

## **Caltrain Modernization Program** Peninsula Corridor Electrification Project (PCEP)



# **Executive Monthly Progress Report**

February 29, 2024

This page is intentionally blank.

## TABLE OF CONTENTS

1.0	Exect	utive Summary1-1
	1.1	Introduction 1-1
	1.2	Program Cost and Budget1-1
	1.3	Program Progress and Schedule1-1
	1.4	Change Management Board (CMB)1-1
	1.5	This Month's Accomplishments1-2
	1.6	Upcoming work 1-3
	1.7	Critical Items
	Table	1-1. Critical Issues and Actions1-4
2.0	Safet	y
	2.1	Completed Work 2-1
	2.2	Upcoming Work
3.0	IMS F	Program Schedule
	3.1	Introduction
	3.2	Critical Path Analysis
	3.3	Schedule Contract Milestone Analysis 3-1
4.0	Cost	and Budget
	4.1	Introduction 4-1
	4.2	Program Budget and Cost 4-1
	Table	4-1. Budget Summary by Project 4-1
	Table	4-2. Budget Summary by Major Elements
	4.3	Program Shared Risk Pool and Contingency 4-1
	Table	4-3. Shared Risk Pool Status as of February 2024 4-2
	4.4	Electrification Design Builder Contract Incentives
	Table	4-6. BBII Incentives
	4.5	Program Cash Flow and Funding
	4.6	Issues
	Table	4-7. Cost and Funding Issues Identified, and Actions Taken for February 2024. 4-5
5.0	Chan	ge Management
	5.1	Introduction
	5.2	Change Orders/Shared Risk Pool 5-1
	5.3	Issues

This page is intentionally blank.

## **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 rebaselined the program budget and schedule in December of 2021. Caltrain finished a schedule reforecast in March 2023 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 2024, the project is on budget:

- The current project total cost at completion (EAC) is the same as the Board adopted budget of \$2.44 billion.
- As of February 2024, a total of \$15.75M has been drawn down from the Shared Risk Pool of \$50 million to-date. In February 2024, \$14,751.00 was drawn from the Shared Risk Pool.
- As of February 2024, a total of \$35.2M has been drawn from the project contingency of \$40 million. In February 2024, \$4,739,922 was drawn from project contingency.
- As of February 2024, \$4M was issued from the milestone incentive pool of \$15 million. The team has concluded evaluation of signal cutover milestone incentives and awarded \$4M in December 2023 to the design-build contractor.

## 1.3 **Program Progress and Schedule**

As of February 29, 2024, the overall project completion is 90.89%. The current program schedule was 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 area focused bus bridges to maximize track access to allow system integration testing, signal cutovers, and proactive OCS construction productivity mitigations for the remaining PCEP work. Due to the February 3<sup>rd</sup> weekend windstorm, OCS wires located at Burlingame and San Antonio were damaged caused by fallen trees on the right of way. The PCEP team assessed the damage and its impact to the project. The storm repair and recovery plan are underway.

## 1.4 Change Management Board (CMB)

In February 2024, the following items were brought to the CMB approval for contingency drawdown:

- PG&E Substation Upgrades Equivalent One-Time Payment (EOTP)
- TASI EMU Maintenance & Material (Pre-Revenue)

#### 1.5 This Month's Accomplishments

The project team has completed the following notable activities for the month of February 2024:

