

Memorandum

*Serious drought.
Help Save Water!*

To: Michael B. Johnson
State Asset Management Engineer

Date: August 13, 2015

From:  AMARJEET BENIPAL
District 3 Director



Subject: **SHOPP ASSET MANAGEMENT PILOT PROGRAM**

Please find attached the enclosed application for the **SR 20/SR 99 Revitalization Project** application. The project is on SR 99 and SR 20 in Yuba City. This project proposes two options:

- Option A includes a 20.16 lane miles Hot Mix Asphalt Concrete (HMA) pavement rehabilitation on SR 20
- Option B includes a 20.16 lane miles HMA pavement rehabilitation on SR 20 and Portland Cement Concrete (PCC) pavement rehabilitation at two SR 20 intersection on Gray Avenue and Walton Avenue.

Both project options A & B also includes:

- Curb cuts and sidewalk improvements to conform with ADA standards;
- ADA compliant pedestrian signals installation;
- Signal integration and fiber optic cable installation on SR 20 from Township Road to Feather River Bridge;
- Highway planting rehabilitation and irrigation improvements;
- Culvert rehabilitation;
- Roadside safety improvements to pave narrow median areas and relocate signal poles;
- Operational improvements on SR 20 to extend the westbound (WB) merge lane near SR 20/SR 99 intersection, Bridge Street to be redesigned to receive dual lefts on SR 99, and SR 20/Live Oak Boulevard intersection in compliance with STAA standards; and
- Intersection improvements on SR 20 WB off-ramp intersection at Sutter Street.

This project is a multi-agency partnership with Yuba City and Caltrans and is intended to leverage SHOPP funding with SACOG Community Design Program being pursued by Yuba City. This pilot project and Yuba City's Highway 20 Revitalization project will both complement each other with the goals of improving mobility on the corridor and implementing the principles of smart mobility and *complete streets*.

Michael B. Johnson
State Asset Management Engineer
August 13, 2015
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All cost estimates are preliminary at the time of this submittal.

If you have any questions, please contact Sergio Aceves at (530) 741-5120 or via email at sergio.aceves@dot.ca.gov. Thank you for your consideration.

Attachment(s)

- (1) SR 99 Live Oak Livable Downtown Corridor Project Application



SHOPP Asset Management Pilot Request Form

SHOPPCPR: Ver 3 11/14

Submittal Date Division of Transportation Programming
State Highway Operation and Protection Program (SHOPP)Project Manager Phone

Dist	County	Route	Prefix	PM	Prefix	PM	EA	PPNO	Project ID
03	Sutter	20, 99		12.6		17	TBD	TBD	TBD

 Includes Multiple Locations (Complete Page 2 of this Form)MPO:

Project Location/Description (Include the nearest city, town or landmark)

OPTION A: On State Route-20 and 99 within the vicinity of the City of Yuba City, from Township Rd to the Feather River Bridge, and on SR-99 from Bridge Street to intersection with SR-20.
Construct Roundabout, Improve curves for STAA trucks, extend WB merge lane west of SR-99, re-design Bridge Street to receive dual left turn lanes from SR-99, perform pavement preservation and rehabilitation work, improve signal integration by installing fiber optic cable, bring all facilities up to current Caltrans ADA standards and add sidewalks were currently missing, rehabilitate 50 culverts, rehabilitate existing highway planting areas, and pave narrow median areas and relocate signal poles to improve worker safety.

Need for project and proposed improvements (Elaborate using PID language)

This project proposes to Construct Roundabout, Improve curves to meet STAA requirements, extend WB merge lane west of SR-99, redesign Bridge Street to receive dual left turn lanes from SR-99, perform pavement preservation and rehabilitation work, improve signal integration by installing fiber optic cable, bring all facilities up to current Caltrans ADA standards and add sidewalks were currently missing, rehabilitate 50 culverts, rehabilitate existing highway planting areas, and pave narrow median areas and relocate signal piles to improve worker safety.

Project located on State Route-20 & 99 from Township Rd to the Feather River Bridge, and on SR-99 from Bridge Street to intersection with SR-20 to provide for increased safety, improved operations, rehabilitated pavement, reduced congestion, ensure pedestrian facilities meet current ADA standards, extend the service life of drainage systems and planting areas, and improved worker safety.

PA&ED / M200 R/W Cert / M410 CCA / M600 PS&E / M380 RTL / M460 END Project / M800

Support (\$1,000)

Capital (\$1,000)
(Escalated to FY of Programming)

	FY	Cost
R/W	2021/22	\$300
Construction	2021/22	\$15,705
Total Capital		\$16,005

	FY	Cost
PA & ED	2018/19	\$900
PS & E	2020/21	\$1,360
R/W	2020/21	\$225
Construction	2021/22	\$2,055
Total Support		\$4,540

Legislative District Numbers
(Separate multiple Districts with a comma)

State Assembly	3
State Senate	4
Congressional	3

 Approved DeniedCAPITAL CONSTRUCTION
COST ESCALATION RATE

District SFP (Print) <i>fox</i>	<input type="text" value="Thomas L Brannon"/>	District SFP (Sign)	<i>Paulene Dixon</i>	Phone	<input type="text" value="(530) 740-4846"/>
District Director (Print) <i>FDR</i>	<input type="text" value="Amarjeet S Benipal"/>	District Director (Sign)	<i>Tom Benipal</i>	Phone	<input type="text" value="(530) 741-4233"/>
SHOPP Exec. (Print)	<input type="text"/>	SHOPP Exec. (Sign)	<input type="text"/>	Phone	<input type="text"/>



SHOPP Asset Management Pilot Request Form

SHOPPCPR: Ver 3 11/14

Submission Date

Division of Transportation Programming
State Highway Operation and Protection Program (SHOPP)

Project Manager

Phone

Dist	County	Route	Prefix	PM	Prefix	PM	EA	PPNO	Project ID
03	Sutter	20, 99		12.6		17	TBD	TBD	TBD

Includes Multiple Locations (Complete Page 2 of this Form)

MPO:

Project Location/Description (Include the nearest city, town or landmark)

OPTION B: On State Route-20 and 99 within the vicinity of the City of Yuba City, from Township Rd to the Feather River Bridge, and on SR-99 from Bridge Street to intersection with SR-20.
Construct Roundabout, Improve curves for STAA trucks, extend WB merge lane west of SR-99, re-design Bridge Street to receive dual left turn lanes from SR-99, perform pavement preservation and rehabilitation work including PCC work, improve signal integration by installing fiber optic cable, bring all facilities up to current Caltrans ADA standards and add sidewalks were currently missing, rehabilitate 50 culverts, rehabilitate existing highway planting areas, and pave narrow median areas and relocate signal poles to improve worker safety.

Need for project and proposed improvements (Elaborate using PID language)

This project proposes to Construct Roundabout, Improve curves to meet STAA requirements, extend WB merge lane west of SR-99, redesign Bridge Street to receive dual left turn lanes from SR-99, perform pavement preservation and rehabilitation work including PCC work at select intersections, improve signal integration by installing fiber optic cable, bring all facilities up to current Caltrans ADA standards and add sidewalks were currently missing, rehabilitate 50 culverts, rehabilitate existing highway planting areas, and pave narrow median areas and relocate signal piles to improve worker safety.

Project located on State Route-20 & 99 from Township Rd to the Feather River Bridge, and on SR-99 from Bridge Street to intersection with SR-20 to provide for increased safety, improved operations, rehabilitated pavement, reduced congestion, ensure pedestrian facilities meet current ADA standards, extend the service life of drainage systems and planting areas, and improved worker safety.

