ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

Ridgecrest/Inyokern Pavement

Resolution SHOPP-P-2526-03B
(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 December 4, 2025 (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

3.1 Whereas at its 3/22/2024 meeting the Commission approved the State Highway Operation and Protection Program and included in this program of projects the Ridgecrest/Inyokern Pavement, 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 G-24-34, "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated 3/22/2024
- ☐ Resolution _____, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated _____

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 Caltrans 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.)*

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: Ridgecrest/Inyokern Pavement

Resolution: SHOPP-P-2526-03B

(to be completed by CTC)

Date

Project Applicant

Date

Implementing Agency

Brandon Fitt

Digitally signed by Brandon Fitt
Date: 2025.10.13 07:47:57 -07'00'

10/13/2025

Date

Brandon Fitt

District Director
California Department of Transportation

11/17/25

Date

Dina El-Tawansy

Director
California Department of Transportation

12/09/2025

Date

Tanisha Taylor

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:	10/09/25 11:14:41 AM

District	EA	Project ID	PPNO	Project Manager
09	38330	0919000069	2685	MILOS, JEREMY J

County	Route	Begin Postmile	End Postmile	Implementing Agency	
KER	178	92.0	R 93.4	PA&ED	Caltrans
				PS&E	Caltrans
				Right of Way	Caltrans
				Construction	Caltrans

Project Nickname

RIDGECREST/INYOKERN PAVEMENT

Location/Description

In and near Ridgecrest, from Redrock Inyokern Road to Clodt Road; also from 0.1 mile west of Mahan Street to the San Bernardino County line (99.0/104.6). Rehabilitate pavement and drainage systems, upgrade lighting and Transportation Management System (TMS) elements, replace guardrail and sign panels, upgrade facilities to Americans with Disabilities Act (ADA) standards, and construct Class 2 bike lanes as complete street elements.

Legislative Districts

Assembly:	33, 34	Senate:	16	Congressional:	08, 23

PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Pavement		23.8			23.8	Lane-miles
Programmed Condition	Pavement	23.8				23.8	Lane-miles

Project Milestone	Actual	Planned
Project Approval and Environmental Document Milestone	06/20/24	
Right of Way Certification Milestone		06/26/29
Ready to List for Advertisement Milestone		01/06/30
Begin Construction Milestone (Approve Contract)		07/09/30

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	22/23	3,117					3,117
PS&E	24/25	4,400					4,400
RW Support	24/25	4,180					4,180
Const Support	29/30	* 9,213					9,213
RW Capital	29/30	2,700					2,700
Const Capital	29/30	* 34,700					34,700
Total		58,310					58,310

* = Unfunded Phase (Future Need)

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: RICH STONE
SHOPP
HQ FINANCIAL PROGRAMMING

Date: October 28, 2025

File: 09-38330 0919000069
Kern 178 92.00/104.6

From: JEREMY MILOS
Deputy District Director
Project & Asset Management, Right of Way
District 9

Subject: **BASELINE AGREEMENT UPDATE**

This memorandum accompanies the Baseline Agreement for the Referenced Project.

The project was split and carried over to the 2024 SHOPP based on the supplemental project report completed in July 2024. Since the supplemental project report, the project PS&E and Right of Way were allocated at the June 2025 CTC meeting for 110% of the programmed amount.

Currently Proposed Major Millstones:

Milestone	Current Schedule
R/W Cert M410	6/26/2029
RTL M460	1/6/2030
Approved Contract M 500	7/9/2030

Current funding:

Component	Original Programed	Programed	Allocated
PAED	$3,117	$3,117	$3,117
PS&E	$4,000	$4,400	$4,400
RW Support	$3,800	$4,180	$4,180
Construction Support	$9,213	$9,213	
RW Capital	$3,400	$2,700	
Construction Capital	$34,700	$34,700	

Memorandum

To: BRANDON FITT
DEPUTY DISTRICT DIRECTOR
DISTRICT 9 PROJECT AND ASSET MANAGEMENT

Date: July 18, 2024

From: KYLE GREENHALGH, PE
Design Manager
D9 Engineering, Branch B
District 9

Subject: **SUPPLEMENTAL PROJECT REPORT FOR PROJECT SPLIT OF RIDGECREST / INYOKERN PAVEMENT**

TRACKING NUMBER

Ridgecrest/Inyokern Pavement 09-38330 (0919000069)
Ker-178- PM88.6/104.6
20.XX.201.120; PPNO: 2685

TIME FACTOR

The request for splitting the project is for immediate signature to split project scope before the beginning of the next design phase.

BACKGROUND

The project scope is to Rehabilitate pavement, drainage system restoration, signs and lighting rehabilitation, traffic signal upgrades, transportation management systems, American with Disabilities Act (ADA) infrastructure, roadside safety improvements, bridge rail upgrades, and complete street improvements.
This memorandum proposes to split the planned improvements of the Ridgecrest/Inyokern Pavement project into two projects: A Parent EA 09-38330 (0919000069) and a Child EA 09-38331 (0923000054). This split will down scope the Parent EA and divide assets and scope between the two projects by Post Mile and pavement strategy. The parent EA will be a pavement rehabilitation to focus on ADA facilities and complete street features. The child EA will become a CAPM pavement strategy.

DISCUSSION/PRO-CON ARGUMENTS

This change is to manage the district deliverables and is reflected in the 2024 SHOPP. The parent project would become long lead and allow more time

for community involvement and provide adequate time to acquire the needed Right of Way and meet the design needs of an in town corridor.

RECOMMENDATION
It is recommended the Project split be approved to allow the initiation of the Parent and Child project for project delivery. This memorandum serves as the Supplemental Project Report for the Parent EA 09-38330 and as the Project Report for the Child EA 09-38331. The division of the project scope into two projects is as follows.

09-38330 (0919000069) – Ridgecrest/Inyokern Pavement (Down scope)
09-38330 (0919000069) Ker-178, PM 92.0/R93.4, 99.0/104.0
20.XX.201.120 – Roadway Rehabilitation, PPNO: 2685

PROJECT DESCRIPTION:
In Kern County at Inyokern from Redrock Inyokern Road to Clodt Road and in and near Ridgecrest from 0.20 Mile west of Mahan Street to San Bernardino County Line.

PROJECT SCOPE:
Rehabilitate pavement and Drainage systems, upgrade lighting and Transportation Management Systems (TMS) Elements, replace guardrail and
sign panel, upgrade American with Disabilities (ADA) standards, and construct a Class II bike lane as a complete Street element.

Project Limits	09-Ker-58	
	PM 92.0/R93.4, 99.0/104.0	
Number of Alternatives	2 (Including No Build Alternative)	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay Support	$17,013,000	$17,013,000
Capital Outlay Construction	$28,403,000	$34,772,254
Capital Outlay Right-of-Way	$1,668,500	$2,221,400
Funding Source	20.20.201.120 – Pavement Rehabilitation	
Funding Year	2030	
Type of Facility	2-4 Lane Conventional Highway	
Number of Structures	1	

SHOPP Project Output	Lane Miles: 23.722 ADA Units: 91 Drainage Restoration (EA): 1 Guardrail (Linear Feet): 240 Bridge Rail (Linear Feet): 604 Bridges (EA): 1 TMS Elements (EA): 9
Environmental Determination or Document	CEQA: Initial Study/Neg Dec (IS/ND) NEPA: Categorical Exemption (CE)
Legal Description	In and near Ridgecrest, from Redrock Inyokern Road to Clodt Road; also from 0.1 mile west of Mahan Street to the San Bernardino County line (99.0/104.6).
Project Development Category	4B

ASSET MANAGEMENT:
Performance objectives are identified in the SHOPP Asset Management Tool located on the Transportation Asset Management Intranet site. The table below reflects the performance measures for this project.

Performance Objective	Unit of Measurement	Quantity	Assets in Good Condition	Assets in Fair Condition	Assets in Poor Condition	Project Benefit
Pavement Class I	Lane-Miles	6.740		6.740		6.74 in Good Condition
Pavement Class II	Lane-Miles	16.982		16.982		16.982 in Good Condition
Drainage System Restoration	LF	111.3		111.3		111.3 in Good Condition
Bridge Rail	LF	604	604			604 In good Condition
Bridges	EA	1				1 In good Condition
Lighting Rehabilitation	EA	18			18	18 in Good Condition
Transportation Management Systems	EA	9	9			9 in Good Condition
Census Station	EA	2	2			2 in Good Condition

Traffic Signals	EA	7	7			7 in Good Condition
Guardrail	Linear Feet	240			240	240 in Good Condition
ADA Facilities	EA	91		91		91 in Good Condition
Proactive Safety Pedestrians	Annual Fatal & Serious Injury Collisions	0.01			0.01	0.01 in Good Condition

PROGRAMMING:

This project was programmed in the 2024 SHOPP (Long Lead) and funded under the SHOPP 20.XX201.120

Fund Source	Fiscal Year Estimate for the Programmed Alternative							
20.10.201.122	23/24	24/25	25/26	26/27	27/28	28/29	29/30	Total
Component	In thousands of dollars ($1,000)							
PA&ED Support								
PS&E Support		*$4,000*						*$4,000*
Right-of-Way Support		*$3,00*						$3,800
Construction Support							*$9,213*	*$9,213*
Right-of-Way							*$3,400*	*$3,400*
Construction							*$34,700*	*$34,700*
Total		*$7,800*					*$47,313*	*$58,230*

ESTIMATE:

The current year cost is $28,403,000. The cost escalated to the mid-year of construction is $34,772,254.

DELIVERY SCHEDULE:

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	Done	
BEGIN ENVIRONMENTAL	M020	Done	
CIRCULATE DED EXTERNALLY	M120	Done	
PA & ED	M200	6/17/2024	A
PS&E TO DOE	M377	8/06/2029	T
DRAFT STRUCTURES PS&E	M240	9/06/2029	T
RIGHT OF WAY CERTIFICATION	M410	6/26/2029	T
READY TO LIST	M460	01/06/2030	T
FUND ALLOCATION	M470	3/16/2030	T
HEADQUARTERS ADVERTISE	M480	3/31/2030	T
AWARD	M495	6/11/2030	T
APPROVE CONTRACT	M500	7/09/2030	T
CONTRACT ACCEPTANCE	M600	1/07/2032	T
END PROJECT	M800	3/07/2032	T

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09-38331 (0923000054) – Ridgecrest/Inyokern CAPM

09-38331 (0923000054) Ker-178, PM 88.6/92.0, R93.4/99.0
20.XX.201.121 – Pavement Preservation, PPNO: 4205

PROJECT DESCRIPTION:

In Kern County at Inyokern from 0.2 Mile East of Route 14 to Redrock Inyokern Road and in and near Ridgecrest from 0.20 mile West of Mahan Street.

PROJECT SCOPE:

This is a Capital Preventive maintenance (CAPM) project that will bring the pavement condition to a state of good repair to extend the service life. This project will include restoration to the existing Drainage systems and Transportation Management Systems (TMS) Elements, as well as bring roadside features to current standards.

Project Limits	09-Ker-58	
	PM 88.6/92.0, R93.4/99.0	
Number of Alternatives	2 (Including No Build Alternative)	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay Support	$3,600,000	$ 3,600,000
Capital Outlay Construction	$20,988,000	$22,980,585
Capital Outlay Right-of-Way	$ 50,000	$ 50,000
Funding Source	20.20.201.121 – Pavement Preservation	

Funding Year	2027
Type of Facility	2-4 Lane Conventional Highway
Number of Structures	0
SHOPP Project Output	Lane Miles: 31.035
Environmental Determination or Document	CEQA: Initial Study/Neg Dec (IS/ND) NEPA: Categorical Exemption (CE)
Legal Description	In and near Ridgecrest, from 0.2 mile east of Route 14 to 0.2 mile east of Redrock Inyokern Road; also from Clodt Road to 0.1 mile west of North Mahan Street.
Project Development Category	4A

ASSET MANAGEMENT:

Performance objectives are identified in the SHOPP Asset Management Tool located on the Transportation Asset Management Intranet site. The table below reflects the performance measures for this project.

Performance Objective	Unit of Measurement	Quantity	Assets in Good Condition	Assets in Fair Condition	Assets in Poor Condition	Project Benefit
Pavement Class I	Lane-Miles	22.428	4.103	18.325		44.8 in good condition
Pavement Class II	Lane Miles	8.607		8.607		2 in good condition
Drainage System Restoration	EA	2	2			2 in good condition

PROGRAMING:

This project was programmed in the 2024 SHOPP (Long Lead) and funded under the SHOPP 20.XX201.121 – Pavement Preservation

Fund Source	Fiscal Year Estimate for the Programmed Alternative					
20.10.201.122	Prior	23/24	24/25	25/26	26/27	Total
Component	In thousands of dollars ($1,000)					
PA&ED Support						
PS&E Support			*$1,600*			*$1,600*
Right-of-Way Support			*$80*			*$80*

Construction Support					*$1,920*	*$1,920*
Right-of-Way					*$50*	*$50*
Construction					*$22,970*	*$22,970*
Total			*$1,680*		*$24,940*	*$26,620*

ESTIMATE:
The current year cost is $20,988,000. The cost escalated to the midyear of construction is $22,980,585.

DELIVERY SCHEDULE:

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	Done	
BEGIN ENVIRONMENTAL	M020	Done	
CIRCULATE DED EXTERNALLY	M120	Done	
PA & ED	M200	6/17/2024	A
PS&E TO DOE	M377	3/01/2026	T
RIGHT OF WAY CERTIFICATION	M410	5/01/2026	T
READY TO LIST	M460	7/01/2026	T
FUND ALLOCATION	M470	10/15/2026	T
HEADQUARTERS ADVERTISE	M480	10/30/2026	T
AWARD	M495	2/07/2027	T
APPROVE CONTRACT	M500	3/07/2027	T
CONTRACT ACCEPTANCE	M600	07/01/2027	T
END PROJECT	M800	12/01/2028	T

DISTRICT CONTACTS

Jeremy Milos — Project Manager
(760)874-8633

Ron Chegwidden — Design Manager
(760)874-8360

Kyle Greenhalgh — Design Manager
(760)874-8851

Kirsten Helton — Environmental
(760)874-8333

DISTRIBUTION LIST SHOPP-P-2526-03B Type text here

District Asset Manager – Forest Becket
Design Manager – Kyle Greenhalgh
Environmental Branch – Kirsten Helton
SHOPP Program Manager – Chuy Gonzalez
Project Manager – Jeremy Milos
District Engineering – Bryan Wesling
Surveys – Sereyna Cagle
Materials Lab – Chris Talbot
District 9 Maintenance and Operations – Bryan Winzenread
Right of Way – David Rodriguez
District 9 Planning – Mark Heckman

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PREPARED BY

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

Kyle N. Greenhalgh

Kyle Greenhalgh, PE, Design Branch Manager

07/19/2024

Date

REVIEWED BY

I have reviewed the Right of Way information in the attached Project Report and the R/W Data sheet attached hereto, and find the data to be complete, current, and accurate:

Brandon Fitt

Brandon Fitt, District Division Chief, Right of Way

7/22/2024

Date

APPOVAL RECOMMENED BY

Jeremy Milos, Project Manager	7/22/24 **Date**

APPOVED BY

Ryan A. Dermody, District Director District 9	7/24/2024 **Date**

Attachments

1. Approved Project Report (09-38330)
2. Construction Cost Estimate - 09-38330 Ridgecrest/Inyokern Pavement
3. Construction Cost Estimate - 09-38331 Ridgecrest/Inyokern CAPM
4. Project Split Matrix
5. Asset Performance – 09-38330
6. Asset Performance – 09-38331

09 - Ker - 178 – 88.6/104.6
09-38330 – 0919000069
20.XX.201.120- SHOPP Roadway Rehabilitation
June 2024

Project Report

For Project Approval

On Route 178

Between 0.2 mile east of Junction Route 14

And the Kern and San Bernardino County Line

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:

