

# Caltrain Electrification Project Update

Peninsula Corridor Joint Powers Board  
May 4, 2023  
Agenda Item #14



# Project Highlights

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- Schedule: No change to revenue service date - fall 2024
- Budget: No change to project budget - \$2.44B
  - \$0.58M draw from \$50M Shared Risk Pool in March 2023
  - No draw from \$40M Project Contingency in March 2023
- Construction
  - Ten weekend shutdowns complete
  - Completion of signal cutovers in Segment 3
  - Load bank testing for Traction Power Substation 2
  - January and March weather damage repairs to be completed by September 2023
- Electric Trains
  - Next two trainset expected Fall 2023

# Safety and Security

Time Period	Reportable Injury Rate
January 1 to March 31, 2023	2.53
Since Project Start (2017)	1.94

*Note: National Average Reportable Injury Rate is 2.50.*

- **One reportable personal injury for March 2023**
- Project Safety Awareness trainings ongoing for Local Fire and Police Departments
- 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 March 2023	Executed To Date	Amount Remaining
BBII Shared Risk Pool	\$50.00M	\$0.58M	\$5.23M	<b>\$44.77M</b>
Project Contingency	\$40.00M	\$0.00M	\$3.52M	<b>\$36.48M</b>
<b>Total</b>	<b>\$90.00M</b>	<b>\$0.58M</b>	<b>\$8.75M</b>	<b>\$81.25M</b>

# Top Risks

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

# Overhead Contact System Production

February 6 – April 16, 2023

Activity	Remaining as of 2/6	Planned 2/6-4/16	Actual 2/6-4/16	Actual vs Planned 2/6-4/16	Remaining as of 4/16
Poles	69	47	50	3	19
Beams	91	50	56	6	35
Cantilevers & Drop Tubes	946	379	315	(38)	631
Feeder & Static Wire Assemblies	1,183	651	746	111	437
Messenger Wire (linear feet)	261,605	73,946	78,084	4,138	183,521
Contact Wire (linear feet)	275,870	114,358	84,297	(24,905)	191,572
Feeder Wire (linear feet)	105,512	3,202	16,427	13,512	89,085
Static Wire (linear feet)	103,349	4,863	5,707	3,277	97,642
Regulation	3,053	608	526	(9)	2,527

# **Service Changes and Customer Experience**



# February to June 2023 – Weekend Shutdowns

Area (Phase)	Work Activity	Weekends	Number of Weekends
San Francisco to Millbrae (Phase 1)	OCS Construction	February 11-12 <del>February 25-26</del> <del>March 4-5</del> <del>March 11-12</del>	4
Millbrae to Hillsdale (Phase 2)	OCS Construction	<del>March 25-26</del> 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 <del>April 29-30</del> May 5-6 May 13-14	4
San Francisco to Millbrae (Phase 5)	OCS Construction Signal Installation	June 10-11 June 17-18	2

- April weekday service changes to support signal installation and testing (2 weeks)
- 2 weekend shutdowns planned for July 2023
- August to December up to 16 weekends

# May to July - Regular Service Weekends

Caltrain will run regular weekend service on the following dates:

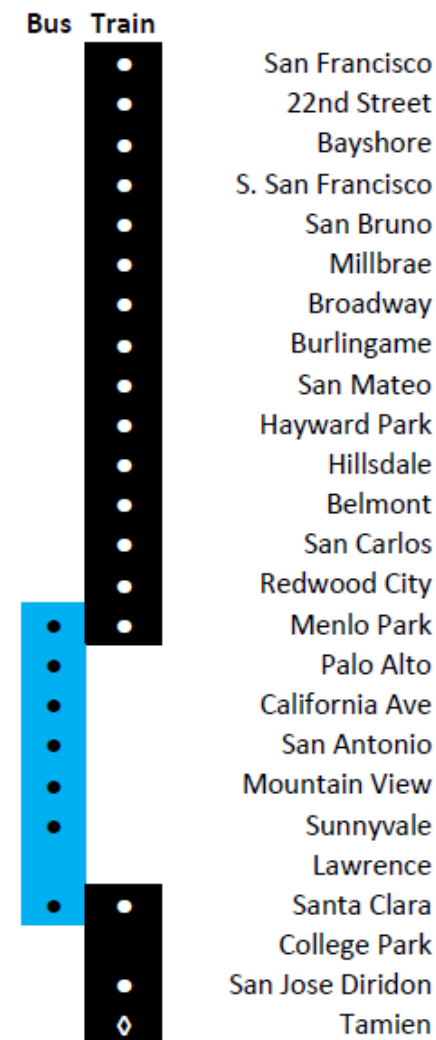
- **May**
  - May 20-21 – Giants Home Games and Bay to Breakers
  - May 27-28
- **June**
  - June 3-4: Giants Home Games
  - June 24-25: Giants Home Games
- **July**
  - July 1-2
  - July 8-9: Giants Home Games
  - July 29-30: Electric Train Tour