- Completed all OCS regulation and Sectionalization. OCS construction is complete.
- Performed February 3<sup>rd</sup> weekend windstorm damage assessment and established storm repair plan.
- Revised PCEP project schedule to incorporate storm repair and recovery work.
- Completed Guadalupe live runs south of Diridon.
- Continued to connect LV permanent power and coordinate remaining low voltage power drop applications with PG&E and utilizing generators to support project testing.
- Continued to address impedance bonds cable theft issue and perform cable replacement to keep project testing schedule.
- Finalized bus bridge planning effort for Live Runs planned for 2024.
- Held Monthly CMB meeting for overall program status and provided schedule, budget, risks, and changes updates.
- 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.
- Adjusted short circuit test sequence and test dates due to storm repair. Obtained PG&E occurrence for March and April testing dates.
- Continued with project close out efforts and tracked all punch list items in a centralized database.
- Competed Certificate of Conformance (COC) for Milestone 1 limits (Diridon to San Antonio) and Drill Track.
- Continued EMU burn-in and Caltrain completed four EMU burn-in acceptance test on mainline.
- Continued broadband equipment on board installation and revised EMU delivery schedule that incorporated broadband equipment installation work. A total of 14 EMU trainsets will be delivered to Caltrain by August 2024.
- Continued Rail Activation effort and developed detailed RAC schedule and Pre-Revenue Service Plan.
- Completed OCS training.
- Continued Diesel fleet exist effort.
- Two more EMUs were delivered and there are a total of 8 EMU trainsets on Caltrain property.
- Continued joint punch list walks and identified punch list items and tracked them via a centralized database.

• Finalized Substantial Completion and Final Acceptance Checklist and issued revised project close out contract specification.

#### 1.6 Upcoming work

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

- Perform and complete storm repair work.
- Revise remaining short circuit testing dates due to OCS storm repair. Perform and complete the remaining 5 short circuit testing with support from PG&E.
- Continue operations planning, ambassador, and rail service planning for Segment 1 and 2 live runs.
- Complete remaining segments live runs with the EMU.
- Complete end to end full corridor live runs prior to substantial completion. Complete PTC Field Qualification testing using full corridor.
- Continue to coordinate with Broadband Project, work with vehicle manufacturer and monitor EMU production schedule that includes broadband equipment installation and testing.
- Continue bi-weekly project completion roadmap meeting with Design-Build Contractor Executives to address path to substantial completion.
- Plan for power contingency test after end-to-end runs with eight EMUs.
- Continue to coordinate with PG&E on low voltage power drop applications, and distribution line de-energization work.
- Complete all joint punch list walks for all remaining work.
- Hold Monthly CMB meeting for program status and change order approval.
- Commence full corridor OP54 with FTA/PMOC.
- Continue the system safety certification process by issuing Certification of Conformance.
- Continue EMU acceptance testing (burn-in).
- Two more trains are to be delivered by the end of March. The remaining to be delivered in 2nd and 3<sup>rd</sup> quarter of 2024 to support September Revenue Service.
- Finalize Substantial Completion and Final Acceptance Checklist and issue revised project close out contract specification.

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 2024, the top critical items and related actions are highlighted below.

Table 1-1. Critical Is	sues and Actions
Critical Issues	Actions
Overhead Contact System (OCS) installation (regulation work) delay due to low productivity Note: The project OCS work was on hold from March 10, 2022, to March 28, 2022, during the safety stand down. Segment 2 OCS was damaged during high wind and heavy rainstorms in late December 2022 and early January 2023	<ul> <li>Additional BBII OCS crew training for regulation and variance in the OCS design / installation due to redesign &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</li> </ul>
	<ul> <li>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. Completed</li> </ul>
	<ul> <li>Bring on more regulating crews in May 2023. Mass will start regulating work in the first week of June 2023 – Completed.</li> <li>Procure more equipment parts and ensure all equipment is performing well for construction – Completed.</li> <li>Bring on equipment fitters and warehouse material</li> </ul>
	<ul> <li>bing on equipment interest and waterreads matched in manager on site – Completed.</li> <li>Segment 2 damaged wire due to 2023 winter storms were repaired in August 2023– Completed.</li> <li>Continue to address OCS quality issues through joints walks and field verification – on-going.</li> <li>OCS Construction is complete except for Feb 3<sup>rd</sup>, 2024, weekend storm damage.</li> </ul>
<ul> <li>Complete TPS Short Circuit Tests</li> <li>TPS 2 short circuit test delays drill track and Segment 4 mainline energization. TPS 2 Short circuit test was performed in May 2023 with some follow up actions.</li> <li>TPS 1 Short Circuit Test is scheduled in February of 2024.</li> </ul>	<ul> <li>Perform comprehensive root cause analysis and develop corrective action plan – Completed.</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 – On-going.</li> <li>Perform technical working groups including all vendors and EOR – On-going.</li> <li>Weekly management team briefing on corrective action status – On-going.</li> <li>Perform independent assessment of the TPS – Completed.</li> <li>Develop SSWP for all work performed at TPS for Caltrain review and approval – On-going.</li> <li>Perform field verification and pre-testing before short circuit re-test – Completed.</li> <li>Perform load bank testing prior to short circuit re-test. – Completed.</li> <li>Developed remaining short circuit tests required for system completion – completed.</li> <li>Perform Short circuit tests – March, April of 2024</li> </ul>
Theft of impedance bond or grounding cables may delay segment live run testing because the system (or portions of the system) cannot be energized without impedance bonds	<ul> <li>Monitor hot spot areas in segments 1, 3 and 4. Perform just in time replacement right before the testing.</li> <li>Report Theft incidents with Transit PD</li> <li>Enhance security with cameras and other monitoring systems.</li> <li>Work with Communications on high voltage safety messages</li> </ul>