Brandon Fitt

Brandon Fitt, Division Chief, Right of Way

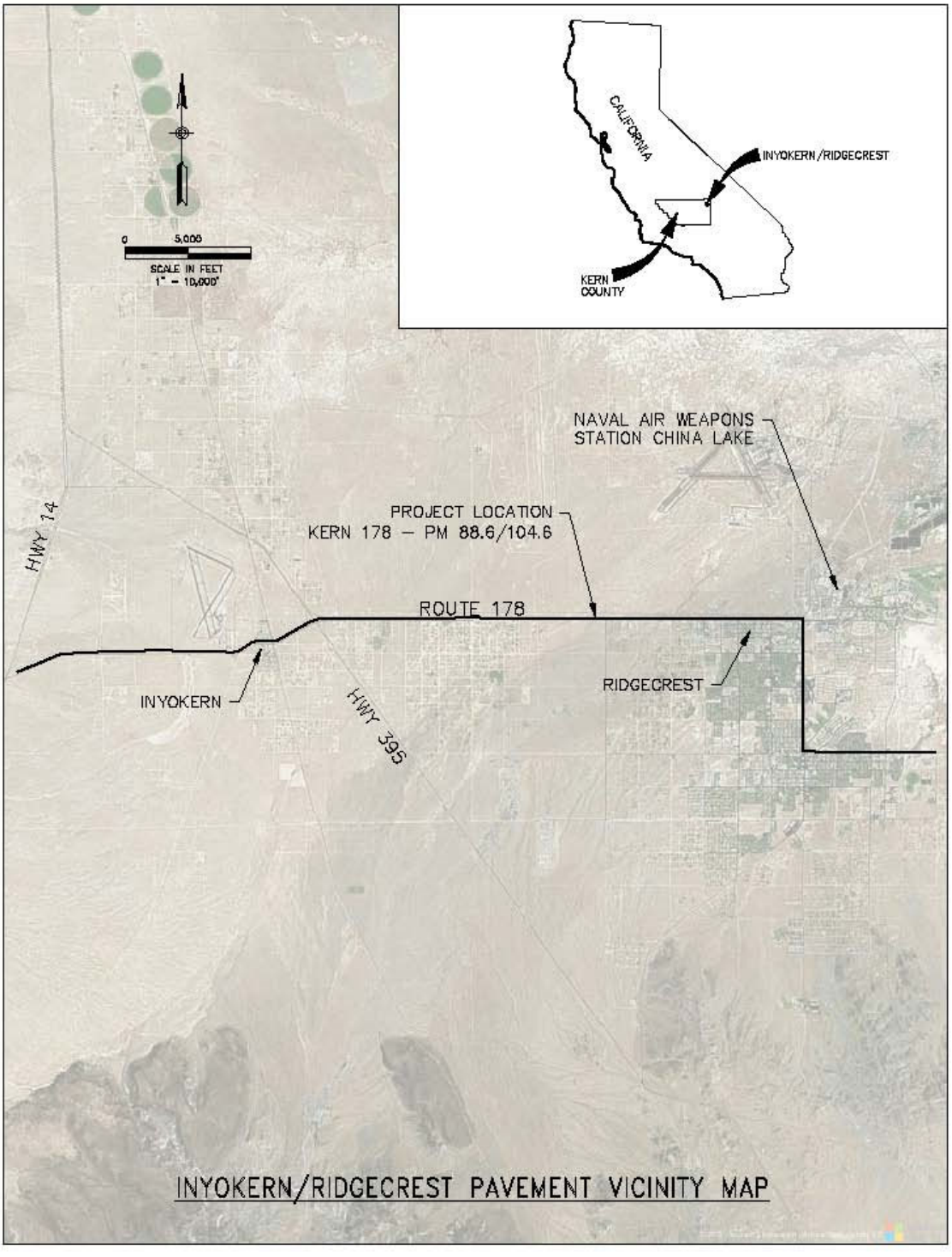
APPROVAL RECOMMENDED:

Jeremy Milos, Project Manager

APPROVED:

Ryan A. Dermody, District Director

6/20/2024
Date


CALIFORNIA
INYOKERN/RIDGECREST
KERN COUNTY
0 5,000
SCALE IN FEET
1" = 10,000'
NAVAL AIR WEAPONS STATION CHINA LAKE
PROJECT LOCATION
KERN 178 – PM 88.6/104.6
HWY 14
ROUTE 178
INYOKERN
HWY 395
RIDGECREST
INYOKERN/RIDGECREST PAVEMENT VICINITY MAP

This 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.

06/19/2024

Jennifer G. Roman, REGISTERED CIVIL ENGINEER *DATE*

Table of Contents

1. INTRODUCTION

This Project Report (PR) proposes a pavement rehabilitation project along State Route 178 (SR 178) from 0.3 mile east of Junction State Route 14 to the Kern and San Bernardino County line (PM 88.6/104.6). The project includes: pavement rehabilitation, drainage system restoration, signs and lighting rehabilitation, traffic signal upgrades, transportation management systems, Americans with Disabilities Act (ADA) infrastructure, roadside safety improvements, bridge rail upgrades and complete streets improvements.

Three Build Alternatives were considered, in addition to the No-Build Alternative. Alternative 2, the preferred alternative, includes the following:

- Pavement rehabilitation, including two segments of partial depth recycle with overlay, from PM 88.85 to 92.03 and from PM 94.84 to 99.03, with two segments of mill and fill generally in or near the communities of Inyokern (PM 92.03 to 94.84) and Ridgecrest (PM 99.03 to 104.61);
- Replacement of culverts at 5 locations;
- Installation of flared end sections at 5 locations;
- Addition of a new drainage system near the Ridgecrest Regional Hospital in Ridgecrest;
- Replacement of drainage system components at the Richmond Road intersection;
- Construction or replacement of curb ramps and driveway replacements to meet ADA;
- New sidewalk, ramps, and driveways to fill in gaps on the south side of the highway from PM 99.32 to 100.76;
- Delineation of Class 2 bike lane;
- Replacement of traffic signs, TMS elements, guardrail and bridge rail;
- Replacement of signals and detector loops at 7 intersections;
- Installation of 2 rectangular rapid flashing beacons in Inyokern, and installation of a pedestrian hybrid beacon and crosswalk near the hospital in Ridgecrest; and,
- Lighting replacements.

The following table shows costs in thousands for Alternative 2, the preferred alternative:

Project Limits	09-KER-178 PM 88.6/104.6	
Number of Alternatives	4 (Including the No-Build Alternative)	
	Current Cost Estimate:	**Escalated Cost Estimate:**
Capital Outlay Support	$20,017	
Capital Outlay Construction	$46,080	$59,286
Capital Outlay Right-of-Way	$1,669	$2,285
Funding Source	20.XX.201.120	
Funding Year	2030	
Type of Facility	2-4 Lane Conventional Highway	
Number of Structures	1	
SHOPP Project Output	56.7 Lane Miles and 91 ADA Units.	
Environmental Determination or Document	IS-ND/CE	

Legal Description	On Route 178 in Kern County in and near Inyokern and Ridgecrest from 0.2 miles east of the Junction with State Route 14 to the Kern/San Bernardino County line.
Project Development Category	Category 4B

There are two additional build alternatives, Alternatives 1 (Base Alternative) and 3 (Unconstrained Alternative) that were evaluated then subsequently not recommended for approval. These alternatives are described in more detail in section 5B.

2. RECOMMENDATION

Alternative 2 is recommended for approval and authorization is requested to proceed with the Plans, Specifications, and Estimates (PS&E) phase of the project. The affected local agencies were provided copies of the Draft Initial Study with Proposed Negative Declaration (IS/ND), and any comments received were considered in the selection of the preferred alternative. All local agencies are in general accord with the project.

3. BACKGROUND

State Route 178 begins at State Route 99 in the city of Bakersfield and ends at the California/Nevada state line, traversing Caltrans' Districts 6, 8 and 9 for 152 miles. It connects Bakersfield to Nevada's Pahrump Valley via Walker Pass and Freeman Junction.

PROJECT HISTORY

In August 2018, Caltrans District 9 began a Project Initiation Report for the West Ridgecrest ADA project. The project was to address inadequate ADA infrastructure from postmiles 98.6 to 100.73 on the south side of the highway. The PIR was suspended in November 2018 due to lack of funding.

Significant additional funding is provided for SHOPP from Proposition 1B. Project was identified to address pavement condition on SR 178, ADA infrastructure designed to prior standards in Inyokern and Ridgecrest, and other roadway deficiencies. ADA infrastructure identified in previous PIR project was included in this project. Development of this project began in January 2020 and Project Initiation Reporpt was approved on June 28, 2021.

Project was identified as a long-lead project because ADA infrastructure will require complex design and considerable right of way. In order to advance pavement rehabilitation work outside of communities, District 9 decided to split the project. Simpler CAPM pavement work outside of the communities will be reprogrammed to a separate project. The split of project will occur after this project report is approved, requiring a Supplemental Project Report required to adjust the scope of project.

COMMUNITY INTERACTION

In 2017 the Ridgecrest Regional Hospital (RRH) conducted a pedestrian study at Sydnor Street. The study was provided as part of the Hospital's improvements that included annex buildings on the east side of the highway. As a result of the study a pedestrian beacon was proposed just south of Sydnor St. A recent Caltrans public survey identified support for a pedestrian crossing in this vicinity.

The affected local agencies were provided copies of the Draft Initial Study with Proposed Negative Declaration (IS/ND), and any comments received were considered in the selection of the preferred alternative. All local agencies are in general accord with the project.

EXISTING FACILITY
Traveled Way, Shoulders, and Median Geometric Information

		Existing	Minimum RRR Standards
Post Mile Range	**88.6/90.45**		
Right-of-Way	Width (ft)	140	
Minimum Curve Radius	Radius (ft)	300	N/A
Through Traffic Lanes	Number of Lanes	3	N/A
	Lane Width (ft)	12	N/A
	Type (Flexible, Rigid, or Composite)	Flexible	N/A
Paved Shoulder Width	Left (ft)	Varies 6-8	N/A
	Right (ft)	Varies 7-8	N/A
Median	Type, Width (ft)	0	N/A
Shoulder is a Bicycle Lane	(Y/N)-Width (ft)	Y- Varies 6-8	N/A
Other Bicycle Lane Width	Width (ft)	N/A	N/A
Bicycle Route	(Y/N)	Y	
Facilities Adjacent to the Roadbed	Width (ft)- Type	None	N/A
Post Mile Range	**90.45/93.34**		
Right-of-Way	Width (ft)	Varies 60-175	
Minimum Curve Radius	Radius (ft)	800	N/A
Through Traffic Lanes	Number of Lanes	2	N/A
	Lane Width (ft)	12	N/A
	Type (Flexible, Rigid, or Composite)	Flexible	N/A
Paved Shoulder Width	Left (ft)	Varies 4-8	N/A
	Right (ft)	Varies 8-10	N/A
Median	Type, Width (ft)	10’ paved Two-Way Left Turn Lane (TWLTL) 92.24 to 92.53, Varies 0-10	N/A
Shoulder is a Bicycle Lane	(Y/N)-Width (ft)	Y- Varies 4-10	N/A
Other Bicycle Lane Width	Width (ft)	N/A	N/A
Bicycle Route	(Y/N)	Y	
Facilities Adjacent to the Roadbed	Width (ft)- Type	4’ Sidewalk 92.29 to 92.53 RT	N/A

Post Mile Range	**93.34/100.66**		
Right-of-Way	Width (ft)	Varies 107-152	
Minimum Curve Radius	Radius (ft)	N/A	N/A
Through Traffic Lanes	Number of Lanes	4	N/A
	Lane Width (ft)	12	N/A
	Type (Flexible, Rigid, or Composite)	Flexible	N/A
Paved Shoulder Width	Left (ft)	Varies 3-8	N/A
	Right (ft)	Varies 4-20	N/A
Median	Type, Width (ft)	Paved/Unpaved Median with Crossovers, Varies 11-22	N/A
Shoulder is a Bicycle Lane	(Y/N)-Width (ft)	Y- Varies 3-20	N/A
Other Bicycle Lane Width	Width (ft)	N/A	N/A
Bicycle Route	(Y/N)	Y	
Facilities Adjacent to the Roadbed	Width (ft)- Type	5-6' Sidewalk 94.48 to 100.66 RT	N/A
Post Mile Range	**100.66/102.55**		
Right-of-Way	Width (ft)	Varies 105-115	
Minimum Curve Radius	Radius (ft)	N/A	N/A
Through Traffic Lanes	Number of Lanes	4	N/A
	Lane Width (ft)	12	N/A
	Type (Flexible, Rigid, or Composite)	Flexible	N/A
Paved Shoulder Width	Left (ft)	Varies 7-12	N/A
	Right (ft)	Varies 3-25	N/A
Median	Type, Width (ft)	Raised Concrete Median with Crossovers, Varies 11-22	N/A
Shoulder is a Bicycle Lane	(Y/N)-Width (ft)	Y- Varies 3-25	N/A
Other Bicycle Lane Width	Width (ft)	N/A	N/A
Bicycle Route	(Y/N)	Y	
Facilities Adjacent to the Roadbed	Width (ft)- Type	5-6' Sidewalk LT and RT	N/A
Post Mile Range	**102.55/103.92**		
Right-of-Way	Width (ft)	Varies 110-125	
Minimum Curve Radius	Radius (ft)	N/A	N/A
Through Traffic Lanes	Number of Lanes	4	N/A
	Lane Width (ft)	12	N/A
	Type (Flexible, Rigid, or Composite)	Flexible	N/A
Paved Shoulder Width	Left (ft)	Varies 3-12	N/A
	Right (ft)	Varies 4-10	N/A
Median	Type, Width (ft)	Paved TWLTL, varies 14-15	N/A
Shoulder is a Bicycle Lane	(Y/N)-Width (ft)	Y- Varies 3-25	N/A

Other Bicycle Lane Width	Width (ft)	N/A	N/A
Bicycle Route	(Y/N)	Y	
Facilities Adjacent to the Roadbed	Width (ft)- Type	5-9’ Sidewalk 102.55 to 103.60 LT, 5‘ Sidewalk 102.55 to 103.43 RT	N/A
Post Mile Range	**103.92/104.61**		
Right-of-Way	Width (ft)	105	
Minimum Curve Radius	Radius (ft)	N/A	N/A
Through Traffic Lanes	Number of Lanes	2	N/A
	Lane Width (ft)	12	N/A
	Type (Flexible, Rigid, or Composite)	Flexible	N/A
Paved Shoulder Width	Left (ft)	6	N/A
	Right (ft)	6	N/A
Median	Type, Width (ft)	0	N/A
Shoulder is a Bicycle Lane	(Y/N)-Width (ft)	Y- 6	N/A
Other Bicycle Lane Width	Width (ft)	N/A	N/A
Bicycle Route	(Y/N)	Y	
Facilities Adjacent to the Roadbed	Width (ft)- Type	5-6' Sidewalk LT and RT	N/A

Right of way

The right of way width varies from 60' to 175'.

Highway Designation

State Route 178 is a conventional highway. There is controlled access for 243.88' at PM 96.3 on the south side of the highway, from PM 102.45 (French Ave.) to PM 102.80 (Gold Canyon Dr) on the east and north sides of the highway, from PM 103.11 (Sunland Dr.) to PM 103.27 (American St.) on the north side of the highway, and from 104.12 (Lumill St.) to PM 104.31 on the south side of the highway.

Speeds

Speed limits in the project limits are in the following table:

PM		Speed Limit (MPH)
Begin	End	
88.380	92.089	60
92.089	92.537	25
92.537	93.240	55
93.240	98.750	65
98.750	99.560	55
99.560	100.560	45
100.560	101.610	40
101.610	102.610	35
102.610	103.630	40
103.630	104.620	55

Mainline Pavement Condition

The pavement is in good to fair condition. Signs of major distress such as rutting, and alligator cracking are present primarily in the wheel path due to repetitive heavy traffic loading. Alligator cracks are fatigue cracks that occur in the wheel path because of repetitive traffic loading and deflections in the pavement. The project area contains two types of alligator cracking, alligator A cracking which refers to the longitudinal cracks in the wheel path, and alligator B cracks which refer to interconnected cracks within the wheel path.

- General Information

  Roadway Classification: Class II (PM 88.6/R93.237 & PM 100.608/104.622), Class I (PM R93.237/100.608)

Item or Milestone	Year
Current Automated Pavement Condition Survey (APCS)	2018
Ten-Year Plan (TYP)	2020
PIR Completed and signed (Current)	2021
Planned Delivery (RTL)	2028

- Distress Types and Extent

  Flexible Pavement Distress: 09-Ker-178-88.38/104.62

	Extent	
Type	Current APCS Yr (actual)	RTL Yr (predicted)
Alligator B Cracking (%)	1.29	16.46
Rutting (inches)	0.07	0.07
International Roughness Index (IRI, inches/mile)	88	113

Pavement Performance Measures

		Caltrans Performance Measures (lane-miles)					Map-21 Condition (lane-miles)				Effectiveness (%)	
Year	Pavement Type	Green	Yellow	Blue	Orange	Red	Good	Fair	Poor	Total Lane Miles	SHOPP Effectiveness ((Red+ Orange) /Total Lane Miles) %	Rehab Effectiveness (Red/Total Lane Miles) %
Current APCS (2016)	Flexible	36.498	12.376	0.614	0.626	0.0	37.222	18.005	0.0	55.227	10.39	0.0
Current APCS (2016)	Rigid	-	-	-	-	-	-	-	-	-	-	-
RTL Delivery (2027)	Flexible	0.0	1.942	0.0	52.659	0.626	0.0	55.227	0.0	55.227	96.48	1.13
RTL Delivery (2027)	Rigid	-	-	-	-	-	-	-	-	-	-	-

Median, Shoulder, and Ramp Pavement Condition

The condition of the shoulders is similar to the mainline pavement condition. Shoulder rehabilitation will be included in the scope of this project. Ramps at the US 395/SR 178 interchange will be conformed grind and paved.

