Caltrain Modernization Program

Peninsula Corridor Electrification Project (PCEP)

Executive Monthly Progress Report

September 30, 2022

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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 re-baselined the program budget and schedule in December of 2021. Caltrain completed a thorough assessment of all aspects of the program including cost, schedule, risks and organization. Caltrain 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. As of September 2022, 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 September 2022, a total of $2.86M has been drawn down from the Shared Risk Pool of $50 million.
- As of September 2022, a total of $1.17M has been drawn from the project contingency of $40 million. No new drawdowns since last month.
- As of September 2022, no new awards have been made from the Project incentive pool of $18.5 million.

1.3 Program Progress and Schedule

As of September 30, 2022, the overall project completion is 76.42%. The current program schedule is projecting a PCEP substantial completion date of April 2024 and Revenue Service by September 2024.

1.4 Change Management Board (CMB)

In September 2022, no change orders were brought to CMB for approval.

1.5 This Month's Accomplishments

The project team has completed the following notable activities for the month of September 2022:

- Submitted final FTA Project Recovery Plan.
- Held Electric Train Celebration Event on September 24, 2022 at Caltrain's San Francisco Station with elected officials, JPB Board, FTA, funding partners and key stakeholders.
- Held Executive Partnering session with BBII, Rail Operations and TASI.
- Continued to finalize Segment 4 energized rail isolation and protection procedure.
- Energized TPS 2 line 2 on September 17, 2022.

- Commenced TPS1 Single Phase Study for Line 1 and Line 2.
- Continued safety special task force working group including TASI, Rail Operations and PCEP to address communications, process and procedure improvements.
- Continued to recruit experienced, qualified resources to fill key management positions for PCEP delivery. As of September, the following positions are still vacant: Lead Scheduler, Document Control Manager and a Close-out Manager.
- Received approval from the FRA on regression test plan for previous 2SC cutover location application logic update.
- Continued pretesting activities for Segment 2 SSF cutover which is planned for October 2022.
- Confirmed last major cutover plan for Segment 2 at Menlo Park, Redwood City, and Palo Alto in early December with Rail Operation and Rail Planning.
- 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.
- Continued Emergency Preparedness Plan (EPREP) and Standard Operating Procedures (SOPs) updates for electrified operations with TASI and Rail Operations.
- Commenced readiness review for Segment 4 system integration testing and energization with Design-Builder.
- Commenced Rail Isolation and Protection training.
- Held track access and RWIC workshops with BBII, Rail Operations and TASI.

1.6 Upcoming work

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

- Issue energized rail isolation and protection procedure.
- Finalize Emergency Preparedness Plan (EPREP) and Standard Operating Procedures (SOPs) updates for electrified operations with TASI and Rail Operations.
- Finalize updated SSWP to include 25kV isolation and protection request.
- Continue 25kV in-depth OCS awareness training for all TASI staff and tenant railroad trainers prior to full Segment 4 energization.
- Continue to hold CMB and PCEP partnering sessions and finalize procedures for the implementation of the Configuration Management Board from the Funding Partners Oversight Protocol.
- Continue to work with PG&E on the interconnect construction cost reimbursement timeline.
- Continue to hold Executive and Project Team Partnering sessions.
- Change TASI PCEP project regular work shifts to Tuesday – Saturday to maximize track access.
- Finalize Program Management Plan (PMP) based on FTA/PMOC comments.
- Energize Segment 4 and commence System Integration Testing and EMU Trainset 3 commissioning.

- Continue pursuing federal and local grants to close the funding gap.
- Hold Monthly CMB meeting for program status and change order approval.
- Commence 2SC application logic update for previous 2SC cutover locations.
- Complete Segment 2 cutover at SSF.
- Commence cutover planning effort for last major Segment 2 cutover at Ralston and Mayfield.
- Complete Segment 4 sectionalization testing, short circuit testing and be ready for EMU Testing under Power.

