



Memorandum

AGENDA ITEM 11

DATE: May 19, 2022
TO: Transportation Authority Board
FROM: Maria Lombardo - Chief Deputy Director
SUBJECT: 05/24/22 Board Meeting: Major Capital Project Update: Caltrain Modernization Program

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| <p>RECOMMENDATION <input checked="" type="checkbox"/> Information <input type="checkbox"/> Action</p> <p>None. This is an information item.</p> <p>SUMMARY</p> <p>CalMod is a \$2.72 billion suite of projects including Positive Train Control (PTC) and the Peninsula Corridor Electrification Project (PCEP). PTC was completed in December 2020. As of April 30, 2022, the PCEP, comprised of electrification of the Caltrain line between San Jose and San Francisco, upgrade of the signal system, and the procurement of electric multiple-unit vehicles, has expended 67.2% of its current budget. Work on the installation of the Overhead Contact System poles, cantilever arm, and wire continues and the traction power facilities are 88% complete. On March 20, 2022, the first and second electrified trainsets arrived at Caltrain’s maintenance facility, where they are undergoing static testing prior to dynamic testing on the line. In December 2021, the Caltrain Board adopted a new Baseline Budget for the PCEP of \$2.44 billion, an increase of \$462 million over the original Baseline Budget. The new budget includes a total of \$90 million in contingency: \$50 million in a shared risk pool plus \$40 million in allocated and unallocated contingency. Caltrain is actively pursuing multiple options for addressing the cost increase. Funds secured thus far include \$52.4 million from the American Rescue Plan Act and \$150 million from the issuance of tax-exempt bonds secured by Measure RR. The bonds are structured to be payable from the sale of Low Carbon Fuel Standards credits upon electrified revenue service. Options being pursued to cover the remaining \$260 million gap include federal and state funding opportunities. A final fallback measure is the Four-Party Agreement, under which the Transportation Authority, San Mateo County</p> | <ul style="list-style-type: none"> <input type="checkbox"/> Fund Allocation <input type="checkbox"/> Fund Programming <input type="checkbox"/> Policy/Legislation <input type="checkbox"/> Plan/Study <input checked="" type="checkbox"/> Capital Project Oversight/Delivery <input type="checkbox"/> Budget/Finance <input type="checkbox"/> Contract/Agreement <input type="checkbox"/> Other: _____ |
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| <p>Transportation Authority (SMCTA), Valley Transportation Authority (VTA), and the Metropolitan Transportation Commission (MTC) each committed to helping to seek and secure up to an additional \$50 million each, for a collective \$200 million backstop for PCEP in the event of cost over-runs or shortfalls in revenues. The PCEP revenue service date remained unchanged at the fourth quarter of calendar year 2024, which includes a six-month contingency.</p> | |
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BACKGROUND

Caltrain Modernization Program (CalMod). CalMod is a \$2.72 billion suite of sustainable projects that will electrify and upgrade the performance, operating efficiency, capacity, safety, and reliability of Caltrain commuter rail service, while improving air quality and reducing greenhouse gas emissions. CalMod includes the PTC Project, which was completed on December 17, 2020, and the Peninsula Corridor Electrification Project, which has two components: electrification of the Caltrain line between San Jose and San Francisco; and the purchase of electric multiple-unit (EMU) vehicles to operate on the electrified railroad. Revenue service is anticipated for the fall of 2024.

The CalMod Program will improve system performance with faster, more reliable service while minimizing equipment and operating costs, and is critical to the long-term financial sustainability of Caltrain. The improvements will extend for 52 miles from San Francisco to San Jose and will also prepare the alignment for the future High-Speed Rail blended system. With the signing of the Full Funding Grant Agreement by the Federal Transit Administration (FTA) in 2017, Caltrain issued Notices to Proceed to its contractors for corridor electrification and purchase of electric trains.

Like any large capital project, the CalMod funding plan relies on contributions from multiple funding partners including the three Peninsula Corridor Joint Powers Board (PCJPB) member counties (San Francisco, San Mateo, and Santa Clara), the MTC, and the California High-Speed Rail Authority (CHSRA). Funding contributions were codified in a series of memorandums of agreement, one of which included an oversight protocol. The three PCJPB counties have a local contribution of \$80 million each to the CalMod program. The Transportation Authority provided about \$41 million, primarily from the Prop K sales tax and One Bay Area Grant programs. The San Francisco Municipal Transportation Agency (SFMTA) provided the remaining \$39 million of San Francisco’s local contribution from the Prop AA General Obligation Bond, completing San Francisco’s \$80 million contribution to CalMod.