Drainage

There are several culverts throughout the project limits conveying drainage through the roadway prism. In the more urban areas, storm drain systems collect highway drainage and convey it out of the right-of-way, though there are not always regional drainage systems for the storm drains to tie into for discharge. In some cases, the stormwater collected in the Caltrans storm drain systems in the has been diverted to drywell systems outside the highway right-of-way either by the City of Ridgecrest or by private development adjacent to the right-of-way. Specific locations of drainage facilities in the project area are shown in Attachments C and M. The general drainage flow in the project area is to the northeast.

Pedestrian Facilities & ADA

There are several pedestrian facilities within the project limits, generally located in Inyokern and Ridgecrest. Facilities include sidewalks and curb ramps, as well as driveways within these pedestrian areas. There are several crosswalks located in the Inyokern and Ridgecrest areas. Specific locations of ramps and driveways are shown in Attachments C and M.

Bicycle Facilities

Location	Type
PM 88.6 to PM 99.6	Shared Roadway
PM 99.6 to PM 102.4	Bike Route, Class II
PM 102.4 to 104.6	Shared Roadway

Median Barrier

Raised curb median with a B1-6 type curb exists from Inyokern Road (PM 100.6) to Gemstone Street (PM 102.7) and will be protected in place.

Bridge Rail

There is existing CB Type 25 and 25B bridge rail associated with the overcrossing at the interchange with US 395.

Existing guardrail
There are 2 sections of existing guardrail within the project limits, from PM 94.75 to 94.79 and from PM 98.39 to 98.41.

Utilities
Utilities within the project limits include gas, electric, sewer, telecommunications, water, and fiber optic cable.

Signals
Signals within the project limits are shown in the following table.

PM	Location
97.6	Jacks Ranch
100.11	Inyokern-Norma
100.61	China Lake-Inyokern
101.1	Ward
101.6	Drummond
102.1	Las Flores
102.45	French
102.62	Ridgecrest-China Lake
103.85	Richmond

Street Lights
Luminaires exist from 2nd St. (PM 92.3) to Brown St. (PM 92.5), at the SR 178/US 395 interchange (PM 93.2), from Inyo St. (PM 99.4) to Richmond Rd. (PM 103.9), and at the Park & Ride lot near the Richmond Rd. intersection.

TMS Elements
TMS elements within the project limits are shown in the following table.

TMS Unit Type	PM	Direction	Location
Traffic Census Stations	88.743	BO	N JCT RTE 14
Extinguishable Message Sign	92.29	EB	Inyokern - School FBs
Traffic Census Stations	101.217	BO	HOSPITAL
Traffic Census Stations	102.586	BO	RIDGECREST BLVD/CHINA LAKE
EMS	103.12	BO	Sunland Rd. STOPS FB - EB(2) WB (2)

Signs/delineation
The type of signs located within the project limits include:
- Roadside Sign (One Post)
- Roadside Sign (Two Post)

General Land Usage and Development
Except for within or close to the communities of Inyokern and Ridgecrest, the land adjacent to the highway is largely undeveloped. Development on the outskirts of Ridgecrest and Inyokern is generally industrial and also includes facilities related to the Naval Air Weapons Station China Lake. In Ridgecrest and Inyokern, development is largely commercial or residential in nature.

Transit Facilities

The following table lists the transit facilities in the area.

Location	Description
Strecker/Inyokern Rd	Bus Stop
Calvert/Inyokern Rd	Bus Stop
Buttermilk Acres	Bus Stop
Sunland St./Inyokern Rd	Bus Stop
Gateway Blvd./China Lake Blvd.	Bus Stop
Coso Ave./China Lake Blvd	Bus Stop
Sydnor Ave./China Lake Blvd	Bus Stop

Park-and-Ride Facilities

There is a park-and-ride lot at PM 103.63 at the intersection with Richmond Rd.

4. PURPOSE AND NEED

4A. Problem, Deficiencies, Justification

Purpose:

The purpose of this project is to:

- Preserve, repair, and extend the service life of the existing pavement.
- Improve ride quality.
- Address culverts that are damaged and/or approaching their service life.
- Improve accessibility under the Americans with Disabilities Act.
- Increase and improve access and connectivity for multiple modes of transportation.
- Upgrade existing highway features to meet current standards.

Need:

Pavement Restoration

The pavement within the proposed project area on State Route 178 is in good to fair conditions but if left untreated will be in fair to poor conditions in the next 20 years. Signs of major distress such as rutting, and alligator cracking are present primarily in the wheel path due to repetitive heavy traffic loading. Alligator cracks are fatigue cracks that occur in the wheel path because of repetitive traffic loading and deflections in the pavement. The project area contains two types of alligator cracking, alligator A cracking which refers to the longitudinal cracks in the wheel path, and alligator B cracks which refer to interconnected cracks within the wheel path.

Drainage Improvements

Several culverts within the project limits are damaged or have exceeded their expected service life and are showing signs of deterioration in the form of rusting and daylighting. Culvert failure would put the roadway at risk due to potential flooding and erosion.

Improve Access and Connectivity for Multiple Modes of Transportation

Per the Caltrans Complete Streets Program, a complete street is a transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists appropriate to the function and context of the facility. The goal of the Caltrans' Complete Street Policy is to create a space where people of all ages and abilities can maximize the right-of-way with a variety of mobility forms and meet the goals of safety, comfort, and connectivity.

Within the project area multiple pedestrian facilities such as curb ramps, sidewalks, and driveways are not in compliance with current Americans with Disabilities Act standards. The south side of the highway within the project area has gaps in the sidewalk and these gaps do not provide for a continuous Americans with Disabilities Act compliant pathway for multiple modes of transportation. Narrow shoulders in the project area are not suitable for bicycles and create gaps in bicycle pathways.

Roadside Safety Features

Multiple roadside safety features are nearing the end of their service life and/or do not meet current standards. Two sections of guardrail from post mile 93.60 to 93.61, 94.76 to 94.78, and 98.39 to 98.41 and one section of bridge rail from post mile 93.20 to 93.26 do not meet current Manual for Assessing Safety Hardware standards. Signage within the project limits do not meet the current Manual on Uniform Traffic Control Devices for size, shape, color, retroflection, or other features meant to draw attention to motorists and provide optimal visibility. Signals at all signalized intersections need to be updated to current standards. Traffic striping and delineation work also needs to be redone to improve clarity and visibility.

Tables detailing existing conditions and deficiencies in the existing roadway, pedestrian facilities and drainage facilities are included in Attachment L.

4B. Regional & System Planning

In District 9, SR 178 is an east-west arterial that provides scenic, commuter, and commercial travel. The route has regional significance and gives access to employment opportunities, goods and services to the residents of Weldon, Lake Isabella, Inyokern, Ridgecrest, China Lake Naval Air Weapons Station (NAWS), Trona and to visitors heading to the Trona Pinnacles National Monument and Death Valley National Park.

State Route 178 is a conventional highway and within the project limits it is part of the National Highway System from PM 88.6 to PM 102.62. From PM R93.118 to PM 100.6 the roadway is part of the Strategic Highway Network. It is classified as a minor arterial, a principal arterial, and other principal arterial. Its truck designation is National Network (STAA) and California Legal and is included as a Goods Movement Route.

This document proposes solutions that are consistent with the mobility needs identified in the Transportation Concept Report (TCR) State Route 178 District 9 (July 2016). The TCR's 20-year System Operations and Management Concept suggests the following improvements through the projects limits:

Location	PM to PM	TCR Suggestion	Proposed Alternative
SR 14 2.8 miles north of Freeman Junction in the Indian Wells Valley to Clodt Road in Inyokern	88.38 - R93.41	"Curb extended and realigned as feasible; sidewalk widened, extended, and gaps filled in from Broadway Street to Brown Road in Inyokern, PM 92.46/92.49 on north side of roadway"	Alternative #3: Construct sidewalk on both sides of the highway from PM 92.25 to 92.30.
Clodt Road in Inyokern to the China Lake Boulevard-Inyokern Road-Sandquist Road intersection in Ridgecrest	R93.41 - 100.61	"Complete the curb, gutter, and sidewalk on the south side of roadway in the City of Ridgecrest, PM 99.09/100.61"	Alternative #2: Fill in the gaps in sidewalk and curb ramp on the south side of the highway from PM 99.32 to PM 100.47 Alternative #3: Fill in the gaps in sidewalk and curb ramp on the south side of the highway from PM 99.01 to PM 100.5
China Lake Boulevard-Inyokern Road-Sandquist Road intersection to 0.17 mile west of Lumill Street in Ridgecrest	100.61 - 103.95	"Complete the curb, gutter, and sidewalk on both sides of roadway"	Alternative #3: Fill in the gaps in sidewalk and curb ramp on the south side of the highway from PM 100.61 to PM 103.85

The Caltrans Bicycle Plan and Complete Streets Facilities for District 9, dated September of 2019, outlines a proposed Class II Bike Lane along Inyokern Road, as well as Class IV Cycle track on China Lake Blvd; and a buffered Class II Bike Lane along Ridgecrest Blvd from China Lake Blvd to Richmond Blvd, and a Class II Bike Lane along Ridgecrest Blvd from Richmond Blvd to the county line. The project will widen shoulders along Inyokern Road to provide sufficient space for a Class II bike lane, but will not address the other proposed bicycle improvements.

Kern County 2022 Regional Transportation Plan / Sustainable Community Strategy identified seven goals: Mobility, Accessibility, Reliability/Safety, Efficiency, Livability/Quality of Life, Sustainability, Equity. Restoring the pavement to good condition will increase mobility, safety, livability, and efficiency, of the transportation system. The ADA curb ramps, sidewalk, and pedestrian crossings will improve mobility, accessibility, safety, livability, and equity, for pedestrians. The drainage improvements meant to address flooding will increase mobility, safety, efficiency, livability, and sustainability, for roadway users.

In addition to the Kern County Regional Transportation Plan (KCRTP), Kern County's Active Transportation Plan of March 2018 illustrates proposed active transportation improvements that are consistent with Caltrans District 9 California Department of Transportation Bicycle Plan and Complete Streets Facilities for District 9.

The Indian Wells region (Ridgecrest and Inyokern) of Kern County is designated as nonattainment for harmful pollutants such as ozone and particulate matter (PM) 2.5 and 10. According to the state and federal Clean Air Acts, nonattainment areas must ensure that "all feasible measures" be implemented to reduce harmful air emissions. Transportation Control Measures (TCM) have received a high level of attention since the passage of the state and federal Clean Air Acts and congestion management legislation as a method to address attaining feasible measures. Goals identified in the KCRTP, including livability and sustainability, focus on carrying out these requirements to achieve standards for healthy air quality. The most typical and successful Transportation Control Measures include improved public transit, traffic flow improvements and high occupancy vehicle lanes, shared ride services, pedestrian/bicycle facilities, and flexible work schedules. All three alternatives address feasible measures within the scope of this project by correcting non-ADA compliant sidewalk, driveways and curb ramps; provision of bicycle facilities; and improving traffic flow.

In the City of Ridgecrest General Plan, dated December 2009, the city identifies State Route 178 as a Class II bikeway within the city limits along Inyokern Road, China Lake Blvd and Ridgecrest Blvd.

4C. Traffic

Traffic Volumes

PM 88.38 to 92.03 and PM 92.03 to 92.5
Data Year .....2021 AADT = 2300
Construction Year AADT .....2027 AADT = 2370
5 Year AADT.....2032 AADT = 2430
10 Year AADT.....2037 AADT = 2490
20 Year AADT.....2047 AADT = 2620
5 Year TI.....2032 TI = 8.0
10 Year TI.....2037 TI = 9.0
20 Year TI.....2047 TI = 9.5
40 Year TI.....2067 TI = 10.5
Construction Year DHV .....2027 DHV = 260
5 Year DHV .....2032 DHV = 270
10 Year DHV .....2037 DHV = 270
20 Year DHV .....2047 DHV = 290
40 Year DHV .....2067 DHV = 320
2021 Directional Split = 61.36 %
2021 Trucks = 18.0 %

PM 92.50 to 100.61
Data Year .....2021 AADT = 6300
Construction Year AADT .....2027 AADT = 6490
5 Year AADT.....2032 AADT = 6660
10 Year AADT.....2037 AADT = 6820
20 Year AADT.....2047 AADT = 7170
5 Year TI.....2032 TI = 9.5
10 Year TI.....2037 TI = 10.0
20 Year TI.....2047 TI = 11.0
40 Year TI.....2067 TI = 12.0
Construction Year DHV .....2027 DHV = 690
5 Year DHV .....2032 DHV = 710
10 Year DHV .....2037 DHV = 730
20 Year DHV .....2047 DHV = 770
40 Year DHV .....2067 DHV = 850
2021 Directional Split = 79.58 %
2021 Trucks = 18.0 %

PM 100.61 to 102.60
Data Year .....2021 AADT = 18300
Construction Year AADT .....2027 AADT = 18860
5 Year AADT.....2032 AADT = 19330
10 Year AADT.....2037 AADT = 19820
20 Year AADT.....2047 AADT = 20830
5 Year TI.....2032 TI = 10.5
10 Year TI.....2037 TI = 11.5
20 Year TI.....2047 TI = 12.5
40 Year TI.....2067 TI = 13.5
Construction Year DHV .....2027 DHV = 1910
5 Year DHV .....2032 DHV = 1960
10 Year DHV .....2037 DHV = 2010
20 Year DHV .....2047 DHV = 2110
40 Year DHV .....2067 DHV = 2330
2021 Directional Split = 65.46 %
2021 Trucks = 18.0 %

PM 102.60 to 104.60
Data Year .....2021 AADT = 2400
Construction Year AADT .....2027 AADT = 2470
5 Year AADT.....2032 AADT = 2540
10 Year AADT.....2037 AADT = 2600
20 Year AADT.....2047 AADT = 2730
5 Year TI.....2032 TI = 8.5
10 Year TI.....2037 TI = 9.5
20 Year TI.....2047 TI = 10.0
40 Year TI.....2067 TI = 11.0

Construction Year DHV .....2027 DHV = 360
5 Year DHV .....2032 DHV = 360
10 Year DHV .....2037 DHV = 370
20 Year DHV .....2047 DHV = 390
40 Year DHV .....2067 DHV = 430
2021 Directional Split = 92.08 %
2021 Trucks = 18.0 %

Traffic Collisions
Collision Rates:
The data provided for the five-year period from July 1, 2018 to June 30, 2023 is protected by 23 U.S.C, section 407:

Table 1 below summarizes crash rates for the segments of the project on eastbound (EB) and westbound (WB) Route 178 mainline from postmile (PM) PM 88.38 to PM 92.03. The Table B report(s) were generated on 02/7/2024 and they depict existing crash rates per million vehicle miles for the most recent 60-month period from 07/01/2018 to 06/30/2023 from the Traffic Accident Surveillance and Analysis System (TASAS).

Table 1:
TASAS Table B Crash Rates

Segment	TOTAL No. of Crashes	ACTUAL (per million vehicle miles)			AVERAGE (per million vehicle miles)		
		Fatal Crashes	Fatal + Injury Crashes	Total[1]	Fatal Crashes	Fatal + Injury Crashes	Total[1]
EB and WB Kern 178 PM 88.38 to PM 92.03	8	0.000	1.68	6.72	0.202	2.28	5.19

Segment	Total Crashes				
	Fatal	Serious Injury	Other Injury	Property Damage Only	Total
EB and WB Kern 178 PM 88.38 to PM 92.03	0	0	2	6	8

(1) All reported crashes (includes Property Damage Only (PDO) Crashes)

Table 1.0 (TASAS Table B Crashes Rates (07/01/2018 – 06/30/2023)) summarizes and compares the actual crash rates for the segment of EB and WB Kern 178 from PM 88.38 to PM 92.03 to the average rates for similar facilities throughout the State. The Total crash rates include all reported crash: Fatal, Injury, and Property Damage.
Analysis of the TASAS table B records shows a total of 8 crashes within the segment of EB and WB Kern 178 from PM 88.38 to PM 92.03 and study periods summarized above, with a total rate of fatal and injury related crashes that are below the average for similar facilities statewide, and a total rate of crashes that is above the average for similar facilities statewide.

