



# Caltrain Modernization Program Peninsula Corridor Electrification Project (PCEP)



## Executive Monthly Progress Report

February 28, 2023

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## **1.0 EXECUTIVE SUMMARY**

### **1.1 Introduction**

The Peninsula Corridor Electrification Project (PCEP) will upgrade 51 miles of diesel service to electrified service from San Francisco to San Jose (Tamien Station). The PCEP scope of work includes design and construction of an overhead contact system, traction power facilities, modification of the existing signaling and grade crossing protection system to make it compatible with the electrified railroad, substation improvements at Pacific Gas and Electric (PG&E) substations, and modifications at existing tunnels and Caltrain’s maintenance facility. It also includes the design, manufacturing, assembly, testing, and delivery of the Electric Multiple Units (EMUs).

Caltrain completed a thorough assessment of all aspects of the program including cost, schedule, risks and organization after the global settlement in 2021. Caltrain re-baselined the program budget and schedule in December of 2021. Caltrain is performing a schedule reforecast effort and is committed to deliver PCEP and achieve revenue service in September of 2024.

### **1.2 Program Cost and Budget**

On December 6, 2021, the JPB adopted a new PCEP program budget of \$2,442,690,697. On January 31, 2023 Caltrain received a \$367 million funding award from California’s Transit and Intercity Rail Capital Program’s (TIRCP) Cycle 6 Existing Project Reserve, representing the remaining funding needed to complete the project. The project is now fully funded in the amount of \$2,442,690,697. As of February 2023, the project is on budget:

- The current project total cost at completion (EAC) is the same as Board adopted budget of \$2.44 billion.
- As of February 2023, a total of \$4.65M has been drawn down from the Shared Risk Pool of \$50 million. In February 2023, \$1.21M was drawn from the Shared Risk Pool.
- As of February 2023, a total of \$3.52M has been drawn from the project contingency of \$40 million. In February 2023, there was no draw from project contingency.
- As of February 2023, no new awards have been made from the Project incentive pool of \$18.5 million.
- As of February 2023, no incentive was issued from the milestone incentive pool of \$15 million.

### **1.3 Program Progress and Schedule**

As of February 28, 2023, the overall project completion is 81.42%. The current program schedule is projecting a PCEP substantial completion date of April 2024 and Revenue Service by September 2024. Staff is implementing a 2023 path to completion with 31 weekend bus bridges to maximize track access to allow system integration testing, signal cutovers, and proactive OCS construction productivity mitigations for the remaining PCEP work. The first weekend closure commenced on February 11, 2023 from Millbrae to San Francisco 4<sup>th</sup> and King.

### **1.4 Change Management Board (CMB)**

In February 2023, the following Shared Risk items were brought to CMB for approval:

- Incorporation of As-Built Additional Ped Gate Mechanisms
- Right-of-Way Site Security

### **1.5 This Month's Accomplishments**

The project team has completed the following notable activities for the month of February 2023:

- Caltrain has received \$43 million in federal funding and \$367 million State TIRCP grant and PCEP is now fully funded.
- Received JPB approval for Compass bus bridge service.
- Continued project schedule reforecast that reflects the path to completion and weekend area closures for the remaining PCEP work.
- Continued to coordinate with PG&E on TPS 2 short circuit testing, low voltage power drop applications, and distribution line de-energization work.
- Performed train operator EMU daily inspection training.
- Completed Segment 3 Menlo Park cutover in February.
- Performed readiness reviews for weekend bus bridges for OCS construction starting in February 2023.
- Completed Rail Service Plan for weekend partial area closure from Millbrae to San Francisco to support Segment 1 OCS construction.
- Developed OCS quantity tracker and monitored weekly planned quantities vs. actual.
- Continued negotiation on railroad isolation and protection change order.
- Continued development of OCS/TPS maintenance RFP.
- Continued safety special task force working group, including TASI, Rail Operations and PCEP to address communications, process, and procedure improvements.
- Continued providing PCEP progress updates to funding partners, leadership, elected officials, citizens, and business community.
- Continued Rail Activation effort on path to energization for Segment 4 and CEMOF.
- Developed TPS 2 correction action plan to address root causes for failed short circuit testing.
- Continued to address TPS 2 findings and complete documentation required to perform short circuit retest.
- Met with Design-Build Contractor Executives to address OCS productivities and TPS findings.

### **1.6 Upcoming work**

For the next six months, the PCEP team has set additional goals as described below:

- Complete project schedule reforecast that reflects the path to completion and weekend area closures for the remaining PCEP work.
- Continue operations planning, ambassador and rail service planning effort for weekend area closures for Segment 2 OCS construction, and Segment 3 last cutover.
- Continue focused area limited weekend shutdown work in March and April 2023 from Millbrae to Hillsdale and Belmont to Menlo Park.
- Continue to coordinate with PG&E on TPS 2 short circuit testing, low

voltage power drop applications, and distribution line de-energization work.

