

MEMORANDUM

TAB 88

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: March 24-25, 2021

From: STEVEN KECK, Chief Financial Officer

Reference Number: 2.5e.(10), Action Item - **YELLOW REPLACEMENT ITEM**

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District 06 – Director

Subject: **SUPPLEMENTAL FUNDS ALLOCATION FOR PREVIOUSLY VOTED PROJECT (PPNO 6820/EA 0U470) – KERN COUNTY – INTERSTATE 5) RESOLUTION FA-20-41**

Book Item Update: *Additional supporting information add under “Funding and Contract Status”*

ISSUE:

Should the California Transportation Commission (Commission) approve the California Department of Transportation’s (Department) request for an additional \$12,335,000 in construction capital and construction support cost, for the State Highway Operation and Protection Program (SHOPP) Pavement Rehabilitation project on Interstate 5 (I-5), in Kern County, to complete the construction contract?

RECOMMENDATION:

The Department recommends that the Commission approve the requested supplemental funds allocation for this SHOPP project.

PROJECT DESCRIPTION:

This project is located on I- 5, near the City of Kettleman, in Kern County. The original scope of work consists of rehabilitating 20 lane-miles of pavement in the southbound (SB) and northbound (NB) directions by replacing failed concrete panels in Lane #1 with Jointed Plain Concrete Pavement (JPCP), and reconstructing Lane #2 with Continuously Reinforced Concrete Pavement (CRCP), including reconstructing outside and inside shoulders. The scope also entails cold planing and overlaying the ramps at Twisselman Road with Hot Mix Asphalt (HMA).

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During construction, and upon removal of the asphalt concrete, it was discovered that Lane #1 was previously cracked and sealed. The cracks were not anticipated or noted as part of the contract, nonetheless, the condition of the Portland Cement Concrete (PCC) pavement in Lane #1 is not suitable to carry traffic.

After several internal discussions within the Department to evaluate the differing site condition, and conferring with the contractor, the Department concluded that it was prudent to reconstruct Lane #1 with CRCP. This option would provide a 40-year design life for both lanes with the least amount of constructability issues.

FUNDING AND CONTRACT STATUS:

This project was programmed in the 2018 SHOPP and in June 2020, the Commission approved funding in the amount of \$29,960,000 in construction capital and \$2,242,000 in construction support. The contract was awarded to the lowest bidder in August 2020 for \$26,713,000, and construction began in November 2020, with 200 working days. The planned completion date of the project is by August 2021.

Currently, the project construction is 20 percent complete with 164 working days remaining. As of February 2021, a total of \$5,761,279 and \$533,746 was expended in construction capital and construction support, respectively. The remaining construction capital, which includes \$1,321,000 in contingency, is \$20,952,000. The remaining construction support budget is \$1,708,000. The Department did not previously request G-12 authority funds for this project.

The remaining project budget is not adequate to complete the proposed work. To that end, the Department cannot issue a construction change order to change the proposed work that exceeds the remaining construction capital and construction support. Therefore, the Department is requesting supplemental funds in the amounts of \$9,335,000 in construction capital and \$3,000,000 in construction support to complete project construction.

Based on the evaluation of differing site conditions, proposed change in pavement strategy and anticipated soil conditions, the Department expects to return back to the Commission to request additional supplemental funds in the future. Approval of this request allows the construction of the project to continue, minimizing costs and schedule delays.

REASON FOR COST INCREASE:

The primary reason for the cost increase is due to differing site conditions, and the extensive pavement damage that were not detected in the early planning phase field pavement inspection. In 2019, during the design phase, the Department inspected the roadway pavement within the project limit and conducted additional tests on a Lane #1 pavement strip. Furthermore, the Department inspected and reviewed the condition of an exposed Lane #1, under construction in an ongoing project adjacent to the location of this project. The test and field inspections that took place during the design phase did not reveal extensive pavement

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cracks, and therefore, the design strategy did not include measures to remedy un-anticipated underlying cracks.

When construction started in November 2020, the underlying PCC pavement in Lane #1 was discovered to have been cracked and seated, which is not suitable to carry traffic. Thus, the rehab strategy was revised early in the construction phase to reconstruct Lane #1 with CRCP.

Based on the specific change in scope of work, the net increase in the project's cost exceeds the available contingency funding. Thus, a contract change order cannot be issued until the supplemental funds are made available. Although the remaining construction capital funds of \$20,952,000 is still available, the Department cannot authorize the new scope with the knowledge that the remaining original work cannot be funded. The requested supplemental construction capital funds would be utilized to mitigate for the differing site conditions, and the requested construction support supplemental funds would be used to cover the cost increase due to the increase in contract time, additional geodetic survey, and added environmental efforts.