## Table 1-1. Critical Issues and Actions

Critical Issues	Actions
	<ul> <li>Distribute high voltage safety fliers to the homeless encampments.</li> <li>Implement asphalt cover for impedance bonds that have been repeatedly stolen. – on-going</li> <li>Purchase anti-theft cable – on-going.</li> </ul>
Server wind and rainy weather may cause more falling trees on the ROW and damage OCS.	<ul> <li>Established tree mitigation special work force.</li> <li>Trimming Caltrain ROW trees per tree mitigation plan as results of 2023 winter storm</li> <li>Working with local jurisdiction urgently for tree trimming especially new Burlingame where most tree fallen incidents have occurred to minimize future incidents.</li> </ul>

## 2.0 SAFETY

There were no reportable injuries in February 2024, keeping the total reportable injuries to 0 for the year, for both January and February. The Reportable Injury Rate (RIR) for 2023 YTD was 1.88. Overall, since the project's construction started in 2017, the RIR is at 1.95, which remains below the national average of 2.5.



Figure 2-1. Project Reportable Injury Rate (RIR) by Year since 2017

## 2.1 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. Caltrain initiated the 10'/10' rule: 10' from track and 10' from overhead wires.

## 2.2 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 and EMU First Responder was completed in October. In all 92 classes were given to emergency responders with a total number of 836 attendees.

Police Departments along the corridor are currently being scheduled by the Transit Police to receive this training also.

In addition to the 836 emergency responders trained, there were 242 third party and Tenant railroad employees trained, and 48 Burlingame Public Works for a total of 1126.

#### 3.0 IMS PROGRAM SCHEDULE

#### 3.1 Introduction

The Integrated Master Schedule (IMS) Program Summary Schedule depicted in Figure 3-1 Master Program Summary Schedule shows the schedule status of the major PCEP projects. The current schedule dates for this program schedule were based on BBII's February 2024 Progress Schedule, as well as the Stadler February 2024 EMU Progress Schedule. The Revenue Service Date (RSD) is anticipated to remain as September 26, 2024, contingent upon the final four trainsets completing burn-In within one month of delivery in August 2024. If the completion of fourteen Trainsets can be completed prior to September 2024, then the Full Funding Grant Agreement (FFGA) Revenue Completion Date (RCD) of December 31, 2024, seems attainable.