- Commence EMU maintenance training.
- Develop detail corrective actions for short circuit re-test.
- Complete TPS documentation audit and field validation.
- Hold in person Executive workshop to discuss actions required to complete remaining work on schedule.
- Plan for Segment 4 Drill Track and Segment 4 Live runs and full energization.
- Energize CEMOF for EMU commissioning.
- Complete Segment 3 construction and ready for Sectionalization Testing.
- Hold Monthly CMB meeting for program status and change order approval.
- Complete Segment 3 signal cutovers in April 2023.
- Execute Railroad isolation and protection change order.
- Complete EMU Storage Plan.

The PCEP Project is currently on budget and on time for achieving Revenue Service in September of 2024.

**1.7 Critical Items**

As of February 2023, PCEP has completed Segment 2 signal cutover, fulfilled the \$410M funding gap, and have adequate RWIC to support field construction. The top critical items and related actions are highlighted below.

**Table 1-1. Critical Issues and Actions**

Critical Issues	Actions
<p>Overhead Contact System (OCS) installation delay due to low productivity</p> <p>Note: The project OCS work was on hold from March 10, 2022, to March 28, 2022 during the safety stand down.</p> <p>Segment 2 OCS was damaged during high wind and heavy rainstorms in late December 2022 and early January 2023</p>	<ul style="list-style-type: none"> <li>• Additional BBII OCS crew training for regulation and variance in the OCS design / installation due to re-design &amp; accommodations to resolve foundation Differing Site Conditions (DSC) issues – Completed.</li> <li>• Hiring additional BBII OCS staff members to prevent schedule slippage and help in future installation planning – Completed.</li> <li>• Hold OCS construction scheduling recovery workshop for remaining OCS installation and testing – Completed.</li> <li>• Increase OCS crews and OCS wiring equipment to increase productivity – Completed.</li> <li>• More track access including weekend area closures for remaining Segments 1 and 2 OCS construction and testing. Weekend bus bridge construction started on February 11, 2023.</li> <li>• OCS storm repair work for Segment 2 is planned for September 2023 due to rainstorm and long lead time for materials.</li> <li>• Bring on more regulating crews in May 2023.</li> <li>• Procure more equipment parts and to ensure all equipment are performing well for construction.</li> </ul>
<p>Unsuccessful TPS 2 short circuit test delays drill track and Segment 4 mainline energization</p>	<ul style="list-style-type: none"> <li>• Perform comprehensive root cause analysis and develop corrective action plan.</li> <li>• Implement configuration change control process including design drawing, shop drawings, as-built version control to ensure all parties are using the same set of drawings for TPS2 testing.</li> </ul>