PA&ED / M200	<input type="text" value="12/01/2019"/>	R/W Cert / M410	<input type="text" value="07/01/2021"/>	CCA / M600	<input type="text" value="11/01/2023"/>
PS&E / M380	<input type="text" value="03/01/2021"/>	RTL / M460	<input type="text" value="08/01/2021"/>	END Project / M800	<input type="text" value="12/01/2023"/>

Support (\$1,000)

	Capital (\$1,000) (Escalated to FY of Programming)	
	FY	Cost
R/W	2021/22	\$500
Construction	2021/22	\$27,420
Total Capital		\$27,920

	FY	Cost
PA & ED	2018/19	\$1,575
PS & E	2020/21	\$2,375
R/W	2020/21	\$530
Construction	2021/22	\$4,315
Total Support		\$8,795

Legislative District Numbers
(Separate multiple Districts with a comma)

State Assembly	<input type="text" value="3"/>
State Senate	<input type="text" value="4"/>
Congressional	<input type="text" value="3"/>

Approved Denied

CAPITAL CONSTRUCTION COST ESCALATION RATE

District SEP (Print) <i>for</i>	<input type="text" value="Thomas L Brannon"/>	District SFP (Sign)	<i>Paulene Brown</i>	Phone	<input type="text" value="(530) 740-4846"/>
District Director (Print) <i>for</i>	<input type="text" value="Amarjeet S Benipal"/>	District Director (Sign)	<i>John Balthasar</i>	Phone	<input type="text" value="(530) 741-4233"/>
SHOPP Exec. (Print)	<input type="text"/>	SHOPP Exec. (Sign)	<input type="text"/>	Phone	<input type="text"/>

SR 20/SR 99 Revitalization Project

Asset Management Pilot Project Nomination

Sut-20- **12.670/17.057**

Sut-99- **30.030/T30.629**

August 13, 2015

Proposal

This pilot project proposes the use of asset management principles to address the overall transportation needs of a major transportation project in Sutter County on State Route (SR) 20 from postmile 12.670 to 17.057 and SR 99 from postmile 30.030 to T30.629 (see Attachment #1 for Title Sheet and Attachment #2 for map). This pilot project will quantify Intelligent Transportation Systems (ITS) elements, safety, operations, highway planting rehabilitation, American with Disabilities Act (ADA) infrastructures and roadside safety needs, and will propose the corresponding programming for each need.

Between the project limits, the project proposes two options:

- **Option A** includes all of the improvements below, but without a Portland Cement Concrete (PCC) pavement rehabilitation
- **Option B** includes all of the improvements below and a PCC pavement rehabilitation at two SR 20 intersection with one on Gray Avenue and another on Walton Avenue.

Both project options A and B includes:

- 1) Curb cuts and sidewalk improvements to conform with current ADA standards and Caltrans design standards;
- 2) ADA compliant pedestrian signals installation;
- 3) Signal integration and fiber optic cable installation on SR 20 from Township Road to Feather River Bridge;
- 4) Highway planting rehabilitation and irrigation improvements;
- 5) 20.16 lane miles of Hot Mix Asphalt (HMA) Pavement preservation and rehabilitation on SR 20;
- 6) Culvert rehabilitation on SR 20;
- 7) Roadside safety improvements to pave narrow median areas and relocate signal poles;
- 8) Operational improvements on SR 20 to extend the westbound (WB) merge lane near SR 20/SR 99 intersection, Bridge Street to be redesigned to receive dual lefts on SR 99, and SR 20/Live Oak Boulevard intersection in compliance with STAA standards; and a
- 9) Construction of a roundabout on SR 20 WB off-ramp intersection at Sutter Street.

The District understands that there is a \$20 million cap for the total project cost estimate eligibility. As a result, the district proposes two alternative options to acknowledge and capture all of the needed improvements within the project limits.

This pilot project is a multi-agency partnership with Yuba City and Caltrans. Yuba City currently sent an application for the SACOG Community Design Program requesting funding for the Highway 20 Revitalization Project plans, specifications, and estimates (PSE) on SR 20 from SR 99 to the 10th Street Bridge, and construction, project plan implementation on SR 20 from SR 99 to Clark Avenue. Upon completion of the project on SR 20 between SR 99 to Feather River Bridge, the City anticipates to take responsibility for the maintenance of the new pedestrian and landscaping infrastructures and improvements so that the corridor stays at a high level of care, reflecting a good image of the City and promoting the attractiveness of the corridor¹.

This pilot project and Yuba City's Highway 20 Revitalization project will both complement each other with the goals of improving mobility on the corridor and implementing the principles of smart mobility and *complete streets*.

Project Purpose and Need

SR 20 and SR 99 are two of the major and most travelled highway in Yuba City. These two routes are also the gateway to Yuba City. Congestion and traffic delays are significant on SR 20 from the Feather River (10th Street) Bridge to Harter Road with a level of service (LOS) ranging from LOS D and E, wherein a LOS A have the least amount of congestion and LOS F having the most congested or worst level of service. SR 99 from Bogue Road to SR 20 currently has a LOS D. Traffic delays on SR 99 from Bridge Street to SR 20 is most significant during peak hours with built-up congestion at the SR 99/Bridge Street intersection. If no improvements are done within these corridors, LOS is expected to reach LOS F in SR 20 and LOS E in SR 99 in the next 20 years².

Other several issues that this project will address includes:

- Traffic delays and congestion on SR 20 from Township to Feather River (10th Street) Bridge, and on SR 99/Bridge Street intersection
- Pedestrian facilities in SR 20 that does not meet ADA standards
- Pedestrian facility gaps in SR 20 from Township Road to SR 99
- Caltrans maintenance workers often need to remove weed and trash on narrow median areas throughout the project limits exposing them to high safety risk
- Non-conforming STAA curvilinear mainline alignment on SR 20/Live Oak Boulevard intersection causing heavy-duty trucks to often off-track outside of their lanes
- SR 20 does not meet current highway design facility standards due to raised curbs

¹ Page 5, Highway 20 Revitalization Project, Yuba city, SACOG Community Design Program Application 2015

² Page 10-11, Caltrans District 3 State Route 20 Transportation Concept Report

- Underutilized SR 20 westbound merge lane west of SR 20/SR 99
- Distressed pavements on SR 20
- Deficient culverts on SR 20

The partnership between Yuba City and Caltrans with this project will contribute to the sustainability, livability, and economic growth of the community.

Caltrans Goals

Safety and Health

Caltrans Maintenance workers go out on-foot to remove weeds and trash on the medians at SR 20. The narrow median exposes our maintenance workers with safety risks working on high speed traffic along SR 20. Paving the narrow medians, relocating signal poles and moving maintenance activities to the shoulder will eliminate recurrent on-foot maintenance activities, and will further improve both worker and traveler safety.

The project will improve landscaping and improve pedestrian mobility by upgrading curb ramps and sidewalks to ADA standards, thereby improving accessibility for mobility-impaired users, and creating a safer and more welcoming environment for all users. Local residents will now feel safer to walk and bike on this corridor, and choose alternative modes of transportation that can also help reduce greenhouse gas emissions, therefore providing cleaner and healthier air quality.