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

#### 3.2 Critical Path Analysis

The current critical path has changed due to the Storm Damage on 2/4/2024. Once the critical Storm Damage impacts were repaired, the remaining Short Circuit Testing was calculated as critical. After completion of Short Circuit documentation, the Segment 1 and 2 Live Run Testing then followed. This path allows for seven days of Project Schedule Contingency, followed by an impacted Substantial Completion date of 5/8/2024. The critical path plot (shown below) represents the as submitted critical path to Substantial Completion for the BBII February 2024 Updated schedule.

tivity D	Activity Name	Orig Dur	Rem Dur	Total Float	Start	Finish	TAR TF	Tar OD	Tar RD	Tar Start	Tar Finish	Date Variance	March 2024         April 2024         May 2024         June 2024         July 2024         August 2024         S           25         03         10         17         24         31         07         14         21         28         05         12         19         26         02         09         16         23         30         07         14         21         28         05         12         19         26         02         09         16         23         30         07         14         21         28         01         08         15         22
	P Update - Feb 2024 (Draft - Import by JAG)												
Mar 2024													
TS-04-4073	SC Test Location 5 - Short Circuit Testing (Retest)	1	1	3	03/15/24*	03/15/24		0					TS-04-4073
TS-04-4077	SC Test Location 4 - Short Circuit Testing (Retest)	1	1	3	03/16/24	03/16/24		0					TS-04-4077
TS-02-2020	SC Test Location 2 - Short Circuit Testing	1	1	3	03/17/24	03/17/24	1	1	1	02/09/24	02/09/24	-22	TS-02-2020
TS-02-2040	SC Test Location 1 - Short Circuit Testing	2	2	3	03/22/24	03/23/24	1	2	2	02/23/24	02/24/24	-15	5 TS-02-2040
G TS-01-2092	Submit Documentation from SC Test 1 for SIT Segment 1 & 2	1	1	8	03/23/24	03/24/24	0	1	1	02/25/24	02/25/24	-28	p 💾 TS-01-2092
TS-01-2094	EOR Review Documentation from SC Test 1 for SIT Segment 1 & 2	1	1	8	03/24/24	03/25/24	0	1	1	02/26/24	02/26/24	-28	o TS-01-2094
TS-01-2096	BBI Incorporate EOR Comments & Submit to JPB Docs for SC Test 1 for SIT Seg 1 & 2	1	1	8	03/25/24	03/26/24	0	1	1	02/27/24	02/27/24	-28	C TS-01-2096
TS-01-2098	JPB Review Documents for SC Test 1 for SIT Segment 1 & 2	1	1	6	03/26/24	03/27/24	0	2	2	02/28/24	02/29/24	-21	C 1 TS-01-2098
TS-02-2003	Segment 2 Live Run Testing (Up to TBD)	2	2	3	03/29/24	03/30/24		0					TS-02-2003
Apr 2024													
TS-04-4074	SC Test Location 3 - Short Circuit Testing	1	1	2	04/05/24	04/05/24	1	1	1	02/17/24	02/17/24	-22	TS-04-4074
TS-01-2084	Submit Documentation from SC Test 3 for SIT Segment 1 & 2	1	1	3	04/05/24	04/06/24	7	1	1	02/18/24	02/18/24	-48	TS-01 2084
TS-01-2086	EOR Review Documentation from SC Test 3 for SIT Segment 1 & 2	1	1	3	04/06/24	04/07/24	7	1	1	02/19/24	02/19/24	-48	1 TS-01-2086
TS-01-2088	BBII Incorporate EOR Comments & Submit to JPB Docs for SC Test 3 for SIT Seg 1 & 2	1	1	3	04/07/24	04/08/24	7	1	1	02/20/24	02/20/24	-48	1 TS-01-2088
- TS-01-2090	JPB Review Documents for SC Test 3 for SIT Segment 1 & 2	2	2	3	04/08/24	04/10/24	5	2	2	02/21/24	02/22/24	-35	TS-01-2090
TS-02-2000	Segment 2 Live Run Testing	4	4	0	04/12/24	04/20/24	0	6	6	03/01/24	03/16/24	-13	0-0-0 TS-02-2000
TS-01-1000	Segment 1 Live Run Testing	4	4	0	04/12/24	04/20/24	0	6	6	03/01/24	03/16/24	-13	0-0-0
TS-00-0062	End to End Testing (2 Trains)	3	3	0	04/26/24	04/28/24	0	2	2	03/22/24	03/23/24	-11	D 5-00-0062
SM-00-20062	Issue Certificate of Compliance for Substantial Completion (End to End)	3	3	0	04/28/24	05/01/24	0	1	1	03/24/24	03/24/24	-36	o = ISM-00-20062
May 2024													
FTC-0001	Project Schedule Contingency	7	7	0	05/01/24	05/08/24	0	8	8	03/25/24	04/01/24	-38	000 ***** TC-0001
GC-00-10540	Scheduled Substantial Completion (CCO 255 Incentive)	0	0	1		05/01/24	1	0	0		03/24/24	-38	GC 00-10540     GC 00
GC-00-9990	Scheduled Substantial Completion	0	0	0		05/08/24*	0	0	0		04/01/24	-37	• • GC-00-9990
DUR-00-2000	Duration Between Substantial Completion and Final Acceptance	111	111	13	05/08/24	08/27/24		0					DUR-00-20
Aug 2024													
GC-00-9920	Final Acceptance	0	0	13		08/27/24*	0	0	0		07/30/24	-28	GC-00-992

