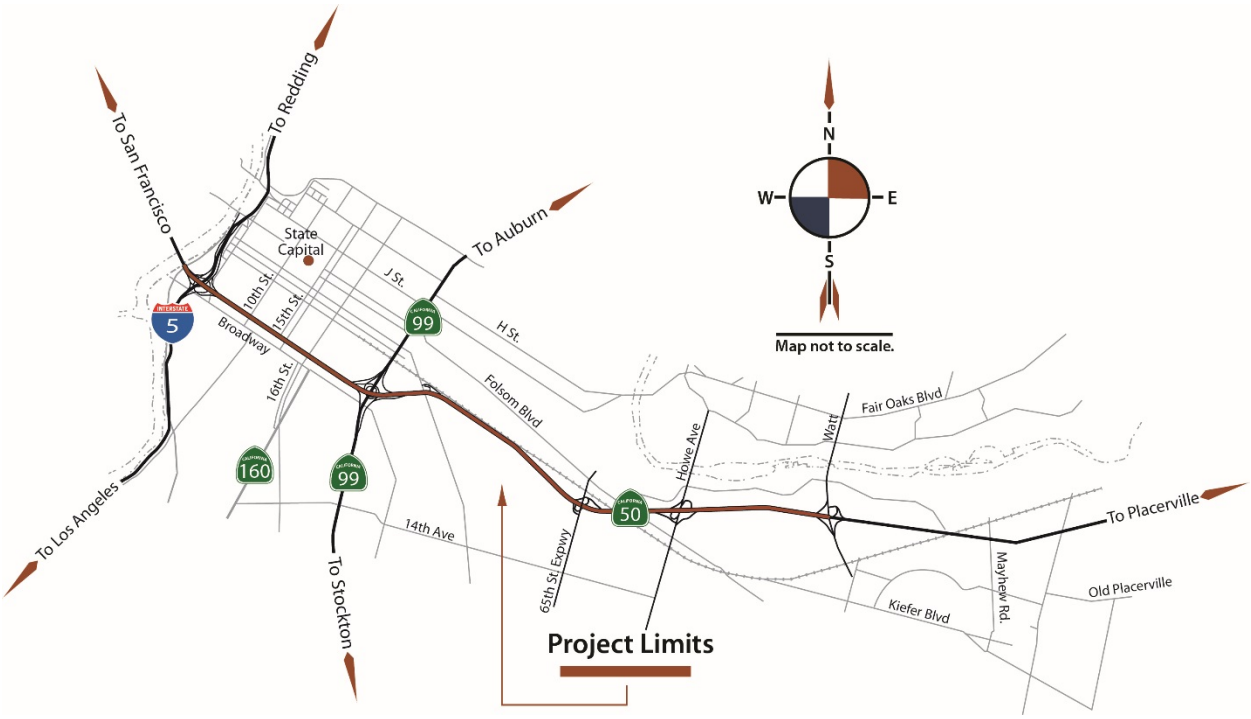
DESIGN-BUILD
NOMINATION FACT SHEET
03-Sac-50-L0.20/R6.1
EA: 03-3F360 & 03-0H080

Project Description

In Sacramento County, on United States Route 50 (US 50), construct High Occupancy Vehicle (HOV) lanes from Interstate 5 (I-5) to 0.8 mile east of Watt Avenue, construct sound walls from Stockton Blvd to 65th St, rehabilitate pavement from I-5 to Watt Ave and increase vertical clearance at seven overcrossings between I-5 and Watt Ave as part of the US 50 Multimodal Corridor Enhancement Project.



Purpose and Need

The purpose of the HOV lanes project (03-3F360) is to reduce congestion on US 50 by extending the existing HOV lanes on US 50 west from the Watt Avenue Interchange, where the current HOV lanes terminate, to the I-5 Interchange in downtown Sacramento to help implement the Sacramento Region Bus/Carpool Lane Network Vision.