**Peninsula Corridor Electrification Project**  
**Monthly Progress Report – February 2023**

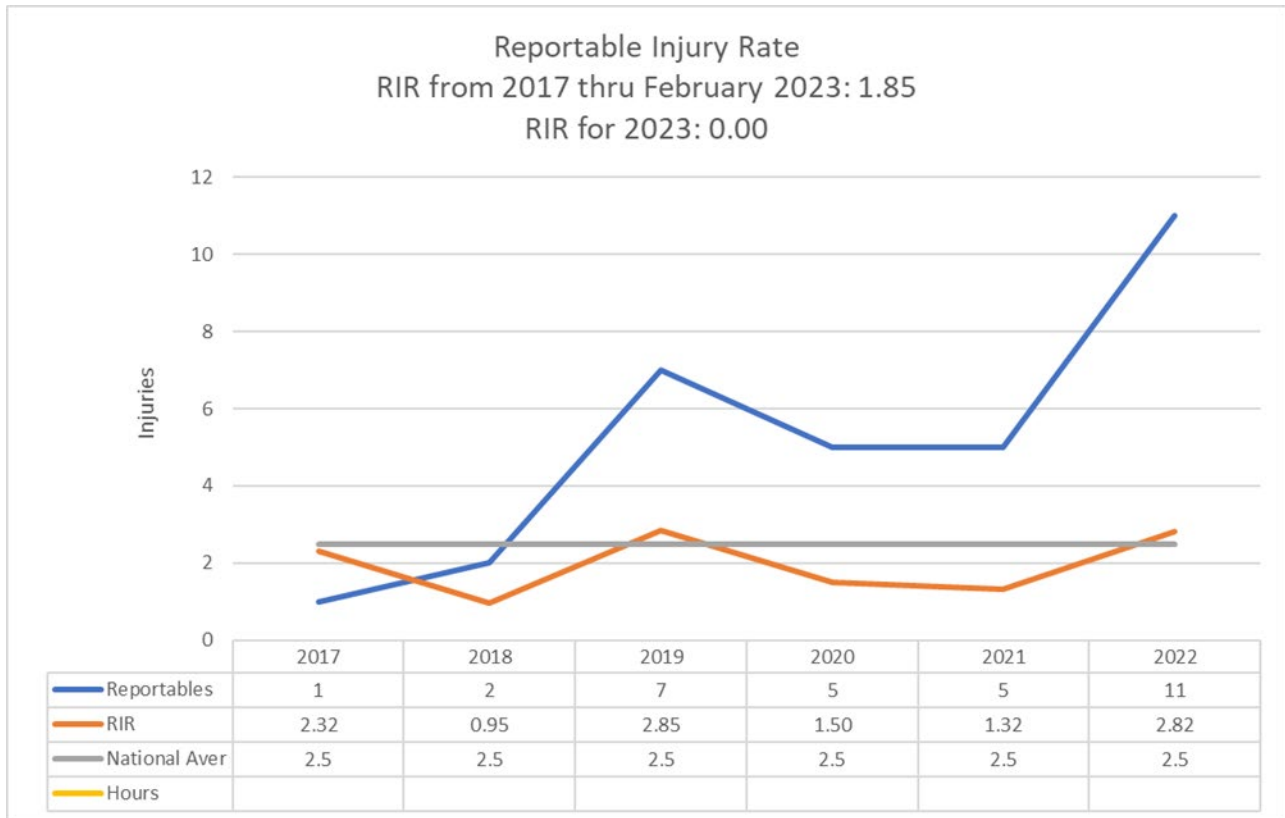
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<b>Critical Issues</b>	<b>Actions</b>
	<ul style="list-style-type: none"><li>• Perform technical working groups including all vendors and EOR.</li><li>• Weekly management team briefing on corrective action status.</li><li>• Develop SSWP for all work performed at TPS for Caltrain review and approval.</li><li>• Perform field verification and pre-testing before short circuit re-test.</li></ul>



**2.0 SAFETY**

There were no reportable injuries in February 2023. The Reportable Injury Rate (RIR) for the entire year (2022) was 2.82. Overall, since the project’s inception, the RIR is at 1.85, which is below the national average.



**Figure 2-1. Project Reportable Injury Rate (RIR) by Year**

**Completed Work**

Safety staff continues to coordinate with contractors to identify opportunities to improve safety performance. Organizational-wide safety briefings are being performed to ensure staff understand the application of post incident mitigation measures including rules and procedural changes designed to enhance safety. Project Safety continues to reinforce jobsite safety practices throughout the Caltrain alignment, investigate incidents, and identify mitigation measures to prevent re-occurrences. Safety project coordination meetings continue to be conducted monthly to promote a clear understanding of project safety requirements. In addition, Caltrain Safety continues weekly calls with the lead safety staff from Caltrain, PCEP, BBII, and TASI to discuss safety performance and ongoing initiatives.