#### Figure 3-2. Critical Path Schedule

## 3.3 Schedule Contract Milestone Analysis

Contractor	Milestones	Reforecast Dates (Dec 2022)	Current Dates (Feb 2024)	Milestone Finish Date Variance	Total Float	Remarks
BBII	Segment 4 Completion (Final Short Circuit Test Report Delivered to JPB)	2/5/2023	5/31/2023	-115		Completed
BBII	System Integration Testing Start (Segment 4)	4/12/2023	6/5/2023	-54		Completed
BBII	Signal Cutovers and Systems Completion	8/20/2023	8/20/2023	0		Completed
BBII	Traction Power Substation #1 Energization	9/12/2023	8/26/2023	17		Completed
BBII	Completion of Milestone 1 (Segments 3 and 4)	5/28/2023	9/15/2023	-110		Completed
BBII	OCS Construction Completion	10/2/2023	2/16/2024	-137		Completed
BBII	OCS Construction Completion (Guadalupe Bridge)	10/25/2023	2/17/2024	-115		Completed
BBII	System Integration Testing Completion	11/18/2023	4/20/2024	-154	0	Short circuit test dates are revised due to storm repair and live runs dates and are adjusted accordingly. Short circuit retests are planned for March 15 & 16; March 22 & 23.
BBII	Scheduled Substantial Completion (Without Contingency)	12/17/2023	5/1/2024	-136	1	The Storm Damage of 2/4/2024 has caused an impact to Substantial Completion Milestones.
BBII	Scheduled Substantial Completion	4/1/2024	5/8/2024	-37	0	The Storm Damage of 2/4/2024 has caused an impact to Substantial Completion Milestones. (WITH 7-days of Contingency) equals 5/8/2024.
Stadler	14th Trainset Arrival at JPB Site	10/12/2023	8/2/2024	-295	-95	Delivery of the 14th Trainset by end of March 2024 is not able to be met due to damaged train. Trainset #311 was shipped to STL for assessment and repair. Currently, the extent of damage or time to repair and ship back to JPB are unknown until structure analysis is performed by Stadler.
Stadler	16th Trainset Arrival at JPB Site	10/12/2023	8/9/2024	-302	1195	Stadler is striving to deliver 16 trainsets by the end of September 2024.
BBII	Scheduled Final Acceptance	7/30/2024	8/27/2024	-28	13	Revised Contractual Final Acceptance Date is 9/8/2024. Thus, the as submitted Feb Update calculated and early completion (by 13-days).
JPB	Revenue Service Date (RSD)	9/26/2024	9/26/2024	0	N/A	
JPB	FFGA Revenue Completion Date (RCD)	12/31/2024	12/31/2024	0	N/A	

Figure 3-3. Contract Milestone Analysis

#### 4.0 COST AND BUDGET

#### 4.1 Introduction

This section presents an update on program cost and budget. On December 6th, 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 29, 2024.

