CALTRAIN ELECTRIFICATION UPDATE
San Jose Community Meeting
July 15, 2019

AGENDA

• Caltrain System Overview
• Project Overview
• San Jose 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

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

**Project Area**

**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
SCHEDULE

MILESTONES

- Caltrain strategic plan makes electrification a priority
- Environmental Clearance
- Award Contract
- Groundbreaking
- First Electric Train Arrives
- Passenger Service with Electric Trains
- Additional Capacity Improvements

* Please keep in mind that testing and construction will overlap as each Segment will be tested individually, prior to final system testing.

* Note: Schedule subject to change

CONSTRUCTION PHASING

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

Work Completed
- Utility Survey
- Geotechnical Investigations
- Disposal of Soil from Geotechnical Investigations
- Soil Resistivity Testing
- Site Surveys
- Signal Cable Inspections

Work In Progress
- Tree Pruning/Removal
- Potholing
- Foundation Installation
- Traction Power Substation Construction
- Paralleling Station Construction

Future Work
- Signal House Construction
- Pole Installation
- Wire Installation
- CEMOF Facilities Modifications
FUTURE CONSTRUCTION

San Jose

<table>
<thead>
<tr>
<th>Date</th>
<th>Work Activity</th>
<th>Expected Duration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Progress</td>
<td>Potholing</td>
<td>2-3 months</td>
</tr>
<tr>
<td>In Progress</td>
<td>Foundation Construction</td>
<td>4-5 months</td>
</tr>
<tr>
<td>Fall 2019</td>
<td>Pole/Wire Installation</td>
<td>3-4 months</td>
</tr>
<tr>
<td>In Progress</td>
<td>Traction Power Substation Construction</td>
<td>2-3 month</td>
</tr>
<tr>
<td>In Progress</td>
<td>Paralleling Station Construction</td>
<td>3-4 months</td>
</tr>
<tr>
<td>Spring 2019</td>
<td>CEMOF Facility Modifications</td>
<td>6-9 months</td>
</tr>
<tr>
<td>July 2019</td>
<td>Signal House Construction</td>
<td>1-2 months</td>
</tr>
</tbody>
</table>

*Expected duration indicates first and last day of activity. Number of actual work days will be fewer.

FOUNDATION CONSTRUCTION

- Excavation
- Rebar and Anchor Installation
- Electrical Grounding
- Concrete Fill
FOUNDATION INSTALLATION

POLE INFORMATION

• 3,000 installed throughout Corridor
  • Approx. 460 poles in San Jose
• Pole Height: 30-50’
• Pole Spacing: ~180’ apart
Example of Poles Planned for Use in San Jose

POLE TYPES SAN JOSE

- Single Track Cantilever
- Two Track Cantilever
- Center

POLE TYPES SAN JOSE

- Portal
- Headspan
POLE INSTALLATION

STRINGING WIRE
TRACTION POWER FACILITIES

• 10 Traction Power Facilities Installed throughout Corridor
  - 1 Traction Power Substation Installed in San Jose
  - 1 Paralleling Station in San Jose
  - 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

TRACTION POWER SUBSTATION LOCATION

CalMod.org

19

CalMod.org

20
TRACTION POWER SUBSTATION

Example Traction Power Substation
PARALLELING STATION LOCATION

Examples from Amtrak Northeast Corridor

EXAMPLE PARALLELING STATIONS

Examples from Amtrak Northeast Corridor
Currently existing maintenance track (no new track)

TEST TRACK INFORMATION

• Approximately 1.5 miles of existing maintenance track (no new track)
• Located between Santa Clara Station and Caltrain CEMOF facility
• Foundations, poles and wires to be installed prior to electric train testing
• New Electric trains will be tested on track
• Testing to occur between late 2019 to Spring 2022
• Testing anticipated to be during daytime
RAILROAD SIGNAL HOUSE

- Regulates signaling power to the new electrical trains
- Replaces existing signal house at Fuller Avenue and Delmas Avenue located next to Fuller Park
- Existing fence to be relocated
- Daytime weekday and limited Saturday construction
  - 7 a.m. to 6 p.m.
  - 1-2 month construction duration
- Equipment staging property owned by Caltrain and leased to the City of San Jose
- No impact to landscape or trees at Fuller Park

RAILROAD SIGNAL HOUSE LOCATION

*Staging Area property owned by Caltrain, leased to City of San Jose
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

- Doorhanger
- Factsheet
- Public Meeting
- Postcard
PUBLIC OUTREACH

- Subscribe to Weekly Updates
  - Visit www.calmod.org/get-involved
- Social Media
- Construction Outreach Office
- Additional Community Meetings
  - Pole Installation

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

WEEKLY UPDATES CalMod.org/get-involved
EMAIL CalMod@caltrain.com
PHONE 650-399-9659
800-660-4287 (Toll Free)

OFFICE 2121 S. El Camino, Suite A-100
San Mateo, CA 94403
9 a.m. - 5 p.m. Monday - Friday

WEBSITE CalMod.org
FACEBOOK www.facebook.com/caltrain
TWITTER @caltrain