#### Caltrain Electrification Project Update

Peninsula Corridor Joint Powers Board December 7, 2023

Agenda Item #9





# **Project Highlights**



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- Schedule: No change to revenue service date fall 2024
- Budget: No change to project budget \$2.44B
  - \$1.74M October 2023 draw from "\$50M Shared Risk Pool"
  - \$22.04M October 2023 draw from "\$40M Project Contingency"
- Construction
  - Overhead Contact System Revised Path to Completion March 23, 2024
  - Short Circuit Testing Scheduled for February 2024
  - Live Runs Scheduled for March 2024
  - No Bus Bridges Planned for January or February
- Electric Trains First Two Electric Trainsets Complete 1,000-Mile Test
  - Two Trainsets Arrived Early November 2023
  - Next Two Trainsets Expected December 2023

### **Safety and Security**

| Time Period                   | Reportable Injury Rate |
|-------------------------------|------------------------|
| January 1 to October 31, 2023 | 1.94                   |
| Since Project Start (2017)    | 1.96                   |

Note: National Average Reportable Injury Rate is 2.50.

- Three reportable injuries for October 2023 (8 total for 2023)
- Project Safety Awareness trainings ongoing for Local Fire and Police Departments (1,000 emergency responders trained to date)
- 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**

| ltem                  | Amount   | Drawn in<br>October 2023 | Drawn To Date | Amount<br>Remaining |
|-----------------------|----------|--------------------------|---------------|---------------------|
| BBII Shared Risk Pool | \$50.00M | \$1.74M                  | \$12.75M      | \$37.25M            |
| Project Contingency   | \$40.00M | \$22.04M                 | \$34.30M      | \$5.70M             |
| Total                 | \$90.00M | \$23.78M                 | \$47.05M      | \$42.95M            |



### **Top Risks**

- Contractor Overhead Contact System Productivity
- Contractor Quality Control and Quality Assurance
- Timely Completion of Integrated Testing and Live Runs
- Traction Power Energization and Short Circuit Testing (TPS-1)
- Theft of Impedance Bonds Cables

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## **Upcoming Board Items**



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- Monthly Updates on Construction Progress and Service Changes
- Increase Contract Authority Within Existing Budget
  - JBR Associates (December 2023)
  - Hatch LTK (January 2023)









**Balfour Beatty** Infrastructure Inc.

#### **Focus Areas**

Continue viewing everything thru the Zero Harm lense – Improving RIR – 1.70 YTD

OCS Production – Regulation
Main Line Regulation Complete
SF Station and Yard to complete - 265 Regulations Remaining
Started Guadalupe Bridge OCS Installation

Traction Power Stations and WPCs
Short Circuit Test - February 2024
SCADA Testing – On going – Complete December