**Upcoming Work**

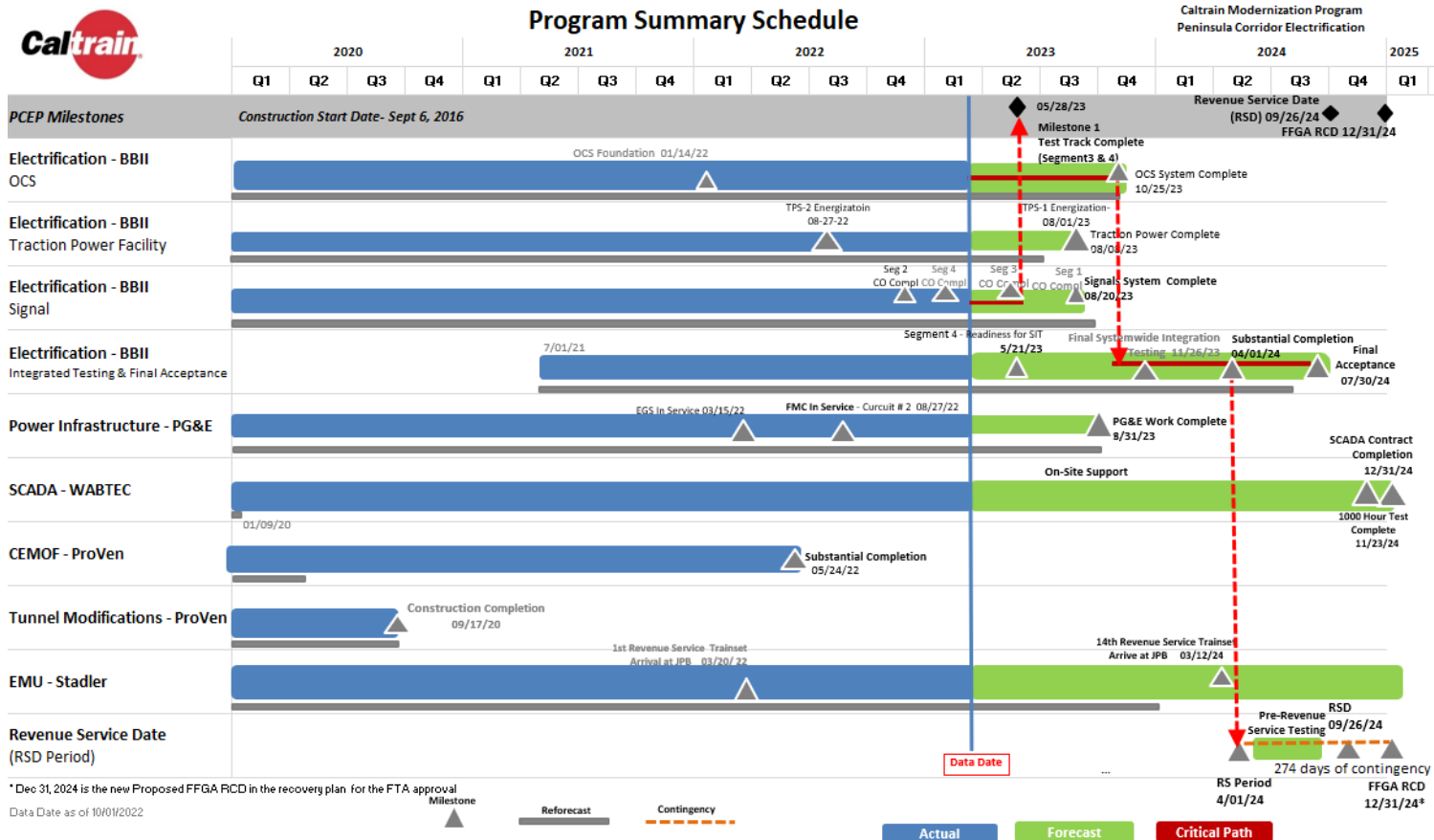
The Fire/Life Safety Committee continues to work with emergency responders along the Caltrain corridor on emergency preparedness in advance of energization. The safety team has updated the OCS and EMU emergency responder safety familiarization presentations to include voiceover features for use by the Fire Departments. The presentation will also be shared with other emergency responder jurisdictions through the project Fire/Life Safety Committee.

OCS safety awareness training was delivered to Mountain View Fire Department on February 1, 2023 and Sunnyvale Fire Department from February 15-17, 2023. PCEP Safety Team will be providing OCS Safety Awareness training to the California Public Utilities Commission (CPUC) in Fresno, CA on April 4, 2023. Additional training is currently scheduled for Palo Alto on March 27, 29, and April 6.

**3.0 IMS PROGRAM SCHEDULE**

**3.1 Introduction**

The Integrated Master Schedule (IMS) Program Summary Schedule depicted in **Figure 3-1** shows the schedule status of the major PCEP projects. The forecasted dates for this program schedule were based on Version C of BBII’s reforecast schedule as well as the current update of the Stadler EMU Progress schedule. The final reforecast schedule information will be available in the March MPR update. The Revenue Service Date (RSD) and Full Funding Grant Agreement (FFGA) Revenue Completion Date (RCD) remains September 26, 2024, and December 31, 2024 respectively.



**Figure 3-1. Master Program Summary Schedule**



**3.3 Schedule Contract Milestone Analysis**

Milestone No. 1: This Milestone has been redefined to include Segment 3 and 4 for more electrified mileage to test the Trainsets. Overall, Milestone No. 1 is currently showing an anticipated completion of May 28, 2023, which is now 28 days later than June 2022 Reforecast date of April 30, 2023, due to the completion of Segment 3 cutover which is scheduled in late April 2023. However, the failed short circuit testing will impact Segment 4 and Segment 3 full energization live runs. The current forecast date for full alignment Substantial Completion is now April 1, 2024, with Scheduled Final Acceptance forecasted for July 30, 2024. BBII is currently working on solutions with JPB and their Signal Installation Subcontractor (MRS) to recover the lost time through additional bus bridges and extended weekend closures.

