State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

TAB 44

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: January 22, 2015

Reference No.: 2.5e.(1)
Action Item

From: NORMA ORTEGA
Chief Financial Officer

Prepared by: Rachel Falsetti, Chief
Division of Transportation Programming

Subject: **ALLOCATION FOR SUPPLEMENTAL FUNDS FOR PREVIOUSLY VOTED PROJECT RESOLUTION FA-14-14**

RECOMMENDATION:

The California Department of Transportation (Department) recommends that the California Transportation Commission (Commission) allocate an additional $5,526,000 in State Transportation Improvement Program (STIP) funds for the Route 101 Marin Sonoma Narrows – Petaluma Boulevard South Interchange and Petaluma River Bridge Replacement project (PPNO 0360H) in Sonoma County.

ISSUE:

Additional funds are needed for construction engineering for one previously voted STIP project in order to complete construction.

RESOLUTION:

Resolved, that $5,526,000 be allocated for construction engineering for the project identified below.

Dist-Co-Route	Fund	Component	Original Allocated Amount	Current Allocation	Allocation Adjustment	Revised Allocation	% Increase Above Current Allocation
04-Son-101	CMIA	CON ENG	$11,042,000	$11,042,000	$0	$11,042,000	0%
	Local	CON ENG	$1,148,000	$1,148,000	$0	$1,148,000	0%
	RIP	CON ENG	$0	$0	**$5,526,000**	$5,526,000	N/A
		Total	$12,190,000	$12,190,000	**$5,526,000**	$17,716,000	45.3.0%

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Project # Allocation Amount Recipient RTPA/CTC Dist-Co-Rte Postmile	Project Title Location Project Description	PPNO Budget Year Fund Type Program Codes Project ID	State Federal Current Amount by Fund Type	State Federal Additional Amount by Fund Type	State Federal Revised Amount by Fund Type
2.5e.(1)	**Supplemental Funds for Previously Voted Projects**				**Resolution FA-14-14**
1 $5,526,000 Department of Transportation MTC Sonoma 04-Son-101 0.9/3.6	**Route 101 Marin Sonoma Narrows - Petaluma Boulevard South Interchange and Petaluma River Bridge Replacement**. Near Petaluma, at Petaluma Boulevard South and Route 101. Construct new interchange, frontage roads, and equipment for ramp metering. Also construct a new bridge structure over the Petaluma River. (TCRP 18) Supplemental funds are needed for construction engineering to complete construction. (Total revised construction engineering [including $1,148,000 in local funds]: $17,716,000.) Outcome/Output: When combined with other segments (PPNO 0360F and 0360J), the Marin Sonoma Narrows project will result in daily vehicle-hours of delay savings of about 10,368 hours.	04-0360H 2010-11 TFA 304-6058 20.20.075.600	$7,395,000		$7,395,000
		2011-12 CMIA 004-6055 20.20.721.000	$11,042,000		$11,042,000
		2011-12 CMIA 304-6055 20.20.721.000	$61,675,000		$61,675,000
		2011-12 SLPP 304-6060 20.20.724.000	$1,865,000		$1,865,000
		2014-15 RIP 001-0042 20.20.075.600 0412000195 3 2640U3		$5,526,000	$5,526,000