Detailed analysis per the TASAS TSAR generated on 02/07/2024 shows that the primary crash factors in the segment were:
• (2) – 25% “Speeding,”

• (2) – 25% “Other Violation,”
• (2) – 25% “Improper Turn,”
• (1) – 12.5% “Influence Alcohol,” and
• (1) – 12.5% “Other than Driver.”

The types of crashes included:
• (3) – 37.5% “Hit Object,”
• (2) – 25.0% "Overturn,”
• (1) – 12.5% “Sideswipe,”
• (1) – 12.5% “Rear End,” and
• (1) – 12.5% “Other.”

The improvements proposed for this section may reduce the total number of crashes with the signage and shoulder improvements. The replacement of sign will aid drivers in their decision making which may result in a decrease of improper turns for this segment. The shoulder improvements may decrease the number of hit object and overturn by giving drivers the ability to more easily avoid crashes.

Table 2 below summarizes crash rates for the segments of the project on eastbound (EB) and westbound (WB) Route 178 mainline from postmile (PM) PM 92.03 to 92.50. The Table B report(s) were generated on 02/7/2024 and they depict existing crash rates per million vehicle miles for the most recent 60-month period from 07/01/2018 to 06/30/2023 from the Traffic Accident Surveillance and Analysis System (TASAS).

Table 2:
TASAS Table B Crash Rates

Segment	TOTAL No. of Crashes	ACTUAL (per million vehicle miles)			AVERAGE (per million vehicle miles)		
		Fatal Crashes	Fatal + Injury Crashes	Total[1]	Fatal Crashes	Fatal + Injury Crashes	Total[1]
EB and WB Kern 178 PM 92.03 to PM 92.50	0	0.000	0.00	0.00	0.033	0.38	0.86

Segment	Total Crashes				
	Fatal	Serious Injury	Other Injury	Property Damage Only	Total
EB and WB Kern 178 PM 92.03 to PM 92.50	0	0	0	0	0

(1) All reported crashes (includes Property Damage Only (PDO) Crashes)

Table 2 (TASAS Table B Crashes Rates (07/01/2018 – 06/30/2023)) summarizes and compares the actual crash rates for the segment of EB and WB Kern 178 from PM 92.03 to PM 92.50 to the average rates for similar facilities throughout the State. The Total crash rates include all reported crash: Fatal, Injury, and Property Damage.

Analysis of the TASAS table B records shows a total of 0 crashes within the segment of EB and WB Kern 178 from PM 92.03 to PM 92.50 and study periods summarized above, with a total

rate of fatal and injury related crashes that are below the average for similar facilities statewide, and a total rate of crashes that is below the average for similar facilities statewide.

Table 3 below summarizes crash rates for the segments of the project on eastbound (EB) and westbound (WB) Route 178 mainline from postmile (PM) PM 92.50 to PM 100.61. The Table B report(s) were generated on 02/7/2024 and they depict existing crash rates per million vehicle miles for the most recent 60-month period from 07/01/2018 to 06/30/2023 from the Traffic Accident Surveillance and Analysis System (TASAS).

Table 3:
TASAS Table B Crash Rates

Segment	TOTAL No. of Crashes	ACTUAL (per million vehicle miles)			AVERAGE (per million vehicle miles)		
		Fatal Crashes	Fatal + Injury Crashes	Total[1]	Fatal Crashes	Fatal + Injury Crashes	Total[1]
EB and WB Kern 178 PM 92.50 to PM 100.61	85	0.060	0.43	1.02	0.023	0.43	1.02

Segment	Total Crashes				
	Fatal	Serious Injury	Other Injury	Property Damage Only	Total
EB and WB Kern 178 PM 92.50 to PM 100.61	5	6	27	47	85

(1) All reported crashes (includes Property Damage Only (PDO) Crashes)

Table 3 (TASAS Table B Crashes Rates (07/01/2018 – 06/30/2023)) summarizes and compares the actual crash rates for the segment of EB and WB Kern 178 from PM 92.50 to PM 100.61 to the average rates for similar facilities throughout the State. The Total crash rates include all reported crash: Fatal, Injury, and Property Damage.

Analysis of the TASAS table B records shows a total of 85 crashes within the segment of EB and WB Kern 178 from PM 92.50 to PM 100.61 and study periods summarized above, with a total rate of fatal and injury related crashes that are above and equal to the average for similar facilities statewide, and a total rate of crashes that is equal to the average for similar facilities statewide.

Detailed analysis per the TASAS TSAR generated on 02/07/2024 shows that the primary crash factors in the segment were:
• (30) – 33.3% “Failure to yield,”
• (25) – 27.8% “Improper Turn,”
• (19) – 21.1% “Speeding,”
• (8) – 8.9% “Influence Alcohol,”
• (4) – 4.4% “Other Violation,”
• (3) – 3.3% “Other than driver,” and
• (1) – 1.1% “Unknown.”

The types of crashes included:
• (29) – 32.2% “Hit Object,”
• (29) – 32.2% “Broadside,”
• (14) – 15.6% “Rear End,”
• (7) – 7.8% “Sideswipe,”
• (4) – 4.4% “Overturn,”
• (3) – 3.3% “Other,”
• (2) – 2.2% “Head-on,” and
• (2) – 2.2% “Auto-pedestrian.”

The proposed improvements for this segment will improve the crash rates. The increase in the shoulder width will provide additional space to avoid objects in the roadway, and may decrease the chances of overturning in an attempt to avoid an object in the road way. the replacement of signs and improvement of signal lights at intersections will aid in the prevention of improper turns as well as assist in the decrease of crashes caused by failure to yield. The improvements proposed will reduce the rate of fatal crashes for this segment.

Table 4 below summarizes crash rates for the segments of the project on eastbound (EB) and westbound (WB) Route 178 mainline from postmile (PM) PM 100.61 to PM 102.6. The Table B report(s) were generated on 02/7/2024 and they depict existing crash rates per million vehicle miles for the most recent 60-month period from 07/01/2018 to 06/30/2023 from the Traffic Accident Surveillance and Analysis System (TASAS).

Table 4:
TASAS Table B Crash Rates

Segment	TOTAL No. of Crashes	ACTUAL (per million vehicle miles)			AVERAGE (per million vehicle miles)		
		Fatal Crashes	Fatal + Injury Crashes	Total[1]	Fatal Crashes	Fatal + Injury Crashes	Total[1]
EB and WB Kern 178 PM 100.61 to PM 102.6	63	0.000	0.37	1.11	0.013	0.44	0.93

Segment	Total Crashes				
	Fatal	Serious Injury	Other Injury	Property Damage Only	Total
EB and WB Kern 178 PM 100.61 to PM 102.6	0	2	20	41	63

(1) All reported crashes (includes Property Damage Only (PDO) Crashes)

Table 4 (TASAS Table B Crashes Rates (07/01/2018 – 06/30/2023)) summarizes and compares the actual crash rates for the segment of EB and WB Kern 178 from PM 100.61 to PM 102.6 to the average rates for similar facilities throughout the State. The Total crash rates include all reported crash: Fatal, Injury, and Property Damage.

Analysis of the TASAS table B records shows a total of 63 crashes within the segment of EB and WB Kern 178 from PM 100.61 to PM 102.6 and study periods summarized above, with a total

rate of fatal and injury related crashes that are below the average for similar facilities statewide, and a total rate of crashes that is above the average for similar facilities statewide.
Detailed analysis per the TASAS TSAR generated on 02/07/2024 shows that the primary crash factors in the segment were:
• (26) – 38.8% “Speeding,”
• (13) – 19.4% “Other Violations,”
• (10) – 14.9% “Failure to yield,”
• (8) – 11.9% “Improper turn,”
• (5) – 7.5% “Influence Alcohol,”
• (3) – 4.5% “Follow too close,” and
• (2) – 3.0% “Unknown.”

The types of crashes included:
• (33) – 49.3% “Rear End,”
• (14) – 20.9% "Broadside,”
• (10) – 14.9% “Sideswipe,”
• (4) – 6.0% “Hit object,”
• (3) – 4.5% “Other,”
• (2) – 3.0% “Auto-pedestrian,” and
• (1) – 1.5% “Head-on.”

The improvements proposed for this segment of the project will aid in improving the total crash rates. The signal improvements, sign replacement and driveway improvements may reduce the number of improper turns, failure to yield and following too close crashes within this segment. The signal improvements will aid in the reduction of traffic build up in each intersection, increasing the time of traffic breaks. The increase in time will allow for a decrease in the failure to yield crash rate. The replacement of signs will increase the visibility and assist in decision making and may reduce the number of improper turns. The improvements to the pedestrian facilities will also improve the total crash rate by reducing the chances of an auto-pedestrian collision.

Table 5 below summarizes crash rates for the segments of the project on eastbound (EB) and westbound (WB) Route 178 mainline from postmile (PM) PM 102.60 to PM 104.6. The Table B report(s) were generated on 02/7/2024 and they depict existing crash rates per million vehicle miles for the most recent 60-month period from 07/01/2018 to 06/30/2023 from the Traffic Accident Surveillance and Analysis System (TASAS).

Table 5:
TASAS Table B Crash Rates

Segment	TOTAL No. of Crashes	ACTUAL (per million vehicle miles)			AVERAGE (per million vehicle miles)		
		Fatal Crashes	Fatal + Injury Crashes	Total[1]	Fatal Crashes	Fatal + Injury Crashes	Total[1]
EB and WB Kern 178 PM 102.6 to PM 104.6	39	0.045	0.49	1.74	0.012	0.39	0.81

Segment	Total Crashes				
	Fatal	Serious Injury	Other Injury	Property Damage Only	Total
EB and WB Kern 178 PM 102.6 to PM 104.6	1	3	9	26	39

(1) All reported crashes (includes Property Damage Only (PDO) Crashes)

Table 5 (TASAS Table B Crashes Rates (07/01/2018 – 06/30/2023)) summarizes and compares the actual crash rates for the segment of EB and WB Kern 178 from PM 102.6 to PM 104.6 to the average rates for similar facilities throughout the State. The Total crash rates include all reported crash: Fatal, Injury, and Property Damage.

Analysis of the TASAS table B records shows a total of 39 crashes within the segment of EB and WB Kern 178 from PM 102.6 to PM 104.6 and study periods summarized above, with a total rate of fatal and injury related crashes that are above the average for similar facilities statewide, and a total rate of crashes that is below the average for similar facilities statewide.

Detailed analysis per the TASAS TSAR generated on 02/07/2024 shows that the primary crash factors in the segment were:
• (14) – 30.4% “Other Violations,”
• (12) – 26.1% “Improper Turn,”
• (10) – 21.7% “Failure to yield,”
• (6) – 13.0% “Speeding,”
• (1) – 2.2% “Influence Alcohol,”
• (1) – 2.2% “Other than Driver,”
• (1) – 2.2% “Unknown,” and
• (1) – 2.2% “Not Stated.”

The types of crashes included:
• (17) – 37.0% “Broadside,”
• (11) – 23.9% "Hit Object,”
• (7) – 15.2% “Rear End,”
• (4) – 8.7% “Sideswipe,”
• (3) – 6.5% “Head-on,”
• (3) – 6.5% “Other,” and
• (1) – 2.2% “Auto-pedestrian.”

The improvements proposed for this segment of the project will aid in improving the fatal, fatal + injury, and total crash rates. The signal improvements and sign replacement may reduce the number of improper turns, failure to yield and following too close crashes within this segment. The signal improvements will aid in the reduction of traffic build up in each intersection, increasing the time of traffic breaks. The increase in time will allow for a decrease in the failure to yield crash rate. The replacement of signs will increase the visibility of the lane layout and assist in decision making and may reduce the number of improper turns. The improvements to the pedestrian facilities will also improve the total crash rate by reducing the chances of an auto-pedestrian collision.

5. ALTERNATIVES

Improvements are shown by category, centerline station and post mile in Appendix M, Improvements Table.

5A. Caltrans Preferred Alternative

Alternative 2 is the preferred alternative and was selected because it satisfies the identified purpose and need for the project reasonably within the programmed budget amounts. The scope of improvements under this alternative addresses comments received during the circulation of the Draft Environmental Document and Draft Project Report and discussion during the Alternative Selection Meeting, specifically the following:

- Add an RRFB at Broadway Avenue in Inyokern in all alternatives;
- Change the RRFB proposed near the hospital in Ridgecrest to a PHB and note that the location will be determined in coordination with the hospital.

Comments regarding existing drainage patterns impacting buildings in Inyokern will need to be addressed during the PS&E phase.

Alternative 2 includes the following work; pavement rehabilitation, replacement of culverts at 5 locations; installation of flared end sections at 5 locations; addition of a new drainage system near the hospital in Ridgecrest; construction or replacement of curb ramps and driveway replacements to meet ADA; new sidewalk, ramps and driveways to fill in gaps on south side of the highway; installation of two rectangular rapid flashing beacons (RRFB) in Inyokern and an PHB and crosswalk in Ridgecrest; delineation of Class 2 bike lane; TMS elements, guardrail, bridge rail, and detector loops at 8 signalized intersections replacement of traffic signs; and lighting replacements. Alternative 2 includes the following:

Pavement:
The proposed pavement methods for the project will be:

- Partial Depth (0.33’) Recycle (PDR) with 0.25’ HMA overlay from the intersection of SR 14 (PM 88.85) to Mountain View Ave. (PM 92.03)
- Mill and fill (remove and replace) 0.25’ HMA from Mountain View Ave. (PM 92.03) to 700’ West of Everett Street (PM 94.84)
- PDR with overlay from 700’ West of Everett Street (PM 94.84) to 350’ West of Mahan St. (PM 99.03)
- Mill and fill from 350’ West of Mahan St. (PM 99.03) to the San Bernardino County Line (PM 104.61).

The PDR approach corrects surface problems and distresses without disturbing the base and subgrade, enhances recycling and conservation, and reduces traffic disruptions. The overlay restores the pavement strength; shoulder backing will be required to transition from the edge of the overlay to the existing grade. The mill and fill approach also corrects surface problems and

distresses without disturbing the pavement subgrade or increasing the pavement elevation, making it easier to tie into existing curb and gutter and side streets in more urban areas. Pavement improvements will be from edge of pavement (EP) to EP, excluding medians. Distressed areas extending below the depth of the PDR or mill and fill will need to be addressed prior to implementation of either pavement approach.

Traffic: Replace detector loops within the limits of the mill and fill or partial depth recycle at the following signalized intersections, with number of loops included in parentheses: Norma St. (20), Inyokern Rd. & China Lake Blvd. (56), Ward Ave. (), Drummond Ave. (30), Las Flores (36), French Ave. (33), Ridgecrest Blvd. & China Lake Blvd (37), Richmond Rd. (21). Replace TMS census loops at PM 88.743, 101.217, and 102.586. Replace all signals at signalized intersections to current standards, update electrical components and underground lines, replace signs. Signalized intersections include: Inyokern Road & China Lake Boulevard, Drummond Avenue & China Lake Boulevard, Las Flores & China Lake Boulevard, Norma Street & China Lake Boulevard, French Avenue & China Lake Boulevard, Ridgecrest Boulevard & China Lake Boulevard, Ridgecrest Boulevard & Richmond Drive.

Drainage: Replace or install culvert systems, end sections, and potentially some minor grading on existing ditches to improve flows. Culverts located at:

- PM 89.03- Replace 2 CMPA 42”x45”x152’ culverts and add flared end sections at downstream ends.
- PM 89.27- Replace existing 24”x55’ CSP culvert and flared end sections.
- PM 92.43- Replace and extend 24”x72’ CSP storm drain and relocate drop inlet, and install flared end section at downstream end.
- PM 99.58 and PM 99.60- Install flared end sections at downstream end of each existing culvert, including possible grading
- PM 100.63- Replace existing 24”x121’ CSP culvert and replace flared end section.
- PM 101.07- Replace 2 curb inlets and CSP 36”x24”x93’ storm drain.
- PM 101.42- Install 2 inlets connected by storm drain pipe to drain low point near hospital in Ridgecrest. The system will flow to a sand-oil separator vault then to a linear series of infiltration chambers located within the right-of-way east of the highway pavement. The system will be equipped with a bubble-up structure that would discharge system overflow to the gutter flowline of the curb and gutter of Omega Way east of the highway.
- PM 103.84- Replace existing trench drain and curb and gutter and a series of inlets in the vicinity of Richmond Avenue. The existing storm drain piping is likely sufficient as stormwater capture capacity seems to be the cause of flooding issues at the intersection.