Contractor	Milestones	Reforecast (June 2022) Dates	Current (January 2023) Forecast	Milestone Finish Date Variance	Remarks
BBII	Segment 4 Completion	15-Nov-22	21-May-23	-187	Delayed by the failed short circuit testing which has delayed the EMU live runs within Segment 4.
BBII	Completion of Milestone 1 (Segments 3 and 4)	30-Apr-23	28-May-23	-28	Delayed by Seg 2 Phase 1 signal cutover installation delays which, in turn, delayed installation of Segment 3 signal cutovers and sectionalization testing
BBII	Traction Power Substation #1 Energization	03-Jun-23	01-Aug-23	-59	Delayed by replacement of the batteries and revisions of the enclosure at TPSS-1 to meet PG&E requirements
BBII	Signal Cutovers and Systems Completion	16-Sep-23	20-Aug-23	27	Delayed by Seg 2 Phase 1 signal cutover installation delays which, in turn, delayed installation of Seg 3 and 1 signal cutovers
BBII	OCS Construction Completion	25-Sep-23	25-Oct-23	-30	Delayed by reconstruction and testing of OCS at the Guadalupe Bridge
Stadler	14th Trainset Arrival at JPB Site	04-Jan-24	12-Mar-24	-68	Stadler improved delivery date of Trainsets 13 and 14 to the JPB Site by 10 days.
BBII	System Integration Testing Start (Segment 4)	15-Nov-22	03-Mar-23	-108	Delayed by energization delay of Overhead Contact System (OCS)
BBII	System Integration Testing Completion	07-Feb-24	26-Nov-23	73	Delayed by installation delay of Overhead Contact System (OCS) in Segments 2 and 1.
BBII	Substantial Completion	01-Apr-24	01-Apr-24	0	
BBII	Scheduled Final Acceptance	30-Jul-24	30-Jul-24	0	
JPB	Revenue Service Date (RSD)	26-Sep-24	26-Sep-24	0	

**Figure 3-3. Contract Milestone Analysis**

**Peninsula Corridor Electrification Project**  
**Monthly Progress Report – February 2023**

**4.0 COST AND BUDGET**

**4.1 Introduction**

This section presents an update on program cost and budget. On December 6, 2021, the JPB adopted a new Program budget of \$2.44 billion. Table 4-1 depicts a summary level of program budget, costs, and estimate at completion based on the latest update of the Electrification and EMU projects as of February 28, 2023.

**4.2 Program Budget and Cost**

**Table 4-1. Budget Summary by Project**

Description of Work	Current Budget (A) <sup>1</sup>	Cost This Month (B) <sup>2</sup>	Cost To Date (C) <sup>3</sup>	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)	Variance at Completion (F) = (A) – (E)
Electrification	\$1,749,139,439	\$20,342,571	\$1,510,843,629	\$238,295,810	\$1,749,139,439	\$0
EMU	\$693,551,258	(\$1,431,814)	\$505,427,283	\$188,123,975	\$693,551,258	\$0
<b>PCEP TOTAL</b>	<b>\$2,442,690,697</b>	<b>\$18,910,757</b>	<b>\$2,016,270,911</b>	<b>\$426,419,785</b>	<b>\$2,442,690,697</b>	<b>\$0</b>

1. Column A "Current Budget" includes re-baseline and executed change orders and awarded contracts.
2. Column B "Cost This Month" represents the cost of work performed this month.
3. Column C "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.

Table 4-2 depicts program budget, costs, and estimate at completion summarized by major elements of work. This budget table provides additional detail for the program and is broken down by major contracts for Electrification and EMU, minor contracts, real estate, utilities, project management oversight and other indirect support costs.