The Funding Partners oversight protocol for CalMod, requires the Executive Director of Caltrain to attend a Board of Supervisors meeting twice a year to provide an update on the CalMod Program. With the concurrence of the President of the Board of Supervisors, the updates since 2019 have taken place at Transportation Authority Board meetings.



DISCUSSION

The paragraphs below provide a brief status update on the CalMod program.

Positive Train Control (PTC). This \$329 million project is complete. PTC is an advanced signal system that equipped the corridor with federally-mandated safety technology. Caltrain received conditional approval of the Positive Train Control Safety Plan from the Federal Railroad Administration (FRA) on December 17, 2020, and is currently in Extended Revenue Service Demonstration and fully interoperable with all tenants on the rail corridor. At its September 2020 meeting, the PCJPB approved a follow-on maintenance agreement with Wabtec Corporation, the PTC project's contractor.

Peninsula Corridor Electrification Project (PCEP). In August 2016, Caltrain awarded the Design-Build Electrification contract to Balfour Beatty Infrastructure in the amount of \$697 million. The contract was issued with a \$108 million Limited Notice to Proceed, which was followed by full Notice to Proceed on June 19, 2017. As of April 30, 2022, expenditures on the PCEP reached \$1.64 billion, 67.2 % of the \$2.44 billion current budget. Work is progressing on both the Electrification and the Vehicles components of the project.

On Thursday, March 10, 2022, there was one significant incident in which a southbound Caltrain train struck PCEP work crew equipment in San Bruno. Two employees were injured and transported to the hospital. One employee required hospitalization, and the other was treated and released. There were eleven passengers who were also treated with minor injuries at the scene and released. The train was carrying 75 passengers at the time of the incident. The incident remains under investigation by the National Transportation Safety Board, the FRA, the California Public Utilities Commission, California Occupational Safety and Health Administration (CalOSHA), as well as Caltrain's internal safety team. A Caltrain Safety Task Force has been mobilized to assess incident lessons learned and initiate proactive measures to improve system safety. Caltrain has implemented the recommendations of the Safety Task Force.

Work on the installation of the Overhead Contact System (OCS) poles, cantilever arms, and wire continues. OCS foundations are complete and pole installation is expected to complete in July 2022. Wire has been completed in Segments 3 and 4. At the north end of the system, completion of wire installation in Segments 1 and 2 is anticipated for March 2023 and November 2022 respectively.

The Traction Power Facilities are 88% complete. Traction Power Substations 1 and 2 are now complete. Remaining work, which includes seven paralleling stations, power connection, energization, commissioning, and testing, is anticipated to be completed by Fall 2022. Signals and Communication Systems construction also continues. The contractor is currently completing the punch list on Segment 4, and it is anticipated that this segment will be handed over to Caltrain in Summer of 2022. Caltrain will use this segment for vehicle testing and commissioning. Segment 2 is anticipated to be completed in November 2022, and Segments 1 and 3 are expected to be completed by July 2023. Signal cutovers in Segment 2, which were postponed due to the aforementioned incident, are anticipated to be completed by the end of May.



Staff anticipates energizing Segment 4, which will allow running test trains in the segment, by September 2022.

Tunnels. Work on modifications to the 100-year-old San Francisco tunnels reached Substantial Completion on September 17, 2020, and Final Acceptance was reached in December 2020.

Vehicles. On September 6, 2016, Caltrain gave a limited Notice to Proceed to Stadler Rail for the \$551 million EMU contract to design and fabricate 96 electric vehicles. After receipt of the Full Funding Grant Agreement, Caltrain issued the full Notice to Proceed on June 1, 2017. Subsequently, Caltrain executed an option for an additional 37 cars, bringing the total to 133 cars. In accordance with the Buy America provisions of the FTA funding, the vehicles are being manufactured by Stadler US at its new facility in Salt Lake City, Utah.

The first and second trainsets arrived at Caltrain's Central Maintenance and Operations Facility on March 20, where they are undergoing static testing prior to dynamic testing on Segment 4 once it is ready. The next two trainsets will arrive in June, and the 14th trainset is anticipated to arrive by January 2024, in time for revenue service in the fall of 2024. The 19th trainset's anticipated arrival is for summer 2024 (trainsets 15 through 19 represent additional trainsets purchased with funding outside of the PCEP budget).