Pedestrian Facilities: Replace 90 existing noncompliant curb ramps and 130 driveways, with conforms to adjacent pavement and sidewalk; and construction or replacement of 1,800’ of sidewalk. Fill in missing gaps of sidewalk from PM 99.03 to PM 100.47 on the south side of the highway with 1,940’ of sidewalk, curb, and gutter, and 7 new or replaced driveways. Class 2 Bike Lane will be delineated from PM 90.43 to PM 92.25. Work will require additional TCEs and utility relocations as noted in Section 6D, and additional right-of-way.

Road Safety:

- Replace 314 regulatory signs throughout the project limits, including breakaway supports.
- Replace 626’ of bridge rail with Type 842 concrete barrier at the 395 overcrossing at PM 93.23. Bridge rail replacement will require widening of the bridge deck to accommodate the wider bridge rail and tying in the new bridge rail to the existing bridge. Existing concrete barrier rail on the bridge approaches would be replaced with MGS.
- Replace 2 sections of metal beam guardrail with MASH-compliant MGS guard rail at PM 94.76 and PM 98.39, for a total length of 296’.

Pavement markings and striping will include enhanced 6” pavement delineation and enhanced pavement markings.

Complete Streets: Install an PHB and cross walk on the south side of the Sydnor St. intersection, at PM 101.34, with the final location determined in coordination with the hospital. The crossing will require a mast-mounted PHB with underground electrical lines, signage, striping, and ADA compliant ramps. The work will be within Caltrans Right of Way and should not change drainage patterns. Install a mast-mounted RRFBs at the school crossings in Inyokern PM 92.34 and 92.43, requiring underground electrical lines, signage and striping for the at-grade crosswalk; no curb ramps would be required.

Road Protective Features:

- Replace highway lighting that has reached the end of its service life at the 395 & 178 interchange at PM 93.23, consisting of 6 light poles, bringing light facilities up to standard including the poles, boxes, and potentially underground wiring tying in to the existing power supply.
- Replace the lighting that has reached the end of its service life at the Park & Ride PM 103.89, consisting of 9 light poles, bringing light facilities up to standard including the poles, boxes, and potentially underground wiring tying in to the existing power supply.

Construction Staging: 13 construction staging areas are proposed for all the alternatives. They consist of disturbed areas, disturbed shoulders and pullouts, and paved lots. Reference “Ridgecrest-Inyokern Improvements” spreadsheet in Attachment M for locations and size. All staging areas are within Caltrans Right of Way or are Caltrans owned parcels.

Closures: The ramps at the SR 178/US 395 interchange may be temporarily closed to accommodate construction activities. Detours will be provided. There will be pedestrian and bicyclist detours where ADA features will be replaced. At the seven intersections with signal replacements there will be temporary closures and detours.

Utility Relocations: Utilities may need to be relocated due to ADA infrastructure and drainage improvements. In general, drainage inlets may need to be moved but will maintain the same discharge locations; fire hydrants and water laterals may need to be relocated; street lights within the proposed ramps would need to be relocated along with their underground or overhead wiring. An estimated 13 relocations would be required in Alternative 2.

RW Requirements: Temporary Construction Easements comprising approximately 4.09 acres and Letters of Permission will be required for conforms, sidewalk, curb ramp, and driveway replacement. Coordination will be required with City of Ridgecrest, Kern County, and the U.S. Navy. New right-of-way comprising 1.02 acres is expected to be required for Alternative 2. Right-of-way requirements summarized by alternative are included in Section 6D.

Trenching: Trenching is required for drainage work and electrical work.

The current estimate of capital costs for Alternative 2 are:

Roadway	$46,079,900
Structure	$0
Right-of-Way	$1,669,900
Total	**$47,749,000**

5B. Other Viable Alternatives

In addition to the No Build Alternative, two build alternatives, Alternatives 1 and 3, were evaluated and subsequently not recommended for approval. The descriptions of these alternatives are included below. Alternative 1 was not recommended for approval because it did not fully meet the purpose and need identified for the project. Alternative 3 did meet the identified purpose and need, but exceeded the programmed funding amounts,

Alternative 1
Alternative 1 is the Base Alternative and includes pavement rehabilitation; replacement of culverts at 2 locations; addition of flared end sections at culverts at 3 locations; addition of a new drainage system near the hospital in Ridgecrest; construction or replacement of curb ramps and driveway replacements to meet ADA; delineation of Class 2 bike lane; and replacement of traffic signs, TMS elements, guardrail, bridge rail, and detector loops at 8 signalized intersections

Pavement:
The proposed pavement methods for the project will be:

- Partial Depth (0.33') Recycle (PDR) with 0.25' HMA overlay from the intersection of SR 14 (PM 88.85) to Mountain View Ave. (PM 92.03)
- Mill and fill (remove and replace) 0.25' HMA from Mountain View Ave. (PM 92.03) to 700' West of Everett Street (PM 94.84)
- PDR with overlay from 700' West of Everett Street (PM 94.84) to 350' West of Mahan St. (PM 99.03)
- Mill and fill from 350' West of Mahan St. (PM 99.03) to the San Bernardino County Line (PM 104.61).

The PDR approach corrects surface problems and distresses without disturbing the base and subgrade, enhances recycling and conservation, and reduces traffic disruptions. The overlay restores the pavement strength; shoulder backing will be required to transition from the edge of the overlay to the existing grade. The mill and fill approach also corrects surface problems and distresses without disturbing the pavement subgrade or increasing the pavement elevation,

making it easier to tie into existing curb and gutter and side streets in more urban areas. Pavement improvements will be from edge of pavement (EP) to EP, excluding medians. Distressed areas extending below the depth of the PDR or mill and fill will need to be addressed prior to implementation of either pavement approach.

Traffic: Replace detector loops within the limits of the mill and fill or partial depth recycle at the following signalized intersections, with number of loops included in parentheses: Norma St. (20), Inyokern Rd. & China Lake Blvd. (56), Ward Ave. (), Drummond Ave. (30), Las Flores (36), French Ave. (33), Ridgecrest Blvd. & China Lake Blvd (37), Richmond Rd. (21). Replace TMS census loops at PM 88.743, 101.217, and 102.586.

Drainage: Replace or install culvert systems, end sections, and potentially some minor grading on existing ditches to improve flows. Culverts located at:

- PM 89.03- Replace 2 CMPA 42”x45”x152’ culverts and add flared end sections at downstream ends.
- PM 99.58 and PM 99.60- Install flared end sections at downstream end of each existing culvert, including possible grading
- PM 101.07- Replace 2 curb inlets and CSP 36”x24”x93’ storm drain.
- PM 101.42- Install 2 inlets connected by storm drain pipe to drain low point near hospital in Ridgecrest. The system will flow to a sand-oil separator vault then to a linear series of infiltration chambers located within the right-of-way east of the highway pavement. The system will be equipped with a bubble-up structure that would discharge system overflow to the gutter flowline of the curb and gutter of Omega Way east of the highway.
- PM 103.84- Replace existing trench drain and curb and gutter and a series of inlets in the vicinity of Richmond Avenue. The existing storm drain piping is likely sufficient as stormwater capture capacity seems to be the cause of flooding issues at the intersection.

Pedestrian & Bicycle Facilities: Replace 94 existing noncompliant curb ramps and 130 driveways, with conforms to adjacent pavement and sidewalk; and construction or replacement of 1,800’ of sidewalk. Class 2 Bike Lane will be delineated from PM 90.43 to PM 92.25.

Road Safety:

- Replace 314 regulatory signs throughout the project limits, including breakaway supports.
- Replace 626’ of bridge rail with Type 842 concrete barrier at the 395 overcrossing at PM 93.23. Bridge rail replacement will require widening of the bridge deck to accommodate the wider bridge rail and tying in the new bridge rail to the existing bridge. Existing concrete barrier rail on the bridge approaches would be replaced with MGS.
- Replace 2 sections of metal beam guardrail with MASH-compliant MGS guard rail at PM 94.76 and PM 98.39, for a total length of 296’.
- Pavement markings and striping will include enhanced 6” pavement delineation and enhanced pavement markings.

Construction Staging: 13 construction staging areas are proposed for all the alternatives. They consist of disturbed areas, disturbed shoulders and pullouts, and paved lots. Reference

"Ridgecrest-Inyokern Improvements" spreadsheet in Attachment M for locations and size. All staging areas are within Caltrans Right of Way or are Caltrans owned parcels.

Closures: The ramps at the SR 178/US 395 interchange may be temporarily closed to accommodate construction activities. Detours will be provided. There will be pedestrian detours where ADA features will be replaced.

Utility Relocations: Utilities may need to be relocated due to ADA infrastructure and drainage improvements. In general, drainage inlets may need to be moved but will maintain the same discharge locations; fire hydrants and water laterals may need to be relocated; street lights within the proposed ramps would need to be relocated along with their underground or overhead wiring. An estimated 13 relocations would be required in Alternative 1.

Trenching: Trenching is required for drainage work and electrical work.

RW Requirements: Temporary Construction Easements comprising approximately 1.72 acres and Letters of Permission will be required for conforms, sidewalk, curb ramp, and driveway replacement. Coordination will be required with City of Ridgecrest, Kern County, and the U.S. Navy. New right-of-way comprising 0.94 acres is expected to be required for Alternative 1. Right-of-way requirements summarized by alternative are included in Section 6D.

The current estimate of capital costs for Alternative 1 are:

Roadway	$36,971,300
Structure	$0
Right-of-Way	$1,628,500
Total	**$38,600,000**

Alternative 3

Alternative 3 is the Unconstrained Alternative and includes the following in addition to the work included in Alternative 2: Shoulder widening; additional sidewalk, driveways and curb ramps to fill gaps in Ridgecrest; addition of a multi-use path in Inyokern; and, shoulder widening and additional Class 2 bike lane delineation. Note that the roundabout at the intersection of Ridgecrest Blvd and Inyokern Rd that had been included in Alternative 3 in the Project Initiation Report has been removed from consideration:

Shoulder Widening:

- From Sta. 251+00 (PM 93.12) to Sta. 262+60 (PM 93.34) the 5' shoulders will be widened to 8' on both sides of the highway. There is a bridge (395 overcrossing) at PM 93.20 to 93.26, the shoulders on the bridge are not slated to be widened, but the shoulders on both approaches to the bridge will be widened. These shoulders have side slopes to existing grade as the highway gains elevation. The side slopes will need to be expanded, but will be within the existing right-of-way limits. It is safe to assume that the fill area will be wider at these locations than the other shoulder widening areas.
- From Sta. 282+00 (PM 93.71) to 323+50 (PM 94.49), the 4' wide shoulders will be widened to 8' on the south side of the highway. Fill areas are estimated to be about 5' wide for these locations with 4:1 side slopes.

- From Sta. 342+00 (PM 94.84) to 563+20 (PM 99.03), the 4' wide shoulders will be widened to 8' on the south side of the highway. Fill areas are estimated to be about 5' wide for these locations with 4:1 side slopes.
- Fill slopes from shoulder widening will require erosion control.

Pedestrian & Bicycle Facilities:

- Fill in gaps with new ramps, sidewalk, driveways and curb and gutter from PM 92.25 to PM 92.49, and from PM 100.5 to 103.84, on the right side of the highway
- Total new or replaced quantities include 6,600’ of sidewalk, curb, and gutter; 7 curb ramps; and, 15 driveways.
- In Inyokern, construct 1,300’ of 8’ wide multi-use path from PM 92.25 to 92.49 on the north side of the highway, and add bulbouts at the 2nd and 3rd Street intersections. The multi-use path is proposed in lieu of proposed sidewalk to accommodate multi-modal traffic (bicycles and pedestrians) and parking without impacts to the adjacent historic structures in this segment.
- Work will require additional TCEs and utility relocations as noted in Section 6D, and additional right-of-way.

Utility Relocations: An estimated 24 utility relocations would be required in Alternative 3.

RW Requirements: Temporary Construction Easements comprising approximately 4.30 acres and Letters of Permission will be required for conforms, sidewalk, curb ramp, and driveway replacement. Coordination will be required with City of Ridgecrest, Kern County, and the U.S. Navy. New right-of-way comprising 2.24 acres is expected to be required for Alternative 3. Right-of-way requirements summarized by alternative are included in Section 6D.

The current estimate of capital costs for Alternative 3 are:

Roadway	$51,598,600
Structure	$0
Right-of-Way	$1,925,900
Total	**$53,525,000**

NON-STANDARD DESIGN FEATURES

Design Standards Risk Assessment			
Alternative	Design Standard from Highway Design Manual Tables 82.1A & 82.1B	Probability of Nonstandard Design Feature Approval (None, Low, Medium, High,)	Justification for Probability Rating
1 & 2	HDM 302.1 Shoulder Width – dated 7/1/20	Existing 5-foot shoulder left & right PM 93.12/93.36, existing 4-foot shoulder right PM 93.72/99.02, existing 3-foot to 5-foot shoulder left & right PM 92.5/93.12, existing 2-foot shoulder left PM 96.29/100.58, existing 2.8-foot shoulder left PM 102.62/102.75, existing 2.5-foot shoulder left PM 103.85/103.89 (low)	There is not a large concentration run off the road type collisions which could be attributed to shoulder width. Project cost and environmental constraints could also be reasoning for a design exception.
3	HDM 302.1 Shoulder Width – dated 7/1/20	Existing 3-foot to 5-foot shoulder left & right PM 92.5/93.12, existing 2-foot shoulder left PM 96.29/100.58, existing 2.8-foot shoulder left PM 102.62/102.75, existing 2.5-foot shoulder left PM 103.85/103.89 (low)	There is not a large concentration of run off the road type collisions which could be attributed to shoulder width. Project cost and environmental constraints could also be reasoning for a design exception.
1, 2, & 3	HDM 105.2 Sidewalks and Walkways – dated 7/1/20	There are sections of sidewalk within the community of Inyokern and downtown Ridgecrest that will be less than 8’ between curb and building (medium)	To reconstruct these sections of sidewalk to standard would involve extensive right-of-way, building demolition, and possible condemnation. This would affect both the project’s schedule and cost.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

There are no known hazardous waste concerns that have been identified within the project limits. During construction, any wastes created will be disposed of off-site according to State and County disposal regulations. The location and depth of work proposed for the project will need to be evaluated during PS&E. If there is the potential for contaminated soil to be present, a Preliminary Site Investigation may be required to assess if contaminants are present and how they will be handled.

Because the project will disturb soils which may contain levels of ADL above the regulatory action level, soil testing and reporting are required prior to the completion of the project's Plans, Specifications and Estimates. If soils exhibit ADL levels above regulatory thresholds, a testing report shall be included in the contract documents as an informational handout, and items for appropriate disposal shall be included in the contract plans, specifications and estimates.

All sign posts and guardrail posts will be treated as hazardous waste and disposed of according to local and State requirements. The construction contract will include a bid item for "treated wood waste" as well as a State furnished item "BOE treated wood waste generation fee".

6B. Value Analysis

A Value Analysis was performed in December 2023 and developed the concepts in the following table. The Final VA Study was issued in May 2024. The following table notes whether or not each concept was recommended to be included in the evaluated alternatives.

Concepts	Recommended to be Included in Project (see notes)
1.0 Use a HAWK pedestrian crossing at the hospital crossing at Sydnor St.	**Yes**
2.0 Infiltration adjacent to R/W at the hospital	**Yes**
3.0 Convey the stormwater north of the credit union and then convey to the retention basin at Ward Avenue	**No**
4.0 Use a multiuse path near the historic area to mitigate the impact to the buildings	**Yes**[1]
5.0 Design the DI to move closer to the curb and outside of the travel way if possible and flowlines allow in Inyokern at Broadway	**Yes**
6.0 Change the limits to transition to mill and fill after the red zone to the east and eliminate widening in this section	**Yes**
7.0 Bulb-outs for traffic-calming measures through Inyokern and Ridgecrest	**No**
8.0 Add dedicated right-turn lane at the Navy Base intersection and restripe the inner left-turn lane to a through lane	**No**
9.0 Use variable work hours with Navy Base communication, including weekends to reduce access issues and allow for better construction schedules	**Yes**
10.0 Use new Bowman Channel/Navy Channel to discharge the onsite flows to SR-178	**Yes**[2]

[1] Included in Alternative 3, which was note recommended for approval.
[2] Not included in alternatives; further environmental clearance required.