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

1.7 Critical Items

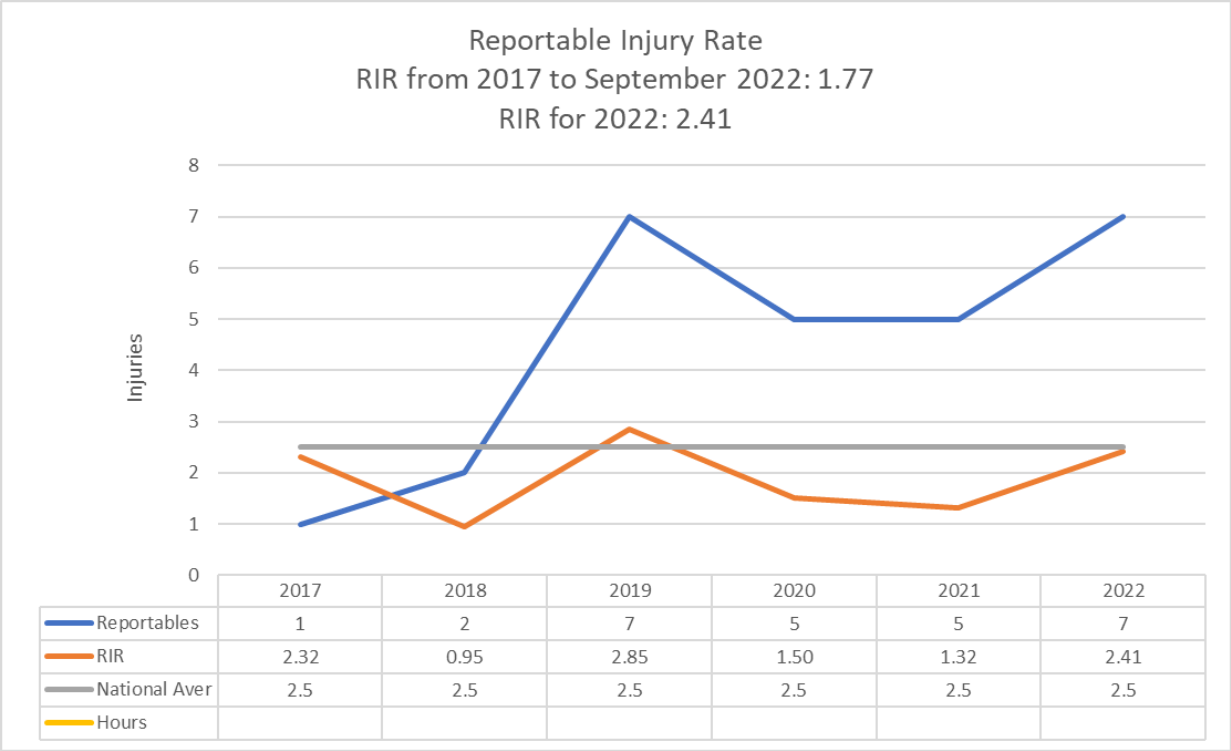
As of September 2022, the top critical items and related actions are highlighted below.

Table 1-1. Critical Issues and Actions

Critical Issues	Actions
Overhead Contact System (OCS) installation 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.	• Additional BBII OCS crew training for regulation and variance in the OCS design / installation due to re-design & accommodations to resolve foundation Differing Site Conditions (DSC) issues – Done. • Hiring additional BBII OCS staff members to prevent schedule slippage and help in future installation planning – Done. • Hold OCS construction scheduling recovery workshop for remaining OCS installation and testing – Done. • Increase OCS crews and OCS wiring equipment to increase productivity.
Timely completion of Segment 2 Signal/2SC cutover	• Perform comprehensive cutover planning; develop and track dashboard for each cutover, including design submittal, duct bank completion, flagger needs. • Work closely with Rail Operations to maximize track access, including weekend bus bridge. • Advance notification to the public on train schedule service changes for weekend shutdown. • Last major cutover is planned for December 5, 2022 through December 19, 2022.
Funding of $410 million program gap	• Special task force is in place to identify federal and state grant opportunities to pursue. • Targeted advocacy is ongoing. • Prepare earmarks grant scope and application.
Lack of field railway worker in charge (RWIC) for increased work crews	• Design-builder brought in more watchmen for off-track work. • TASI to expedite RWIC hiring and training. • Explore third party field resource procurement path. • Assess operational impact for expanding work limits with track and time.

2.0 SAFETY

There was one reportable injury in September (foot injury requiring modified duty). The Reportable Injury Rate (RIR) for 2022 through September is 2.41, which is below the national average of 2.50. Overall, since the project's inception, the RIR is at 1.77.



	2017	2018	2019	2020	2021	2022
Reportables	1	2	7	5	5	7
RIR	2.32	0.95	2.85	1.50	1.32	2.41
National Aver	2.5	2.5	2.5	2.5	2.5	2.5
Hours						

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

2.1.1 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.