Supply chain issues and labor turnover/shortages continue to be the primary issues for final assembly in Salt Lake City.

Central Maintenance and Operations Facility. The contractor for the facility upgrades is completing the punch list items. Completion is anticipated this spring.

Cost and Schedule. On December 6, 2021, the Caltrain Board adopted a new Baseline Budget for the PCEP of \$2.44 billion, an increase of \$462 million over the original Baseline Budget. This new budget reflects the completed negotiations with the contractor on a global settlement for \$346.68 million to resolve issues related to the two-speed check solution for the signaling system at crossings, outstanding Change Orders mostly related to differing site conditions encountered during foundation installation, and COVID. In addition, project staff conducted a "budget scrub" which resulted in a \$115.76 million cost increase. The new budget includes a total of \$90 million in contingency: \$50 million in a shared risk pool plus \$40 million in allocated and unallocated contingency. The Revenue Service date remained unchanged for the fourth quarter of calendar year 2024, which includes a six-month contingency.

Funding Gap. Caltrain staff is actively pursuing multiple options for addressing the \$462 million budget increase. Funds secured thus far include:

- **American Rescue Plan Act:** Caltrain already has received \$52.4 million from the federal American Rescue Plan Act for the PCEP cost increase.
- **Issuance of tax-exempt bonds:** On February 3, 2022, having received authorization from the three member agencies, the Caltrain board approved the issuance of bonds secured by Measure RR (three-county 1/8-cent Caltrain sales tax measure approved in 2020). The bonds are structured to be payable from the sale of Low Carbon Fuel



Standards credits upon electrified revenue service. On March 2, 2022, Caltrain issued bonds providing the \$150 million in funds for the project.

Options being pursued to cover the remaining \$260 million gap include:

- **Federal and State funding opportunities:** Caltrain is actively pursuing other grant sources. On February 15, 2022, Assemblymembers Mullin, Berman, and Wiener introduced Assembly Bill (AB) 2197, that would appropriate \$260 million from the General Fund for allocation to the PCJPB for the purpose of completing the Caltrain Electrification Project. The Transportation Authority has adopted a support position on AB 2197. In March, the MTC approved the Bipartisan Infrastructure Law Regional Grant Strategy, which named the Electrification project as a priority for the Federal-State Partnership for Intercity Passenger Rail program. Caltrain is also actively seeking other sources at the federal level.
- **Four-Party Agreement:** A part of the Full Funding Grant Agreement process, the Transportation Authority, San Mateo County Transportation Authority, VTA, and MTC each committed to helping to seek and secure up to an additional \$50 million, for a collective \$200 million backstop for PCEP in the event of cost over-runs or shortfalls in revenues.

We are concurrently working with Caltrain and the funding partners on expanding and implementing the risk mitigation measures contained in the Risk Management Plan for the remainder of the project, seeking to reduce the amount of additional funding ultimately required to complete the project. We are also interested in working with all the funding partners to seek additional federal and state funding and support Caltrain advocacy to secure those funds. Cash flow projections indicate that the \$260 million in additional funding will be needed prior to July 2023.

Progress Reports. Detailed CalMod monthly reports are provided to the Caltrain Board and are publicly available. Peninsula Corridor Electrification Project reports are located at:

http://www.caltrain.com/projectsplans/CaltrainModernization/CalMod_Document_Library.html#electric

Challenges and Opportunities. In addition to needing to secure funds to cover the anticipated increased project cost and contingency, there are some challenges that may impact Caltrain's ability to complete CalMod, even within a new schedule and budget. Although already considered in the adopted new cost and schedule, the primary risk items that we are monitoring include:

- Potential for Stadler's sub-suppliers to fall behind schedule or delays in parts supply chain result in late completion of vehicles
- Segment 4 may not be fully installed and tested prior to EMU readiness
- Extent of differing site conditions and associated redesign efforts results in delays to the completion of the electrification contract and increases program costs



- The contractor may not complete signal and communication design, installation, and testing for the “two-speed check” modifications within budget and schedule
- Change of vehicle sub-suppliers results in additional first article inspections at cost to PCJPB (i.e., COVID, bankruptcy)

FINANCIAL IMPACT

None. This is an information item.

CAC POSITION

None, as this is an information item. This update will be presented to the Community Advisory Committee at its May 25, 2022, meeting.

SUPPLEMENTAL MATERIALS

- Attachment 1 - PCEP Segment Map



Attachment 1. PCEP Segment Map