6C. Resource Conservation

The existing AC will be recycled in the PDR segments. Milled material can be reused as shoulder backing. Removed asphalt and Portland cement concretes and other materials from demolition or removal efforts can be recycled as part of the resource conservation for this and other projects.

6D. Right-of-Way Issues

Temporary construction easements will be required. Potholing may be required at the proposed drainage systems. Utility relocations will be required for replacement or installation of drainage infrastructure and for curb ramps and accessibility clearances.

The following is a summary of right-of-way impacts that have been identified for this project for each project alternative:

Right-of-Way Impacts by Alternative			
Description	Alternate 1	Alternate 2	Alternate 3
Temporary Construction Easements	74951SF 1.72 AC	178369 SF 4.09 AC	187470 SF 4.30 AC
Right-of-Way Acquisitions	40978 SF 0.94 AC	44534 SF 1.02 AC	97421 SF 2.24 AC
Utility Pothole Locations (EA)	22	27	27
Utility Relocations (EA)	13	13	24

There is a section of roadway from Sta. 218+60 to Sta. 220+70 (just east of Inyokern) that is located on Southern Pacific Railroad land, triggering special requirements. Caltrans has not acquired Right of Way from the Railroad, but it has been included in the RW identified in the RW Data Sheets. The only work proposed in this area is pavement rehabilitation, as such all work will be within the existing roadway. The Inyokern Shoulders project (EA 09-37790) was recently constructed in this location, which removed the rails from the roadway. This is an abandoned railway, but the land is still owned by the railroad for an approximately 1.5 mile length of the highway.

Additional right-of-way may be required to address, in the future, drainage concerns that have been identified during the PA/ED process at or near the Ward Avenue, Drummond Avenue and near San Bernardino Boulevard intersections. The problem areas could not be addressed as part of this project because of environmental and right of way concerns that were beyond the scope of this project.

6E. Environmental Compliance

Caltrans prepared the attached Initial Study with Negative Declaration for the project. The Initial Study with Negative Declaration has been prepared in accordance with Caltrans' environmental procedures, as well as the California Environmental Quality Act (CEQA) and other State and federal environmental regulations. The Initial Study with Negative Declaration is the appropriate document for the proposal.

A CDFW 1600 Streambed Alteration Agreement and RWQCB 401 Certification will be required prior to construction.

Proposed improvements in the area of the existing FEMA Zone A Flood Zone and Zone AE Floodway west of Ridgecrest are intended to not increase stormwater flows, impervious areas, or fill material in order to avoid floodplain or floodway impacts that would otherwise require additional hydraulic analysis or permitting.

Considerations identified in the Environmental Document include the following:

- Special status animal and plant species: None are present, but preconstruction surveys will be required.
- Nesting birds: Preconstruction surveys will be required.
- Natural communities of special concern: Biological monitoring during initial ground-clearing activities, water diversion plan to ensure work occurs in dry conditions, and temporary construction BMPs to minimize potential erosion will be required.
- Hazardous materials: Preliminary site investigations may be required in location areas where contaminated materials may be encountered. Soils shall be tested for aerially deposited lead and soil and other materials shall be disposed of accordingly.
- Noise: There will be temporary elevated noise levels during construction.

Comments received during the circulation of the Draft Environmental Document and Draft Project Report include the following:

- Concerns regarding school access will be addressed with a Safe Routes to Schools study for the project area. An additional RRFB has been added to the project at Broadway Avenue in Inyokern.
- Concerns regarding highway drainage entering existing buildings in Inyokern will be investigated further during PS&E,

6F. Air Quality Conformity
The project limits lie within the Eastern Kern Air Pollution Control District. The Draft Environmental Document did not identify any air quality issues, nor did it note the need to conform to an air quality plan.

6G. Title VI Considerations
The project complies with the Title VI requirements. The project includes the following improvements and measures that would facilitate the mobility of low mobility groups such as the young, aged, handicapped, economically-disadvantaged and minority groups:

- Curb ramps, sidewalks and multi-use path
- Pedestrian crossings
- Widened shoulders and bicycle lane delineation
- Maintaining access during construction to existing services and pedestrian routes
- Maintaining access to existing transit services.

6H. Noise Abatement Decision Report
Project is a Type III project exempt from noise analysis (23CFR772). No further analysis is required.

6I. Life-Cycle Cost Analysis
This is a CAPM project with prescriptive pavement work that has been identified by Maintenance Engineering. As a result, a Life Cycle Cost Analysis is not applicable to this project.

6J. Reversible Lanes
This project does not qualify as a capacity-increasing or a major street or highway realignment project and consideration of reversible lanes is not required for the project.

7. OTHER CONSIDERATIONS

Public Hearing Process
The Draft Environmental Document (DED) was circulated for comment.

Permits
- Lahontan Regional Water Quality Control Board 401 Permit
- California Department of Fish & Wildlife 1602 Streambed Alteration Agreement (At this time, it is anticipated that no mitigation will be required for the CDFW 1602 permit.)
- Encroachment permits from Kern County and City of Ridgecrest

Cooperative Agreements
There are no existing cooperative agreements.

Report on Feasibility of Providing Access to Navigable Rivers
There are no traditional navigable waters within the project area.

Transportation Management Plan
A Traffic Management Plan (TMP) will be required for this project in the Plans, Specifications, and Estimate (PS&E) phase. The TMP will identify methods to reduce traffic delays, maintain traffic flow, and provide a safe environment for the work force, motorists, bicyclists, and pedestrians during construction. The following elements should be considered, as noted in the TMP Checklist in Attachment J:
 A public awareness campaign (radio, print, internet)
 Detour or alternative routes with signing
 Coordination with Kern County, City of Ridgecrest, the US Navy, and Kern Regional Transit.

A Traffic Handling Plan is included in Attachment N and discusses staging of construction. It includes plans for all 4 segments based on the constraints of the road geometry in that segment. These plans involve various traffic management strategies, including lane shifts and alternating traffic with flaggers during construction to minimize disruptions along State Highway 178. Suggestions for alternate routes via US 395 are provided to mitigate congestion; additionally particular attention is given to maintaining access to businesses and residences during construction.

Construction staging areas are strategically placed along the project route, offering adequate space for equipment and materials storage. Pedestrian and bicycle access during construction are ensured through detours, temporary ramps, and alternate routes to safeguard non-motorized traffic throughout the project, promoting safety and minimal disruption for pedestrians and cyclists. The suggestion for cyclists in particular involves alternative routes through Ridgecrest.

Accommodation of Oversize Loads
Proposed project will not change existing access for oversize loads. either during construction or after the project is complete.

Graffiti Control
Graffiti control is not applicable.

Asset Management
The asset management performance measures table is included as Attachment I. The project meets asset measure requirements in SHOPP Asset Performance Measure Report.

Complete Streets
Alternative 3 proposes to close all gaps in the ADA infrastructure by constructing sidewalk, driveways, and curb ramps in areas where they do not currently exist. Alternative 2 proposes to construct new sidewalk from Mahan St. (PM 99.03) to Triangle Dr. (PM 100.5). All 3 build alternatives will reconstruct the existing non-compliant curb ramps and driveways.

Alternatives 1, 2 and 3 will install a pedestrian signal and cross walk at the hospital entrance on Sydnor St., PM 101.34. Alternatives 1, 2 and 3 will install 2 pedestrian-activated flashing beacons and cross walks in Inyokern to enhance the school crossings. The crossings will require a signal standard with underground electrical lines, signage, striping, and ADA compliant ramps. A Safe Routes to Schools Survey (SR2S) will be performed to assess where additional pedestrian safety improvements may be appropriate.

Alternative 3 will construct a multi-use path and sidewalk in Inyokern, as well as bulbouts to provide shorter crossing distance and enhance visibility for pedestrians in the areas the multi-use path is proposed.

Alternatives 1 and 2 propose delineation of additional bike lanes where existing shoulder widths meet the Class 2 standard. Alternative 3 proposes additional Class 2 bike lane through widening the shoulder to 8’ to accommodate the bike lane.

Climate Change Considerations

The restored pavement will have an extended service life thus, reducing maintenance costs. The drainage upgrades will reduce the cost and need for weather related maintenance. The project will cause a temporary increase in greenhouse gas emissions during construction, but will not cause any increase in long-term greenhouse gas emissions. The project will consider upgrades to existing pipe sizes to increase capacity of drainage systems to convey flows from larger or more intense storm events from larger storm events anticipated as a result of climate change.

Broadband and Advance Technologies

This project will utilize six-inch striping on the roadway in the project area. This is one of the products that the autonomous vehicle manufacturers have identified as a product that they could possibly use for directing the vehicles along the state highway. Broadband facilities have not been identified by the District for inclusion in this project.

Stormwater

This project used the long form for the Storm Water Data Report (SWDR) based upon the disturbed soil area (DSA) being approximated over an acre (Attachment K).

It was determined that the project’s combined risk (Project Sediment Risk and the Receiving Water Risk) is level 1 using the risk determination tool. Alternative 3 has new impervious surface exceeding 1 acre, requiring treatment Best Management Practices (BMPs). Side slope infiltration, bioretention basins and infiltration areas would be potential candidates for treatment BMPs. Construction BMPs include physical controls such as inlet protection and fiber rolls as well as scheduling and site management. The project is not located in a Total Maximum Daily Load (TMDL) watershed where Caltrans is the named stakeholder.

There are three areas with drainage issues that will need to be addressed in the future. These include the discharges from the storm drain systems at the Ward Avenue and Drummond Avenue intersections in Ridgecrest, and at the east end of the project near San Bernardino Boulevard. These improvements may require acquiring easements or additional right-of-way, as well as coordination with the City of Ridgecrest for proper discharge of storm drainage from the Caltrans right-of-way. The problem areas could

not be addressed because of environmental and right of way concerns that were beyond the scope of this project.

8. ESTIMATE, FUNDING AND PROGRAMMING

Funding

It has been determined that this project is eligible for Federal-aid funding. The project will be funded from the State Highway Operations and Protection Program (20.XX.201.120).

Programming
This project was programmed into the 2022 SHOPP program as follows:

Fund Source	Fiscal Year Estimate								
20.XX.201.120	Prior	24/25	25/26	26/27	27/28	28/29	29/30	Future	Total
Component	In thousands of dollars ($1,000)								
PA&ED Support	$3,117								$3,117
PS&E Support		$4,000							$4,000
Right-of-Way Support		$3,800							$3,800
Construction Support						$9,100			$9,100
Right-of-Way						$3,400			$3,400
Construction						$34,7000			$34,7000
Total	$3,117	$7,800				$47,200			$58,117

The support cost ratio is 52.50%.

Estimate
Cost estimates for the project are attached. The current year construction and right-of-way costs for Alternative 2 are $46,079,900 and $1,669,000, respectively. The escalated construction and right-of-way costs for Alternative 2 are $59,285,585, which is more than the programmed amount, and $2,285,100, respectively.

9. DELIVERY SCHEDULE

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target/Actual)
PROGRAM PROJECT	M015	7/1/22	Actual
BEGIN ENVIRONMENTAL	M020	1/9/23	Actual
NOTICE OF PREPARATION (NOP)	M030	3/26/24	Target
NOTICE OF INTENT (NOI)	M035	3/26/24	Target
CIRCULATE DPR & DED EXTERNALLY	M120	3/26/24	Target
PA & ED	M200	6/17/24	Target

PS&E TO DOE	M377	9/26/29	Target
RIGHT OF WAY CERTIFICATION	M410	6/26/29	Target
READY TO LIST	M460	1/6/30	Target
HEADQUARTERS ADVERTISE	M480	3/31/30	Target
AWARD	M495	6/11/30	Target
APPROVE CONTRACT	M500	7/9/30	Target
CONTRACT ACCEPTANCE	M600	1/7/32	Target
END PROJECT EXPENDITURES	M800	6/7/34	Target
FINAL PROJECT CLOSEOUT	M900	4/9/36	Target

10. RISK SUMMARY

There are several risks associated with this project. The high impact risks identified include the following:

- Construction impacts to adjacent businesses and residents. Public communication and education should begin early. Construction strategies such as detours, night work, and alternative pedestrian and bicycle access should be implemented. Traffic management plans will be developed in PS&E.
- Inability to meet Americans with Disabilities Act (ADA) standards. Early design is ideal to foresee unachievable ADA curb ramp standards. Major changes in construction will cause several delays.
- Presence of listed species. Consultation with CDFW and USFWS will be needed. A CDFW 2081 ITP, USFWS BO, and/or mitigation may be required.
- 1600 permit mitigation required. Consultation with CDFW will be needed. Development of a mitigation plan may include mitigation credit purchase.
- Additional pedestrian safety features identified as a result of the SR2S Survey.
- Potential relocation of underground utilities
- Difficulties due to RW acquisition

Refer to Attachment F for more details on the Risk Register.

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)
This project is considered an Assigned Project in accordance with the current Federal Highway Administration (FHWA) and the Department of Transportation (Caltrans) 23 USC 327 NEPA Assignment Memorandum of Understanding.

The project requires the following coordination:

California Department of Fish and Wildlife
California Fish and Game Code Section1602
Lake or Streambed Alteration Agreement

Local Agency
Kern County, City of Ridgecrest, Naval Air Weapons Station (NAWS) China Lake
Regional Water Quality Control Board

Clean Water Act Section 401
Water Quality Certification

Other
Utility Companies
Private Landowners
Local Businesses
Southern Pacific Railroad
Ridgecrest Regional Hospital

12. PROJECT REVIEWS

Scoping team field review Date 12/9/2022
Scoping team field review attendance roster attached.
District Program Advisor *Brandon Fitt* Date 2/29/2024
District Maintenance *Terry Erlwein* Date 2/29/2024
Headquarters Project Delivery Coordinator Date
Project Manager *Jeremy Milos* Date 2/29/2024
FHWA Date
District Safety Review Date 2/29/2024
Constructability Review Date
Other Date

13. PROJECT PERSONNEL

Jeremy Milos	Project Manager	Project Management	760-874-8633
Cecilia Boudreau	Office Chief, Environmental	Environmental	760-874-8330
Ron Chegwidden	Design Manager	Engineering	760-874-8360
David Rodriguez	Senior Right of Way Agent	Right of Way	760-920-8613
Rebeka Riesen	Environmental Coordinator	Environmental	442-359-8454
Brandon Fitt	Asset Manager	Planning	760-874-8321
Kirsten Helton	Chief, Planning	Planning	760-874-8333
Justin Castleberry	Acting Maintenance Engineer	Maintenance	760-937-3758
Hin Hartanto	Construction Senior	Construction	760-937-3243
Lianne Talbot	Traffic Safety Engineer	Traffic Engineering	760-937-7826
Bradley Bowers	Environmental Engineer	Storm Water	760-874-8317
Jennifer Shonafelt	Traffic Operations Engineer	Traffic Operations	760-920-0204
Brian Cook	District Storm Water Coordinator	Storm Water	760-920-0209
Jennifer Roman	ESE	Engineering	775-291-6337
Bryan Elkins	ESE	Engineering	760-920-4948

14. ATTACHMENTS

A. Project Location Map
B. Preliminary Plans
C. Typical Sections
D. Final Environmental Document
E. Right of Way Data Sheet
F. Risk Register
G. Cost Estimates - 3 options
H. Traffic Data Report
I. Asset Management Performance Measures Table
J. Traffic Management Plan Checklist
K. Storm Water Data Report
L. Existing Conditions Tables
M. Ridgecrest-Inyokern Improvements Table
N. Traffic Handling Plan

Cost Estimate – 38330 (Parent EA)

Ridgecrest/Inyokern Pavement

EA: 09-38330

Type of Estimate: PA&ED Level **Program Code:** 201.120 Pavement Restoration

Project Limits: INY-178 **92.0** to **93.4** and
99.0 to **104.0**

Description: Pavement Restoration, drainge restoration and ADA Facilties improvements

Scope: 0.25' Mill and Fill and additioinal work to bring primary and satellite assests to good

Alternative:	**1 (Baseline and Programmable)**

	Current Cost	Escalated Cost
ROADWAY ITEMS **	$ 28,403,000	$ 34,772,000
STRUCTURE ITEMS **		$ -
SUBTOTAL CONSTRUCTION COST	$ 28,403,000	$ 34,772,254
RIGHT OF WAY **		
TOTAL CAPITAL OUTLAY COST	**$ 28,403,000**	**$ 34,772,254**

