

Caltrain Electrification Project Update

Peninsula Corridor Joint Powers Board
March 2, 2023
Agenda Item #9



Project Highlights

Project Highlights

- Schedule: No change to revenue service date - fall 2024
 - Reforecast schedule available April 2023
- Budget: No change to project budget - \$2.44B
 - \$236k draw from \$50M Shared Risk Pool in January 2023
 - \$43k draw from \$40M Project Contingency in January 2023
- Construction
 - Successful completion of signal installation and testing
 - First two weekend shutdowns completed
 - Short circuit test failure
- Electric Trains
 - Next two trainset expected April 2023

Safety and Security

Time Period	Reportable Injury Rate
January 1 to January 31, 2023	0.00
Since Project Start (2017)	1.87

Note: National Average Reportable Injury Rate is 2.50.

- No reportable personal injuries for January 2023
- Project Safety Awareness trainings ongoing for Local Fire and Police Departments
 - Mountain View and Sunnyvale completed in February
- Completed 25kV training for all TASI and tenant railroad staff
- Development of emergency responder safety presentation for local first responders

Project Contingency and Shared Risk Pool

Item	Amount	Executed in January 2023	Executed To Date	Approved by CMB in February 2023	Amount Remaining
BBI Shared Risk Pool	\$50.00M	\$0.24M	\$3.440M	\$1.60M	\$44.96M
Project Contingency	\$40.00M	\$0.04M	\$3.52M	\$0.00M	\$36.48M
Total	\$90.00M	\$0.28M	\$6.96M	\$1.60M	\$81.44M

In February, the Change Management Board approved:

- \$549,014 from BBI Shared Risk Pool for additional design and construction for pedestrian gate modifications
- \$1,050,547 from BBI Shared Risk Pool for right-of-way security increases

Top Risks

- Low Contractor Productivity on Overhead Contact System Installation
- Traction Power Short Circuit Testing
- Contractor Quality Assurance

Construction

February Overview

- Signal Installation and Testing (Menlo Park to Santa Clara) – Successfully completed
- Short Circuit Testing - Santa Clara to San Jose – Test failed
 - Contractor document control and configuration management concerns
 - Independent audits underway from BBI and Caltrain before retesting
 - New test date to be determined
 - Not on critical path, but does affect ability to test electric trains

Overhead Contact System Production

February 6-26, 2023

Activity	Total to Completion (as of February 6)	Installed (February 6-26)	Total Remaining (as of February 26)
Poles	69	12	57
Beams	91	7	84
Cantilevers & Drop Tubes	1,164	129	1,035
Feeder & Static Wire Assemblies	1,184	367	817
Messenger Wire (linear miles)	264,945	35,345	229,600
Contact Wire (linear miles)	276,800	14,105	262,695
Feeder Wire (linear miles)	105,406	-	105,406
Static Wire (linear miles)	103,348	-	103,348
Regulation	3,053	133	2,920

Note: Feeder and static wire not planned for February.

Overhead Contact System Production

February 2023

- Issues

- Continued insufficient contractor resources
- Wire train breakdown
- Inventory management issues
- Weather delays

- Mitigations

- Daily project leadership meetings to review production and identify mitigations
- Balfour Beatty expertise being brought in and performing complete project assessment
- Twice weekly executive coordination between Caltrain and Balfour Beatty
- Field changes to increase production and resolve issues at lowest level possible
- Balfour Beatty procuring additional spare parts for wire train

Service Changes and Customer Experience

February to July 2023 – Weekend Shutdowns

Area (Phase)	Work Activity	Weekends	Number of Weekends
San Francisco to Millbrae (Phase 1)	OCS Construction	February 11-12 February 25-26 March 4-5 March 11-12	4
Millbrae to Hillsdale (Phase 2)	OCS Construction	March 25-26 April 1-2	2
Belmont to Menlo Park (Phase 3)	OCS Construction	April 8-9 April 15-16	2
Menlo Park to Santa Clara (Phase 4)	Signal Installation OCS Testing System Integration Testing	April 22-23 April 29-30 May 5-6 May 13-14 May 20-21	5

- No service changes planned for weekends of February 18-19 or March 18-19 for signal install and equipment staging
- Temporary weekday service changes April 17-28 for signal installation and testing
- 2 contingency weekends in June and July

Phase 1 - San Francisco to Millbrae

Remaining Dates: March 4-5 & March 11-12

- South of Millbrae Station, trains make local stops
- BART Coordination
 - Timed BART transfers at Millbrae
 - Service ends earlier to align with BART schedule
- Encouraging alternative transportation, all options:
www.caltrain.com/status
- Lifeline bus bridge provided
 - Overall people capacity limited, customers should use bike parking or bike share
 - ADA accessible vehicle provided for each connecting train during service



Phase 2 – Millbrae to Hillsdale

March 25-26 & April 1-2

- North of Millbrae and south of Hillsdale, trains make local stops
- Encouraging alternative transportation (ECR), all options: www.caltrain.com/status
- Lifeline bus bridge provided
 - Overall people capacity limited, customers should use bike parking or bike share
 - ADA accessible vehicle provided for each connecting train during service
- Service ends early on weekends

Bus	Train
	• San Francisco
	• 22nd Street
	• Bayshore
	• S. San Francisco
	• San Bruno
	• Millbrae
•	• Broadway
•	• Burlingame
•	• San Mateo
•	• Hayward Park
•	• Hillsdale
	• Belmont
	• San Carlos
	• Redwood City
	• Menlo Park
	• Palo Alto
	• California Ave
	• San Antonio
	• Mountain View
	• Sunnyvale
	• Lawrence
	• Santa Clara
	• San Jose Diridon
	• Tamien

Weekend Shutdown Customer Experience

- Reduced ridership on shutdown weekends
- No safety or security concerns raised
- Customer Service recorded 50 additional calls (30% increase) on first day of shutdown. Calls diminished over time.
- All affected stations were staffed with ambassadors



Customer Communications



City of San Bruno Retweeted
Caltrain @Caltrain · Feb 1

As we work to improve service for our riders as part of Caltrain Electrification, there will be weekend service disruptions throughout the year. Learn more at caltrain.com/status.