**Table 4-2. Budget Summary by Major Elements**

Description of Work	Re-Baseline Budget	Current Budget	Cost This Month	Cost To Date	Estimate To Complete	Estimate At Completion
Electrification	\$1,097,149,881	\$1,097,149,881	\$13,917,498	\$904,142,494	\$192,891,387	\$1,097,033,881
EMU Procurement	\$556,072,601	\$556,248,486	-\$2,112,640	\$419,077,518	\$137,560,968	\$556,638,486
Minor Construction Contracts (Tunnel, CEMOF, SCADA, Non-BBI OCS)	\$67,055,072	\$68,091,194	\$74,957	\$64,677,734	\$3,413,459	\$68,091,194
Real Estate Acquisition & Support	\$34,914,177	\$34,914,177	-\$342	\$23,977,873	\$10,936,304	\$34,914,177
PG&E, Utilities	\$132,088,994	\$132,088,994	\$1,624,573	\$204,966,083	-\$72,877,088	\$132,088,994
Management Oversight & Support	\$312,699,697	\$315,007,767	\$3,160,915	\$263,443,692	\$51,564,075	\$315,007,767
TASI Support	\$114,488,767	\$114,488,767	\$1,540,970	\$93,793,271	\$20,695,496	\$114,488,767
Finance Charges	\$9,898,638	\$9,898,638	\$0	\$9,304,280	\$594,358	\$9,898,638
Insurance	\$6,581,851	\$6,581,851	\$0	\$4,897,449	\$1,684,402	\$6,581,851
Other Required Projects & Services	\$9,084,176	\$10,484,176	\$255,955	\$3,635,970	\$7,048,206	\$10,684,176
Environmental Mitigation	\$14,438,866	\$13,038,866	\$0	\$1,242,229	\$11,596,637	\$12,838,866
Caltrain Capital Overhead (ICAP)	\$48,217,887	\$48,217,887	\$448,871	\$23,112,317	\$25,105,570	\$48,217,887
Contingency	\$40,000,089	\$36,480,012	\$0	\$0	\$36,206,012	\$36,206,012
<b>Total</b>	<b>\$2,442,690,697</b>	<b>\$2,442,690,697</b>	<b>\$18,910,757</b>	<b>\$2,016,270,911</b>	<b>\$426,419,785</b>	<b>\$2,442,690,697</b>

### 4.3 Program Shared Risk Pool and Contingency

Caltrain and Balfour Beatty Infrastructure, Inc. (BBII) continue implementing new mechanisms to ensure a collaborative approach to Project delivery. The management team meets every week to review the issues log focusing on risk mitigation and issues resolution.

As part of global settlement, a shared risk pool of \$50 million was established to manage risks and mitigation proactively and collaboratively with the design-build contractor. Table 4-3 shows the current shared risk drawdown for the current month and to-date as well as the remaining balance of the shared Risk Pool by Risk Category. Any shared risk items (27 Risk IDs listed below in Table 4-3) that are above \$250,000 require Change Management Board (CMB) approval.

**Table 4-3. Shared Risk Pool Status as of February 2023**

Risk ID	Risk Description	Risk Amount	Current Month	Executed to Date	Remaining Balance
1	Permanent Power Availability	\$268,572	\$17,449	\$178,365	\$90,207
2	Different Site Condition for OCS Foundation	\$3,500,000	\$0	\$986,104	\$2,513,896
3	Different Site Condition for Duct bank	\$2,800,000	\$0	\$391,881	\$2,408,119
4	Condition of existing Fiber backbone infrastructure	\$3,150,000	\$0	\$244,632	\$2,905,368
5	Availability of TASI Resource	\$5,777,820	\$0	\$0	\$5,777,820
6	Signal Cutover access and work window	\$5,607,150	\$0	\$0	\$5,607,150
7	Condition of existing signal system	\$538,572	\$0	\$29,125	\$509,447
8	EMI Nonconformance by EMU Vendor	\$750,000	\$0	\$0	\$750,000
9	Reed Street Cutover	\$90,000	\$0	\$0	\$90,000
10	Availability of low voltage power for cutover testing	\$1,120,000	\$0	\$0	\$1,120,000
11	Third party Permits	\$150,000	\$0	\$0	\$150,000
12	SCADA integration for the entire alignment	\$159,524	\$0	\$0	\$159,524
13	Tunnel OCS Compatibility	\$167,500	\$0	\$0	\$167,500
14	Supply chain issue due to COVID 19	\$300,000	\$0	\$28,923	\$271,077
15	End to end Systems integration commissioning	\$2,100,000	\$0	\$0	\$2,100,000
16	Existing Caltrain Operating systems interface and integration	\$1,400,000	\$71,920	\$71,920	\$1,328,080
17	Third party Approval	\$150,000	\$0	\$13,140	\$136,860
18	Impact from Caltrain other capital or third-party projects	\$2,166,683	\$0	\$148,103	\$2,018,580
19	Track access delay for BBII Construction	\$1,800,000	\$51,784	\$180,770	\$1,619,231
20	Additional light Maintenance and Protection Needs	\$280,000	\$20,031	\$164,531	\$115,469
21	Crossing Protection	\$220,000	\$0	\$102,334	\$117,666
22	Power facilities	\$500,000	\$0	\$0	\$500,000
23	NCR's	\$0	\$0	\$0	\$0
24	Potholing	\$1,700,000	\$0	\$107,547	\$1,592,453
25	Pre-Revenue Service Operational Testing	\$250,000	\$0	\$0	\$250,000
26	TRO Contingency	\$3,000,000	\$0	\$0	\$3,000,000
27	Contingency	\$12,000,000	\$1,050,547	\$2,003,026	\$9,996,974
NA	Unidentified	\$54,179	\$0	\$0	\$54,179
	<b>BBII Risk Pool Total</b>	<b>\$50,000,000</b>	<b>\$1,211,731</b>	<b>\$4,650,401</b>	<b>\$45,349,600</b>

In addition to the established Risk Pool with BBII, the Re-Baseline Budget includes a program contingency of \$40 million to cover non-BBII potential changes and unknowns. Table 4-4 provides a detailed status of approved transfers from contingency due to executed Contract Change Orders and approved Budget Transfers.