Due to the curve in the mainline, trucks on SR 20 at the Live Oak Boulevard intersection often off-track outside of their lane. Redesigning and constructing the intersection of SR 20 and Live Oak Boulevard up to STAA standards will allow trucks to maintain their lane, provide an easier travel for STAA vehicles, and reduce the potential for a sideswipe collision.

The intersection of the westbound (WB) SR 20 exit with Sutter Street is a 2-way stop controlled intersection. Conversion of this intersection to a roundabout will not only have a significant reduction in collisions by 25%, but there will also be a net improvement in vehicle delays by allowing more free-flow operation.

Integration of signals along the corridor into a more coordinated and adaptive system will not only reduce collisions by improving the flow of traffic, but will also improve vehicle delay times.

Lengthening the WB merge west of SR 20/SR 99 will bring the merge to Caltrans design standards, reducing collision potential. WB traffic largely does not use this lane, reducing the intersection's capacity. Extending the merge will make the lane more attractive for through traffic, reducing traffic delays at the intersection by increasing throughput.

Stewardship and Efficiency

The following SHOPP related needs have been identified by Caltrans District 3 staff. These improvements will provide benefits to all modes of transportation.

The current facilities vary in terms of conditions. Table 1 below identifies the pre and post-project conditions:

Table 1. Project Pre and Post Condition Comparison									
<i>SHOPP Program</i>	<i>Asset</i>	<i>Total Quantity</i>	<i>Pre-Project Condition</i>			<i>Post- Project Condition</i>			
			Good	Fair	Poor	Good	Fair	Poor	
015	Roundabout conversion	1 location	0	0	1	1	0	0	
310	Left turn improvement	1 location	0	0	1	1	0	0	
310	1-Curve	1 location	0	0	1	1	0	0	
120	Pavement Rehabilitation	20.16-lane miles	0	20.16	0	20.16	0	0	
315	Signal integration	32	0	20	12	32	0	0	
361	ADA improvement	310 ADA Units	0	0	310	310	0	0	
151	Drainage System Restoration	50-culverts	0	50	0	50	0	0	
210	Planting and Irrigation	5.5 Acres	0	5.5 Ac	0	5.5 Ac	0	0	
235	Pave median	7-locations	0	0	7	7	0	0	

The pre-project condition of the area is a mixture of Fair and Poor conditions. The projects will upgrade these assets to a Good condition.

Caltrans will be responsible for the components of the project defined in Table 2a and 2b.

Table 2a: Option A- Project Components and Costs (without PCC improvements)			
Item (Program)	Performance Measures	Description of Work	Cost
Safety (015)	5 collisions over 20 years	Construction of a roundabout at the end of SR-20 WB off-ramp with Sutter Street since this is currently a 2-way stop controlled intersection.	\$1,000,000
Op. Improvements (310)	21,300 vehicle-hours delay reduced	Construction of roundabout at Sut-20 WB ramp/Sutter St intersection will also benefit operations.	1,200,000
Op. Improvements (310)	4,600 vehicle-hours delay reduced	Redesign curve at SR 20 and Live Oak Boulevard intersection to permit STAA truck usage.	\$700,000
Op. Improvements (310)	14,000 vehicle-hours delay reduced	Extend WB merge length west of 20/99 intersection.	\$500,000
Op. Improvements (310)	1,024,000 vehicle-hours delay reduced	Redesign Bridge Street to receive dual lefts from SR 99.	\$1,500,000
Pavement Rehabilitation (120)	20.16 Lane Miles Rehabilitated	Perform HMA pavement preservation, and rehabilitation work on SR 20 within project limits	\$4,000,000
ITS (315)	80,900 Vehicle-hours Delay/year savings	Signal integration and fiber optic cable installation on SR 20 from Township Road to Feather River Bridge.	\$2,200,000
ADA (361)	310 ADA Units	On SR 20, bring all curb cuts up to current ADA standards, install compliant Accessible Pedestrian Signals, bring sidewalks up to current ADA standards and place sidewalk where currently missing.	\$1,500,000
Culvert Rehabilitation (151)	50 Culverts Rehabilitated	On SR 20, rehabilitate 50-culverts to extend service life and ensure they perform as designed during storm events	\$1,300,000
Highway Planting Rehabilitation Program(210)	5.5 Ac	Rehabilitate 5.5 Ac of existing highway planting on SR 99 from Bridge St. to SR 20 and on SR 20 in the north two quadrants of the Sutter Street undercrossing.	\$500,000
Roadside Safety Improvements (235)	9 Locations	On SR 20, pave narrow median areas and relocate signal poles	\$350,000
Total			\$14,750,000

Table 2b: Option B- Project Components and Costs (with PCC improvements)			
Item (Program)	Performance Measures	Description of Work	Cost
Safety (015)	5 collisions over 20 years	Construction of a roundabout at the end of SR-20 WB off-ramp with Sutter Street since this is currently a 2-way stop controlled intersection.	\$1,000,000
Op. Improvements (310)	21,300 vehicle-hours delay reduced	Construction of roundabout at Sut-20 WB ramp/Sutter St intersection will also benefit operations.	1,200,000
Op. Improvements (310)	4,600 vehicle-hours delay reduced	Redesign curve at SR 20 and Live Oak Boulevard intersection to permit STAA truck usage.	\$700,000
Op. Improvements (310)	14,000 vehicle-hours delay reduced	Extend WB merge length west of 20/99 intersection.	\$500,000
Op. Improvements (310)	1,024,000 vehicle-hours delay reduced	Redesign Bridge Street to receive dual lefts from SR 99.	\$1,500,000
Pavement Rehabilitation (120)	20.16 Lane Miles Rehabilitated	Perform HMA pavement preservation, and rehabilitation work on SR 20 within project limits. Portland Cement Concrete (PCC) SR 20 intersection with Gray Ave, and Walton Ave.	\$15,000,000
ITS (315)	80,900 Vehicle-hours Delay/year savings	Signal integration and fiber optic cable installation on SR 20 from Township Road to Feather River Bridge.	\$2,200,000
ADA (361)	310 ADA Units	On SR 20, bring all curb cuts up to current ADA standards, install compliant Accessible Pedestrian Signals, bring sidewalks up to current ADA standards and place sidewalk where currently missing.	\$1,500,000
Culvert Rehabilitation (151)	50 Culverts Rehabilitated	On SR 20, rehabilitate 50-culverts to extend service life and ensure they perform as designed during storm events	\$1,300,000
Highway Planting Rehabilitation Program(210)	5.5 Ac	Rehabilitate 5.5 Ac of existing highway planting on SR 99 from Bridge St. to SR 20 and on SR 20 in the north two quadrants of the Sutter Street undercrossing.	\$500,000
Roadside Safety Improvements (235)	9 Locations	On SR 20, pave narrow median areas and relocate signal poles	\$350,000
Total			\$25,750,000

Sustainability, Livability, and Economy

This project will contribute to sustainability, livability, and economy through the following benefits:

- Reduces congestion and traffic delays, therefore improving the traffic flow efficiency, reducing greenhouse gas emissions, improving air quality, and improving economic activity.
- Improves freight access by upgrading SR 20 to STAA standards that will improve interregional and regional freight and economic connectivity.
- Restoration of plants with low maintenance, drought tolerant planting and irrigation will reduce maintenance requirements and also reduce maintenance worker exposure.
- Reduces greenhouse gas emissions and improves air quality by encouraging alternative modes of transportation.
- Improves the resiliency of the system by bringing pavement to a state of good repair.
- Improves the operations and climate resiliency of the system by rehabilitating the culverts and drainage systems to improve safety during major storm events.
- Reduces water use through an improved irrigation system.
- Improving livability in the adjacent neighborhoods through beautification and safety improvements.