# Phase 4 – Menlo Park to Santa Clara

Weekends: April 22-23, April 29-30, May 6-7, May 13-14

- No weekend train service between Menlo Park and Santa Clara stations
- Weekend lifeline bus bridge
  - Overall people capacity limited; customers should use bike parking or bike share
  - ADA accessible vehicle provided for each connecting train during service
  - Supplemental bus capacity provided for Giants games
  - Lawrence Station not served by bus bridge
- Service ends early on weekends



# Phase 5 – San Francisco to Millbrae

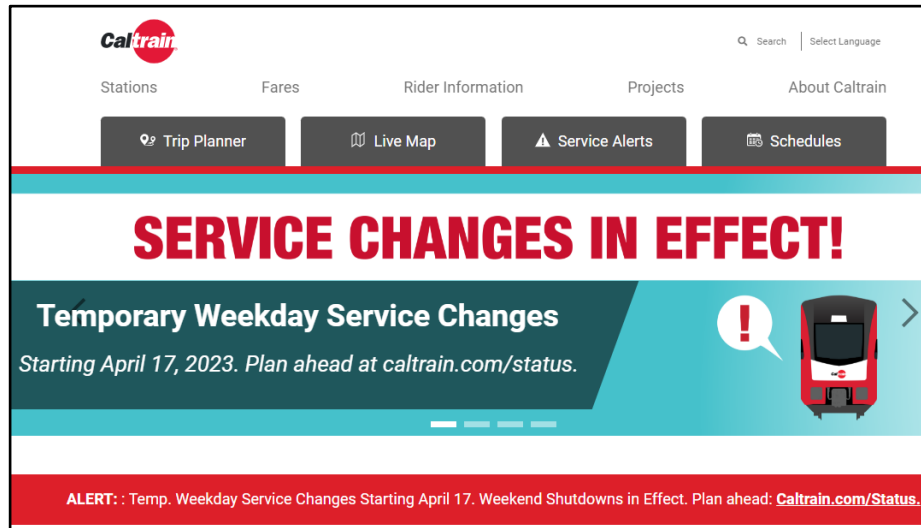
Weekends: June 10-11, 17-18

- No weekend train service between San Francisco and Millbrae
- Weekend lifeline bus bridge
  - Overall people capacity limited; customers should use bike parking or bike share
  - ADA accessible vehicle provided for each connecting train during service
  - Supplemental bus capacity provided for Giants games
- Service ends early on weekends