The HOV lanes project is needed because the US 50 corridor is experiencing substantial recurring congestion during peak commute periods. The amount and duration of congestion is expected to increase in the future as suburban development continues in the eastern portions of Sacramento County and El Dorado County. This Project will improve mobility, provide an option for reliable peak period travel time, and meet sustainability goals by providing incentives for commuters to use buses, carpools, or vanpools for peak period travel to improve traffic operations by reducing congestion and travel time.

The State Highway Protection Program (SHOPP) rehabilitation project (03-0H080) will extend the service life of the pavement and reduce maintenance expenditures by rehabilitating the existing lanes and other

assets along this corridor. This project is needed because the existing pavement is deteriorated and has a poor ride quality that requires high annual maintenance to repair, thus exposing workers who maintain this roadway to heavy live traffic. The rehabilitation project also proposes to increase the deficient vertical clearances at seven Overcrossing structures within project limits as identified in the District 3 Goods and Movement Study by lowering the US 50 roadway profile. The increased vertical clearance will reduce the frequency of "high load" hits, reduce maintenance worker exposure to live traffic, and improve freight mobility in this corridor by providing a direct route instead of the detouring around the structures.

Project Benefits

This HOV and the Rehab Project will directly benefit traffic along the US 50 corridor by:

1. Allowing connectivity and consistency with the planned HOV system in the Sacramento Region.
2. Achieving the goals of the current Sacramento Area Council of Governments' (SACOG's) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) by enhancing mobility and promoting ridesharing.
3. Improving US 50 to meet the growing travel demand in the Sacramento Region.
4. Providing an option for reliable peak period travel time with a multimodal approach.
5. Using the highway facilities as efficiently as possible.
6. Improving general traffic operations by reducing congestion and travel time.
7. Installing advanced ITS infrastructure for improved traffic management, and ready the corridor for Caltrans' future Integrated Corridor Management project planned on US 50.
8. Improving lighting near transit facilities to improve safety.
9. Enhancing freight mobility along the US 50 Corridor.
10. Providing long life pavement in this highly congested corridor resulting in less frequent maintenance and improved ride equality.

Project Proposal

The HOV lanes component of this corridor mobility project (03-3F360) has been fully funded with $90 million from Solutions for Congested Corridor Program (SCCP) to successfully complete the addition of 14 HOV lane miles. These SCCP funds will be used to fund $10 million Construction Support and $80 million Construction Capital.

The SAC 50 Rehabilitation project (03-0H080) is fully funded by State Highway Operation and Protection Program (SHOPP) for $278 million and will rehabilitate 56 lane miles of mainline with a long-life pavement, increase the vertical clearance of seven structures to Federal Standards to improve Freight Mobility along the corridor, and upgrade pedestrian ramps and sidewalks throughout the corridor to current Americans with Disabilities Act (ADA) standards.

Schedule:

Design-Bid-Build

03-3F360, HOV Project		0H080, Rehab Project	
Program Project	11/01/2012	Program Project	08/16/2017
PA&ED	05/31/2017	PA&ED	08/01/2018
RTL	02/14/2020	RTL	02/14/2020
CCA	12/01/2024	CCA	12/01/2024

Design-Build

Request for qualifications (RFQ) *	Winter 2018
Request for proposals (RFP) *	Spring 2019
R/W Cert**	February 2020
CCA	Winter 2023

*The HOV project (03-3F360) and the Rehabilitation project (03-0H080) will be combined prior to the RFQ and RFP.

**Right of way clearance for some of the segments within the project will be obtained earlier than this date.

Cost/Funding

The rehab project is fully funded by SHOPP's Roadway Rehabilitation (20.XX.201.120) program and the HOV project is fully be funded by the SB1 SCCP Program.