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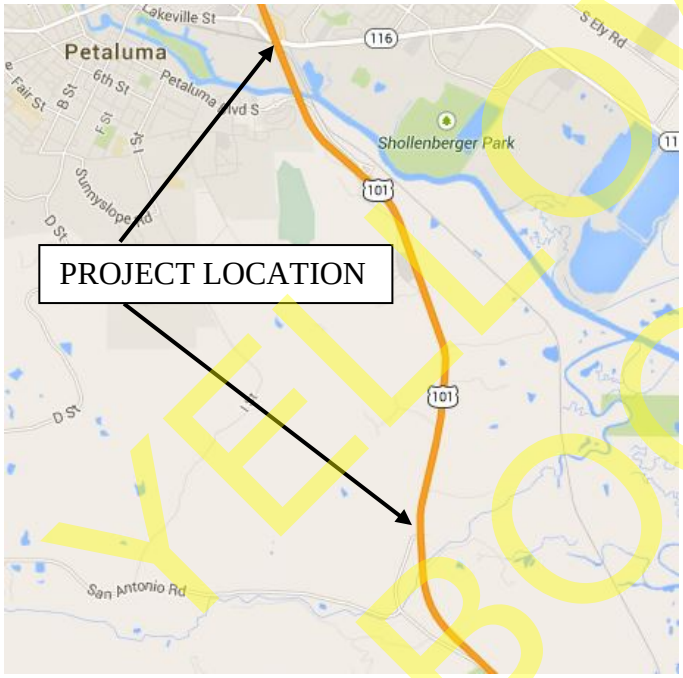
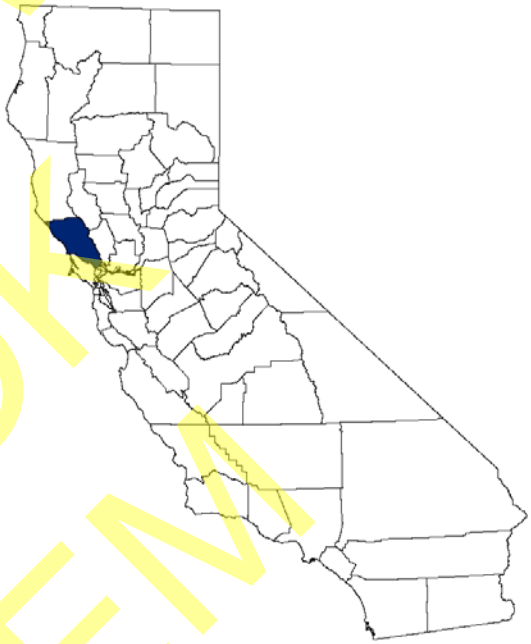
PROJECT DESCRIPTION:

The project scope includes construction of a new interchange at Petaluma Boulevard South and Route 101, replacement of the existing 4-lane bridge structure over the Petaluma River with a 6-lane structure, construction of frontage roads, and installation of ramp metering within the project limits.

PROJECT LOCATION





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FUNDING STATUS:

At its May 2012 meeting, the Commission allocated $11,402,000 in Proposition 1B Corridor Mobility Improvement Account (CMIA) funds for construction engineering along with allocation of CMIA, Proposition 1B State-Local Partnership Program (SLPP) and Regional Improvement Program (RIP) funds for construction capital. The project funding plan also includes local funds ($1,148,000 for construction engineering and $6,065,000 for construction capital).

An additional $5,526,000 is needed for construction engineering. This funding shortfall is proposed to be funded with RIP funds.

REASONS FOR COST INCREASE:

As a result of various issues relating to the exclusionary netting that was used to deter bird nesting on the existing bridge structures over Petaluma River Bridge, there is a shortfall in construction engineering budget. The construction capital expenditures attributable to these issues are relatively minor and can be paid out from the existing project contingency.

Following is the issues background and the timeline describing main events that have resulted in this funding shortfall.

The Streambed Alteration Agreement (Section 1602 Permit) issued by the California Department of Fish and Wildlife for this project specifies the migratory bird nesting season from February 15th to August 15th. This permit further requires that if active bird nests are identified within the work zone, a 50 foot no-work buffer for non-raptors and a 300 foot buffer for raptors must be established. The existing Petaluma River Bridge is a popular nesting location for migratory birds.

Since the new bridge over the Petaluma River follows the same horizontal alignment as the old bridge, the new structure is being constructed in stages within the existing airspace of the old bridge (Figure 7). As a portion of the new structure is built, traffic from the existing structure is moved onto the new structure then the existing structure can be demolished (Figure 8). To deter migratory birds from nesting during construction, the contractor was required to install exclusionary netting per the project specifications.

As the nesting season began, Caltrans biologists and construction staff noticed hundreds of birds landing on the netting. A closer examination revealed that several birds were able to breach the exclusionary netting and that ten birds had died after being trapped inside the netting. Immediately, Caltrans biologists, engineers, and contractor personnel met on-site to discuss plans to modify the netting installation to prevent further bird entrapment and mortality. The contractor was directed to implement modifications to the netting installation. The US Fish and Wildlife Service was also notified about the bird mortalities.

The following day the contractor started work to modify netting installation. The repair work was time consuming and challenging due to limited access to the underside of the bridge (Figures 1, 2, 3). These modifications were completed two weeks later (Figure 4). During the interim, while repairs were being undertaken, another 53 birds became trapped and died. Four additional bird deaths occurred later for a total of 67 mortalities.

A special investigation conducted by the Fish and Wildlife concluded that bird entrapment and mortalities at the Petaluma River Bridges were unintentional and acknowledged that considerable efforts were made by Caltrans and the contractor to immediately correct the situation. As a result of that investigation, no charges were brought forth against the Department or against the contractor. Except for a small administrative charge, no penalties were levied. The Fish and Wildlife required the Department and contractor to research and install other types of bird deterrent means and to intensify the bird monitoring efforts. Netting is no longer used, and has been replaced entirely by solid panels that do not provide habitat space (Figure 5).