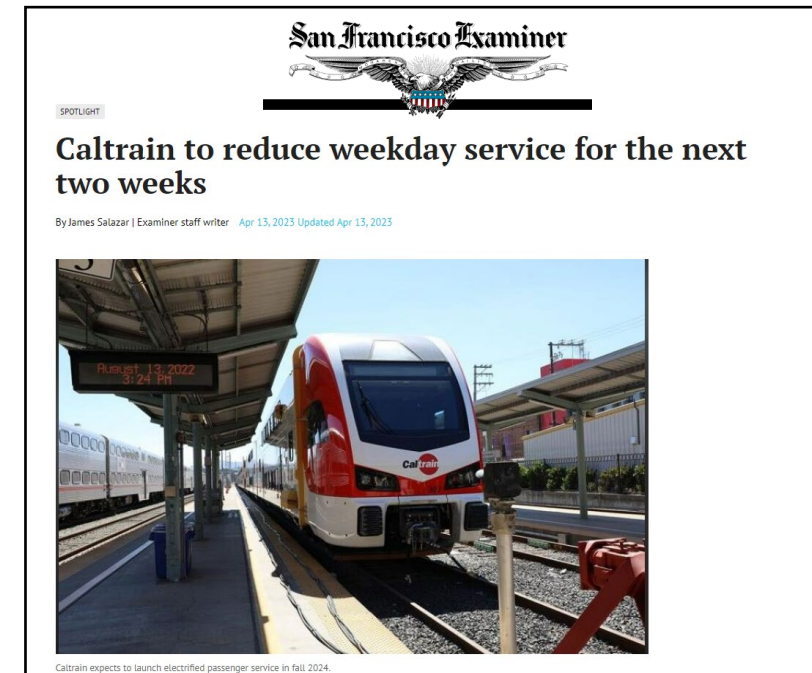


# Customer Communication

- [caltrain.com/status](https://caltrain.com/status)



The screenshot shows the Caltrain website's navigation bar with links for Stations, Fares, Rider Information, Projects, and About Caltrain. Below the navigation are buttons for Trip Planner, Live Map, Service Alerts, and Schedules. A prominent banner reads "SERVICE CHANGES IN EFFECT!" in red, followed by "Temporary Weekday Service Changes Starting April 17, 2023. Plan ahead at [caltrain.com/status](https://caltrain.com/status)." An alert icon and a train icon are also present. At the bottom, a red bar contains the text: "ALERT: : Temp. Weekday Service Changes Starting April 17. Weekend Shutdowns in Effect. Plan ahead: [Caltrain.com/Status](https://Caltrain.com/Status)."



The image shows a snippet of a news article from the San Francisco Examiner. The headline reads "Caltrain to reduce weekday service for the next two weeks". Below the headline, it says "By James Salazar | Examiner staff writer Apr 13, 2023 Updated Apr 13, 2023". There is a photograph of a Caltrain train at a station platform. A digital display above the train shows "Planned 13:2022 3:24 PM". At the bottom of the snippet, it says "Caltrain expects to launch electrified passenger service in fall 2024."

# Upcoming Board Items

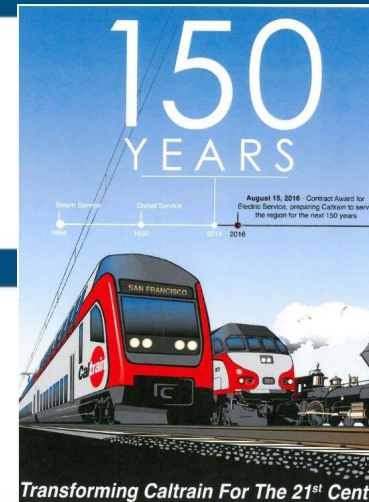
# Upcoming Board Items

- Monthly Updates on Construction Progress and Service Changes
- Railroad Isolation Protection Change Order (June 2023)
- SamTrans Memorandum of Understanding for Weekend Bus Bridge Support (June 2023)
- Increase Contract Authority Within Existing Budget for Consultant Services
  - Hatch LTK (October 2023)

# May 4, 2023

Caltrain Board of Directors Update

**Balfour Beatty**  
Infrastructure Inc.





# What We Heard?

- Get the Right Resources
- Address QC Issues
- 3<sup>rd</sup> Party Independent Assessments
- Plan Ahead for New Areas of Work
- Provide Schedule & Budget Certainty

# What Have We Done?

- Leadership Changes
- Organizations Changes & Additional Resources
- Engaged our UK Resource Team – Direct line of communication
- Resolved the Document Control Issue
- Weekly quantity and planning tracker – Path to Completion
- Root Cause Failure Analysis of the SC Failure at TPS2

# What Have We Done?

- Change Material Management Leadership & Processes
- More collaborative and transparent – Improved communication
- Wire Train & Equipment Management
- Engaged in 3<sup>rd</sup> Party Independent Assessments

# BBII Philosophy

- Continue with Zero Harm
- One Truth
- Knowing Our Reality
- What Gets Measured Gets Done
- Expectations/Accountability
- Continuous Improvement
- Focus on Operational Excellence
- We Earn Our Place On the Team Every Day – Can't Do it, Can't Stay
- Making Decisions in the Best Interest of the Project
- Have Fun

