department of Transportation (Caltrans) Stewardship and Oversight Agreement.

12. PROJECT REVIEWS

Scoping team field review:	Date:
- Monika Pedigo (Design Engineer)	2/10/2020
- Joseph Estepa (Project Engineer), Design	9/19/2019
- Greg Saiyo (Biologist), Environmental Unit	9/19/2019
- Connor Buitenhuys (Archeologist), Environmental Unit	9/19/2019
- Jeff Hamm (D3 Construction Engineer), West Sacramento	2/10/2020
- Daniel Roberts (D3 Maintenance), West Sacramento	2/10/2020

District Program Advisor Manjot Gill Date 9/22/2020

District Safety Review Target Date 10/2021

Constructability Review Target Date 10/2021

13. PROJECT PERSONNEL

Name	Title	Phone No.
Jess Avila	Project Manager	530-682-8488
Tom Shelton	Assistant Project Manager	530-741-4020
Monika Pedigo	Design Engineer	916-274-2903
Joseph Estepa	Project Engineer	916-274-0538
John Welch	D3 Bridge Program Advisor	530-741-4029
Manjot Gill	D3 Pavement Program Advisor	530-741-5407
Aloysius Pelly	D3 Drainage Program Advisor	530-741-5197
Jeff Sims	Structures Design Engineer	916-227-8497
Keith Stillmunkes	Structures Project Engineer	916-227-8489
Masum Patwary	Environmental Coordinator	530-741-4588
Michael Sterle	Landscape Architect	530-741-4152
Betzaida Perez	Hazardous Waste Coordinator	530-741-5462
Lee Martin	Right of Way Coordinator	530-741-4074
Edwardo R. Estrada	Right of Way Agent (Railroad)	530-741-7146
Harsbinder Chohan	Right of Way Utility Coordinator	530-741-4911
Jack Kemmerly	Traffic Signing & Striping Engineer	530-741-5727
Maher Dabbagh	TMP Coordinator	916-583-9104
Fernando Rivera	Traffic Safety Engineer	530-741-5712
Sathish Prakash	Traffic Forecasting Engineer	530-741-5177
Jasdeep Randhawa	Freeway Operations	916-583-9064
Karan Dhungana	Electrical Project Engineer	530-741-5322
Chris Rockey	Hydraulics Engineer	530-741-4517
Iris Bishop	Stormwater Coordinator	530-741-4320
Addisu Workineh	District 3 Materials Engineer	530-741-5176
Jeffrey Hamm	Area Construction Engineer	916-375-8366
Hogni Setberg	Bridge Construction Engineer	916-662-1777
Daniel Roberts	Maintenance Supervisor	916-375-8343
Robert Polgars	Utility Engineering Work Group	530-741-4225
Naj Dakak	Utility Engineering Work Group	530-741-4203

14. ATTACHMENTS (Number of Pages)

A. Location map (1)
B. Typical Cross Sections (6)
C. Layouts (36)
D. Advance Planning Studies (10)
E. Hazardous Waste Initial Site Assessment (2)
F. Value Analysis Summary (2)
G. Preliminary Structural Section Recommendation (11)
H. Right of Way Data Sheet (4)
I. Environmental Document (3)
J. Life Cycle Cost Analysis Summary (3)
K. Traffic Management Plan (4)
L. Stage Construction and Traffic Handling Plans (60)
M. SHOPP Performance Report (2)
N. Landscape Architecture Assessment Study (7)
O. Stormwater Data Report (11)
P. Preliminary Drainage Report (15)
Q. District Preliminary Geotechnical Report (26)
R. Programming Sheet (2)
S. Project Report Cost Estimate (10)