



Memorandum

Date: December 7, 2018
To: Transportation Authority Board
From: Eric Cordoba – Deputy Director for Capital Projects
Subject: 12/11/2018 Board Meeting: Update on the Transbay Transit Center Girder Fractures and the Study of Governance, Management, Oversight and Delivery of the Downtown Extension

<p>RECOMMENDATION <input checked="" type="checkbox"/> Information <input type="checkbox"/> Action</p> <p>None. This is an information item.</p> <p>SUMMARY</p> <p>The purpose of this memo is to update the Board on two concurrent efforts related to the Transbay Joint Powers Authority (TJPA): The review of the girder fractures at the transit center and the study of governance, management, oversight and delivery of the Downtown Extension required by the Transportation Authority Board on October 23, 2018. Eric Cordoba, Deputy Director for Capital Projects will present this item.</p>	<p><input type="checkbox"/> Fund Allocation</p> <p><input type="checkbox"/> Fund Programming</p> <p><input type="checkbox"/> Policy/Legislation</p> <p><input type="checkbox"/> Plan/Study</p> <p><input checked="" type="checkbox"/> Capital Project Oversight/Delivery</p> <p><input type="checkbox"/> Budget/Finance</p> <p><input type="checkbox"/> Contract/Agreement</p> <p><input type="checkbox"/> Other: _____</p>
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DISCUSSION

Transit Center Fractured Girder.

On the morning of September 25, 2018, workers installing ceiling panels discovered a fissure on the flange of a steel girder in the ceiling of the third level bus deck over Fremont Street. The transit center and Fremont Street between Mission and Howard streets were closed, and the TJPA immediately inspected a parallel beam in the same location. A second, smaller fissure was discovered on the flange of this second beam. Further inspections and advance testing and monitoring of similarly designed and constructed beams within the building began, starting with identical transfer girders that span over First Street. To date, additional fissures have not been found.

At the request of Mayors Breed and Schaaf, the Metropolitan Transportation Commission (MTC) convened a Peer Review panel to work with TJPA to assess the situation and make recommendations. The panel is composed of:

- Michael D. Engelhardt Ph.D., P.E. Professor, Department of Civil, Architectural and Environmental Engineering at the University of Texas at Austin and Director of the Ferguson Structural Engineering Laboratory (Chair)

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- John W. Fisher, PhD. Professor Emeritus of Civil Engineering at Lehigh University and Director Emeritus of the ATLSS Engineering Research Center
- Brian Kozy, PhD., P.E., Principal Engineer at the Federal Highway Administration
- Thomas A. Sabol, Ph.D., S.E. Principal at Englekirk Structural Engineers and Adjunct Professor of the Civil and Environmental Engineering Department at UCLA
- Robert E. Shaw, Jr., P.E., President of the Steel Structures Technology Center and member of the D 1 Structural Welding Committee at the American Welding Society

The Peer Review panel was tasked with:

1. Assessing load capacity of the temporary shoring system.
2. Developing a sampling and testing plan for the material from the fractured steel girders.
3. Determine the cause of failure, as informed by the material test results and design analysis.
4. Assess current condition of structural elements directly affected by the steel fractures.
5. Recommend a repair solution, as informed by the cause of failure and current condition.

In addition, the following stakeholders are participating in the process:

- TJPA
- Thornton Tomasetti – Structural Engineer of Record
- Webcor/Obayashi – General contractor
- Skanska – Steel Subcontractor
- Herrick – Steel Fabricator
- MTC
- SFCTA
- AC Transit
- CCSF Department of Building Inspection

Since early October, the panel and stakeholders have been engaged in a series of meetings and workshops, design charrettes, and review of project documents. A series of samples were collected from the affected girder in accordance with a plan and procedures agreed to by the panel and sent to an independent lab, Lucius Pitkin, Inc in New York, for a series of metallurgical analyses. All mechanical testing is anticipated to be complete by December 14. The final report on the root cause assessment is anticipated by early January 2019. Meanwhile, the structural engineers have developed and analyzed a variety of fixes, which have been reviewed by and discussed with the peer panel. This early effort is intended to reduce the implementation time once a cause is confirmed. In addition, the team is reviewing the structural elements of the building to determine which areas merit additional attention.

At this time, it is difficult to determine when the fix will be complete, since a lot depends on the lead time for the materials needed to implement the fix. The steel fabricator is investigating material availability in order to develop a schedule. We will invite the MTC to present to our Board when the Peer Review panel is ready to make its recommendations.

DTX Governance, Management, Oversight, and Project Delivery Review

On October 23, 2018, the Transportation Authority Board unanimously voted to suspend the funding agreement with the TJPA for the DTX 30% Design Part 1 efforts by approval of Resolution 19-18

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until the following conditions are met: 1)The San Francisco City Controller's Office conducts an evaluation of TJPA's management and delivery of the TTC; 2) The SFCTA staff performs a review of alternative oversight and governance models for the management and delivery of the DTX in addition to its previously scoped task to advise on project delivery methods for DTX as approved through Resolution 19-02; and 3)The results of both efforts are presented to the Transportation Authority Board and the Transportation Authority Board takes action to release in whole or in part said funding.

We are in the process of assembling a team of experts to conduct a review of international mega rail project delivery best practices and assist in the review and evaluation of alternative governance and oversight arrangements for management and delivery of the DTX project. The team will also review and advise on overall funding and project delivery strategy for the project and implications for the organizational structure for the project. The effort will consist of research, expert interviews, and a series of charrettes and workshops with key stakeholders (Caltrain, California High Speed Rail Authority, TJPA, MTC, CCSF, and the Transportation Authority) that will result in the development of alternatives and recommendations for consideration. Over the past month, we have had conversations with all of the key stakeholders about the proposed approach, receiving useful input and confirmation of everyone's interest in participating.

The findings of the review will be presented to the Transportation Authority Citizen Advisory Committee (CAC) and Board, as well as the TJPA Board. We anticipate completing the selection of panel experts by January 4, 2019 and completing the effort by May 2019. Similarly, the Controller's review of the management and delivery of the TTC is anticipated to be completed in the same time frame.

FINANCIAL IMPACT

This is an information item.

CAC POSITION

The CAC will be briefed on this item at its January meeting.

SUPPLEMENTAL MATERIALS

None