#### 4.2 Program Budget and Cost

Description of Work	Current Budget	Cost This Month	Cost To Date	Estimate To Complete	Estimate At Completion	Variance at Completion
	(A) <sup>1</sup>	(B) <sup>2</sup>	(C) <sup>3,4</sup>	(D)	(E) = (C) + (D)	(F) <sup>5</sup> = (A) – (E)
Electrification	\$1,754,673,622	\$9,108,961	\$1,622,610,438	\$131,316,235	\$1,753,926,673	\$746,949
EMU	\$688,017,075	\$2,346,267	\$567,223,401	\$121,540,622	\$688,764,024	(\$746,949)
PCEP TOTAL	\$2,442,690,697	\$11,455,227	\$2,189,833,839	\$252,856,857	\$2,442,690,697	\$0

Table 4-1.	Budget	Summary	hv	Project
	Duugei	Summary	IJУ	IIUJECL

<sup>1.</sup> Column A "Current Budget" includes re-baseline and executed change orders and awarded contracts.

<sup>2.</sup> Column B "Cost This Month" represents the cost of work performed this month.

<sup>3.</sup> Column C "Cost to Date" includes actuals (amount paid) and accruals (amount of work performed) to date.

<sup>4.</sup> Column F "Variance at Completion" includes forecasted transfer of contingency from EMU to Electrification project.

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.

	I able	4-2. Duaget S			5	
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	\$1,093,328,881	\$3,686,656	\$1,029,973,256	\$61,985,625	\$1,091,958,881
EMU Procurement	\$556,072,601	\$564,986,271	\$1,140,826	\$467,349,631	\$97,636,640	\$564,986,271
Minor Construction Contracts (Tunnel, CEMOF, SCADA, Non- BBI OCS)	\$67,055,072	\$68,091,194	\$0	\$64,996,591	\$1,329,477	\$66,326,067
Real Estate Acquisition & Support	\$34,914,177	\$34,914,177	\$37,357	\$24,949,469	\$9,964,709	\$34,914,177
PG&E, Utilities**	\$132,088,994	\$132,480,062	\$314,316	\$125,693,927	\$3,620,196	\$129,314,123
Management Oversight & Support	\$312,699,697	\$315,007,767	\$2,589,192	\$298,422,640	\$23,012,030	\$321,434,670
TASI Support	\$114,488,767	\$140,877,323	\$3,019,229	\$121,529,574	\$22,705,740	\$144,235,314
Finance Charges	\$9,898,638	\$9,898,638	\$398,046	\$12,204,723	\$513,807	\$12,718,530
Insurance	\$6,581,851	\$6,581,851	\$0	\$6,291,001	\$290,850	\$6,581,851
Other Required Projects & Services	\$9,084,176	\$10,484,176	\$17,430	\$6,176,601	\$4,507,575	\$10,684,176
Environmental Mitigation	\$14,438,866	\$13,038,866	\$0	\$1,307,851	\$8,711,123	\$10,018,974
Caltrain Capital Overhead (ICAP)	\$48,217,887	\$48,217,887	\$252,176	\$30,938,576	\$17,279,312	\$48,217,887
Contingency	\$40,000,089	\$4,783,603	\$0	\$0	\$1,299,774	\$1,299,774
Total	\$2,442,690,697	\$2,442,690,697	\$11,455,227	\$2,189,833,839	\$252,856,857	\$2,442,690,697