Improving service with Caltrain Electrification.



WEEKEND SHUTDOWNS IN EFFECT
Check status: **CALTRAIN.COM/STATUS**

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Upcoming Board Items

Upcoming Board Items

- Monthly Updates on Construction Progress and Service Changes
- Maintenance Contract
 - Informational (Spring 2023)
 - Board Action (Summer 2023)
- Railroad Isolation Protection Change Order (April 2023)
- Increase Contract Authority Within Existing Budget for Consultant Services
 - Hatch LTK (October 2023)

Appendix

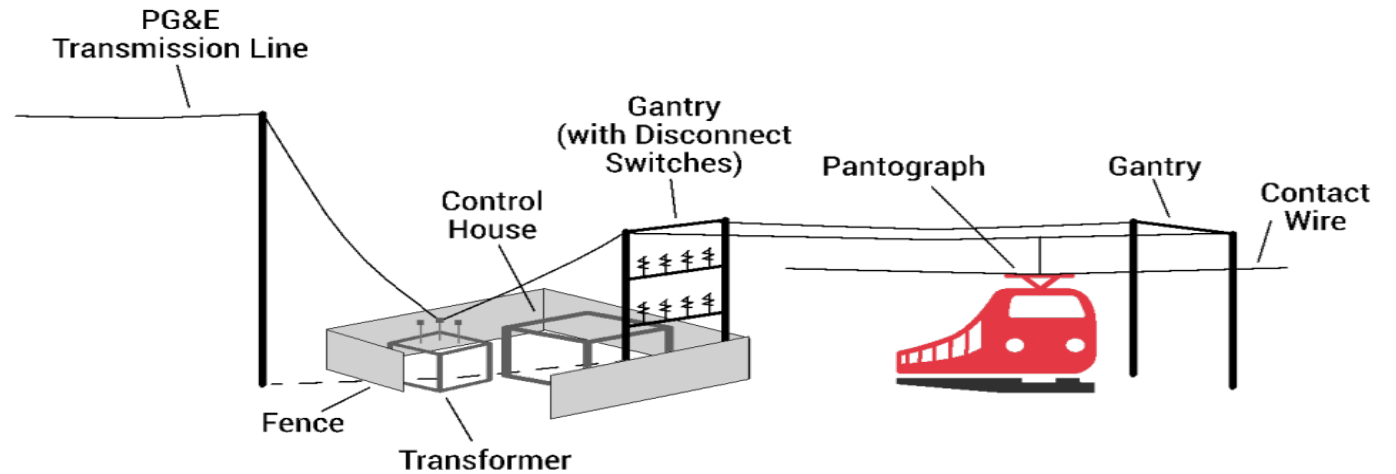
Project Overview

- San Francisco to San Jose (Tamien Station)
- 51 miles
- Project Cost: \$2.44B
- Revenue Service: fall 2024



Project Elements

- Electrification
 - Overhead Contact System (OCS)
 - Traction Power Facilities
 - Signal System
- Electric Trains
 - 19 7-car train sets (133 cars)
 - 75% replacement diesel fleet



(Note: 96 cars funded by project; 37 cars funded by State TIRCP)

Project Benefits



Improved Train Performance,
Increased Service and Greater Capacity

Improved Regional Air Quality and
Reduced Greenhouse Gas Emissions



Job Creation Locally and
Across the Country



Reduced Engine Noise
Emanating from Trains



Project Budget

Description of Work	Budget	Cost This Month	Cost To Date	Estimate To Complete
Electrification	\$1,097,149,881	\$18,413,448	\$890,224,997	\$206,808,884
EMU Procurement	\$556,248,486	\$6,491,807	\$421,190,158	\$135,058,328
Minor Construction Contracts (SSF, 25th Grade, Tunnel, CEMOF, SCADA, Non-BBI OCS)	\$68,091,194	\$0	\$64,602,778	\$3,488,416
Real Estate Acquisition & Support	\$34,914,177	(\$2,273)	\$23,978,215	\$10,935,962
PG&E, Utilities	\$132,088,995	\$1,296,890	\$203,341,510	(\$71,252,516)
Management Oversight & Support	\$315,007,767	\$2,760,708	\$260,282,776	\$54,724,991
TASI Support	\$114,488,767	\$1,638,025	\$92,252,301	\$22,236,466
Finance Charges	\$9,898,638	\$0	\$9,304,280	\$594,358
Insurance	\$6,581,851	\$0	\$4,897,449	\$1,684,402
Other Required Projects & Services	\$10,484,176	\$205,436	\$3,380,015	\$7,104,161
Environmental Mitigation	\$13,038,866	\$0	\$1,242,229	\$11,796,637
Caltrain Capital Overhead (ICAP)	\$48,217,887	\$1,239,175	\$22,663,447	\$25,554,440
Contingency	\$36,480,012	\$0	\$0	\$36,596,012
Total	\$2,442,690,697	\$32,043,217	\$1,997,360,155	\$445,330,542

Notes: "Re-Baseline Budget" includes executed change orders and awarded contracts;

"Cost This Month" represents cost of work performed January 2023;

"Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) as of January 2023.

"Contingency" budget is drawn down and transferred to other elements after CMB approvals as reflected in the Estimate at Completion.



FOR MORE INFORMATION

WWW.CALTRAIN.COM