2.1.2 Upcoming Work

The Fire/Life Safety Committee continues to work with the San Jose and Santa Clara Fire Departments on Emergency Preparedness in preparation for the energization of Segment 4. The safety team is updating with OCS and EMU emergency responder

safety familiarization presentations to include voiceover features for use by the Fire Departments. Once completed, the presentation will also be shared with other emergency responder jurisdictions through the project Fire/Life Safety Committee. In addition, the project safety team has initiated discussions with Segment 3 Fire Department jurisdictions and conducted project safety awareness training on September 8, 2022 for Training Officers of the Santa Clara County Fire Departments. In addition, a full-scale emergency exercise that will include an electrification incident response component is scheduled for November 6, 2022. Segment 3 Fire Department safety awareness training has been scheduled for Sunnyvale (1/4, 1/5, and 1/6/2023) and Mountain View (1/30, 2/1, and 2/3/2023) Fire Departments. Additional training is currently being coordinated with other Segment 3 Fire Departments.

Tenant railroads operating on Caltrain Right-of-Way have been trained in early September. PCEP will continue to train key management personnel and then provide the training material for their use in training their respective personnel.

In total, one hundred and thirty-five (135) third party contractors and members of tenant railroads have been trained in the OCS Safety Awareness program with additional classes to be scheduled as needed.

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 the source documents to the IMS as of October 1, 2022. The Revenue Service Date (RSD) and Full Funding Grant Agreement (FFGA) Revenue Completion Date (RCD) remains September 26, 2024, and December 31, 2024 respectively.

