

**DOCKETED**

<b>Docket Number:</b>	21-SPPE-01
<b>Project Title:</b>	CA3 Backup Generating Facility-Vantage
<b>TN #:</b>	242754
<b>Document Title:</b>	CalTrain Electrification Santa Clara and San Jose Presentation
<b>Description:</b>	N/A
<b>Filer:</b>	Scott Galati
<b>Organization:</b>	DayZenLLC
<b>Submitter Role:</b>	Applicant Representative
<b>Submission Date:</b>	4/22/2022 1:40:00 PM
<b>Docketed Date:</b>	4/22/2022



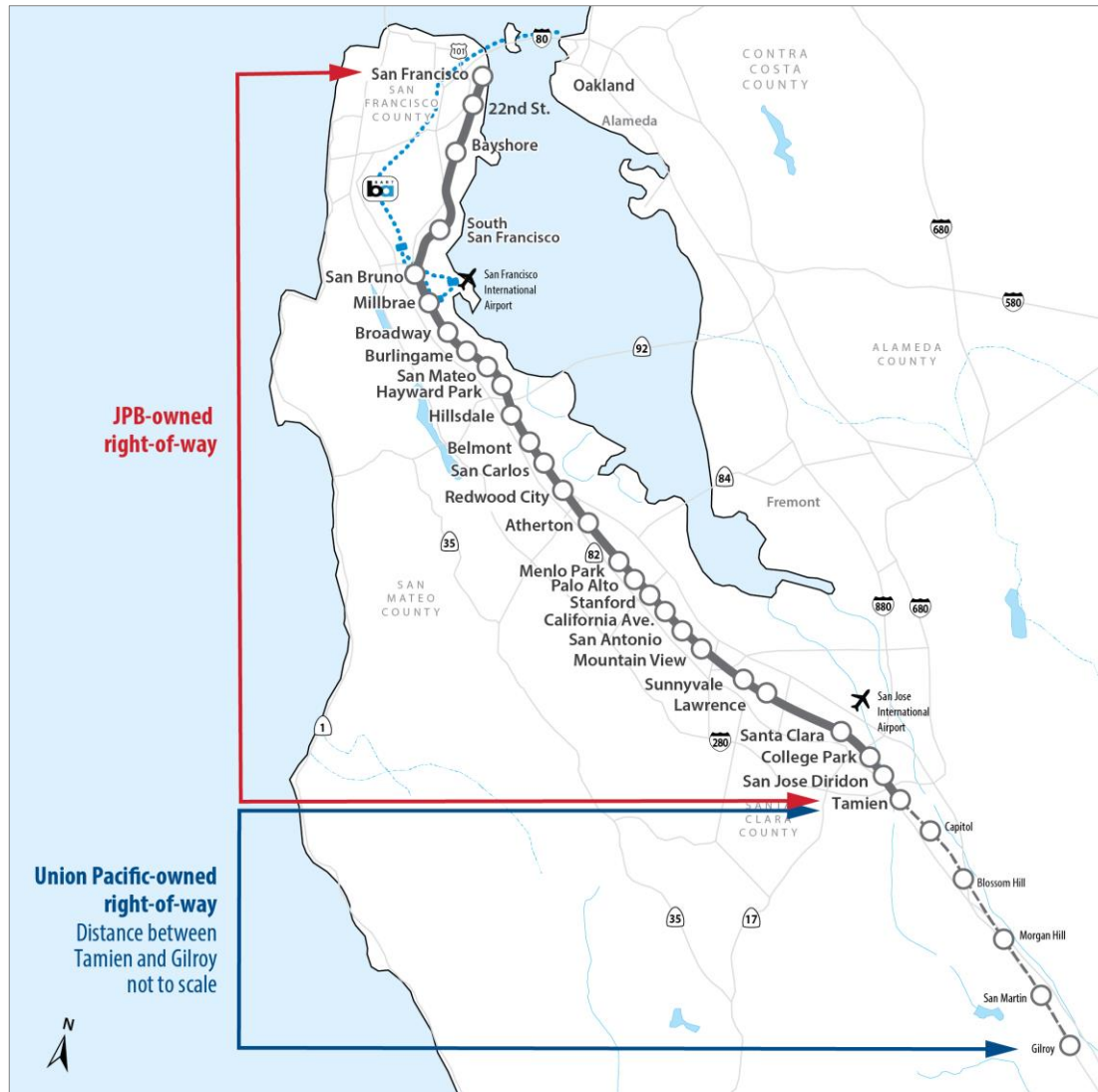
## CALTRAIN ELECTRIFICATION UPDATE

Santa Clara & San Jose Update  
November 3, 2021

# AGENDA

- Caltrain System Overview
- Project Overview
- Construction and Testing Activities
- Questions