# What Are We Doing?

- Managing production daily
  - What, how do we do more safely?
- Share a production planned vs. schedule showing production outpacing planned
- Planning/Executing for Testing & Commissioning – Joint BBII/JPB effort
- Planning/Executing for System Integration Testing – Joint BBII/JPB effort

# What Are We Doing?

- Developed a Joint JPB/BBII Punchlist Plan
- Sharing and Measuring the Interim Milestones
- Developing & Finalizing Substantial Completion/Final Acceptance Checklist with JPB
- Series of Joint Task Force to evaluate and mitigate risk. Plan A & Plan B (Traction Power example)
- Segment 3 Sectionalization Readiness Review Team

# What We Are Doing To Increase OCS Production?

- Segment 1A – North Corridor – Complete May 31<sup>st</sup> - Short Segmented Runs – Decreases Productivity
- Segment 2 – Long Straight Wire Runs – 1800 LF vs 3600 LF Avg
- By Mid-July will Increase from 2 Wiring Crews to 4 Wiring Crews
- Wire Run Ready Crews getting further ahead creating more availability
- Wire Train Increase Productivity & Tensions (2 Wires Same Time)
- Regulation subcontractors will onboard May 9<sup>th</sup> and begin May 31, 2023
- Above Equals More Productivity

# OCS Interim Milestone Management

OCS Segment Milestone Matrix				
Activity	Segment 1	Segment 2**	Segment 3	Segment 4 *
Poles	4/30***	7/31***	Done	Done
All Beams	4/30***	7/31***	Done	Done
Cantilevers & Drop Tubes	30-May	31-Aug	Done	Done
Feeder & Static Wire Assemblies	30-May	31-Aug	Done	Done
Messenger Wire	16-Jun	25-Sep	Done	Done
Contact Wire	16-Jun	25-Sep	Done	Done
Feeder Wire	16-Jun	18-Sep	Done	Done
Static Wire	16-Jun	18-Sep	Done	Done
Regulation	30-Sep	10-Oct	Done	Done
High Pot Testing	10/6 - 10/7	10/13 - 10/14	5/6 - 5/7	Done
Sectionalization Testing	10/7 - 10/8	10/13 - 10/14	5/13 - 5/14	Done
SC TPS Testing	10/21 - 10/29	10/21 - 10/29	5/19 - 5/21	5/19 - 5/21
(SIT)Live Run Test	11/4 - 11/5	11/18 - 11/19	6/26 - 7/9	6/5 - 6/19
Start BBII Pre-Punch List/Walks	8/31/2023	9/15/2023	3/20/2023	Done
Complete BBII Punch List Work	9/30/2023	10/15/2023	5/19/2023	Done
Start BBI/JPB Joint Punch List Walks	10/1/2023	10/16/2023	5/9/2023	Done
Complete BBI/JPB Punch List Work	12/31/2023	12/31/2023	7/31/2023	7/31/2023
Contractual Overall Substantial Completion	4/1/2024	4/1/2024	4/1/2024	4/1/2024
Contractual Final Acceptance	7/31/2024	7/31/2024	7/31/2024	7/31/2024

\* Excludes Guadelupe Bridge - End of September

\*\*\* Coordinating with PG&E OH Shutdowns



# TPS Interim Milestone Management

TPS1 Milestone Matrix	
Activity	TPS1
MRS Com Equipment & Testing	10-May
Set Final Battery House	28-Apr
Interlocking Test	15-Jul
EPS Testing	26-Apr
PG Energization 115 Kv transformers	20-Aug
TPS1 Lockdown Substation 115 Kv Transformer	21-Aug
Loadbank Pre-Test	9/7 - 9/14
Short Circuit Testing	10/21 - 10/29

TPS2 Milestone Matrix	
Activity	TPS2
Uplodad & Test New Relay Settings	21-Apr
3rd Party Wire Inspection - NETE	28-Apr
Load bank Pre-Test	5/3 - 5/5
Short Circuit Testing	5/19 - 5/22

FOR MORE INFORMATION

[WWW.CALTRAIN.COM](http://WWW.CALTRAIN.COM)