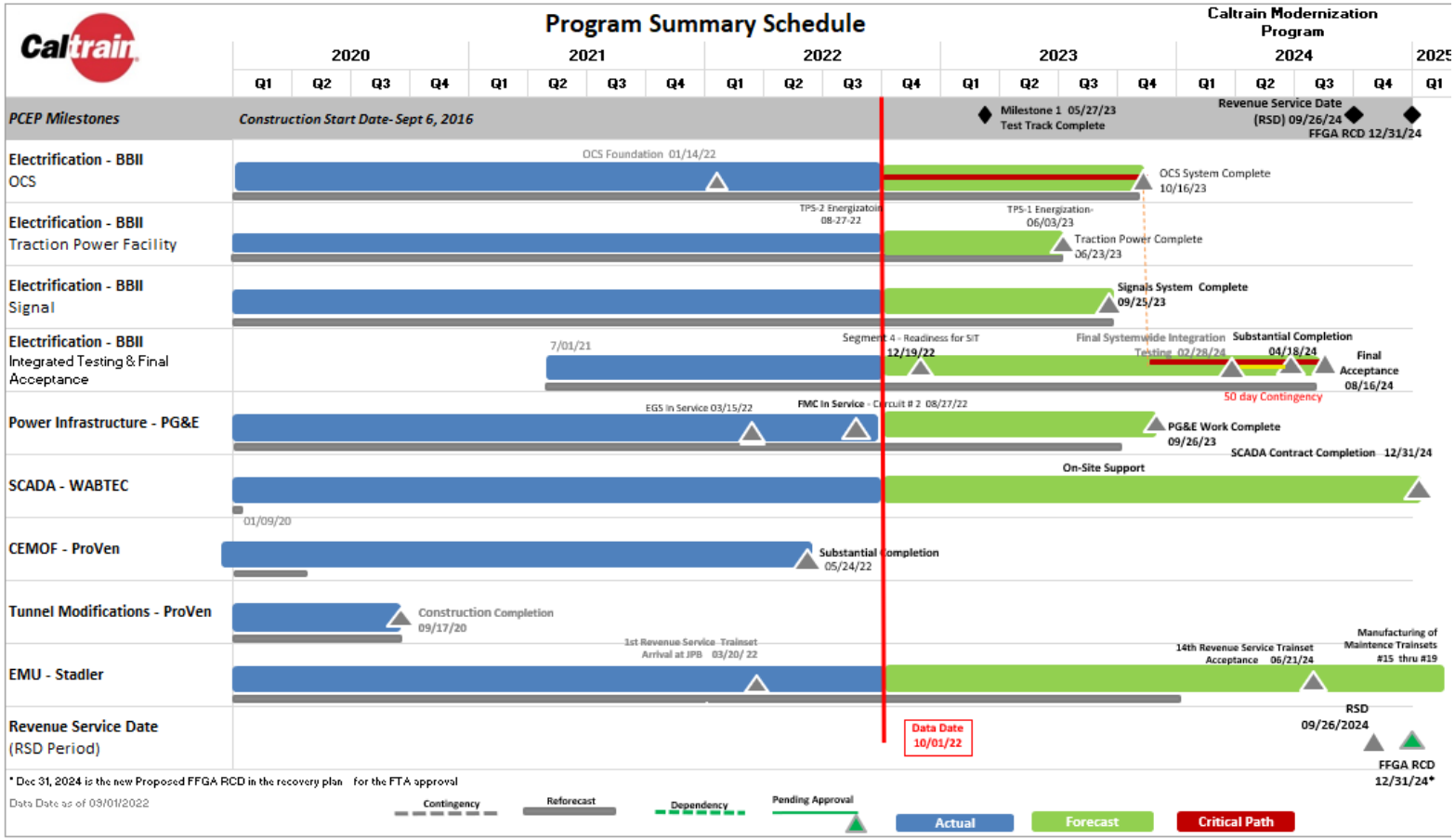


Figure 3-1. Master Program Summary Schedule

3.2 Critical Path Analysis

The current critical path for PCEP starts with installation of the Static and Feeder Wire in Segment 1 and 2, then continues to run through the OCS system in Segment 1 and Segment 2 followed by Testing, Start-up and Final Acceptance. The criticality of the path has slipped another 4 days from the June 2022 Reforecast Schedule and now show a negative 16 day total float.

The current near critical path is the remaining Signal and Crossing cutovers for Segment 2, Segment 3 and Segment 1, followed by Testing and Milestone 1 completion. This near critical path is within 13 days of the most critical path.