# CALTRAIN SYSTEM



- 31 Stations Gilroy to San Francisco
- 68 Weekday Trains
- At-Grade Crossings, Viaducts, and Bridges
- Intermodal Connections
- Bike Commuters

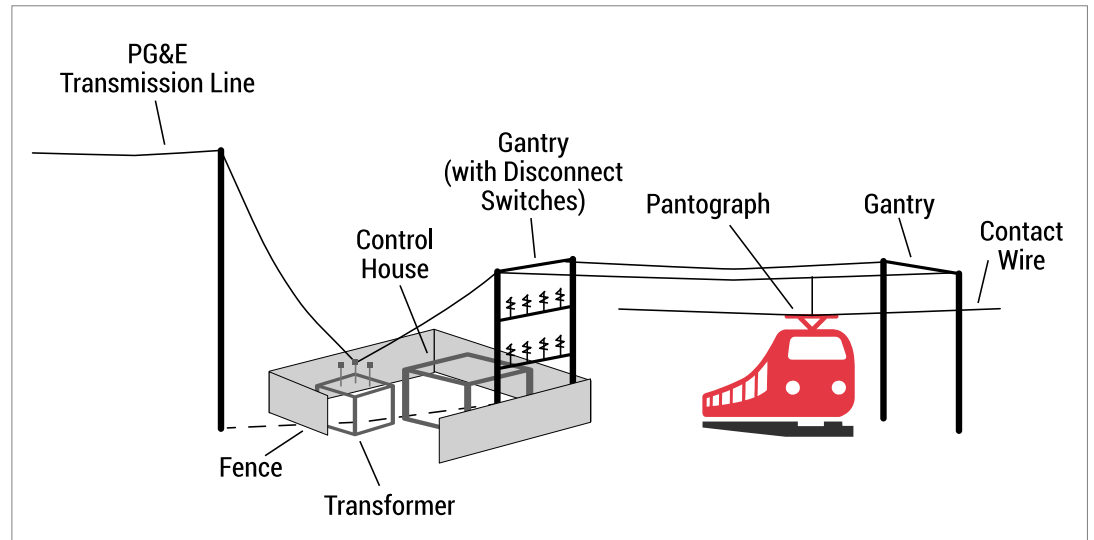
# PROJECT DESCRIPTION

## Project Area



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

## Project Elements



### Electrification

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

### Electric Trains\*

- 19 7-car train sets
- 133 electric cars

\*Includes 2018 State TIRCP Funding

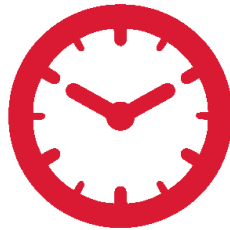
# PROJECT DESCRIPTION

## Service Elements



### Speed

- Up to 79 mph



### Service Increase

- 6 trains / hour / direction
- More station stops / reduced travel time
- Restore 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**