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These unintended bird mortalities also triggered a strong reaction from the local environmental community. As part of a supplemental report of the 2013-14 State budget, the California State Senate passed a resolution requiring the Department to take necessary corrective actions. The Native Songbird Care and Conservation organization and others filed a complaint against the Department seeking a judgment that the Department ceases all the operations and the activities that might harm and/or interfere with the nesting activities of cliff swallows. The lawsuit was eventually settled on the condition that, among other things, the Department will not demolish the existing bridge structures during the bird nesting seasons. This restriction coupled with other restrictions on in-water activities (specified in the 1602 permit) has lengthened the time needed to complete construction. Figure 6 shows the revised construction schedule.

The total construction engineering budget shortfall of $5,526,000 can be summarized into the following four categories:

1. Additional biological monitoring
To meet the settlement conditions, the Department, in collaboration with the Fish and Wildlife, has established an extensive bird monitoring protocol that requires full-time biological monitors on-site seven days a week during the majority of the bird nesting season. Due to the unavailability of sufficient in-house resources, the biological monitoring has to be performed by the consultant biologists. The hourly costs for a consultant biologist are approximately 30 percent higher than the in-house staff costs. Furthermore, the required Department oversight of such consultant task orders adds 10 to 15 percent in administration charges to the final costs. **Total estimated cost is $1,500,000**.

2. Additional staff time to revise and implement the bird exclusionary measures and to defend the lawsuit
The field and office staff has been and continue to perform activities that were not anticipated:

- The Resident Engineer had to dedicate at least one full-time field engineer to monitor, coordinate, and document the activities and the changes related to bird exclusionary measures during the 2013 and 2014 bird nesting seasons. Similar efforts are expected to continue for the remaining nesting seasons.
- The Resident Engineer, Senior Environmental Planner, Senior Construction Engineer, and the Public Information Office staff had to spend considerable time coordinating with the regulatory agencies, legislators, attorneys, local environmental groups to address their concerns, manage media inquiries, solicit input and develop new bird deterrent measures, and implement those measures in a coordinated fashion.
- The field and office staff was also heavily involved in providing support to the legal defense team to block the injunction, cooperate with the Fish and Wildlife criminal investigation, defend the lawsuit, and negotiate the ultimate settlement.
- The revalidation of the environmental document required additional biological studies to assess the impact of the bird mortalities on the species population.
  Total estimated cost is $1,526,000.

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3. Additional design support
A number of contract change orders (CCO's) have been executed to implement the revised bird exclusionary measures. Furthermore, additional CCOs have been approved/executed to address various issues relating to bridge foundation seal courses, piles, relocation of foundation spoils and changes in the pavement structure section. **Total estimated cost is $800,000**.

4. Additional staff time due to delays in completing the project on time
Due to an anticipated higher risk of storm water violations for performing ground disturbing activities during wet weather, which could result significant penalties and project delays, the contract was suspended from January 2013 to May 2013. Furthermore, the above described work window restrictions, and other unforeseen work and unanticipated conflicts have increased the construction duration by one year. The field office is currently operating at bare minimum staffing levels and further staff reduction is not possible. Therefore, current staffing levels will be maintained for one additional year. **The total estimated cost is $1,700,000.**

FUNDING OPTIONS:

OPTION A: Approve this request for supplemental funds, as presented above, for $5,526,000 to complete construction.

OPTION B: Deny this request. The Department will not be able to perform the required environmental monitoring levels agreed upon with the regulatory agencies and may be subject to addition violations and fines.

RECOMMENDED OPTION:

The Department recommends that this request of $5,526,000 as presented in Option A above, be approved to complete construction.