#	Activity ID	Activity Name	Duration	Total Float	Reforecast Start	Reforecast Finish	Current Start	Current Finish	Refor Finish Variance
1	**Segment 1 (8 Mi)**		513	-18	16-Sep-22	29-Dec-23	28-Sep-22 A	19-Jan-24	-23
2	OC-01-31690	Install Shunt Wire Segment 1 WA 1 (0 of 2 TD)	2	-15	16-Sep-22	19-Sep-22	21-Nov-22	22-Nov-22	-64
3	OC-01-31040	Install Feeder Wire Segment 1 WA 1 (5,739 of 32,468 TD)	63	-15	19-Sep-22	29-Sep-22	28-Sep-22 A	02-Dec-22	-62
4	OC-01-31090	Install OCS Static Wire Segment 1 WA 1 (0 of 32,529 TD)	4	-15	29-Sep-22	03-Oct-22	02-Dec-22	07-Dec-22	-62
5	OC-01-31080	Install OCS Messenger / Contact Wire Segment 1 WA 1 (0 of 164,754 TD)	25	-15	26-Oct-22	21-Nov-22	07-Dec-22	02-Jan-23	-39
6	OC-01-31560	Install Feeder Wire Segment 1 WA 2 (0 of 25,421 TD)	12	-15	21-Nov-22	05-Dec-22	02-Jan-23	13-Jan-23	-39
7	OC-01-31170	Install Static Wire Segment 1 WA 2 (0 of 33,655 TD)	21	-15	05-Dec-22	27-Dec-22	13-Jan-23	02-Feb-23	-39
8	OC-01-31200	Install OCS Messenger / Contact Wire Segment 1 WA 2 (0 of 120,311 TD)	38	-15	27-Dec-22	02-Feb-23	02-Feb-23	11-Mar-23	-39
9	OC-01-31570	Install Feeder Cable Segment 1 WA 2 (0 of 278 TD)	2	-15	02-Feb-23	03-Feb-23	11-Mar-23	13-Mar-23	-39
10	OC-01-31580	Install Static Cable Segment 1 WA 2 (0 of 170 TD)	1	-15	03-Feb-23	05-Feb-23	13-Mar-23	14-Mar-23	-39
11	OC-01-31620	Install OCS Insulation Segment 1 WA 2 (0 of 21 TD)	13	-15	05-Feb-23	17-Feb-23	14-Mar-23	27-Mar-23	-39
12	OC-01-31230	Regulate OCS Segment 1 WA 2 (0 of 531 TD)	76	-15	17-Feb-23	01-May-23	27-Mar-23	07-Jun-23	-39
13	OC-01-31190	Install OCS Jumpers Segment 1 WA 2 (0 of 42 TD)	7	-15	01-May-23	08-May-23	07-Jun-23	14-Jun-23	-39
14	OC-01-31630	Install OCS Section Insulators Segment 1 WA 2 (0 of 33 TD)	13	-15	08-May-23	20-May-23	14-Jun-23	26-Jun-23	-39
15	OC-01-31210	Panning OCS Segment 1 WA 2 (0 of 38 TD)	21	-15	20-May-23	26-Jun-23	26-Jun-23	17-Jul-23	-22
16	TS-01-1000	Segment 1 Integrated Testing	30	-16	29-Nov-23	29-Dec-23	20-Dec-23	19-Jan-24	-21
17	**Segment 2 (21.1 Mi)**		2158	-18	15-Jun-18	29-Nov-23	15-Jun-18 A	20-Dec-23	-23
18	OC-02-32050	Install Static Wire Assemblies Segment 2 WA 5 (329 of 368 TD)	1434	-15	10-Aug-18	11-Aug-22	10-Aug-18 A	17-Oct-22	-65
19	OC-02-32052	Install Feeder Wire Assemblies Segment 2 WA 5 (279 of 342 TD)	613	-8	10-Aug-18	11-Aug-22	10-Aug-18 A	17-Oct-22	-30
20	OC-02-327565	Install OCS Surge Arrester Segment 2 WA 5 (0 of 4 TD)	2	-15	11-Aug-22	14-Aug-22	17-Oct-22	19-Oct-22	-65
21	OC-02-32035	Install MPA's Segment 2 WA 5 (10 of 15 TD)	691	-15	21-Oct-20	15-Aug-22	21-Oct-20 A	20-Oct-22	-65
22	OC-02-32045	Install Feeder Wire Segment 2 WA 5 (20,479 of 51,342 TD)	1301	-15	11-Jan-19	20-Aug-22	11-Jan-19 A	25-Oct-22	-64
23	OC-02-32025	Install Static Wire Segment 2 WA 5 (22,817 of 51,500 TD)	1502	-15	15-Jun-18	29-Aug-22	15-Jun-18 A	02-Nov-22	-64
24	OC-02-32040	Install OCS Messenger / Contact Wire Segment 2 WA 5 (36,827 of 110,846 TD)	916	-15	27-Mar-20	16-Sep-22	27-Mar-20 A	21-Nov-22	-64
25	OC-02-327475	Panning OCS Segment 2 WA 4 (0 of 23 TD)	24	-15	26-Jun-23	18-Jul-23	17-Jul-23	08-Aug-23	-22
26	OC-02-327365	Panning OCS Segment 2 WA 2 (0 of 15 TD)	15	-15	18-Jul-23	02-Aug-23	08-Aug-23	23-Aug-23	-22
27	OC-02-32285	Panning Segment 2 WA 1 (0 of 17 TD)	17	-15	02-Aug-23	18-Aug-23	23-Aug-23	08-Sep-23	-22
28	OC-02-327235	Loop Testing Segment 2 WA 1 (0 of 17 TD)	13	-15	18-Aug-23	30-Aug-23	08-Sep-23	20-Sep-23	-22
29	OC-02-327425	Loop Testing OCS Segment 2 WA 3 (0 of 12 TD)	13	-15	18-Aug-23	30-Aug-23	08-Sep-23	20-Sep-23	-22
30	OC-02-327415	High Pot Testing OCS Segment 2 WA 3 (0 of 12 TD)	7	-15	30-Aug-23	06-Sep-23	20-Sep-23	27-Sep-23	-22
31	OC-02-327395	High Pot testing OCS Segment 2 WA 2 (0 of 15 TD)	10	-15	06-Sep-23	15-Sep-23	27-Sep-23	06-Oct-23	-22
32	OC-02-327225	High Pot Testing Segment 2 WA 1 (0 of 17 TD)	9	-15	15-Sep-23	25-Sep-23	06-Oct-23	16-Oct-23	-22
33	TS-02-2010	OCS Sectionalizing Testing Segment 2	5	-16	25-Sep-23	30-Sep-23	16-Oct-23	21-Oct-23	-21
34	TS-02-2000	Segment 2 Integrated Testing	60	-16	30-Sep-23	29-Nov-23	21-Oct-23	20-Dec-23	-21
35	**All Segments**		327	-18	25-Sep-23	30-Jul-24	16-Oct-23	16-Aug-24	-19
36	OC-00-0000	OC Systems Acceptance Test High Pot / Loop Test Complete (All Segments)	0	-9		25-Sep-23		16-Oct-23	-12
37	TS-00-0060	Final Systemwide Integrated Testing - End to End	40	-16	29-Dec-23	07-Feb-24	19-Jan-24	28-Feb-24	-21
38	FTC-0001	Project Schedule Contingency	50	-16	11-Feb-24	31-Mar-24	28-Feb-24	18-Apr-24	-17
39	PC-00-0990	Overall Schedule / Substantial Completion Completion Milestone	0	-16		01-Apr-24		18-Apr-24	-17
40	GC-00-9990	Scheduled Substantial Completion	0	-16		01-Apr-24		18-Apr-24*	-17
41	GC-00-9920	Final Acceptance	0	-16		30-Jul-24		16-Aug-24*	-17
42	**Submittals**		120	-16	01-Apr-24	29-Jul-24	18-Apr-24	16-Aug-24	-17
43	SM-00-20020	Final Punchlist	60	-16	01-Apr-24	30-May-24	18-Apr-24	17-Jun-24	-17
44	GC-00-9930	Final Acceptance Inspection	60	-16	31-May-24	29-Jul-24	17-Jun-24	16-Aug-24	-17