Please see Attachment #4 for the Sustainability Checklist for this project.

System Performance

Integration of signals along the corridor will allow traffic signals along the corridor to be coordinated with each other from the Caltrans District 3 Marysville HQ building, reducing traffic delays. The use of fiber optics will improve communication performance and eliminate wire theft issues.

SR 20 in the vicinity of Live Oak Boulevard is a horizontal curve, and an STAA truck on SR 20 cannot negotiate the curve without risk of its trailer tires off-tracking into adjacent lanes. Realignment of the curve will permit STAA trucks to remain in their own lanes, improving truck maneuverability and reducing the potential for sideswipe collisions.

Northbound trucks on SR 99 trying to turn left onto Bridge Street face a similar problem. There is only a single left turn lane for turning traffic, trucks would not be able to make the turn without occupying both lanes. By modifying Bridge Street west of SR 99, a second left turn lane could be added, reducing delays for left turn traffic and improving the overall operation of the intersection.

Westbound SR 20 at the SR 20/SR 99 intersection has three lanes, which reduces to two after the intersection in a short merge. Traffic headed westbound tends to avoid the #3 lane, leading to overuse of the #1 and #2 lanes. By increasing the length of the merge, the #3 lane will become more attractive to traffic as the merge will be easier to perform, thereby reducing congestion at the 20/99 interchange.

Organizational Excellence

This is a joint project between Caltrans and Yuba City. The project provides an opportunity to establish and foster partnerships with stakeholders, and collaborate to create better mobility on SR 20 and SR 99 and implement the Caltrans and the Yuba City's goal to reduce traffic delays, and improve operations, modal choice, and economic activities within the corridor. The District is also committed to risk management and the implementation of PD-09. As we move this project forward we are looking to the District Risk Register to identify, analyze, and plan for risk management. Below are some of the risks we anticipate for this project and will be further vetted during the PID development phase:

- As part of our risk management strategy, the district recognizes our local partner's desire for landscaping. We will work with them to create a maintenance agreement and ensure suitable plants fill the landscaped area.
- For any effects on the agricultural industry, like the increase in traffic, risk will be managed by coordinating with the agriculture industry and their harvesting/production season
- In order to ensure we're working effectively with our local partners and their different needs we will continue to communicate early on as this project develops

We aim to identify these early on in project development so that they do not unreasonably delay project implementation.

Overall, the coordination between Caltrans and Yuba City with implementing this project will solidify our commitment to our partners and will also save time and money.

Funding Plan

Table 3a and 3b depicts all of the currently programmed and currently unprogrammed needs broken down by project component. Landscaping on medians, lighting, and other pedestrian furniture's are not included in the cost estimates for this project because these costs and improvements will be provided by the Yuba City. Presently, no funding has been programmed for this project.

Table 3a: Option A- SHOPP Asset Management Program Estimate (without PCC improvements)			
	Total Need	Currently Programmed	Currently Unprogrammed SHOPP Needs
PAED	\$ 885,000	\$0	\$ 885,000
PS&E	\$ 1,330,000	\$0	\$ 1,330,000
Right of Way Support	\$ 220,000	\$0	\$ 220,000
Construction Support	\$ 2,000,000	\$0	\$ 2,000,000
<i>Subtotal Support</i>	<i>\$4,435,000</i>		<i>\$4,435,000</i>
Right of Way Capital	\$ 300,000	\$0	\$ 300,000
Construction Capital	\$ 14,750,000	\$0	\$ 14,750,000
<i>Subtotal Capital</i>	<i>\$15,050,000</i>		<i>\$15,050,000</i>
Total Project Cost	\$19,485,000	\$0	\$19,485,000

*Total Support/Capital Cost ratio is 29%

Table 3b: Option B- SHOPP Asset Management Program Estimate (with PCC improvements)			
	Total Need	Currently Programmed	Currently Unprogrammed SHOPP Needs
PAED	\$ 1,550,000	\$0	\$ 1,550,000
PS&E	\$ 2,320,000	\$0	\$ 2,320,000
Right of Way Support	\$ 520,000	\$0	\$ 520,000
Construction Support	\$ 4,200,000	\$0	\$ 4,200,000
<i>Subtotal Support</i>	<i>\$8,590,000</i>		<i>\$8,590,000</i>
Right of Way Capital	\$ 500,000	\$0	\$ 500,000
Construction Capital	\$ 25,750,000	\$0	\$ 25,750,000
<i>Subtotal Capital</i>	<i>\$26,250,000</i>		<i>\$26,250,000</i>
Total Project Cost	\$34,840,000	\$0	\$34,840,000

*Total Support/Capital Cost ratio is 32%

Project Savings

Combining several SHOPP Programs into one project will result in both capital and support cost project savings. While more effort will be expended during project planning phases to coordinate with several Program Advisors to develop project scope, significant savings will be achieved in subsequent project development phases. Savings in capital costs will be achieved by combining work items and obtaining savings from utilizing larger material and labor quantities. Larger contracts are more attractive to contractors due to the ability for them to be

more efficient with their resources. This will translate into lower contract bids resulting in additional savings.

Table 4a and 4b shows estimated cost savings between programming projects under separate SHOPP programs versus programming as a SHOPP Asset Management project. For comparison purposes, Traffic Control (10%) and Mobilization (10%) items were used to show capital cost savings. It is assumed that additional savings will be achieved when a more detailed estimate is completed during development of the Project Initiation Document.

Table 4a: Option A- Project Savings (without PCC improvements)											
Cost Estimate	SHOPP Program (x1,000)								Total Cost	SHOPP Asset Management Program	Estimated Savings
	015	310	120	315	361	151	210	235			
Construction Capital	\$1,150	\$4,485	\$4,600	\$2,530	\$1,725	\$1,495	\$575	\$400	\$16,960	\$14,750	\$2,210
RW Capital	\$20	\$79	\$81	\$45	\$31	\$26	\$10	\$8	\$ 300	\$ 300	\$ 0
Support	\$800	\$1,290	\$1,320	\$725	\$495	\$430	\$400	\$280	\$5,740	\$4,435	\$ 1,305
Total Project Cost	\$1,970	\$5,854	\$6,001	\$3,300	\$2,251	\$1,951	\$985	\$688	\$23,000	\$19,485	\$3,515

Table 4b: Option B- Project Savings (with PCC improvements)											
Cost Estimate	SHOPP Program (x1,000)								Total Cost	SHOPP Asset Management Program	Estimated Savings
	015	310	120	315	361	151	210	235			
Construction Capital	\$1,150	\$4,485	\$17,250	\$2,530	\$1,250	\$1,495	\$575	\$400	\$29,610	\$25,750	\$3,860
RW Capital	\$20	\$75	\$290	\$43	\$30	\$25	\$10	\$7	\$ 500	\$ 500	\$ 0
Support	\$800	\$1,285	\$5,200	\$725	\$495	\$430	\$400	\$280	\$9,615	\$8,590	\$ 1,025
Total Project Cost	\$1,970	\$5,845	\$22,740	\$3,298	\$2,250	\$1,950	\$985	\$687	\$39,725	\$34,840	\$4,885

Recommendation

It is the considered opinions of Caltrans Program/Project Management and Transportation Planning and Modal Programs that this project would make an excellent candidate project as it would have a very positive impact on the community in terms of personal safety, security, and aesthetics as well as allow for an additional measure of community pride and livability. The project would support several sustainability principles and implement the goals of both the City and Caltrans. Finally, the project would reinforce a strong relationship between Caltrans and Yuba City.

