CALTRAIN ELECTRIFICATION UPDATE

Sunnyvale Community Meeting
October 10, 2019
AGENDA

• Caltrain System Overview
• Project Overview
• Sunnyvale Construction Activities
• Questions
CALTRAIN SYSTEM

- 32 Stations Gilroy to San Francisco
- 92 Weekday Trains
- At-Grade Crossings, Viaducts, and Bridges
- Intermodal Connections
- Bike Commuters
PROJECT DESCRIPTION

Project Area

- 51 miles
- San Francisco to San Jose (Tamien Station)

Project Elements

Electrification
- Overhead Contact System (OCS)
- Traction Power Facilities

Electric Trains*
- 19 7-car train sets
- 133 electric cars

*Includes 2018 State TIRCP Funding
PROJECT DESCRIPTION

Service Elements

Speed
• Up to 79 mph

Service Increase
• 6 trains / hour / direction
• More station stops / reduced travel time
• Restore Atherton & Broadway service

Mixed-fleet Service (interim period)
Continue Tenant Service
• ACE, Capitol Corridor, Amtrak, Freight
PROJECT BENEFITS

- Improved Train Performance, Increased Service and Greater Capacity
- Improved Regional Air Quality and Reduced Greenhouse Gas Emissions
- Positive Economic Benefits for the Region
- Reduced Engine Noise Emanating from Trains
- Increased Revenue and Reduced Fuel Cost
* Note: Schedule subject to change
CONSTRUCTION PHASING

- 51 Miles Corridor
- 4 Work Segments
- 3,000 Poles
- 10 Traction Power Facilities
# FIELD WORK PROGRESSION

<table>
<thead>
<tr>
<th>Work Completed</th>
<th>Work In Progress</th>
<th>Future Work</th>
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<tr>
<td>• Utility Survey</td>
<td>• Tree Pruning/Removal</td>
<td>• Foundation Installation</td>
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<td>• Geotechnical Investigations</td>
<td>• Potholing</td>
<td>• Pole Installation</td>
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<tr>
<td>• Disposal of Soil from Geotechnical Investigations</td>
<td>• Paralleling Station</td>
<td>• Wire Installation</td>
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<tr>
<td>• Soil Resistivity Testing</td>
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<td>• Bridge Barrier Construction</td>
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<td>• Site Surveys</td>
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<td>• Signal Cable Inspections</td>
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# FUTURE CONSTRUCTION

Sunnyvale

<table>
<thead>
<tr>
<th>Date</th>
<th>Work Activity</th>
<th>Expected Completion*</th>
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</thead>
<tbody>
<tr>
<td>In Progress</td>
<td>Tree Pruning/Removal</td>
<td>Early 2020</td>
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<tr>
<td>In Progress</td>
<td>Potholing</td>
<td>Late 2019</td>
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<tr>
<td>In Progress</td>
<td>Paralleling Station Construction</td>
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<td>Bridge Barrier Installation</td>
<td>Summer 2020</td>
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</tbody>
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*Expected completion period indicate first and last day of activity. Number of actual workdays will be fewer.
FOUNDATION CONSTRUCTION

• Excavation
• Rebar and Anchor Installation
• Electrical Grounding
• Concrete Fill
FOUNDATION INSTALLATION
POLE INFORMATION

• 3,000 Installed throughout Corridor
  • Approx. 250 poles in Sunnyvale
• Pole Height: 30-50’
• Pole Spacing: ~180’ apart
Example of Poles Planned for Use in Sunnyvale

POLE TYPES SUNNYVALE

Single Track Cantilever  Two Track Cantilever
POLE TYPES SUNNYVALE

Center

Portals
POLE INSTALLATION

Current Pole Installation
STRINGING WIRE
TRACTION POWER FACILITIES

• 10 Traction Power Facilities Installed throughout Corridor
  - 1 Paralleling Station installed in Sunnyvale
  - Gantry structures up to 50’

• Provides electrical power to trains through the Overhead Contact System

• Unmanned station

• Day and weekend construction work

• Limited night work during construction
PARALLELING STATION LOCATION
EXAMPLE PARALLELING STATIONS

Examples from Amtrak Northeast Corridor
BRIDGE BARRIERS

• Ensure the safety of pedestrians and electrical infrastructure

• Will be installed at:
  – Mathilda Avenue
  – Fair Oaks Avenue
  – Wolfe Road
BRIDGE BARRIERS

Screen Mesh

Polycarbonate Panel

9'6” fence height required for pedestrian bridges
CONSTRUCTION INFORMATION

• Work will occur during day and night
• Some 24 hour weekend work
• Crews will utilize acoustical barrier blankets and position lights away from homes
• Dedicated hotline for construction complaints
PUBLIC OUTREACH

CALTRAIN MODERNIZATION

IMPROVING CONVENIENCE
An identified option meats the trains can run more frequently and more efficiently.

INCREASING CAPACITY
CalMod will also provide economic benefits, including creating nearly 10,000 jobs across the country.

BOOSTING ECONOMIES
Replacing old diesel trains with new electric buses will reduce CO2 and improve air quality.

These are just a few examples of how Caltrain and the CalMod program are innovating to better serve the Bay Area. Learn more at CalMod.org and stay in touch with us on social media!

Postcard

PUBLIC MEETING

Doorhanger

Factsheet

Public Meeting

CalMod.org
PUBLIC OUTREACH

• Subscribe to Weekly Updates
  – Visit www.calmod.org/get-involved
• Social Media
• Construction Outreach Office
WHAT’S NEXT

• Caltrain Business Plan
  – Caltrain2040.org
• High-Speed Rail Blended System
  – hsr.ca.gov
• Caltrain Downtown Extension
  – sftca.org/transbay-transit-center
• Diridon Concept Plan
  – DiridonSJ.org
CALMOD CONTACT INFORMATION

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