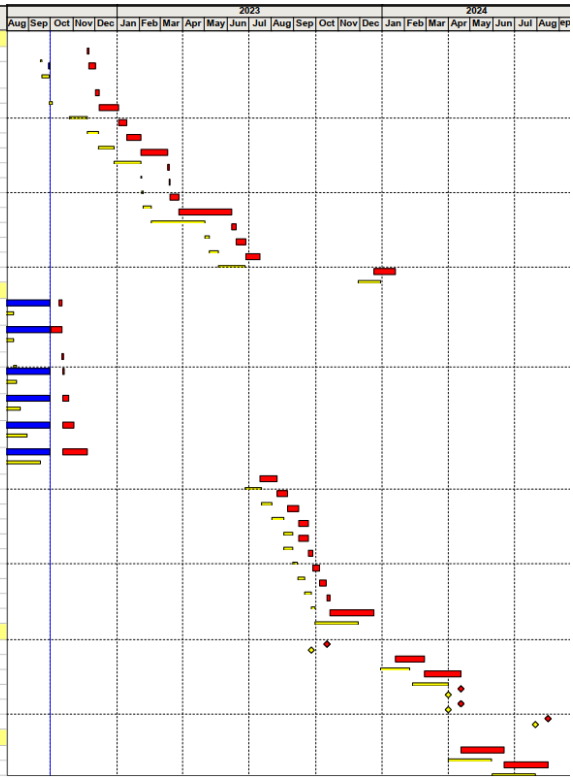


Figure 3-2. Critical Path Schedule

3.3 Schedule Contract Milestone Analysis

Milestone 1, redefined by Project Management to include Segment 3 and 4 for more electrified mileage, is scheduled by May 2023. The current forecast date for full alignment Substantial Completion is now April 18, 2024 with Scheduled Final Acceptance now forecasted for August 16, 2024.

Contractor	Milestones	Reforecast (June 2022) Dates	Current (September 2022) Forecast	Milestone Finish Date Variance	Remarks
BBII	Segment 4 Completion	15-Nov-22	19-Dec-22	-34	Delayed by grounding and bonding delays and forecasted increase in the number of JPB reviews
BBII	Completion of Milestone 1 (Segments 3 and 4)	30-Apr-23	27-May-23	-27	Delayed by Seg 2 Phase 1 signal cutover installation delays which, in turn, delayed installation of Segment 3 signal cutovers
BBII	Traction Power Substation #1 Energization	03-Jun-23	03-Jun-23	0	
BBII	Signal Cutovers Completion	16-Sep-23	25-Sep-23	-9	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	16-Oct-23	-21	Delayed by installation delays of OCS beams, poles and static & feeder wiring in Segment 2
Stadler	14th Trainset Final Acceptance	04-Jan-24	21-Jun-24	-169	Stadler is experiencing track access availability, workforce availability and material issues with their Suppliers.
BBII	System Integration Testing Completion	07-Feb-24	28-Feb-24	-21	Delayed by installation of Overhead Contact System (OCS) in Segments 2 and 1.
BBII	Substantial Completion	01-Apr-24	18-Apr-24	-17	Delayed by Integrated Testing and Project Contingency
BBII	Scheduled Final Acceptance	30-Jul-24	16-Aug-24	-17	Delayed by Final Completion and Final Acceptance Testing
JPB	Revenue Service Date (RSD)	26-Sep-24	26-Sep-24	0	
JPB	FFGA Revenue Completion Date (RCD)	31-Dec-24	31-Dec-24	0	

3.4 Schedule Issues

Issues that may impact critical path or major milestones are identified in the table below as of September 2022.