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

#### 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 the 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.

Risk ID	Risk Description	Risk Amount	Current Month	Executed to Date	Remaining Balance
1	Permanent Power Availability	\$268,572	\$0	\$178,365	\$90,207
2	Different Site Condition for OCS Foundation	\$3,500,000	\$0	\$1,303,894	\$2,196,106
3	Different Site Condition for Duct bank	\$2,800,000	\$0	\$435,798	\$2,364,202
4	Condition of existing Fiber backbone infrastructure	\$3,150,000	\$0	\$545,221	\$2,604,779
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	\$507,167	\$31,405
8	EMI Nonconformance by EMU Vendor	\$750,000	\$0	\$13,184	\$736,817
9	Reed Street Cutover	\$90,000	\$0	\$111,765	-\$21,765
10	Availability of low voltage power for cutover testing	\$1,120,000	\$0	\$3,178,705	-\$2,058,705
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	\$152,418	\$15,083
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	\$0	\$71,920	\$1,328,080
17	Third party Approval	\$150,000	\$0	\$353,277	-\$203,277
18	Impact from Caltrain other capital or third-party projects	\$2,166,683	\$0	\$1,933,131	\$233,552
19	Track access delay for BBII Construction	\$1,800,000	\$0	\$1,172,376	\$627,624
20	Additional light Maintenance and Protection Needs	\$280,000	\$0	\$180,505	\$99,495
21	Crossing Protection	\$220,000	\$0	\$102,334	\$117,666
22	Power facilities	\$500,000	\$0	\$917,293	-\$417,293
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	\$14,451	\$4,458,376	\$7,541,624
NA	Unidentified	\$54,179	\$0	\$0	\$54,179
	BBII Risk Pool Total	\$50,000,000	\$14,451	\$15,752,198	\$34,247,803

## Table 4-3. Shared Risk Pool Status as of February 2024

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.

#### Peninsula Corridor Electrification Project

## Monthly Progress Report – February 2024

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

Change Order ID	Description	Contingency
	PCEP Contingency Budget	\$40,000,088
STA-056-CCO-038	Allowance for Electric Power Cost at TTCI	(\$132,365)
STA-056-CCO-041	Manual Phase Break	(\$43,520)
STA-056-CCO-042	Stadler Project Time Extension	(\$8,021,124)
ARINC-061-CCO-005	Traction Power Facility SCADA Database Changes	(\$1,036,122)
PROV-070-CCO-056	Proven Tunnels Final Settlement	\$1,000,000
PROV-071-CCO-069	Proven CEMOF Final Settlement	(\$1,000,000)
BT-027D	Legal Support FY23 - PG&E Counsel	(\$200,000)
BT-029D	GFI Electrification FY23-24 Additional Staff	(\$2,108,070)
STA-056-CCO-053	Stadler – Passenger Convenience Outlets	(\$716,661)
BT-035C	TASI Support – Electrification (2023-2024) rev1	(\$22,039,703)
BBII 053-BT-CNPA	Non-PCEP Actuals-BBII Hist. Change Inc. PCEP Re-Baseline	\$2,191,000
BBI-053-CCO-255	Global Project Time Resolution (TRO)-Substantial Completion – January 2024	\$1,630,000
PG&E-042-BT-006	PG&E Equiv. One-Time Payment (EOTP) - First Reimbursement	(\$391,068)
BT-057	TASI – TASI EMU Maintenance & Material (Pre-Revenue)	(\$4,348,854)
	Remaining Contingency	\$4,783,602
BT-058	Tunnel Leak Remediation (TASI Construction)	(\$562,851)
BT-035	TASI Support-Electrification (2023-2024)-Field Support to Sept 2024	(\$2,795,140)
MGMT-2024-02	Management Oversight – Update EAC	(\$6,426,903)
BBII-053-CCO-255- EAC2	Global Project Time Resolution (TRO)-Substantial Completion-February 2024	\$1,370,000
PG&E-042-BT-007A	PG&E Supplemental Agreement No. 4 – PCEP Share	\$1,600,000
PG&E-042-BT-007B	PG&E Supplemental Agreement No. 2 – EAC Variance	\$501,962
PG&E-042-BT-007C	PG&E Supplemental Agreement No. 2A – EAC Variance	\$1,509,909
PROV-063-CLOSE	South San Francisco Station Project OCS - Close Out	\$1,000,000
PROV-070-CLOSE	Proven Tunnels – Close out of Final Actuals	\$184,910
PROV-071-CLOSE	Proven CEMOF – Close out of Final Actuals	\$580,217
PG&E-042 BT-006	PG&E Equiv. One Time Payment (EOTP) - Final Reimbursement	(\$445,932)
	Forecasted Remaining Contingency	\$1,299,774

Note: EAC Contingency reflects forecast contingency.