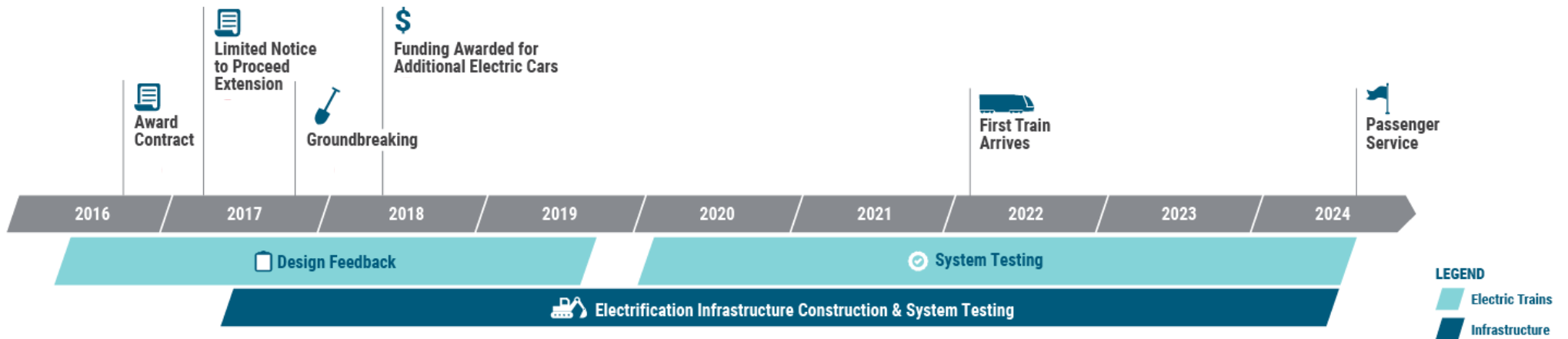


**Reduced Engine Noise Emanating from Trains**



**Increased Revenue and Reduced Fuel Cost**

# SCHEDULE



\* Note: Schedule subject to change



# ELECTRIFICATION PROGRESS



FOUNDATIONS  
**92%**  
COMPLETE



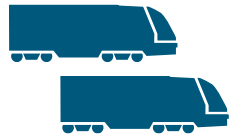
POLES  
**67%**  
COMPLETE



TRANSFORMER  
INSTALLED AT  
**10 of 10**  
FACILITIES



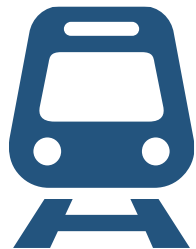
# ELECTRIC TRAIN MANUFACTURING & TESTING



**86**  
SHIPPED



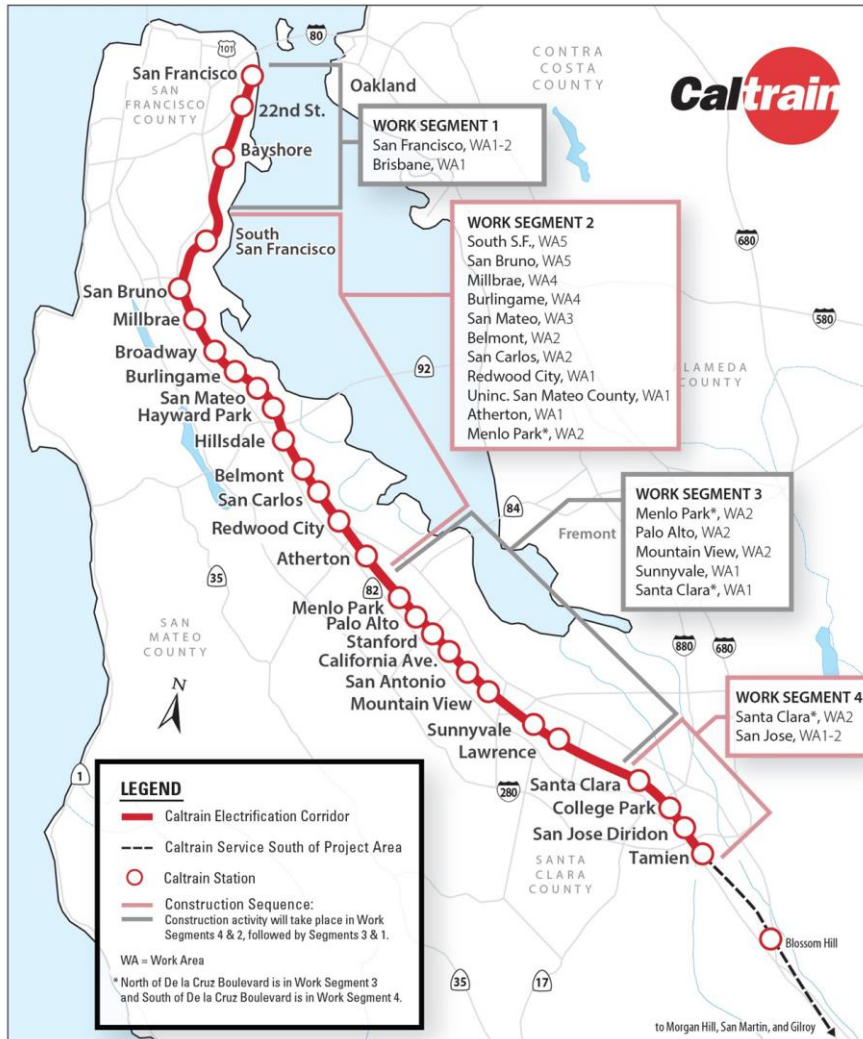
IN SALT LAKE CITY  
MANUFACTURING  
FACILITY



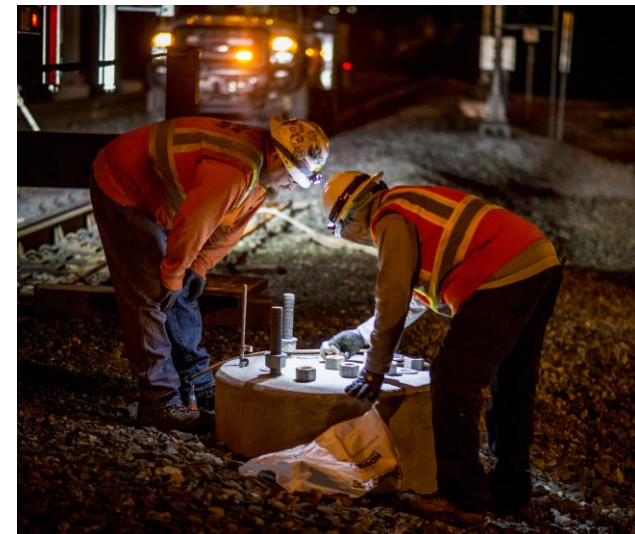
**TRAINSET 1**  
IN PUEBLO  
FOR ON-TRACK  
TESTING