Training Schedule – November / December

Punchlist Execution – 52.87% Complete

Closeout Execution
As-Built 47% complete submitted to the EOR

Measuring what we do every day



#### **Current Overall OCS**

| Balfour Beatty Infrastructure, Inc            |         |             |                       |              |                   |                |                       |
|---|---------|-------------|-----------------------|--------------|-------------------|----------------|-----------------------|
| Caltrain Peninsula Corridor Electrification P | roject  |             |                       |              |                   |                |                       |
| Construction Progress Tracker                 |         |             |                       |              | Week C            | ompleted       | 47                    |
|   |         |             |                       |              |                   | Updated        | 11/27/2023            |
|   |         |             |                       |              |                   |                |                       |
|   |         |             |                       |              |                   |                |                       |
|   |         |             |                       |              |                   |                |                       |
|   |         |             | Total                 |              |                   |                |                       |
|   |         |             | Quantity              | Planned      | Actual            | Remaini        | <b>n</b>              |
|   | Total   | Job to Date | Remaining<br>Starting | Work<br>from | Installed<br>from | ng<br>Quantity | Remaining<br>Quantity |
| Commodity                                     |         | % Complete  | Week 41               | Week 41      |                   | to Install     | Planned               |
| OCS Completion items & Regulation             | 5,815   | 95.44%      | 829                   | 829          | 564               | 265            | 265                   |
| Panning                                       | 95      | 78.95%      | 95                    | 95           | 75                | 20             | 20                    |
| Loop Testing                                  | 68      | 67.65%      | 68                    | 67           | 46                | 22             | 22                    |
| High Pot testing                              | 92      | 60.87%      | 92                    | 92           | 56                | 36             | 36                    |
| Sectionalization Testing                      | 8       | 50.00%      | 4                     | 4            | -                 | 4              | 4                     |
| Feeder & Static Wire Assemblies               | 4,855   | 100.00%     | 12                    | 12           | 12                | -              | _                     |
| Messenger Wire (Guadalupe Bridge)             | 771,077 | 99.67%      | 256,576               | 2,571        | -                 | 256,576        | 2,571                 |
| Contact Wire (Guadalupe Bridge)               | 782,985 | 99.67%      | 272,762               | 2,571        | -                 | 272,762        | 2,571                 |
| Feeder Wire (Guadalupe Bridge)                | 486,189 | 99,55%      | 122,047               | 2,192        | -                 | 122,047        | 2,192                 |
| Static Wire (Guadalupe Bridge)                | 604,799 | 99.67%      | 108,990               | 1,982        | -                 | 108,990        | 1,982                 |
|   |         | 85.15%      |                       |              |                   |                |                       |



#### **Current Short Circuit Testing and Live Run Testing Plan**

| SC Test | Track | Teams @ MP  | Revised Dates | Sub Station | Limits             |
|---------|-------|-------------|---------------|-------------|--------------------|
| Test 1  | MT 2  | 45.24       | 2/23/2024     | TPS 1       | 1.1 to 45.24       |
| Test 2  | MT 1  | 26.2        | 2/9/2024      | TPS 1       | TPS 1 to 26 Mp     |
| Test 3  | MT 2  | 1.1         | 2/17/2024     | TPS 2       | TPS 2 to 1.1       |
| Test 4  | MT 2  | 26.2        | 2/16/2024     | TPS 2       | TPS 2 to 26.2      |
| Test 5  | MT 2  | 38.61(PS 6) | 2/10/2024     | TPS 2       | TPS 2 to SWS(26.1) |

Note: the Short Circuit Testing dates are yet to be confirmed by PG&E



#### **Overall Path To Completion**

|  | December |  |  | January |  |  | ry February |  |  | y March |  |  |  |  | Ар | oril |  | Ma | ay |  | July |  |  |  |  |  |
|--|----------|--|--|---------|--|--|-------------|--|--|---------|--|--|--|--|----|------|--|----|----|--|------|--|--|--|--|--|
| OCS Main Line Completion                   |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| OCS Panning/Loop/HighPot Testing Complete  |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| OCS SF Station Completion                  |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Sectionalization Testing                   |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Short Circuit Testing                      |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| SCADA Testing Complete                     |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Parallel Station Complete                  |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Wayside Power Cabinets Complete            |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Segment 1 & 2 Live Run Test                |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| End to End Test                            |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Substantial Completeion Documents Complete |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Substantial Completion                     |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Punchlist Complete                         |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Final Acceptance Documents Complete        |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |
| Final Acceptance Documents Complete        |          |  |  |         |  |  |             |  |  |         |  |  |  |  |    |      |  |    |    |  |      |  |  |  |  |  |



#### What are the action items to ensure Substantial Completion?

- Teams (BBII and Caltrain) is performing comprehensive reviews of project schedule for the remaining work including all interfaces, durations and to ensure it is comprehensive and achievable. - COMPLETE
- Updating the program schedule 3 times a week to manage and measure the progress of construction, testing, system integration, and closeout, including documentation ON-GOING
- Continue to measure our daily quantity productions ON-GOING
- > Leadership enhancements in Systems Integration to strengthen the team. COMPLETE
- > Bringing over 2 new members from the UK to strengthen our TP needs. COMPLETE
- Strengthen the program schedule support and oversight from the UK team to help evaluate and monitor the updates to the program schedule COMPLETE
- Bringing on 15 additional support staff for closeout needs As-builts, Documentation, Punchlist, Night-Time Supervision, etc. – ON-GOING - 11 New Hires



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