Attachments

Attachment #1: Title Sheet

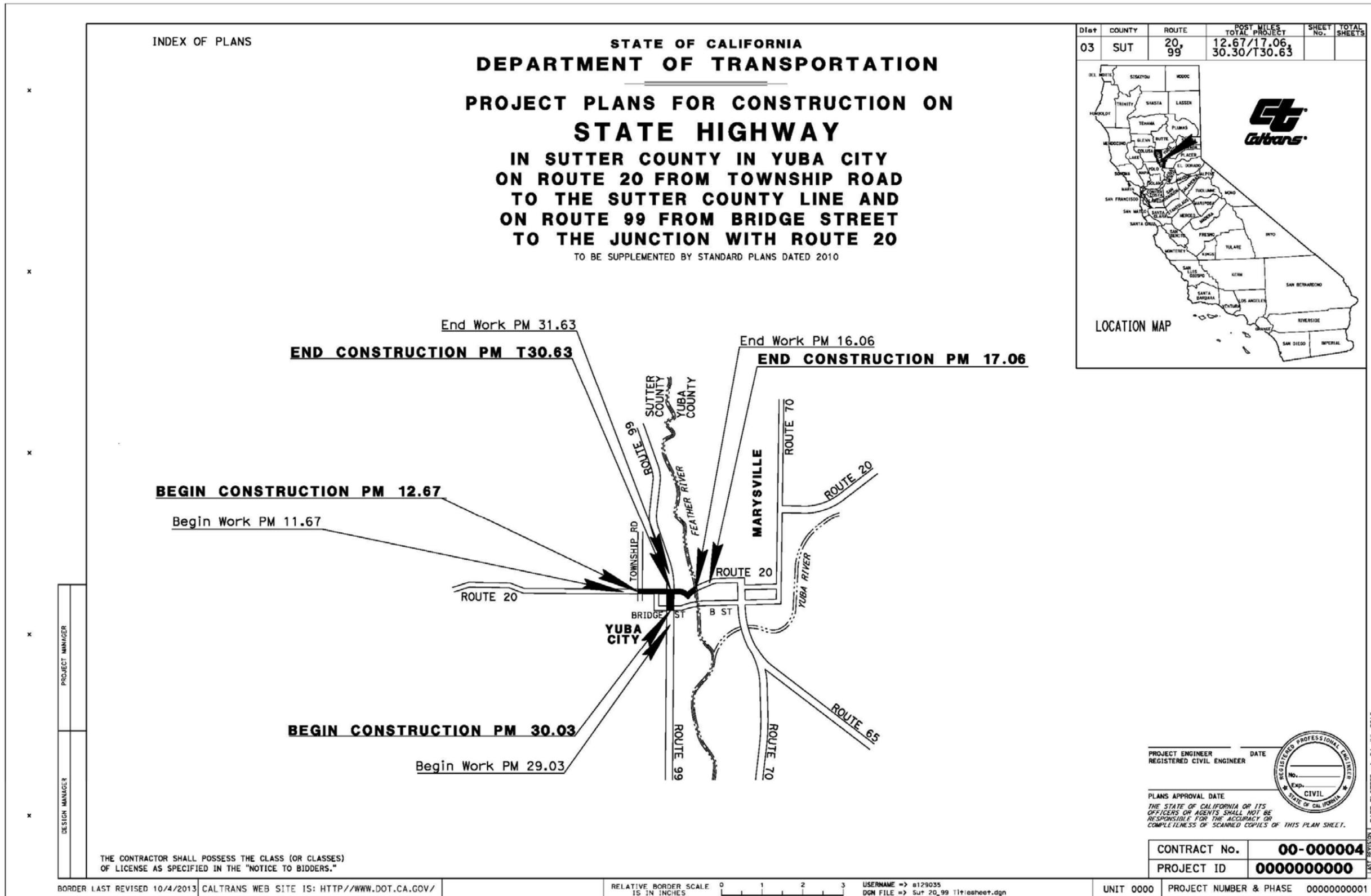
Attachment #2: Map

Attachment #3: Photographs

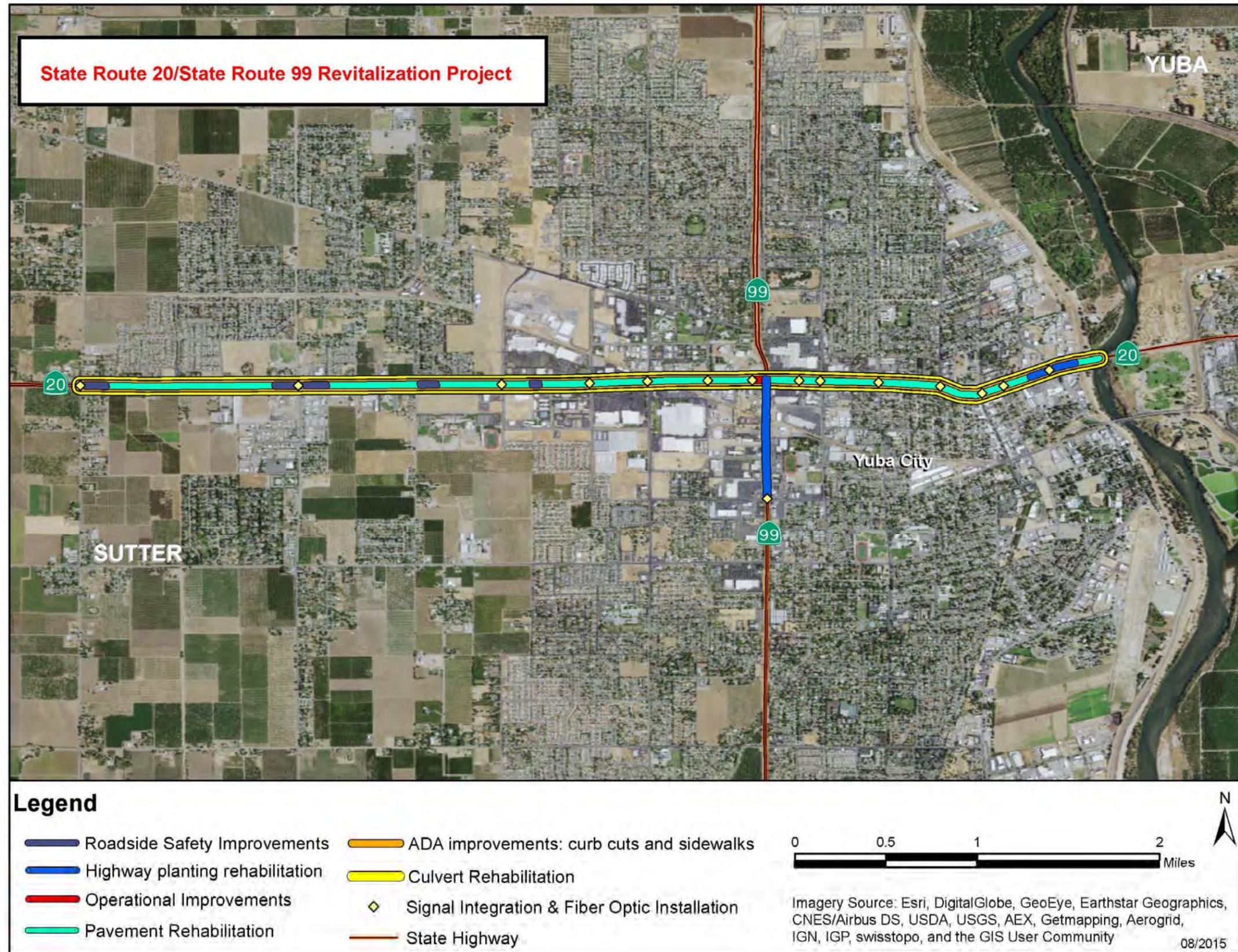
Attachment #4: Sustainability Goals

Attachment #5: Yuba City Support Letter

Attachment #6: Asset Management Nomination Evaluation



Attachment # 2: Map



Attachment # 3: Photographs



Figure 1: Aerial SR99 at Bridge Street



Figure 2: Car Merging Westbound SR 20 at SR 99 (Proposal to extend merge lane)