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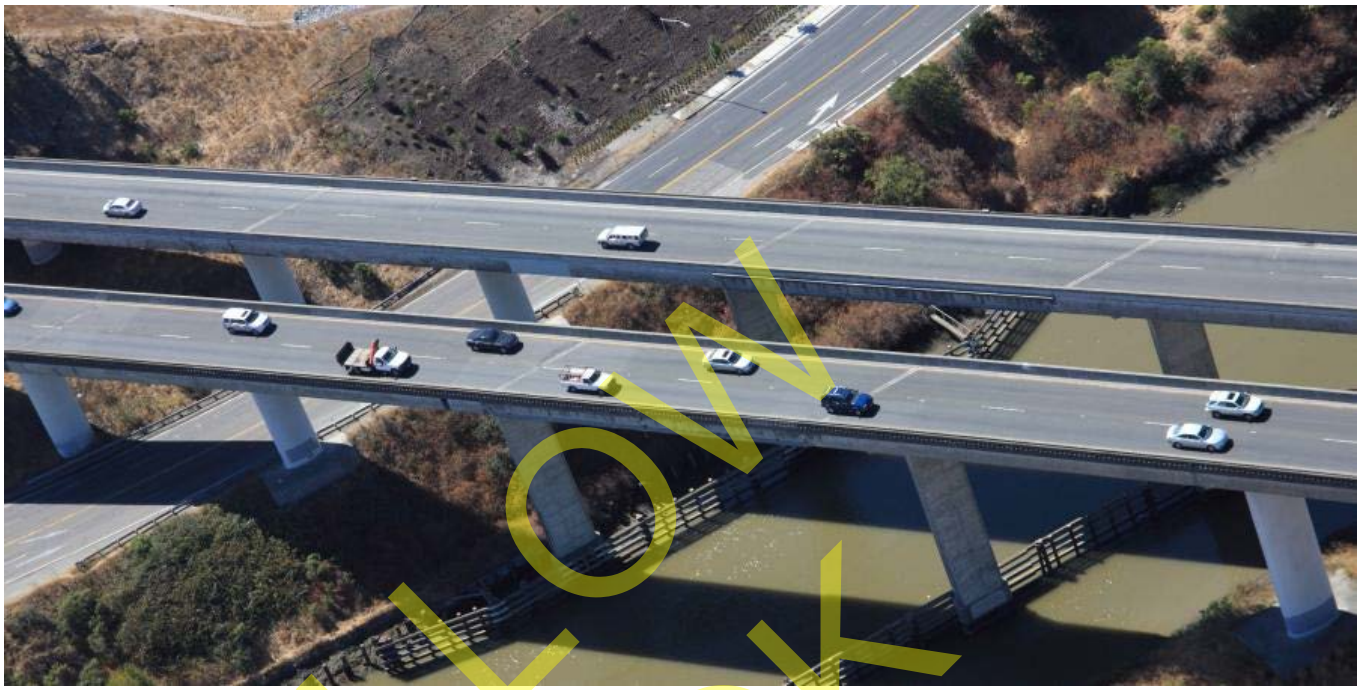

Figure 1: Difficult access to bridge-underside areas 75 feet above the Petaluma River

Figure 2: Difficult access from river banks

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Figure 3: Difficult access to bridge columns during night-time lane closures

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Figure 4: Original (top) and modified (bottom) netting installation