03-3F360 - HOV Project	**($ million)**	**03-0H080 - Rehab Project**	**($ million)**
PA&ED Support	$5.8	PA&ED Support	$7.8
PS&E Support*	$10.0	PS&E Support	$17.0
Right of Way Support	$2.5	Right of Way Support	$1.8
Construction Support*	$10.0 (from SCCP)	Construction Support	$31.8
Right of Way Capital	$5.5	Right of Way Capital	$3.9
Construction Capital	$80.0 (from SCCP)	Construction Capital	$216.0
Total	**$113.8**	**Total**	**$278.3**

*Note: Some of the PS&E and Construction Support resources will be converted to Construction Capital for the Design-Build designer, quality effort and co-located office.

Permits/Agreements

An Encroachment Permit with the City of Sacramento and Railroad Agreements with Union Pacific Rail Road (UPRR) and Sacramento Regional Transit (RT) are required.

Right of Way/Utilities

All proposed pavement work can be performed within Caltrans R/W except at the Brighton Overhead and at Camellia City Viaduct. The bridge widening work proposed with this project would require significant coordination with UPRR and RT at the Brighton Overhead and the Camellia City Viaduct. Coordination with UPRR and RT are on-going under the SAC 50 HOV lanes project (03-3F360) which is expected to be combined with the rehabilitation project (03-0H080). There are utilities attached to or placed through the bridges at various locations within this project that require relocation if any bridge raising is proposed to address vertical clearance issues instead of lowering mainline US 50. Temporary construction easements will be necessary to construct the proposed sound walls along the south side of US 50 from Stockton Blvd to 65th Street. The expected completion of the R/W Cert is February 2020 for the Design-

Bid-Build process. A detailed R/W clearance for each parcel involved in this corridor project will be provided as part of the RFP.

Utility conflicts are being identified and verified during the preliminary engineering process. All utility conflicts and R/W acquisitions schedule will be defined before the issuance and release of the RFP.

Transportation Benefit

In Sacramento, this highway is a multilane urban freeway that serves as a vital commuter route for residents traveling into the City of Sacramento's central business district. Also, it serves as a freight corridor in the Sacramento Region by connecting the Mather Airfield with the farming communities and other businesses for goods movement. This highway carries an Average Daily Traffic of 250,000 with 9% Trucks. Reconstructing this PCC pavement with a Continually Reinforced Concrete Pavement (CRCP) without reducing existing lanes during the peak commute hours is a challenging task which needs innovative traffic handing and construction practices.

By utilizing design-build procurement process, the potential for congestion relief on one of the Western United States' largest international freight and international travel corridors can be realized two to three years earlier. Also, increased travel reliability (a factor particularly important to the freight movement industry) and enhanced safety will be realized earlier. These benefits will all enhance the quality of life of the motorists. Additionally, the early delivery of this project will provide cost savings that could not be realized if following the regular Design-Bid-Build process. It is also expected that the Design-Build process will yield innovations in delivery, especially in traffic management and construction staging.

The Design Build process will also provide opportunities to phase the construction of this large project to reduce construction related impacts to local communities and deliver some of the benefits early. For example, as the coordination with the Rail Road companies continues for the construction of Brighton and Camellia structures, the sound walls from Stockton Blvd to 65th Street could be constructed to mitigate construction related impacts to local communities. Additionally, the bridge structure over the weekly Sacramento Farmers Market and other leased air space could be staged to minimize impacts to local communities.

Public/Political Support of Project

City of Sacramento, City of Folsom, City of Ranch Cordova, Eldorado County, three California Assembly Members and one California State Senator whose constituents use this portion of the US 50 or are in neighborhoods adjacent to Highway 50 support this project.

Why is this project a good design-build candidate?

