

TO: BATA Oversight Committee

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DATE: October 28, 2015

FR: Executive Director

Memorandum

W. I. 1256

RE: Toll Bridge Seismic Retrofit Program Update and East Span Maintenance Peer Review

Staff will provide an update to the Committee on the San Francisco-Oakland Bay Bridge East Span Seismic Replacement Project and a maintenance-focused peer review of the new bridge by engineers from the International Cable Supported Bridge Operators Association (ICSBOA). Major highlights include:

- A. On the demolition of the E3 marine foundation pier, Caltrans has received final environmental approvals to proceed with the implosion of the pier. Caltrans is scheduling the implosion for Saturday morning on November 7, 2015 during the slack tide. The implosion will only take a few seconds and the contractor will be utilizing a bubble curtain system in the water around the pier and coverings over the piers to contain the implosion. The California Highway Patrol will be closing the bicycle/pedestrian pathway and will be assisting with a rolling traffic break during the implosion. As a precaution, BART also will be briefly halting rail service in the Transbay Tube. Should Caltrans miss that morning's slack tide, then the implosion would be rescheduled to the next slack tide during daylight hours.
- B. A group of bridge engineers from the ICSBOA have completed their maintenance-focused peer review of the new east span project. The purpose of the ICSBOA is to bring together professionals responsible for the management, maintenance, and operation of cable supported bridges from around the world to discuss the challenges they face in the maintenance and operations of such bridges. The ICSBOA offered to review the comprehensiveness of the proposed inspection and maintenance program, and to identify potential best practices or deficiencies in the proposed maintenance program.

The peer review group included engineers from the Storebælt and Øresund Bridges in Denmark, the Forth Road Bridge in Scotland, Bronx-Whitestone Bridge in New York, and Tsing-Ma Bridge in Hong Kong.

The peer review group met with design, construction, inspection, and maintenance staffs of Caltrans and its consultants, reviewed draft maintenance manuals, and went on a site visit to the critical areas of the span. Generally, the group found the new span to be in a condition consistent with a new complex long span bridge and did not find concerns that required immediate remediation. The group noted that all bridges require on-going maintenance and rehabilitation to achieve their design lives as some parts, like expansion joints and paint, will need to be replaced.

BATA Oversight Committee October 28, 2015 Page 2

The group made a number of recommendations to improve and maximize bridge life, including:

- Having a risk-based approach to inspection and maintenance;
- Installing additional bridge monitoring systems;
- Improving inspection and maintenance access, specifically for a main cable traveler system; and
- Installing additional dehumidification on the bridge main cable.

Staff has invited a representative of the peer review group and a representative from Caltrans maintenance staff to the BATA Oversight Committee to discuss the recommendations.

Steve Heminger

Attachments

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