Bay Area Toll Authority Oversight Committee

July 9, 2025 Agenda Item 6a-25-0940

Toll Bridge Asset Management Plan Update

Subject:

Staff will provide an update on the joint BATA and Caltrans Toll Bridge Asset Management Plan progress including analysis of lifecycle cost. Staff plan to integrate the latest analysis results into the next cycle of the BATA 10-Year Toll Bridge Capital Improvement Plan.

Background:

In June 2020, a BATA Ad Hoc Working group was established to evaluate the impacts of COVID-19 and the Shelter-in-Place Orders on toll bridge traffic and toll revenue. The Ad Hoc Working Group reviewed the impact of the pandemic, and an action plan was proposed to maintain the toll bridges in the state of good repair, including developing a robust asset management program to demonstrate sustainable asset stewardship of the toll bridges, effective use of resources, and incorporating best practices in asset management. Part of the asset management program included adoption of the Toll Bridge Asset Management Policy and Objectives in January 2024. The policy communicates BATA's commitment to best practices in asset management and outlines concrete objectives.

Toll Bridge Asset Management Plan Update

In the spring of 2021, BATA and Caltrans joined efforts to develop a Toll Bridge Asset Management Plan (TBAMP). The TBAMP includes a comprehensive life cycle cost analysis for each of the seven toll bridges in the Bay Area. This analysis focuses on three scenarios to manage Bay Area toll bridges over the next 50 years, highlighting the tradeoffs between condition levels and costs:

- Scenario 1 Spot Repair: Fix bridge elements before they fall into very poor conditions.
- Scenario 2 Reduce Backlog: Fix bridge elements as needed to sustain fair condition.
- Scenario 3 Accelerate Rehab: Fix bridge elements as needed to increase time in good condition.

The presentation will provide essential background on bridge conditions. Bridge condition ratings are based on the Federal Highway Administration (FHWA) National Bridge Inspection Standards (NBIS) and are determined by element level inspections by Caltrans certified engineers. Inspections occur biennially in compliance with state and federal requirements. It is important to highlight the FHWA bridge condition ratings are not safety ratings and that a poor rating does not mean the bridge is unsafe. Caltrans engineers regularly inspect the bridges and monitor bridge safety, and any deficiencies are addressed immediately. The FHWA bridge rating is a tool to help track deterioration and guide maintenance priorities and funding. FHWA's guidelines calls for rating the bridge components on a 0 to 9 scale. The bridge components are the deck, superstructure, and substructure of each bridge. The overall condition rating for each bridge reflects the lowest of the three component ratings. If the rating is greater than or equal to 7, the bridge is classified as Good; if it is less than or equal to 4, the classification is Poor.

Bridges rated 5 or 6 are classified as Fair. The bridge component condition ratings are dynamic and may change over time due to use, environment, and maintenance activities. In general, bridges with Good condition ratings are typically newer with some minor defects that do not impact performance. Bridges with Fair condition ratings may exhibit moderate defects; however, the strength and functionality of bridge components remain unaffected. Bridges with Poor condition ratings tend to exhibit more extensive or widespread deterioration and generally require more frequent maintenance to ensure continued safe operation.

The analysis showed that maintaining the toll bridges in fair or better condition under the Reduce Backlog scenario is the most cost-effective strategy for managing the toll bridges. This finding is consistent with the adopted BATA Toll Bridge Asset Management Policy and Objectives. The Reduce Backlog scenario highlights a long-term approach that balances the cost and timing of investments and reflects BATA's asset management principles of using a whole life cycle cost approach and supporting data-driven, risk-based decision-making. Staff will report back on the progress of the overall asset management program as part of the annual toll bridge program update in November 2025.

Recommendations:

None. Information Only

Attachments:

- Attachment A: Life Cycle Cost Analysis Results for Individual Toll Bridges
- Presentation: Toll Bridge Asset Management Plan Update.

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