Date of Estimate	**7/15/2024**
Date of "Begin Construction"	**7/1/2030**
Date of "End Construction"	**6/1/2031**
Date of "Midpoint Construction"	12/15/2030
Months between "midpoint construction" and estimate date:	77.1
Annual Rate of Escalation (structure and roadway):	**3.2%**

** = Rounded to the nearest thousand dollars

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	$ 20,000
2	Pavement Structural Section	$ 10,447,550
3	Drainage	$ 400,000
4	Specialty Items	$ 4,224,950
5	Environmental	$ 627,000
6	Traffic Items	$ 2,675,500
7	Detours	$ 95,000
8	Minor Items	$ 924,500
9	Roadway Mobilization	$ 1,553,160
10	Supplemental Work	$ 565,000
11	State Furnished	$ 2,523,000
12	Time Related Overhead	$ 1,941,450
13	Contingencies	$ 2,405,566
	TOTAL ROADWAY ITEMS	**$ 28,402,676**

Estimate Prepared By: Kyle Greenhalgh 6/24/2024
Name Date

Estimate Reviewed By:
Name Date

Section 1: EARTHWORK

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
170103 Clearing & Grubbing	LS		$ 30,000	$ -
100100 Develop Water Supply	LS	1	$ 20,000	$ 20,000
190101 Roadway Excavation	CY		$ 40	$ -
198010 Imported Borrow (Cy)	CY		$ 45	$ -
TOTAL EARTHWORK ITEMS				**$ 20,000**

Section 2: PAVEMENT STRUCTURAL SECTION

Item Code and Item Name		*Unit*	*Quantity*	*Unit Cost*	*Cost*
190185	Shoulder Backing	CY		$ 50	$ -
304101A	COLD IN-PLACE RECYCLING	SQYD		$ 10.00	$ -
	Mix Design - PDR	LS		$ 25,000	$ -
304301A	EMULSIFIED RECYCLING AGENT (COLD IN-PLACE RECYCLING)	TON		$ 400	$ -
304201A	CEMENT (COLD IN-PLACE RECYCLING)	TON		$ 220	$ -
304401A	ASPHALTIC EMULSION (COLD IN-PLACE RECYCLING)	TON		$ 700	$ -
304500A	SAND COVER (COLD IN-PLACE RECYCLING)	TON		$ 100	$ -
390011	PREPAVING INERTIAL PROFILER	LS	1	$ 100,000	$ 100,000
398200	Cold Plane Asphalt Concrete Pavement	SQYD	1,600	$ 8.00	$ 12,800
120205	Class 2 Aggregate Base (Cy)	CY	2,200	$ 75.00	$ 165,000
	Tack Coat	TON	300	$ 750	$ 225,000
390132	Hot Mix Asphalt (Type A)	TON	60,150	$ 165	$ 9,924,750
	Cap AC dikes	LS	1	$ 20,000	$ 20,000
TOTAL PAVEMENT STRUCTURAL ITEMS					**$ 10,447,550**

Section 3: DRAINAGE

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
710210 Adjust Frame And Grate To Grade	LF	20	$ 4,000	$ 80,000
Drainage inlets	EA	2	$ 5,000	$ 10,000
Sydnor Draiange System	LS	1	$ 200,000	$ 200,000
Replace 24" CSP	LS	2	$ 50,000	$ 100,000
Rock Slope Protection	LS	1	$ 10,000	$ 10,000
TOTAL DRAINAGE ITEMS				**$ 400,000**

Section 4: SPECIALTY ITEMS

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
070030 Lead Compliance Plan	LS	1	$ 2,000	$ 2,000
070012 Progress Schedule (Critical Path Method)	LS	1	$ 10,000	$ 10,000
ADA Curb Ramps	CY	235	$ 4,000	$ 940,000
Curb and Gutter	CY	42	$ 800	$ 33,600
Sidewalk - minor concrete	CY	111	$ 850	$ 94,350
Driveway	EA	130	$ 14,500	$ 1,885,000
Remove Bridge Railing	LF	600	$ 100	$ 60,000
Bridge Rail	LF	600	$ 2,000	$ 1,200,000
TOTAL SPECIALTY ITEMS				**$ 4,224,950**

Section 5: ENVIRONMENTAL

Section 5a: ENVIRONMENTAL MITIGATION

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
141120 Treated Wood Waste (guardrail post)	LS	1	$ 20,000	$ 20,000
Contractor Supplied Biologist	LS		$ -	$ -
Annual 401 Permit Fee	EA	5	$ 2,500	$ 12,500
141000 Temporary Fence (Type ESA)	LS	1	$ 3,500	$ 3,500
SUBTOTAL ENVIRONMENTAL MITIGATION				$ 36,000

Section 5B: LANDSCAPE AND IRRIGATION

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
				$ -
				$ -
				$ -
SUBTOTAL LANDSCAPE AND IRRIGATION				$ -

Section 5C: NPDES

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
074037 Move-In/Move Out (Temp Erosion Control)	EA	600	$ 500	$ 300,000
130620 Temporary Drainage Inlet Protection	EA	30	$ 300	$ 9,000
130640 Temporary Fiber Roll	LF	4,000	$ 8.00	$ 32,000
130100 Job Site Management	LS	1	$ 40,000	$ 40,000
130300 Prepare Storm Water Pollution Prevention Plan	LS	1	$ 6,000	$ 6,000
130330 Stormwater Annual Report	LS	2	$ 2,000	$ 4,000
Temporary Concrete Washout	LS	1	$ 80,000	$ 80,000
Street Sweeping	LS	1	$ 120,000	$ 120,000
SUPPLEMENTAL WORK FOR NPDES				
(These costs are not accounted in total here but under Supplemental Work Section).				
066595 Water Pollution Control Maintenance Sharing	LS	1	$ 12,000	$ 12,000
066596 Additional Water Pollution Control**	LS	1	$ 12,000	$ 12,000
SUBTOTAL NPDES (Without Supplemental Work)				$ 591,000

** 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.*

TOTAL ENVIRONMENTAL ITEMS	**$ 627,000**

Section 6: TRAFFIC ITEMS

Section 6A: Traffic Electrical

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
870112 Inductive Loop Detectors	EA	20	$ 2,000	$ 40,000
870009 Elements During Construction	EA	1	$ 8,000	$ 8,000
8760600 Traffic Monitoring Station System	EA	1	$ 108,000	$ 108,000
Pedestrian Hybrid Beacon, Mast Arm	EA	1	$ 150,000	$ 150,000
Retangual Rapid Flahsing Beacon, Mast Arm	EA	2	$ 100,000	$ 200,000
SUBTOTAL TRAFFIC ELECTRICAL				$ 506,000

Section 6B: Traffic Signing and Striping

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
120090 Construction Area Signs	LS	1	$ 80,000	$ 80,000
840516 Thermoplastic Pavement Marking (Enhanced Wet Night Visibility)	SQFT	3,000	$ 8.00	$ 24,000
Roadside Signs (Furnish & Install 1-post, 2-post, & Turnable)	EA	280	$ 725	$ 203,000
846007 6" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	270,000	$ 2.25	$ 607,500
846051 12" Rumble Strip (Asphalt Concrete Pavement)	STA	1,500	$ 30	$ 45,000
Edgeline Delineators	LS	1	$ 50,000	$ 50,000
				$ -
SUBTOTAL TRAFFIC SIGNING AND STRIPING				$ 1,009,500

Section 6C: Stage Construction and Traffic Handling

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
120100 Traffic Control System	LS	1	$ 1,100,000	$ 1,100,000
120201 Portable Radar Speed Feedback Sign System	LS	1	$ 60,000	$ 60,000
SUBTOTAL TRAFFIC SIGNING AND STRIPING				$ 1,160,000

TOTAL TRAFFIC ITEMS	**$ 2,675,500**

Section 7: DETOURS

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
124000 Temporary Pedestrian Access Route	LS	1	$ 95,000	$ 95,000
TOTAL DETOURS (Bridge Construction)				**$ 95,000**

SUBTOTAL SECTIONS 1-7 — $ 18,490,000

Section 8: MINOR ITEMS

8A - Americans with Disabilities Act Items			
ADA Items		1.5%	$ 277,350.00
8B - Bike Path Items			
Bike Path Items		1.0%	$ 184,900.00
8C - Other Minor Items		3%	
Other Minor Items (% of subtotal sections 1-7)	$ 18,490,000		$ 462,250
TOTAL MINOR ITEMS			**$ 924,500**

Section 9: MOBILIZATION

Total Section 1-8	$	19,414,500	
Percentage of Section 1-8		8%	
TOTAL MOBILIZATION			**$ 1,553,160**

Section 10: SUPPLEMENTAL WORK

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
066090 Maintain Traffic	LS	1	$ 100,000	$ 100,000
066393 HMA Smoothness Incentive	LS	1	$ 60,000	$ 60,000
066015 Rederal Trainee Program	LS	1	$ 5,000	$ 5,000
066094 Value Analysis	LS	1	$ 10,000	$ 10,000
066670 Payment Adjustments For Price Index Flux	LS	1	$ 350,000	$ 350,000
066700 Partnering	LS	1	$ 25,000	$ 25,000
066920 Dispute Resolution Board	LS	1	$ 15,000	$ 15,000
TOTAL SUPPLEMENTAL WORK				**$ 565,000**

Section 11: STATE FURNISHED MATERIALS AND EXPENSES

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
066916 Annual Construction General Permit Fee	LS	1	$ 3,000	$ 3,000
066105 RE Office	LS	1	$ 20,000	$ 20,000
066062 COZEEP Expenses	LS	1	$ 2,500,000	$ 2,500,000
TOTAL STATE FURNISHED MATERIALS AND EXPENSES				**$ 2,523,000**

Section 12: TIME-RELATED OVERHEAD

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) * =		10%	
TRO only paid on Bid Items (minus Mob) Section 1-8	$	19,414,500	
TOTAL TIME RELATED OVERHEAD			**$ 1,941,450**

Section 13: CONTINGENCY

(Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11 (does not include TRO)	$	24,055,660	
		10%	
TOTAL CONTINGENCY			**$ 2,405,566**

Cost Estimate – 38331 (Child EA)

Inyokern CAPM

EA: 09-38331

Type of Estimate: PA&ED Level **Program Code:** 201.121 CAPM

Project Limits: INY-178 **88.6** to **92.0** and
93.4 to **99.0**

Description: Restore Pavement condition

Scope: 0.33 Partial Depth Recycle with 0.25' HMA Overlay
0.30' Mill'n'Fill - Two Culvert Replacements

Alternative: **1 (Baseline and Programmable)**

	Current Cost	Escalated Cost
ROADWAY ITEMS **	$ 20,988,000	$ 22,981,000
STRUCTURE ITEMS **		$ -
SUBTOTAL CONSTRUCTION COST	$ 20,988,000	$ 22,980,585
RIGHT OF WAY **		
TOTAL CAPITAL OUTLAY COST	**$ 20,988,000**	**$ 22,980,585**

Date of Estimate	**7/15/2024**
Date of "Begin Construction"	**3/1/2027**
Date of "End Construction"	**9/1/2027**
Date of "Midpoint Construction"	6/1/2027
Months between "midpoint construction" and estimate date:	34.6
Annual Rate of Escalation (structure and roadway):	**3.2%**

** = Rounded to the nearest thousand dollars

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	**Earthwork**	$ 1,288,000
2	**Pavement Structural Section**	$ 12,560,300
3	**Drainage**	$ 185,000
4	**Specialty Items**	$ 12,000
5	**Environmental**	$ 188,500
6	**Traffic Items**	$ 984,600
7	**Detours**	$ -
8	**Minor Items**	$ 760,920
9	**Roadway Mobilization**	$ 1,278,346
10	**Supplemental Work**	$ 306,500
11	**State Furnished**	$ 63,000
12	**Time Related Overhead**	$ 1,597,932
13	**Contingencies**	$ 1,762,717
	TOTAL ROADWAY ITEMS	**$ 20,987,814**

Estimate Prepared By: Kyle Greenhalgh 6/20/2024
Name Date

Estimate Reviewed By:
Name Date

Section 1: EARTHWORK

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
170103 Clearing & Grubbing	LS	1	$ 30,000	$ 30,000
100100 Develop Water Supply	LS	1	$ 20,000	$ 20,000
190101 Roadway Excavation	CY	10,800	$ 35	$ 378,000
198010 Imported Borrow (Cy)	CY	21,500	$ 40	$ 860,000
TOTAL EARTHWORK ITEMS				**$ 1,288,000**

Section 2: PAVEMENT STRUCTURAL SECTION

Item Code and Item Name		*Unit*	*Quantity*	*Unit Cost*	*Cost*
190185	Shoulder Backing	CY	6,340	$ 50	$ 317,000
304101A	COLD IN-PLACE RECYCLING	SQYD	310,000	$ 8.00	$ 2,480,000
	Mix Design - PDR	LS	1	$ 25,000	$ 25,000
304301A	EMULSIFIED RECYCLING AGENT (COLD IN-PLACE RECYCLING)	TON	1,610	$ 400	$ 644,000
304201A	CEMENT (COLD IN-PLACE RECYCLING)	TON	650	$ 220	$ 143,000
304401A	ASPHALTIC EMULSION (COLD IN-PLACE RECYCLING)	TON	190	$ 650	$ 123,500
304500A	SAND COVER (COLD IN-PLACE RECYCLING)	TON	310	$ 100	$ 31,000
390011	PREPAVING INERTIAL PROFILER	LS	1	$ 75,000	$ 75,000
398200	Cold Plane Asphalt Concrete Pavement	SQYD	1,600	$ 8.00	$ 12,800
120205	Class 2 Aggregate Base (Cy)	CY			
	Tack Coat	TON	300	$ 750	$ 225,000
390132	Hot Mix Asphalt (Type A)	TON	52,900	$ 160	$ 8,464,000
	Cap AC dikes	LS	1	$ 20,000	$ 20,000
TOTAL PAVEMENT STRUCTURAL ITEMS					**$ 12,560,300**

Section 3: DRAINAGE

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
710210 Adjust Frame And Grate To Grade	LF	20	$ 2,500	$ 50,000
Replace double CSP at 35+00 (Sys # 501784008905)	LS	1	$ 30,000	$ 30,000
Replace 24" CSP at 48+00 (Sys # 501786008929)	LS	1	$ 40,000	$ 40,000
Richmond Drainage system	LS	1	$ 50,000	$ 50,000
Rock Slope Protection	LS	1	$ 15,000	$ 15,000
TOTAL DRAINAGE ITEMS				**$ 185,000**

Section 4: SPECIALTY ITEMS

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
070030 Lead Compliance Plan	LS	1	$ 2,000	$ 2,000
070012 Progress Schedule (Critical Path Method)	LS	1	$ 10,000	$ 10,000
TOTAL SPECIALTY ITEMS				**$ 12,000**

Section 5: ENVIRONMENTAL

Section 5a: ENVIRONMENTAL MITIGATION

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
141120 Treated Wood Waste (guardrail post)	LS	1	$ 15,000	$ 15,000
Contractor Supplied Biologist	LS		$ -	$ -
Annual 401 Permit Fee	EA	5	$ 2,500	$ 12,500
141000 Temporary Fence (Type ESA)	LS	1	$ 3,500	$ 3,500
SUBTOTAL ENVIRONMENTAL MITIGATION				$ 31,000

Section 5B: LANDSCAPE AND IRRIGATION

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
				$ -
				$ -
				$ -
SUBTOTAL LANDSCAPE AND IRRIGATION				$ -

Section 5C: NPDES

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
074037 Move-In/Move Out (Temp Erosion Control)	EA	3	$ 3,500	$ 10,500
130620 Temporary Drainage Inlet Protection	EA	30	$ 300	$ 9,000
130640 Temporary Fiber Roll	LF	4,000	$ 8.00	$ 32,000
130100 Job Site Management	LS	1	$ 25,000	$ 25,000
130300 Prepare Storm Water Pollution Prevention Plan	LS	1	$ 6,000	$ 6,000
Temporary Erosion Control	LS	1	$ 75,000	$ 75,000
SUPPLEMENTAL WORK FOR NPDES				
(These costs are not accounted in total here but under Supplemental Work Section).				
066595 Water Pollution Control Maintenance Sharing	LS	1	$ 12,000	$ 12,000
066596 Additional Water Pollution Control**	LS	1	$ 12,000	$ 12,000
SUBTOTAL NPDES (Without Supplemental Work)				$ 157,500

* *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.*

TOTAL ENVIRONMENTAL ITEMS	**$**	**188,500**

Section 6: TRAFFIC ITEMS

Section 6A: Traffic Electrical

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
				$ -
870112 Inductive Loop Detectors	EA	8	$ 1,700	$ 13,600
SUBTOTAL TRAFFIC ELECTRICAL				$ 13,600