Table 3-1. Schedule Issues and Actions

Issues	Actions
OCS Construction Delay – installation has been delayed due to low productivity, extensive rework, crew shortages, and track access.	• BBII has brought on additional crews and equipment to help improve OCS productivities. • BBII is currently working on mitigation measures to recover the negative float currently shown for Milestone No. 1 and for Substantial/Final Completion. • TASI has advised regular work week shifts to change to include weekends, which will provide more field access.
Field Protective Personnel Shortages (RWICs, watchmen) continue to affect field planned work.	• TASI has hired additional field personnel and started qualification training

	• TASI is planning on procuring a third party watchmen service.
Theft of copper bonds, grounds and rail return cable has caused a big impact to Segment 4 integrated testing.	• Project is working with Transit security and Transit PD to increase theft enforcement.
EMU Supplier Chain Issues	• Stadler plans to develop a risk analysis of their supply base with the intent to mitigate potential high-risk suppliers that could pose significant risks to delivery of the remaining vehicles. Stadler's procurement team is working on being proactive and creative to keep the project moving and on schedule.
Two-Speed Check Issues – Two-speed application (2SC) logic defects found will require new software release and regression test and may impact Segment 2 cutover completion.	• Assign technical task force for defect fixes. • Review with Rail Operations and FRA for approval. • Roll out new application logic and perform regression tests for the crossings that were previously cutover. • Implement new allocation logic to the remaining crossings.

4.0 COST AND BUDGET

4.1 Introduction

This section presents current 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 September 30, 2022.

4.2 Program Budget and Cost

Table 4-1. Budget Summary by Project

Description of Work	Current Budget (A)[1]	Cost This Month (B[2]	Cost To Date (C)[3]	Estimate To Complete (D)	Estimate At Completion (E) = (C) + (D)	Variance at Completion (F) = (A) – (E)
Electrification	$1,749,139,438	$487,254	$1,410,126,166	$339,013,273	$1,749,139,438	$0
EMU	$693,551,258	$7,343,736	$483,794,954	$209,756,304	$693,551,258	$0
PCEP TOTAL	**$2,442,690,697**	**$7,830,990**	**$1,893,921,120**	**$548,769,577**	**$2,442,690,697**	**$0**

1. Column A “Current Budget” includes 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	-$3,291,783	$830,772,651	$266,261,230	$1,097,033,881
EMU Procurement	$556,072,601	$556,204,966	$6,720,000	$401,711,868	$154,493,098	$556,204,966
Minor Construction Contracts (Tunnel, CEMOF, SCADA, Non-BBI OCS)	$67,055,072	$68,091,194	$43,299	$64,453,991	$3,637,203	$68,091,194
Real Estate Acquisition & Support	$34,914,177	$34,914,177	$85,760	$23,879,948	$11,034,229	$34,914,177
PG&E, Utilities	$132,088,995	$132,088,995	-$251	$200,316,020	-$68,227,026	$132,088,995
Management Oversight & Support	$312,699,697	$312,699,697	$2,940,320	$249,315,220	$63,584,476	$312,899,697
TASI Support	$114,488,767	$114,488,767	$1,602,929	$85,880,401	$28,608,366	$114,488,767
Finance Charges	$9,898,638	$9,898,638	$139,426	$9,114,561	$784,077	$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	$9,084,176	$149,535	$3,048,763	$6,035,413	$9,084,176
Environmental Mitigation	$14,438,866	$14,438,866	$20,000	$1,227,099	$13,211,767	$14,438,866
Caltrain Capital Overhead (ICAP)	$48,217,887	$48,217,887	-$578,245	$19,303,147	$28,914,740	$48,217,887
Contingency	$40,000,089	$38,831,602	$0	$0	$38,747,602	$38,747,602
Total	**$2,442,690,697**	**$2,442,690,697**	**$7,830,990**	**$1,893,921,120**	**$548,769,577**	**$2,442,690,697**

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 September 2022

Risk ID	Risk Description	Risk Amount	Current Month	Executed to Date	Remaining Balance
1	Permanent Power Availability	$268,572	$46,421	$160,916	$107,656
2	Different Site Condition for OCS Foundation	$3,500,000	$10,368	$1,022,639	$2,477,361
3	Different Site Condition for Duct bank	$2,800,000	$0	$98,657	$2,701,343
4	Condition of existing Fiber backbone infrastructure	$3,150,000	$0	$132,561	$3,017,439
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	$144,500	$605,500
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	$0	$0	$1,400,000
17	Third party Approval	$150,000	$0	$0	$150,000
18	Impact from Caltrain other capital or third-party projects	$2,166,683	$0	$159,342	$2,007,340
19	Track access delay for BBII Construction	$1,800,000	$0	$14,605	$1,785,395
20	Additional light Maintenance and Protection Needs	$280,000	$0	$0	$280,000
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	$71,012	$1,628,988
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	$0	$900,000	$11,100,000
NA	Unidentified	$54,179	$0	$0	$54,179
	BBII Risk Pool Total	**$50,000,000**	**$56,789**	**$2,864,615**	**$47,135,385**