**Table 4-4. Program Contingency Drawdown Balance**

Change Order	Description	Current Budget Contingency	EAC Contingency
<b>Project Contingency</b>		Previously Reported Balance	<b>\$36,596,012</b>
STA-056-042	Passenger Convenience Outlet Current Limit	\$0	<b>(\$390,000)</b>
	<b>PROJECT CONTINGENCY REMAINING BALANCE</b>	<b>\$36,480,012</b>	<b>\$36,206,012</b>

Note: EAC Contingency reflects forecast contingency.

**4.4 Electrification Design Builder Contract Incentives**

The Global Settlement with BBII also includes incentives based on Milestone completions and remaining contract incentives. Table 4-6 provides a status of Design-Build Contractor incentives Budgeted, Awarded, and remaining Balance.

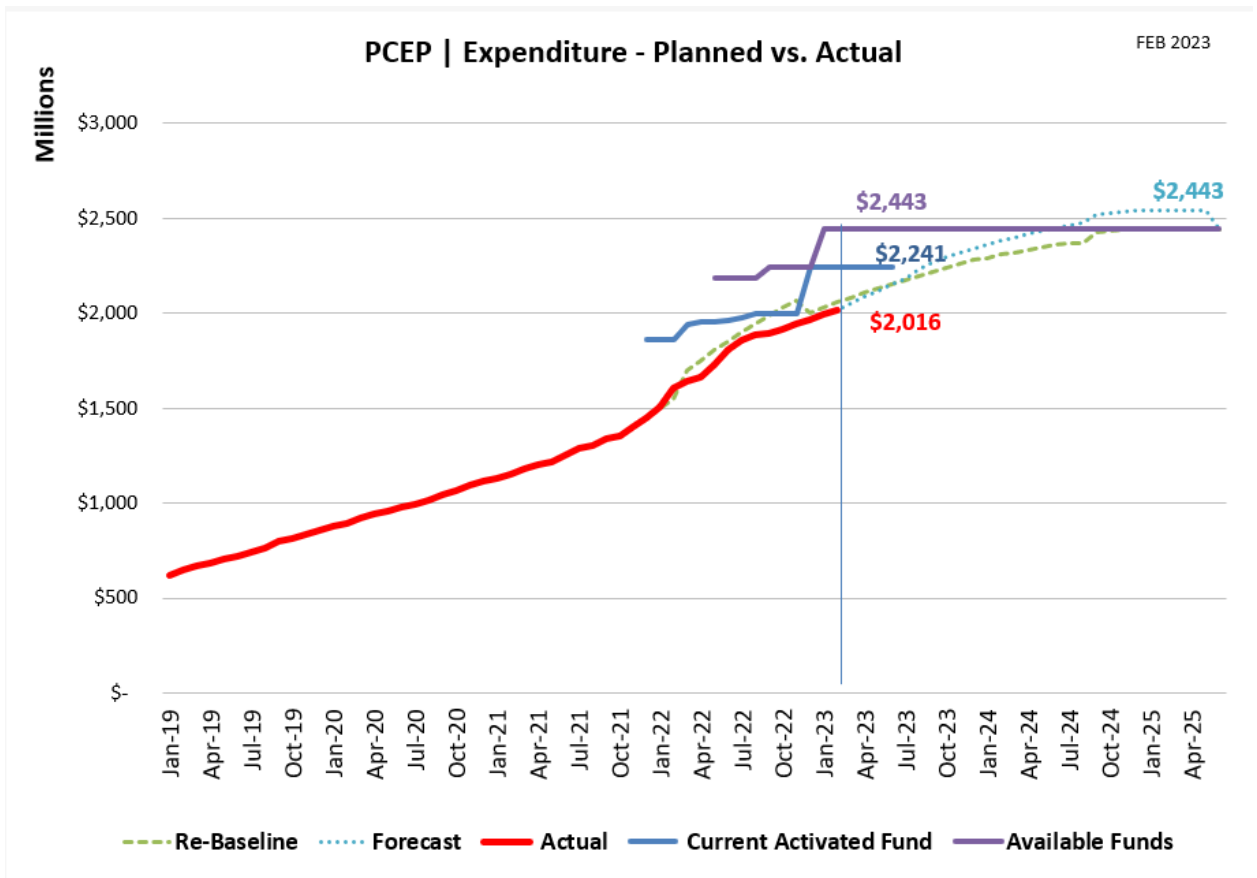
**Table 4-5. BBII Incentives**

Incentives	Budgeted	Awarded	Balance
<b>Contract Incentive:</b>			
Quality	\$1,250,000	\$1,000,000	\$250,000
Safety	\$2,500,000	\$875,000	\$1,625,000
Community Outreach	\$2,500,000	\$1,750,000	\$750,000
DBE	\$900,000	\$0	\$900,000
<b>Total Contract Incentive</b>	<b>\$7,150,000</b>	<b>\$3,625,000</b>	<b>\$3,525,000</b>
<b>Milestone Incentive:</b>			
Early Signal and Crossing Cutover	\$4,000,000	\$0	\$4,000,000
Early Project Substantial Completion (NTE)	\$8,000,000	\$0	\$8,000,000
Early Revenue Service	\$3,000,000	\$0	\$3,000,000
<b>Total Milestone Incentive</b>	<b>\$15,000,000</b>		<b>\$15,000,000</b>

**4.5 Program Cash Flow and Funding**

The remaining program expenditures are cash flowed in Figure 4-1. With the award of the full funding, the program does not expect any cash flow issues due to funding.





**Figure 4.1 Expenditure – Funding Cash Flow**

**4.6 Issues**

**Table 4-6. Cost and Funding Issues Identified, and Actions Taken for February 2023.**

Issues	Actions
Late receiving of PG&E \$99 million reimbursement	<ul style="list-style-type: none"> <li>• Work with PG&amp;E to project reimbursement date.</li> <li>• May need to hold \$100 million bond until PG&amp;E reimbursement is made to support project cash flow needs for FY25.</li> </ul>

## **5.0 CHANGE MANAGEMENT**

### **5.1 Introduction**

The change management process establishes a formal administrative work process associated with the initiation, documentation, coordination, review, approval, and implementation of changes during the design, construction, or manufacturing of PCEP. The change management process accounts for the impacts of the changes and ensures prudent use of contingency.