Figure 3: Curb to be removed at SR 20/El Margarita



Figure 4: Curb to be removed at SR 20/George Washington to meet Caltrans Facility Design Standards



Figure 5: SR 20/Sutter Street Off-ramp Intersection. 2-way Stop intersection. Proposal to construct a roundabout to reduce traffic delays and collisions



Figure 6: Sidewalks not conforming to ADA and Caltrans Design Standards

Attachment #4: Sustainability Goals

Complete 20 question below: Sections in Green

Please answer these 20 question to help develop sustainability components (highlighted in Green) for your SHOPP Pilot project. This will be used for the project sustainability score as it relates to the Department's Strategic Goals for Sustainability, Livability and Economy (See Tab on Sustainability Goal for reference). For further background you can see the Envision Guidance tab.

SHOPP Nomination Sustainability Contacts:

Gina Moran (916) 651-8164
Amy Bailey (916) 651-8166
Mary Beth Herritt (916) 653-4166
Melissa Thompson (out July 29-Aug 11) (916) 653-7569

Sustainability Goal measures	Project Title: SR 20/SR 99 Revitalization Project	Yes/No	Description (of Yes responses)
Quality of Life			
Stimulate Sustainable Growth and Development (Envision QL 1.2)			
Intent: Support and stimulate sustainable growth and development, including improvements in job growth, capacity building, productivity, business attractiveness and livability.			
1 Prosperity	Will the project enhance the community's quality of life and economic prosperity?	Yes	Improving all sidewalks and curb cuts to conform with ADA and Caltrans Design Standards and improving landscapes will encourage walkability and alternative modes of transportation. Beautification of the corridor will enhance the quality of life and also encourage new economic investments on the corridor.
Improve Community Mobility and Access (Envision QL 1.2)			
Intent: Locate, design and construct the project in a way that eases traffic congestion, improves mobility and access, does not promote urban sprawl, and otherwise improves community livability.			
2 Access	Will the project provide good, safe access to adjacent facilities, amenities and transportation hubs, including appropriate wayfinding signage?	Yes	This project will provide safe access for all users including freight. This project will improve and increase freight accessibility by upgrading it to STAA standards. Installation of pedestrian signals, sidewalk and curb cuts improvements will provide safe access and wayfinding for active modes of transportation
3 Non-Auto Mode Share	Will the project encourage the use of transit and/or non-motorized transportation?	Yes	This project will provide sidewalk and curb cuts improvements. Caltrans is also partnering with the City in constructing additional pedestrian infrastructures such as lighting, hardscapes, and pedestrian furnitures to encourage walkability and other alternative modes of transportation.
4 Non-Auto Mode Share	Has the project team coordinated the design with other infrastructure assets to improve walkability and livability?	Yes	This project will provide sidewalk and curb cuts improvements. Caltrans is also partnering with the City in constructing additional pedestrian infrastructures such as lighting, hardscapes, and pedestrian furnitures to improve walkability and livability on SR 20.
Preserve Historic and Cultural Resources (Envision QL 3.1)			
Intent: Preserve or restore significant historical and cultural sites and related resources to preserve and enhance community cultural resources.			
5 Env	Will the project minimize impacts on historic and cultural resources? (Consulted the tribal, historic and cultural resource staff in Environmental (PQS)?)	No	
Enhance Public Space (Envision QL 3.3)			
Intent: Improve existing public space including parks, plazas, recreational facilities, or wildlife refuges to enhance community livability.			
6 Livability	Will the proposed project make meaningful enhancements to public space or address Section 4(f) properties, (examples include parks, plazas, recreational facilities, or wildlife refuges) to enhance community, livability, and quality of life?	Yes	Improved livability in the corridor and adjacent neighborhoods through beautification and safety improvements in the public space such as sidewalks within the project limits.
Leadership			
Foster Collaboration and Teamwork (Envision LD 1.3)			
Intent: Eliminate conflicting design elements, and optimize system by using integrated design and delivery methodologies and collaborative processes.			
7 Sustainable Corridor Master Plan (SCMP)	Are the project owner and the project team intending to take a Context Sensitive Solutions view of the project?	Yes	Caltrans is partnering with the City to ensure the project is integrated into the existing and planned community infrastructure. Caltrans also took into consideration recommendations from the City's Highway 20 Better Streets Design Guide wherein the City had a workshop and took an interdisciplinary approach that involves all stakeholders.
Improve Infrastructure Integration (Envision LD 2.2)			
Intent: Design the project to take into account the operational relationships among other elements of community infrastructure which results in an overall improvement in infrastructure efficiency and effectiveness.			
8 Livability	Will the project team seek input from local stakeholders regarding how the project impacts or enhances the community infrastructure?	Yes	Caltrans is partnering with the City to address any project impacts and needs to improve the corridor. Caltrans also took into consideration recommendations from the City's Highway 20 Better Streets Design Guide.