Figure 5: Use of panes as an exclusionary measure

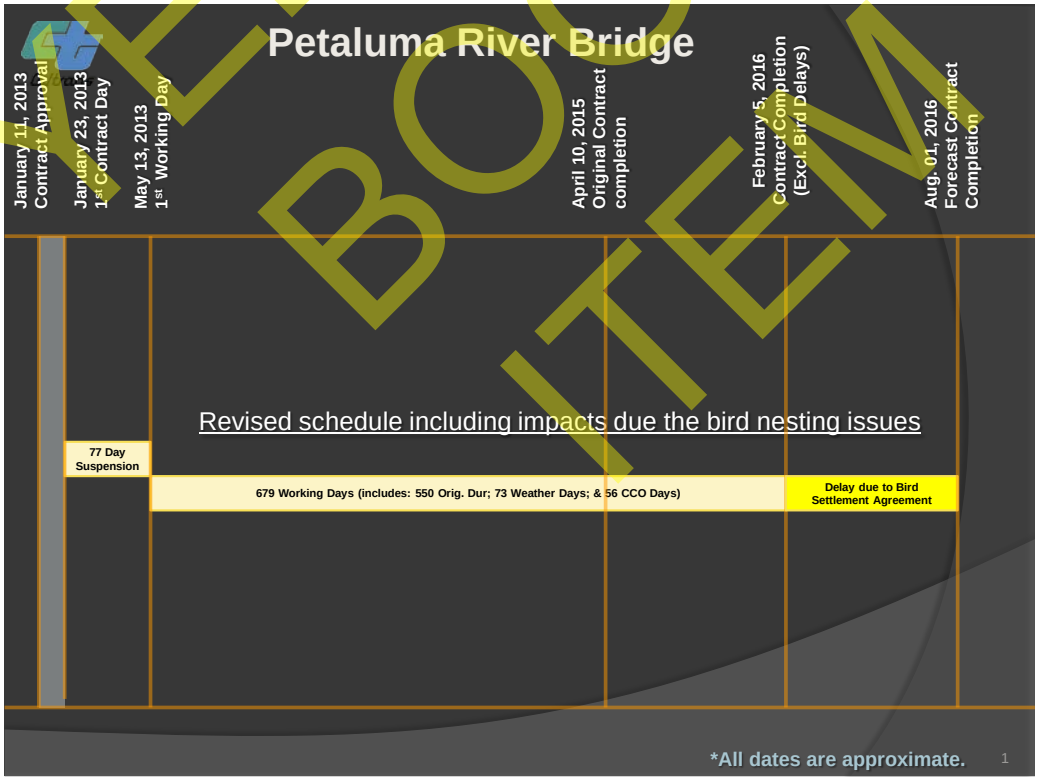

Figure 6 Revised project schedule showing delays due to the bird nesting settlement restrictions

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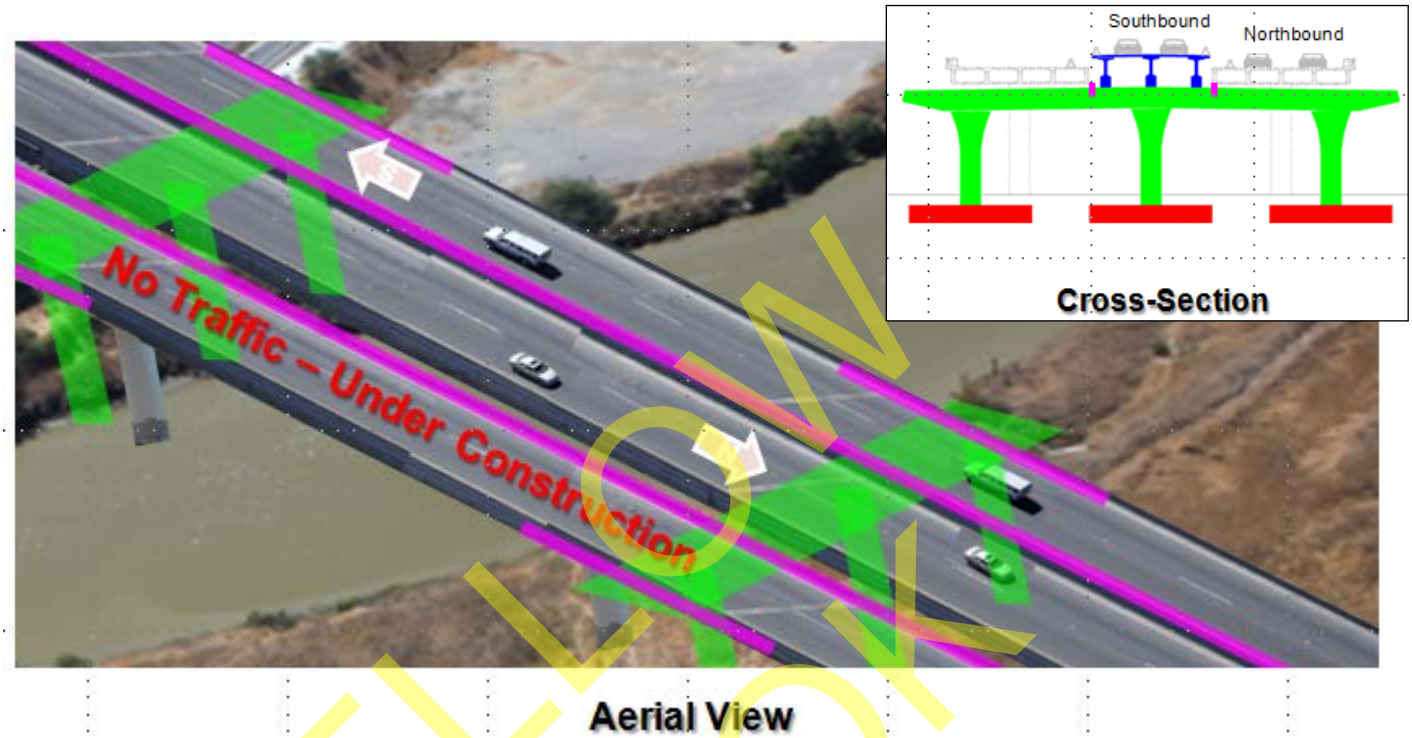

Figure 7 Staging Overview

Figure 8 Petaluma River Bridge Overview

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