Section 6B: Traffic Signing and Striping

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
120090 Construction Area Signs	LS	1	$ 30,000	$ 30,000
840516 Thermoplastic Pavement Marking (Enhanced Wet Night Visibility)	SQFT	3,000	$ 8.00	$ 24,000
Roadside Signs (Furnish & Install 1-post, 2-post, & Turnable)	EA	20	$ 1,600	$ 32,000
846007 6" Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	270,000	$ 1.50	$ 405,000
846051 12" Rumble Strip (Asphalt Concrete Pavement)	STA	1,500	$ 30	$ 45,000
Edgeline Delineators	LS	1	$ 50,000	$ 50,000
				$ -
SUBTOTAL TRAFFIC SIGNING AND STRIPING				$ 586,000

Section 6C: Stage Construction and Traffic Handling

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
120100 Traffic Control System	LS	1	$ 350,000	$ 350,000
120201 Portable Radar Speed Feedback Sign System	LS	1	$ 35,000	$ 35,000
SUBTOTAL TRAFFIC SIGNING AND STRIPING				$ 385,000

TOTAL TRAFFIC ITEMS	**$ 984,600**

Section 7: DETOURS

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
	LS	1		$ -
TOTAL DETOURS (Bridge Construction)				**$ -**

SUBTOTAL SECTIONS 1-7	**$ 15,218,400**

Section 8: MINOR ITEMS

8A - Americans with Disabilities Act Items			
ADA Items			
8B - Bike Path Items			
Bike Path Items		2.0%	$ -
8C - Other Minor Items		3%	
Other Minor Items (% of subtotal sections 1-7)	$ 15,218,400		$ 760,920
TOTAL MINOR ITEMS			**$ 760,920**

Section 9: MOBILIZATION

Total Section 1-8	$	15,979,320	
Percentage of Section 1-8		8%	
TOTAL MOBILIZATION			**$ 1,278,346**

Section 10: SUPPLEMENTAL WORK

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
066090 Maintain Traffic	LS	1	$ 4,000	$ 4,000
066393 HMA Smoothness Incentive	LS	1	$ 80,000	$ 80,000
066595 Water Pollution Control Maintenance Sharing	LS	1	$ 12,000	$ 12,000
066596 Additional Water Pollution Control	LS	1	$ 6,000	$ 6,000
066094 Value Analysis	LS	1	$ 10,000	$ 10,000
066670 Payment Adjustments For Price Index Flux	LS	1	$ 175,000	$ 175,000
066700 Partnering	LS	1	$ 12,000	$ 12,000
066920 Dispute Resolution Board	LS	1	$ 7,500	$ 7,500
TOTAL SUPPLEMENTAL WORK				**$ 306,500**

Section 11: STATE FURNISHED MATERIALS AND EXPENSES

Item Code and Item Name	*Unit*	*Quantity*	*Unit Cost*	*Cost*
066916 Annual Construction General Permit Fee	LS	1	$ 3,000	$ 3,000
066105 RE Office	LS	1	$ 10,000	$ 10,000
066062 COZEEP Expenses	LS	1	$ 50,000	$ 50,000
TOTAL STATE FURNISHED MATERIALS AND EXPENSES				**$ 63,000**

Section 12: TIME-RELATED OVERHEAD

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) * =		10%	
TRO only paid on Bid Items (minus Mob) Section 1-8	$	15,979,320	
TOTAL TIME RELATED OVERHEAD			**$ 1,597,932**

Section 13: CONTINGENCY

(Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11 (does not include TRO)	$	17,627,166	
		10%	
TOTAL CONTINGENCY			**$ 1,762,717**

Project Split Matrix

Split Matrix

Parent Project

Project ID	District	EA	PPNO	Program	Program Code
0919000069	9	38330	2685	SHOPP	02.xx.201.120
County	**Route**	**Post Miles**	**FY Con**		
Kern	178	88.6/104.6	2027/28		
Description					
In and near Ridgecrest, from Route 14 to San Bernardino County line. Rehabilitate pavement and drainage systems, upgrade lighting and Transportation Management System (TMS) elements, replace guardrail and sign panels, upgrade facilities to Americans with Disabilities Act (ADA) standards, and construct Class 2 bike lanes as complete street elements. (Long Lead Project)					
		SHOPP Funded (x$1,000)			
Phase	**Programmed Amount**	**Expended**	**Additional Need**	**Total Proposed**	**FY**
PAED	$ 3,117	$ 773		$ 3,117	22/23
PS&E	$ 4,865	$ -		$ 5,600	23/24
R/W Supp	$ 3,878	$ -		$ 3,880	23/24
Con Supp	$ 11,133			$ 11,020	27/28
R/W Cap	$ 3,072			$ 3,450	27/28
Con Cap	$ 50,569			$ 57,670	27/28
Total	**$ 76,634**	**$ 773**	**$ -**	**$ 84,737**	

Performance:	Value	Units
	56.7	Lane Miles

Cond:	Good	Fair	Poor	New
Pre		56.7		
Post	56.7			

Child Project

Project ID	District	EA	PPNO	Program	Program Code
0923000054	9	38331	4025	SHOPP	02.xx.201.120
County	**Route**	**Post Miles**	**FY Con**		
Kern	178	88.6/92.0, R93.4/99.0	26/2027		
Description					
In Kern County At and Near Inyokern from 0.2 Mile East of Route 14 to Redrock Inyokern Road and from Clodt Road to 0.2 Mile West of Mahan Street. Rehabilitate pavement and drainage system and construct Class 2 bike lanes as complete street elements.					
		SHOPP Funded (x$1,000)			
Phase	**Programmed Amount**	**Expended**	**Additional Need**	**Total Proposed**	**FY**
PAED					
PS&E	$ 1,600	$ -		$ 1,600	23/24
R/W Supp	$ 80	$ -		$ 80	23/24
Con Supp	$ 1,920			$ 1,920	26/27
R/W Cap	$ 50			$ 50	26/27
Con Cap	$ 22,970			$ 22,970	26/27
Total	**$ 26,620**	**$ -**	**$ -**	**$ 26,620**	

Performance:	Value	Units
	31	Lane Miles

Cond:	Good	Fair	Poor	New
Pre	5.5	25.6	0	
Post	31			

Parent Project

Project ID	District	EA	PPNO	Program	Program Code
0919000069	9	38330	2685	SHOPP	02.xx.201.120
County	**Route**	**Post Miles**	**FY Con**		
Kern	178	92.0/R93.4, 99.0/104.6	2029/30		
Description					
In Kern County At Inyokern from Redrock Inyokern Road to Clodt Road and In and Near Ridgecrest from 0.2 Mile West of Mahan Street to San Bernardino County Line. Rehabilitate pavement and drainage systems, upgrade lighting and Transportation Management System (TMS) elements, replace guardrail and sign panels, upgrade facilities to Americans with Disabilities Act (ADA) standards, and construct Class 2 bike lanes as complete street elements. (Long Lead)					
		SHOPP Funded (x$1,000)			
Phase	**Programmed Amount**	**Expended**	**Additional Need**	**Total Proposed**	**FY**	**Split % of Programmed**
PAED						
PS&E	$3,265	$0	$735	$4,000	24/25	82.22%
R/W Supp	$3,798	$0	$2	$3,800	24/25	97.99%
Con Supp	$9,213	$0	-$113	$9,100	29/30	81.74%
R/W Cap	$3,022	$0	$378	$3,400	29/30	110.68%
Con Cap	$27,599	$0	$7,101	$34,700	29/30	68.62%
Total	**$46,897**	**$0**	**$8,103**	**$55,000**		

Performance:	Value	Units
	23.8	Lane Miles

Cond:	Good	Fair	Poor	New
Pre		23.8		
Post	23.8			

Asset Performance – Parent EA 09-38330

SHOPP Project - Accomplishment - Performance Measures - Benefits

District: 09 **Tool ID:** 20351 **Project ID:** 0919000069 **EA:** 38330 **Co-Rte-PM:** All Locations View/Print PIR (Performance) Report

Multi-Objective Worksheet | Bridge B | Pavement P | Drainage D | Facilities | Signs and Lighting | Mobility TMS | Roadside | Bicycle and Pedestrian Infrastructure | Sustainability /Climate Change | Advance Mitigation /Mitigation | Major Damage & Betterments | Green-house Gases | Relinquishment

Performance & Accomplishments (PRG)

	ActID	Activity Detail	Performance Objective	Unit of Measurement	Quantity	Pre-Good	Pre-Fair	Pre-Poor	New	Post-Good	Post-Fair	Post-Poor	HQ Program Review - Agree with District?	HQ Comment	Review Date	Performance Change Date After Review	Comment
1	A03	Bridge Rail (201.112)	Bridge Rail Replacement and Upgrade	Linear Feet	604.000	604.000				604.000							
2	A08	Number of Bridges	No Performance Objective in the SHSMP	Each	1.000												
3	B22	Asphalt Pavement Major Rehab	Pavement Class I	Lane Miles	6.432		6.432			6.432							
4	B22	Asphalt Pavement Major Rehab	Pavement Class II	Lane Miles	14.528		14.528			14.528							
5	B25	Asphalt Pavement Minor Rehab (CAPM)	Pavement Class I	Lane Miles	0.308		0.308			0.308							
6	B25	Asphalt Pavement Minor Rehab (CAPM)	Pavement Class II	Lane Miles	2.456		2.456			2.456							
7	C01	Replace/Install Culverts (201.151)	No Performance Objective in the SHSMP	Each	1.000	1.000				1.000							
8	C02	Replace/Install Culverts (201.151)	Drainage Restoration	Linear Feet	111.300	111.300				111.300							
9	E07	Guard Rail (201.010, .015)	No Performance Objective in the SHSMP	Linear Feet	240.000			240.000		240.000							
10	E23	Collisions Reduced (201.015)	Collision Severity Reduction	Fatal/Serious Injury Collisions	0.200			0.200		0.200							
11	E24	Lighting - Rehabilitation (201.170)	Lighting Rehabilitation	Each	18.000			18.000		18.000							
12	E55	Proactive Safety Vehicles	Proactive Safety	Annual Fatal & Serious Injury Collisions	0.010			0.010		0.010							
13	F01	Census Station (201.315)	No Performance Objective in the SHSMP	Each	2.000	2.000				2.000							
14	F11	Traffic Signals	No Performance Objective in the SHSMP	Each	7.000	7.000				7.000							
15	F23	ADA - New Curb Ramp Installed (201.361)	No Performance Objective in the SHSMP	Each	3.000				3.000								
16	F24	ADA - Repair/Upgrade Curb Ramp (201.361)	No Performance Objective in the SHSMP	Each	84.000			84.000		84.000							
17	F39	Traffic Signals (201.315)	No Performance Objective in the SHSMP	Each	6.000	6.000				6.000							
18	F43	ADA - Deficient Elements	ADA Pedestrian Infrastructure	Deficient Elements	87.000			84.000	3.000	84.000							
19	F46	TMS Technology Component	Transportation Management Systems	Each	8.000	8.000				8.000							
20	H13	Crosswalks	No Performance Objective in the SHSMP	Linear Feet	1.000				1.000								
21	H21	Sidewalks (less than 8 feet)	No Performance Objective in the SHSMP	Linear Feet	2000.000				2000.000								
22	H32	Is any Location Within the Project Limits Ped/Bike Accessible?	No Performance Objective in the SHSMP	Yes/No	Yes												
23	H63	Bicycle and Pedestrian Infrastructure	Bicycle and Pedestrian Infrastructure	Linear Feet	2001.000				2001.000								

(Last Saved - 10/11/23 @ 9:19 AM by Mara Chaudhari)

Programming Performance Summary (All Locations)

Program Code	Activity Category	Asset Class	Asset	Performance Value	Performance Measure	Unit	Pre-Good	Pre-Fair	Pre-Poor	Pre-Total	Post Good	New	Post Good+New	Post-Fair	Post-Poor	Post-Total
201.120	Pavement - Roadway Rehabilitation 3R	Primary	Pavement	23.7	Lane mile(s)	Lane mile(s)	0.0	23.7	0.0	23.7	23.7	0.0	23.7	0.0	0.0	23.7

Notes:

1. The crosswalk for reporting performance in the "Programming Performance Summary" was developed to assist the districts on performance reporting requirements for CTC and PCRs. For discrepancies or errors, please notify AM Tool admins via e-mail at CT-TAM@dot.ca.gov.
2. The data summarized in the table represents the performance reported or to be reported in CTIPS.
3. Programming only requires the breakdown of Good, Fair and Poor for Primary and Supplementary Asset Classes.
4. Reporting of bridge pre and post conditions may contain errors if the project RTL is before 2024/25.
5. Reporting drainage pre-total and post good may differ whenever projects contain abandoned/removed culverts as the culvert no longer exists at post construction, is deleted from the pre-total value for posting of the post good value, and gets deleted from the statewide CIP inventory database.
6. Reactive Safety projects will temporally use the same performance outputs of Safety Improvement projects. When the reporting requirements for CTC changes, the logic in the AM Tool will change.
7. During the transition to the new Proactive Safety objective, the performance output for projects with a primary activity category of Proactive Safety (under program codes 015, 112, or 235) will continue to be presented here in the units of measure corresponding to the activities historically reported to date. A change in units to "Annual Fatal and Serious Injury Collisions" for future programming requests is being planned.

Asset Performance – Child EA 09-38331

SHOPP Project - Accomplishment - Performance Measures - Benefits

District: 09 **Tool ID:** 23933 **Project ID:** 0923000054 **EA:** 38331 **Co-Rte-PM:** All Locations View/Print PIR (Performance) Report

Multi-Objective Worksheet | Bridge | Pavement P | Drainage D | Facilities | Signs and Lighting | Mobility | Roadside | Bicycle and Pedestrian Infrastructure | Sustainability /Climate Change | Advance Mitigation /Mitigation | Major Damage & Betterments | Green-house Gases | Relinquishment

Performance & Accomplishments (PRG)

	ActID	Activity Detail	Performance Objective	Unit of Measurement	Quantity	Pre-Good	Pre-Fair	Pre-Poor	New	Post-Good	Post-Fair	Post-Poor	HQ Program Review - Agree with District?	HQ Comment	Review Date	Performance Change Date After Review	Comment
1	B25	Asphalt Pavement Minor Rehab (CAPM)	Pavement Class I	Lane Miles	22.428	5.503	16.925			22.428							
2	B25	Asphalt Pavement Minor Rehab (CAPM)	Pavement Class II	Lane Miles	8.605		8.605			8.605							
3	C01	Replace/Install Culverts (201.151)	No Performance Objective in the SHSMP	Each	2.000	2.000				2.000							
4	C02	Replace/Install Culverts (201.151)	Drainage Restoration	Linear Feet	357.830	357.830				357.830							
5	H06	Bikeway Class II	No Performance Objective in the SHSMP	Linear Feet	29568.000				29568.000								
6	H32	Is any Location Within the Project Limits Ped/Bike Accessible?	No Performance Objective in the SHSMP	Yes/No	Yes												
7	H63	Bicycle and Pedestrian Infrastructure	Bicycle and Pedestrian Infrastructure	Linear Feet	29568.000				29568.000								

(Last Saved - 10/11/23 @ 9:23 AM by Mara Chaudhari)

Programming Performance Summary (All Locations)

Program Code	Activity Category	Asset Class	Asset	Performance Value	Performance Measure	Unit	Pre-Good	Pre-Fair	Pre-Poor	Pre-Total	Post Good	New	Post Good+New	Post-Fair	Post-Poor	Post-Total
201.121	Pavement - Pavement Preservation	Primary	Pavement	31.0	Lane mile(s)	Lane mile(s)	5.5	25.5	0.0	31.0	31.0	0.0	31.0	0.0	0.0	31.0

Notes:

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2. The data summarized in the table represents the performance reported or to be reported in CTIPS.
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5. Reporting drainage pre-total and post good may differ whenever projects contain abandoned/removed culverts as the culvert no longer exists at post construction, is deleted from the pre-total value for posting of the post good value, and gets deleted from the statewide CIP inventory database.
6. Reactive Safety projects will temporally use the same performance outputs of Safety Improvement projects. When the reporting requirements for CTC changes, the logic in the AM Tool will change.
7. During the transition to the new Proactive Safety objective, the performance output for projects with a primary activity category of Proactive Safety (under program codes 015, 112, or 235) will continue to be presented here in the units of measure corresponding to the activities historically reported to date. A change in units to "Annual Fatal and Serious Injury Collisions" for future programming requests is being planned.