Sustainability Goal measures		Project Title: SR 20/SR 99 Revitalization Project	Yes/No	Description (of Yes responses)
9	Freight	Will the project address the needs on the priority freight network included in the Freight Mobility Plan?	Yes	Improves freight access by upgrading SR 20 to STAA standards that will improve interregional and regional freight and economic connectivity.
Resource Allocation				
Use Recycled Materials (Envision RA 1.3)				
Intent: Minimize transportation costs and impacts and retain regional benefits through specifying local sources.				
10	Resource Consumption	Will the project team consider reuse of existing materials or recycled materials or use of materials from within 100 miles of the project site?	Yes	The project team will consider and examine opportunities for recycling materials throughout the planning and implementation of the project.
Reduce Energy Consumption (Envision RA 2.1)				
Intent: Conserve energy by reducing overall operation and maintenance energy consumption throughout the project life cycle.				
11	Energy	Can the project incorporate reducing energy consumption or generating energy supply during the construction phase or after as a purpose for the project?	Yes	The project team will consider opportunities to incorporate reducing energy consumption through implementation of the project. One possible implementation is using LED lights for street lighting.
Natural World				
Preserve Prime Habitat and Species (Envision NW 1.1)				
Intent: Avoid placing the project – and the site compound/temporary works – on land that has been identified as of high ecological value or as having species of high value.				
12	Env	Does the project concept incorporate solutions to preserve, improve or connect important natural resources (habitat, species needs, or fish and wildlife movement corridors)?	No	
Protect Wetlands and Surface Water (Envision NW 1.2)				
Intent: Protect, buffer, enhance and restore areas designated as wetlands, shorelines, and waterbodies by providing natural buffer zones, vegetation and soil protection zones.				
13	Water	Does the project concept address or enhance adjacent wetlands, hydraulic connection and waters functions, values, or existing deficiencies?	Yes	Improvements by rehabilitating the culverts and drainage systems.
Preserve Prime Farmland (Envision NW 1.3)				
Intent: Identify and protect soils designated as prime farmland, unique farmland, or farmland of statewide importance.				
14	Env	Does the project concept improve or enhance the existing farming conditions or associated interface with the transportation facility (water conveyance, quality, habitat preservation, weed management, farming operation, etc.)?	No	
Preserve Floodplain Functions (Envision NW 1.5)				
Intent: Preserve floodplain functions by limiting development and development impacts to maintain water management capacities and capabilities.				
15	Water	Does the project concept allow for natural floodplain functions restored or rectified related to existing infrastructure impingements?	No	
Manage Stormwater (Envision NW 2.1)				
Intent: Minimize the impact of infrastructure on stormwater runoff quantity and quality.				
16	Water Quality	Can the project be designed to treat more than minimum stormwater treatment requirements, for example post construction or TMDL compliance units?	No	
Roadside Vegetation Environment (Envision NW 3.4)				
Intent: Use appropriate non-invasive species and control or eliminate existing invasive species.				
17	Env	Does the project concept incorporate improvements to roadside vegetation through restorative actions to native/appropriate vegetation to reduce/eliminate need for future management (maintenance, water use, pesticides, invasive species, etc.)?	Yes	Restoration of plants with low maintenance, drought tolerant planting and irrigation will reduce maintenance requirements
Climate & Risk				
Reduce Greenhouse Gas Emissions (Envision CR 1.1)				
Intent: Conduct a comprehensive life-cycle carbon analysis and use this assessment to reduce the anticipated amount of net greenhouse gas emissions during the life cycle of the project, reducing project contribution to climate change.				
18	GHG	Based on a life-cycle carbon assessment, will the project be designed in a way that substantially reduces carbon emissions?	Yes	Using the PCC pavement rehabilitation will help reduce GHG emissions.
Assess Climate Threat (Envision CR 2.1)				
Intent: Develop a comprehensive Climate Vulnerability Assessment and Adaptation Plan.				
19	Resiliency	Will the project address potential risks or vulnerability deficiencies identified in state, regional, local or site specific plans?	No	
Manage Heat Island Effects (Envision CR 2.5)				
Intent: Minimize surfaces with a high solar reflectance index (SRI) to reduce localized heat accumulation and manage microclimates.				
20	Green Infrastructure	Will the project be designed to include green infrastructure such as reducing heat island effects by reducing the percentage of low solar reflectance index (SRI) surfaces?	Yes	Using the PCC pavement rehabilitation will help reduce heat island effects

Attachment #5 Yuba City Support Letter



August 13, 2015

Amarjeet S. Benipal
District Director
Caltrans District 3
703 B Street
Marysville, CA 95901

Re: State Route 20 and State Route 99 (SR 20/SR 99) Revitalization Project

Dear Amarjeet S. Benipal:

The City of Yuba City is pleased to support the State Route 20 and State Route 99 (SR 20/SR 99) Revitalization Project application from Caltrans District 3 for the Caltrans State Highway Operation and Protection Program (SHOPP) Asset Management Pilot Project Nomination.

SR 20 and SR 99 are routes of vital importance to local, regional, and interregional travel and goods movement in the City of Yuba City. The City has been an active partner with Caltrans for improvements previously done within the SR 99 corridor. The City engaged Caltrans during its public engagement efforts and workshop for developing Yuba City's *Highway 20 Better Street Design Guide* that is focused on creating a vibrant and pedestrian-friendly commercial corridor.

Currently, the City of Yuba City applied for the SACOG Community Design Program requesting funding for the Highway 20 Revitalization Project from SR 99 to the Feather River (10th Street) Bridge implementing some of the guidelines from the Highway 20 Better Design Guide. This project proposes improvements such as installation of street trees, landscaping, sidewalks, curb ramps, pedestrian furniture, lighting, and signage.

The SR 20/SR 99 Revitalization Project will help alleviate traffic delays on SR 20 from Township Road to Feather River (10th Street) Bridge and on SR 99 from SR 20 to Bridge Street through operational and Intelligent Transportation Systems (ITS) Improvements. This Caltrans project will also improve curb cuts and sidewalks to conform to ADA and Caltrans design standards, rehabilitate culverts and pavement on SR 20, improve roadside safety by paving narrow medians and relocating poles, and rehabilitate plantings and improve irrigations on landscapes not within the scope of the Yuba City-led Highway 20 Revitalization project.

Yuba City's Highway 20 Revitalization Project and the Caltrans SR 20/SR 99 Revitalization Project will complement each other and help improve the City's economy, improve highway safety and operations, provide an ADA/pedestrian friendly infrastructures, and reduce greenhouse gas emissions.

The City of Yuba City supports this project by providing staff time for planning-level efforts, data, and will assume responsibility for the maintenance of some new infrastructure and improvements within Clark to Stafford Way.

Sincerely,

Diana Langley
Public Works Director

Attachment #6:

Asset Management Nomination Evaluation

Introduction

The asset management pilot program projects will be evaluated based on weighted scoring from each of the five Strategic Plan Goal areas. Teams have been established to develop criteria for the evaluation of the project nominations. These teams are currently at various levels of refinement of their respective criteria. The information presented in this document represents the current ideas of each team. Although it is unlikely that gross departures from the general themes presented will occur, each team has the prerogative to react to the projects nominated in setting/revising their evaluation criteria. Therefore, the following information is presented in the interest of transparency but could be subject to change.

Safety and Health (Contact Person - Steve Guenther)

Provide a safe transportation system for workers and users and promote health through active transportation and reduced pollution in communities.

1. **Minimize injuries and fatalities of workers** – Quantitative data within the projects limits such as Average Annual Daily Traffic (AADT), urban or rural location, and worker average exposure will be used to assess the risk of workers. The Roadside Safety Program criteria will be used to give consideration to other aspects the project contributes to worker safety.

Roadside Safety Program Elements

1. Relocating and clustering existing facilities to safe work locations,
2. Minor pavement for areas beyond the gore, slopes adjacent to bridge structures, low visibility areas, road edge, and narrow areas,
3. Vegetation control treatment under existing guardrail,
4. Inert materials to slopes and low visibility areas,
5. Access gates, staircases, trails for light duty vehicles, and maintenance vehicle pullouts
6. Safety rails on retaining walls
7. Shielding of equipment that cannot be relocated
8. Removal of duplicative signage
9. Signage, lighting and additional pavement at chain control

10. *(SRRA Water Quality Compliance for sewage and drinking water systems
- 2015 REVISION NOT YET MADE TO MANUAL)*

2. **Minimize injuries and fatalities of automobile users** - Quantitative data within the projects limits such as roadway classification, AADT, urban or rural location, traffic speeds, and accident “hot spots” will be used to assess the risk of users. The project will then be assessed using the following:

Criteria (in priority order)*

1. Run Off Road Program
 2. Shoulder/Centerline Rumble strips
 3. Left-turn channelization
 4. Crosswalk Safety Enhancements
 5. School Zone Signals
 6. New/Upgraded Bridge Rails or Guardrail
 7. New/Upgrade Crash Cushions
 8. Upgrade guardrail transitions and end treatments
 9. Rock fall Mitigation
 10. Glare Screen
 11. Overcrossing Pedestrian Fencing
 12. Other considerations
3. **Minimize injuries and fatalities of vulnerable users by increasing Active Transportation connectivity** - Quantitative data within the projects limits such as bike crash data, pedestrian accident data, exposure times, and existing shoulder widths will be used to assess the risk of bike and pedestrian users. The project will then be assessed using Complete Streets Prioritization Criteria for SHOPP to assess other ways the project increases Active Transportation connectivity.
4. **Maximize active transportation access on facilities to encourage use** - Quantitative data within the projects limits such as existing bike lanes, shoulder widths, and pedestrian crossings will be used to assess the existing access for active transportation. The project will then be assessed for its contribution to active transportation attributes.
5. **Minimize system-related pollution for criteria pollutant emissions** - Quantitative data within the projects limits for existing criteria pollutants emissions to assess the need for criteria pollutant reduction. The project will be assessed to look at the attributes that

contribute to emission reduction such as improving traffic flow, improve vehicle performance (e.g. IRI reduction), and reducing traffic disruption.

