Caltrain Electrification Update
Atherton Community Meeting
December 17, 2018

Agenda
• Project Overview Recap
• Project Update
• Electrification Infrastructure
  – Atherton Activities
• Questions
Caltrain System

- 32 Stations Gilroy to San Francisco
- 92 Weekday Trains
- At-Grade Crossings, viaducts, and bridges
- Intermodal Connections
- Bike Commuters

JPB owns right-of-way from SF to San Jose

Union Pacific owns

Ridership

Average Daily Ridership vs. Year:

- 1998
- 2018

Average Daily Ridership:

- 10,000
- 20,000
- 30,000
- 40,000
- 50,000
- 60,000
- 70,000
At Capacity Today

Bi-directional commute with riders standing on trains going southbound and northbound

Aging Fleet

<table>
<thead>
<tr>
<th>SERIES</th>
<th>QUANTITY</th>
<th>NUMBER OF SEATS</th>
<th>YEAR OF MANUFACTURE</th>
<th>MAKE</th>
<th>RETIRE DATE</th>
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<tbody>
<tr>
<td>Locomotives</td>
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<td>2003</td>
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<td>108</td>
<td>1985-1987</td>
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<td>2015-2017</td>
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<td>2030</td>
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<td>1985</td>
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<td>16</td>
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<td>Bombardier</td>
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</table>

*Trains recently acquired from Metrolink with refurbishment ongoing.

At Retirement Age: 20/29 loco; 73/134 cars
Regional Transportation Needs

- US 101 and Interstate 280 Congested
- Corridor supports growing economy
- 75% Caltrain riders commute to work
- 60% are choice riders

Project Description

<table>
<thead>
<tr>
<th>Area</th>
<th>Project</th>
<th>Service</th>
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</thead>
</table>
| 51 miles San Francisco to San Jose (Tamien Station) | Electrification:  
  • Overhead Contact System (OCS)  
  • Traction Power Facilities  
  Electric Trains  
  • 75 percent of fleet | 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 |
Service Benefits

<table>
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<th>Metric</th>
<th>Today</th>
<th>PCEP</th>
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<tr>
<td>Example Baby Bullet Train</td>
<td></td>
<td></td>
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<tr>
<td>Retain 5-6 stops</td>
<td>60 min</td>
<td>45 min</td>
</tr>
<tr>
<td>Retain SF to SJ 60 minutes</td>
<td>6 stops</td>
<td>13 stops</td>
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<tr>
<td>Example Redwood City Station</td>
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<td></td>
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<tr>
<td>Train stops / peak hour</td>
<td>3</td>
<td>5</td>
</tr>
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Note: Prototypical Train and Schedule

Key Regional Benefits (2040)

- Greenhouse gases annual: 176,000 metric tons of CO₂
- Daily traffic congestion: 619,000 vehicle miles
- Engine noise reduced
- Up to 97% clean air daily
- 111,000 ridership daily
- Improved frequency / quicker trips

Note: 2013 BAC Report, generates $2.5B economic activity and 9,600 jobs
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

Note: Schedule Subject to Change

Electric Train

- 2016 Capacity Board Decision (bike to seat ratio, onboard bathrooms, upper doors ‘not precluded’)
- 2017 Design Progressing w/ Additional Public Input
  - Completed: Exterior design, Seat colors, Bike Storage, ADA restroom
- 2019 Virtual Reality 360 Tour
CalMod Construction Phasing

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

CalMod Atherton

Atherton Project Area .8 miles
Field Work Progression

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

Work In Progress
- Potholing
- Foundation Installation

Future Work
- Pole Installation
- Wire Installation

Future Construction Activities

<table>
<thead>
<tr>
<th>Date</th>
<th>Work Activity</th>
<th>Expected Duration*</th>
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</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>3-4 months</td>
</tr>
<tr>
<td>Early 2019</td>
<td>Pole Installation</td>
<td>2-3 months</td>
</tr>
<tr>
<td>Spring 2019</td>
<td>Wire Installation</td>
<td>2-3 months</td>
</tr>
</tbody>
</table>

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

On Track Equipment

Pole Information

• 3,000 Installed throughout Corridor
  • 22 poles in Atherton
• Pole Height: 30-50’
• Pole Spacing: ~180’ apart
Pole Types Atherton

- Single Track Center
- Single Track Side
- Two-Track Cantilever

Example of Poles Currently Planned for Use in Atherton

Pole Installation

Current Pole Installation
Stringing Wire

4 overhead wires per track: Feeder, Contact, Messenger, and Static

Construction Impacts

- 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
San Francisco Tunnel Work

- Within the four San Francisco Tunnels:
  - Overhead Contact System Installation
  - Grouting and Notching
  - Drainage and Track Work

SF Weekend Caltrain Closures

- Weekends - Oct 6, 2018 to Spring 2019
  - Caltrain service north of the Bayshore Station will be suspended on the weekends
  - Bus service will be provided from Bayshore to 4th and King and 22nd Street stations
- Weekday service will remain unchanged
- Caltrain service south of Bayshore will remain unchanged
- Schedule at caltrain.com/SFWeekendClosure
Public Outreach

- Subscribe to Weekly Updates
  - Visit www.calmod.org/get-involved
- Social Media
- Construction Outreach Office

Public Outreach

Physical Notices
CALMOD CONTACT INFORMATION

WEBSITE 🌐 CalMod.org

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

FACEBOOK 🌐 www.facebook.com/caltrain
TWITTER 🔄 @caltrain