CONSTRUCTION CAPITAL COST INCREASE

Given the reasons explained above, the Department adjusted several contract pay items to perform the work needed to correct the differing site condition and to complete the project construction. The impacted contract pay items were adjusted as follows:

• Jointed Plane Concrete Pavement (JPCP)	(-\$882,000)
• Drill and Bond (Dowel Bar)	(-\$147,700)
• Isolation Joint Seal (Silicone)	(-\$336,600)
• Remove Concrete Pavement (Panel)	(-\$246,960)
• Grind Existing Concrete Pavement	(-\$315,000)
• Time-Related Overhead	\$440,000
• Roadway Excavation	\$284,700
• Class 3 Aggregate Sub-base	\$258,000
• Hot Mix Asphalt (Type A)	\$908,000
• Continuously Reinforced Concrete Pavement (CRCP)	\$6,644,000
• Remove Concrete Pavement	\$478,700
• Bid Price Fluctuation	\$1,840,000
• Equipment Cost Delays	<u>\$410,000</u>
The net cost of the above adjustment is:	<u>\$9,335,140</u>

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SUPPORT COST INCREASE

The additional support cost is due to the increase in contract time, additional survey, and environmental efforts. It is anticipated that the change in scope will add an estimated 90 working days to the original 200. Geodetic survey will be required for the full five (5) miles to establish a new design-based profile. The Letter of Concurrence (LOC) from U.S. Fish and Wildlife Service (USFWS) will need to be amended to reflect the revised scope and additional biological surveys will be required prior to commencement of work.

The Department has determined that the requested supplemental funds are in the best interest of the State to rehab both lanes within the project limits with long-life pavement. This will result in minimal maintenance work to preserve the pavement condition and to eliminate the need for any major rehabilitation project during the 40-year service life.

CONSEQUENCES:

With the approval of this supplemental funds request, the Department will deliver this project with added value and benefit to the State and the travelling public. The initial cost increase would be offset by the anticipated savings of maintenance cost over the life of the pavement, and the Department would expend minimal funds to preserve pavement condition within the project limits. The new pavement would provide a smooth traveling surface over the next 4 decades with minimal traffic disruption for extensive repairs.

Downscaling scope to address differing site conditions would result in leaving poor-condition pavement unchanged. This would not meet the planned performance output. Work would need to be down scoped by eliminating items or reducing project limits. This would create the additional need for another project to bring this segment to a state of good repair. If so, more maintenance and/or rehab projects would be required, which would result in more traffic delays and disruptions

FINANCIAL RESOLUTION:

Resolved, that \$9,335,000 be allocated from the Budget Act Item 2660-302-0890, and Non-Budget Act Item 2660-802-3290 for construction capital and \$3,000,000 for construction support to provide funds to complete the construction of the project.

Attachment

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2.5 Highway Financial Matters

Project #	Project Title	PPNO	State	State
Allocation Amount	Location	Program	Federal	Federal
Recipient	Project Description	Funding Year	Additional	Revised
<u>RTPA/CTC</u>		Item #	Amount by	Amount by
County		Fund Type	Fund Type	Fund Type
Dist-Co-Rte	Project Support Expenditures	Program Codes	Current Amount	Current Amount
Postmile		Project ID	by Fund Type	by Fund Type
		Adv Phase		
		EA		

2.5e.(10)

Supplemental Funds for Previously Voted Project

Resolution FA-20-41

\$12,335,000	Near Kettleman City, from 0.6 mile south of Twisselman Road Overcrossing to Kings County line.	06-6820			
	<u>Outcome/Output:</u> Reconstruct the number two lane with Continuously Reinforced Concrete Pavement (CRCP) and grind the number one lane to rehabilitate pavement.	505-3290	\$189,000	\$253,000	\$442,000
Department of Transportation		RMRA			
<u>KCOG</u>		001-0890	\$2,053,000	\$2,747,000	\$4,800,000
Kern		FTF			
06-Ker-5	Supplemental funds are needed to Complete Construction.	20.10.201.122			
81.7/87.0	Total revised amount \$41,289,800	SHOPP/2017-18			
		802-3290	\$2,591,500	\$787,000	\$3,378,500
		RMRA			
		20.20.201.122			
		SHOPP/2019-20			
		302-0890	\$24,121,300		\$24,121,300
		FTF			
		20.20.201.122			
		SHOPP/2020-21			
		302-0890		\$8,548,000	\$8,548,000
		FTF			
		20.20.201.122			
		0615000301			
		OU470			