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 unknown costs. 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
Project Contingency	Previously Reported Balance	**$38,831,602**	**$38,831,602**
BT-049	CNPA – Mary Avenue Pre-exemption (Paid by non-PCEP)		$116,000
BT-027D	Legal Support FY23 – PG&E Counsel		($200,000)
	PROJECT CONTINGENCY REMAINING BALANCE	**$38,831,602**	**$38,747,602**

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
Contract Incentive:			
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
Total Contract Incentive	**$7,150,000**	**$3,625,000**	**$3,525,000**
Milestone Incentive:			
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
Total Milestone Incentive	**$15,000,000**		**$15,000,000**

4.5 Program Cash Flow and Funding

The remaining program expenditures are cash flowed in Figure 4-1 to illustrate by June 2023 additional funding will be needed to complete the program.

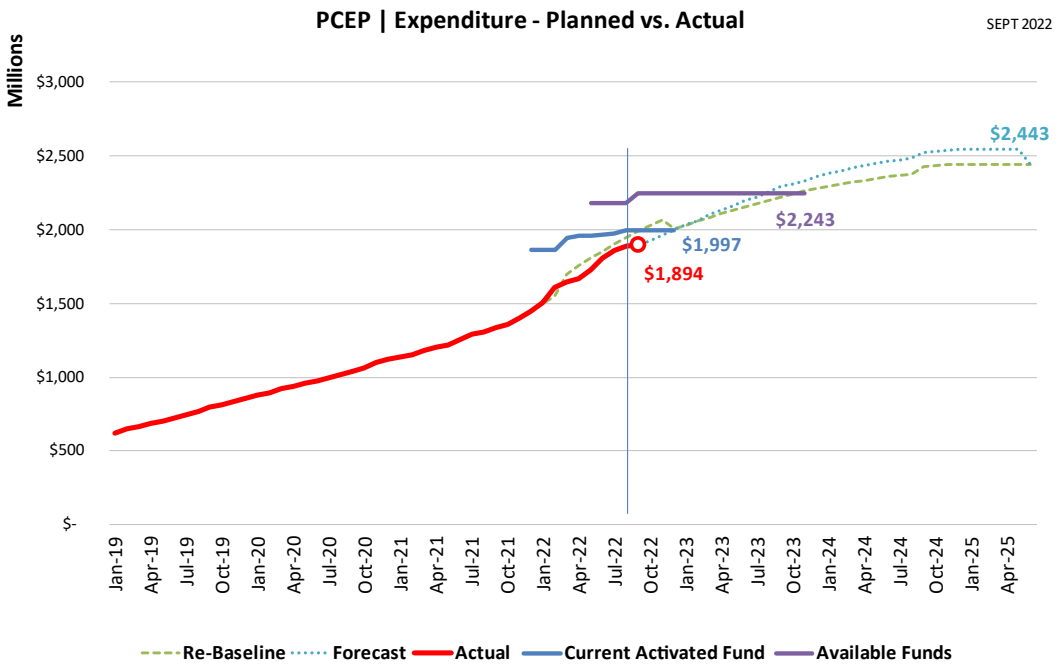


Figure 4.1 Expenditure – Funding Cash Flow

4.6 Issues

Table 4-6. Cost and Funding Issues Identified, and Actions Taken for September 2022

Issues	Actions
Additional funding setup for $410M Funding Gap.	• Actively pursuing additional State and Federal funding sources. • Dedicated task force has been established at the executive level. • Prepare earmarks grant scope and application for April submission.

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 September 2022:

- Single Phase Study Additional Resources and Expedited Reports (Balance of TPS-2 work) for $46,421 was executed on September 12, 2022.
- Fence Repair at FDN 45.5-05 due to Illegal Dumping for $10,368 was executed on September 13, 2022.

5.2.2 Approved Change Orders

- None.

5.2.3 Upcoming Change Orders/Shared Risk Items

- Thirteen (13) shared risk items, totaling $304,923 are being routed for management approval signatures.
- EMU Change Order of $110,367 for additional special tools to provide for Y Connector Boxes at CEMOF.

5.3 Issues

Table 5-1. Change Management Issues Identified and Actions Taken for September 2022

Issues	Actions
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.	• Define EMU testing and burn in work schedule. • BBII provides isolation and protection once Segment 4 is powered up. • BBII will provide maintenance lite during EMU testing and burn in. • Prepare Request for Proposal for OCS/TPS Maintenance Service for public procurement. • Develop evaluation criteria for Maintenance Service proposals. • Recommend for award and obtain JPB board approval.
Increase security service to prevent on-going theft problem.	• Working with design build contractor to identify ROW security surveillance needs and work out commercial arrangement for shared cost.