The total Program Contingency as of the December 2021 Re-Baseline Budget totaled \$90M including Allocated and Unallocated Contingency, and BBII Risk Pool. Table 4-5 summarizes the current remaining and forecasted contingency balance as of the monthly update.

Table 4-5. Overall Program Contingenc
---------------------------------------

		Shared Risk Pool with BBII	Program Contingency		су
	Total E = (A+D)	BBII Risk Pool (A)	Allocated (B)	Unallocated (C)	Subtotal D = (B+C)
PCEP Contingency	\$90,000,088	\$50,000,000	\$24,115,581	\$15,884,507	\$40,000,088
Drawn Contingency	(\$50,968,683)	(\$15,752,198)	(\$21,953,405)	(\$13,263,080)	(\$35,216,486)
Remaining Contingency	\$39,031,405	\$34,247,802	\$2,162,176	\$2,621,427	\$4,783,603
Pending Changes	(\$3,632,376)	(\$148,547)	(\$2,162,176)	(\$1,321,653)	(\$3,483,829)
Forecasted Remaining Contingency	\$35,399,029	\$34,099,255	\$0	\$1,299,774	\$1,299,774

### 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.

Incentives	Budgeted	Awarded	Balance
Contract Incentive:			
Quality	\$1,250,000	\$1,000,000	\$250,000
Safety	\$2,500,000	\$1,000,000	\$1,500,000
Community Outreach	\$2,500,000	\$2,000,000	\$500,000
DBE	\$900,000	\$0	\$900,000
Total Contract Incentive	\$7,150,000	\$4,000,000	\$3,150,000
Milestone Incentive:			
Early Signal and Crossing Cutover	\$4,000,000	\$4,000,000	\$0
Early Project Substantial Completion (NTE)	\$8,000,000	\$0	\$8,000,000
Early Revenue Service	\$3,000,000	\$0	\$3,000,000
Total Milestone Incentive	\$15,000,000	\$4,000,000	\$11,000,000

Table	4-6.	BBII	Incentives

## 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



## Table 4-7. Cost and Funding Issues Identified, and Actions Taken for February 2024

Issues	Actions		
Late receiving of PG&E \$99 million reimbursement	<ul> <li>PG&amp;E first reimbursement to planned to be made on February 23, 2024.</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/CCO

The following Shared Risk items were executed in February 2024:

- Caltrain Fouling Distance was executed in 02/05/2024, for \$201,795.
- Orange Phase Break & end of Electrified Track Signs was executed on 02/06/2024, for \$14, 541.
- Track Access Delay for November 2023 was executed on 02/06/2024, for \$45,677.
- CCO-260 Contract Language Revision to Intermediate Milestone 1 was executed on 02/20/2024, at no additional cost.
- 5.2.2 The following items were brought to the CMB for contingency drawdown approval in February 2024:
  - JM for PG & E Equivalent One-Time Payment (EOTP)
  - JM for TASI EMU Pre-Revenue Service Maintenance and Material
- 5.2.3 Upcoming Change Orders or Shared Risk Items
  - Test Train Passing CEMOF Isolation Limits
  - Anti-theft Asphalt over Impedance Bonds November and December 2023
  - ROW G&B Theft Replacement Removed from IRL 313

#### 5.3 Issues

#### Table 5-1. Change Management Issues Identified and Actions Taken for February 2024

Issues	Actions
None	• n/a