This is a good candidate project for design build for many reasons:

- Under design-build, portions of the design and construction phases are overlapped leading to significant time savings. Improved coordination between the designer and the builder lead to better constructability and improved efficiency. The design-builder is also able to order critical materials earlier and schedule subcontractors more effectively. Finally, the designer can design the project to take advantage of the contractor's strengths and availability (equipment, materials on hand, and expertise). Each of these benefits can lead to significant time savings. It is anticipated that design-build will enable this project to be completed two to three years earlier than by design-bid-build. This project, because of the geographical size and the variety of work, offers a design-builder the opportunity to maximize options that will allow for an expedited project delivery.
- The innovation in the design-build process is the early involvement of the contractor that enables engineering considerations to be incorporated into the design phase and enhances the constructability of the engineered project plans. Interjecting contractor knowledge early into design can foster creative engineering and construction solutions as well as possible innovation available in the staging of construction and maintenance

of traffic. This will transfer the design related risks to the Design Build contractor from Caltrans. Design-build projects can lessen the impact on the traveling public by shortening overall construction schedule while allowing the contactor maximum flexibility. It is anticipated that there will be sufficient flexibility in the selection of bridge structures and pavement design to obtain innovation

- The design build process allows for transfer of risks including cost escalation and schedule delays. The design-build contract is for a firm fixed price and a schedule guarantee for the work. The contractor is responsible for completing the scope of the work in accordance with the schedule. This would include responsibility for the schedule performance of subcontractors after the initial award. The contractor is responsible for any increase in the quantities of commodities, labor, and any other units that evolve as design is advanced.
- Because design-build projects are awarded on a fixed price basis, with limited opportunities for cost growth, the Department will have greater certainty regarding the total project cost at an early stage of the process. Under the design-build delivery methodology, the contractor provides the Department with a fixed price for the construction before detailed design is complete and then is responsible for working with the designer to make sure that price remains fixed.
- An accelerated rehabilitation of existing pavement will prevent further deterioration of the pavement resulting in safer traffic conditions and reduced exposure of maintenance workers to live traffic.
- All work will be within the existing right of way and utility impacts will be minimal.
- Construction costs have started going up in the recent months. The faster the contract is awarded the less probability that the construction costs will be increasing due to the rebounding economy and other economic conditions.
- A lot of the improvements are located within Caltrans existing right-of-way. These improvements, with most having independent benefit to the motoring public, can be constructed while coordinating with the Rail Roads and waiting for utility relocations.
- Design-Build will allow for traffic delay savings to be realized earlier.
- Combining the multiple projects into one larger project adds efficiency in the delivery and greater opportunity for design-build enhancements. These efficiencies will include reduced Support and Capital costs.

PROJECT CONTACTS

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DESIGN-BUILD

PROJECT SELECTION CRITERIA

The successful Designer/Builder's tasks should be evaluated by the project team with input from the appropriate functional units. The table below illustrates the tasks for which the Designer/Builder's assistance will be needed and discuss its benefits to deliver the project.

In applying the following criteria, some items will require a simple yes or no answer. In those cases, mark either 1 (Yes) or 5 (No). Other criteria will need to be evaluated using a more subjective range. In those cases, mark between 1 and 5. A narrative explanation may be attached to help explain.

Date: 5/25/18

SELECTION CRITERIA	YES 1	2	3	4	NO 5
• Minimal public/environmental controversy			X		
• Project approval (PA&ED) obtained or imminent?		X			
• Environmental approval for entire project?		X			
• All major decisions made?		X			
• Project footprint established	X				
• Right of Way parcels have been identified	X				
• No condemnations expected	X				
• Utility conflicts identified				X	
• Relocations have been identified and responsibility and time frame for relocation has been agreed upon					X
• Environmental permits identified and readily obtainable	X				
• List of permits provided	X				
• Schedule for obtaining permits included	X				
• Endangered species					X
• Hazardous Material Site Assessment completed			X		
• Railroad involvement?	X				
• General agreement with railroad reached					X
• Type of agreements needed have been identified	X				
• Bridge Site Data complete and submitted	X				
• Permits to enter for foundation investigation have been obtained	X				
• Cooperative Agreements					X
• Funding commitments obtained		X			
• Project lends itself to concurrent design and construction	X				
• Significant time savings anticipated by using Design-Build		X			