Stewardship and Efficiency (Contact Person - Mike Johnson)

The stewardship goal is all about preserving the existing transportation system. Project nominations should include all of the following that are applicable:

1. Quantify the pre and post condition of all assets that will have condition improvement through the project. See the district 2 project example.
2. Quantify any new physical assets that will be added to the system through the project. Stick with the higher value items such a pavement area, bridge deck area, culverts, ITS elements etc.
3. For projects that protect or preserve our existing assets, describe the nature of the preservation work (examples: pavement crack sealing, bridge painting, culvert lining, etc.) and quantify the area or limits of the proposed work. Include an estimate of the expected life extension of the component or asset resulting from the proposed work.
4. If any portion of the proposed project relies on State only funding (no Federal funds) please clearly identify it in the nomination. Generally this would be the case for facility projects with a few exceptions.

System Performance (Contact Person - Thomas Schriber)

1. Fix it First – This refers to the concept of replacing elements that are non-functional or obsolete prior to placing new elements that expand the system.
2. High Delay Reduction – The primary goal of the mobility program is decreasing delay.
3. Travel Time Reliability – The primary goal of system reliability is to have reliable travel time.
4. Trucks - Goods movement is a major element of mobility.
 - Fix it First = % of project related to fix it first
 - High Delay Reduction = Daily Reduction of Delay
 - Travel Time Reliability = Reliability Index
 - Trucks = % of trucks

Reliability calculation:

1. Travel Time Reliability is measured in terms of the Buffer Time Index, which was developed by the FHWA Pooled Fund Study for Measuring Mobility in Urban Transportation. The Buffer Time Index is the extra time travelers need to add to

their trip to ensure they arrive on time. The Buffer Time is expressed as a percentage. A buffer index of 40 percent means for a 20 minute travel time an extra 8 minutes would need to be added (20 min x 40 percent = 8 minutes) to arrive at their destination on time. The buffer time index is computed in PeMS as (95th percentile Travel Time – Median percentile Travel Time)/Median percentile Travel Time.

- The Buffer Time Index is obtained from PeMS on predefined corridors in the PeMS corridor module.
- PeMS reports break up the Buffer Time Index into 60 five minute time periods for the A.M peak period (5:00-10:00 AM) and 60 five minute time periods for the PM peak period (3:00-8:00 PM) for non-holiday weekdays averaged for a three month period.
- The 60 five minute periods are sorted into three different categories. Reliable (BTI less than 20%), Moderately Reliable (BTI 20-40%), and Unreliable (BTI over 40%).
- If a corridor had 60 time periods with a BTI less than 20% that corridor would be 100% reliable. If that corridor had 40 time periods with a BTI less than 20%, 6 time periods between 20-40% and 14 time periods with a BTI over 40% that corridor would be 66.7% reliable, 10.0% moderately reliable and 23.3 unreliable.
- This is done for each corridor by direction for both the AM and PM peak periods.

Delay calculation:

- The Priority Index Number (PIN) used for prioritizing Operational Improvements has a delay index component. Here is a link to the guidelines for calculating PINs:
- <http://traffic.onramp.dot.ca.gov/mobility>

Corridor type. The hierarchy is as follows:

2. High Priority Corridors – These corridors are identified by the Office of Strategic Development and are the top corridors for mobility funding.
3. Congested Corridors – The congested urban corridors are the primary focus of mobility funding. Congested corridors that are not identified as high priority corridors would fall into this second tier.
4. Inter Corridors – The Department has already identified certain inter-regional routes as focus routes with higher priority for funding. This category would include those routes plus all segments of interstate facilities that don't fall into the top two tiers.
5. Economically Significant Corridors – This captures goods movement corridors and corridors with high tourism value as well as evacuation routes that don't fall into the top three tiers.
6. Other – This category includes any route that does not fall into the first four categories.

[Sustainability \(Contact Person - Melissa Thompson or spreadsheet contacts\)](#)

The Sustainability team has developed a new shorter version checklist of 20 questions that will help define the sustainability benefits of a project nomination. Please refer to the attached spreadsheet. Contact names and numbers are also listed in the spreadsheet if you have any sustainability questions.

Organizational Excellence (Michelle Tucker or Eric Shrader)

1 Positive Work Environment – Promote a positive work environment and implement a management system to maximize accomplishments, encourage innovation and creativity, and ensure staff performance is aligned with Department and State goals.

5.1.6 (proposed) Project contains innovative elements or components (either new or developed by Caltrans employees).

5.1.7 (proposed) Project has been previously assessed to have a high level of “worthiness” as a top priority item in other regional, master, system plans, etc. or the project is innovative or represents a fix to a long-standing or strongly-desired need.

Cross-cuts with Goal 2 –Stewardship & Efficiency, Money Counts. Effectively manage California’s transportation-related assets.

5.1.8 (proposed) Project contains amenities that generate employee satisfaction and make Caltrans a “workplace of choice”(e.g., lockers, showers, bike storage facilities, e-charging stations for vehicles, multimodal access to community). *Cross-cuts with Goal 1—Safety and Health, Promote community health through active transportation.*

2 Customer Service – Continuously increase customer satisfaction. (No criteria identified at this time.)

3 Lean 6-Sigma – Employ Lean 6-Sigma to reduce waste in Department operations and decision processes and to ensure resources are used effectively. (No criteria identified at this time.)

4 Communication – Improve internal and external communication to better demonstrate professionalism and service levels to the public and other stakeholders...

5.4.5 (proposed) Projects has an early and formal communication plan to improve stakeholder/community awareness (e.g., the W/X Project on US-50).

5 Risk and Ethics – Cultivate an environment that encourages proper identification, management, and communication of risk across all levels of the organization and makes intelligent decisions based on that analysis.

5.5.5 (proposed) The project is being used as part of a response strategy to a published item on the Caltrans Enterprise Risk Register or a District risk register.

(proposed) The project demonstrates early commitment to risk management through identification, analysis, and planning at the PID phase as recommended in PD-09.

6 Collaborative Partnerships – Improve collaborative partnerships with agencies, industries, municipalities and tribal governments and advance national engagement with the transportation research and policy committees.

5.6.4 (proposed) Number of PDTs (project development teams) that are comprised of collaborative partnerships, i.e., external stakeholders. *Cross-cuts with Goal 4 – System Performance. Utilize leadership, collaboration and strategic partnerships to develop an integrated transportation system that provides reliable and accessible mobility for travelers.*