### **5.2 Change Orders/Shared Risk Pool**

#### **5.2.1 Executed Shared Risk**

The following Shared Risk items were executed in February 2023:

- Track Access Delays for April 2022 was executed on February 28, 2023 for \$25,565.
- Track Access Delays for May 2022 was executed on February 28, 2023 for \$26,219.
- BBII ROW Security (August 1, 2022 to December 9, 2022) was executed on February 16, 2023 for \$1,050,547.
- TPS-1 Standalone Report for Single Phase Study was executed on February 28, 2023 for \$71,920.
- Contaminated Splice Closure at MP 25.00 was executed on February 8, 2023 for \$11,818.
- Additional Fence Repair in RWC adjacent to Woodside Road was executed on February 17, 2023 for \$20,031.
- CHSR and STATCOMs Analysis at TPS-1 was executed on February 28, 2023 for \$17,449.

#### **5.2.2 CMB Approved Shared Risk Items**

- Incorporation of As-Built Additional Ped Gate Mechanisms for \$549,014.
- Right-of-Way Site Security for \$1,050,547.

#### **5.2.3 Upcoming Change Orders/Shared Risk Items**

- Relocation of Aerial Utilities at Stanford Station (MP 30.5) Design Only for \$17,392.
- UPRR Reed Street Median Design Civil Improvements (Sunken Costs) for \$45,089.
- Final Tie in and Additional Conduit at CP Tunnel MP 4.78 for \$26,526.
- Isolation and Protection for Railroad Change Order
- VTA Bus Bridge Service

**5.3 Issues**

**Table 5-1. Change Management Issues Identified and Actions Taken for February 2023**

<b>Issues</b>	<b>Actions</b>
Segment 4 Maintenance Option in the existing BBII Contract was never exercised. Maintenance of OCS/TPS for Segment 4 will be needed post Segment 4 substantial completion once Caltrain is using it for EMU testing under 25kV.	<ul style="list-style-type: none"><li>• Define EMU testing and burn in work schedule.</li><li>• BBII provides isolation and protection once Segment 4 is powered up.</li><li>• BBII will provide maintenance lite during EMU testing and burn in.</li><li>• Prepare Request for Proposal for OCS/TPS Maintenance Service for public procurement scheduled for February 2023.</li><li>• Develop evaluation criteria for Maintenance Service proposals.</li><li>• Recommend for award and obtain JPB board approval.</li></ul>