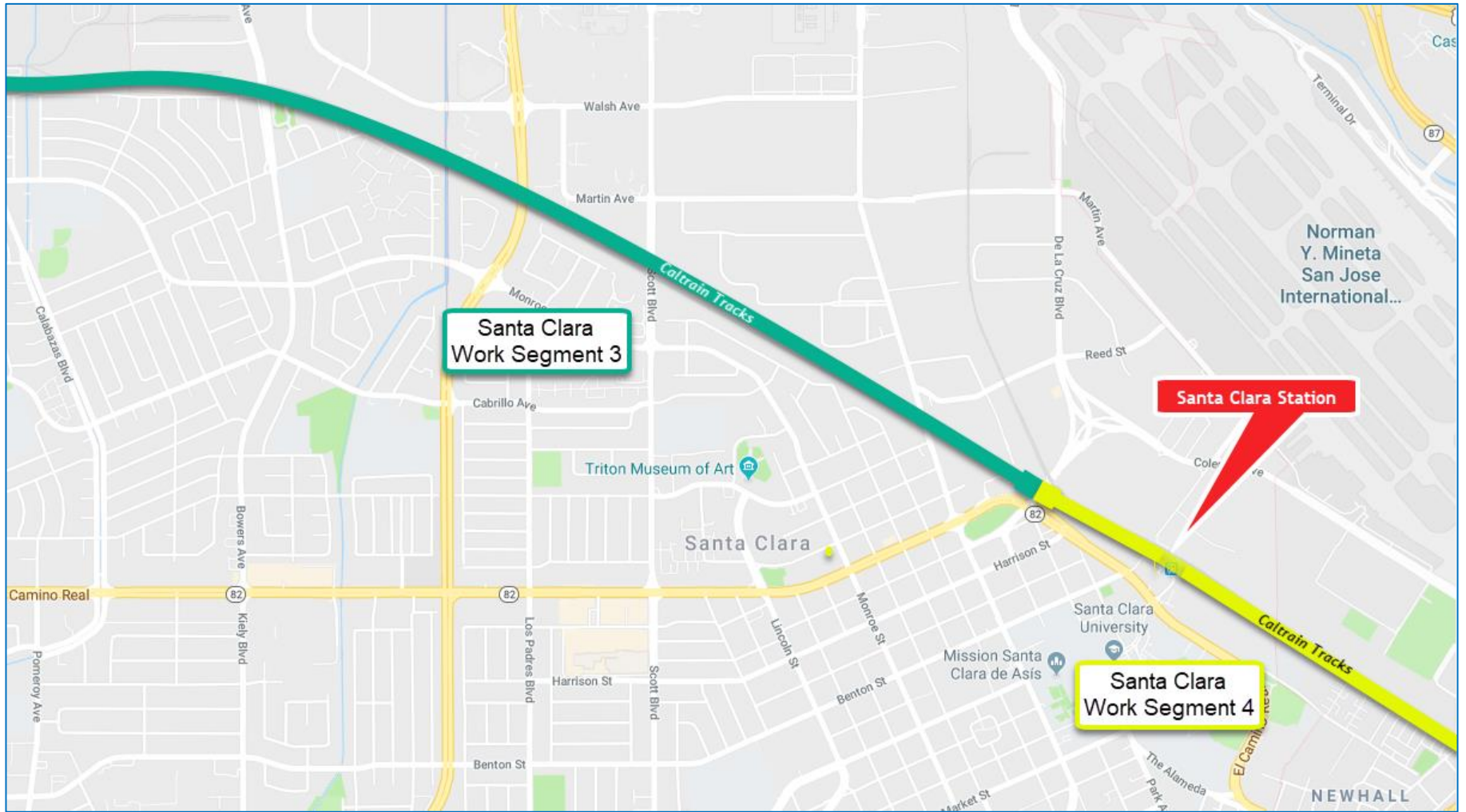
# CONSTRUCTION PHASING



- 51 Miles Corridor
- 4 Work Segments
- 2,600 Poles
- 10 Traction Power Facilities



# SANTA CLARA



# SAN JOSE



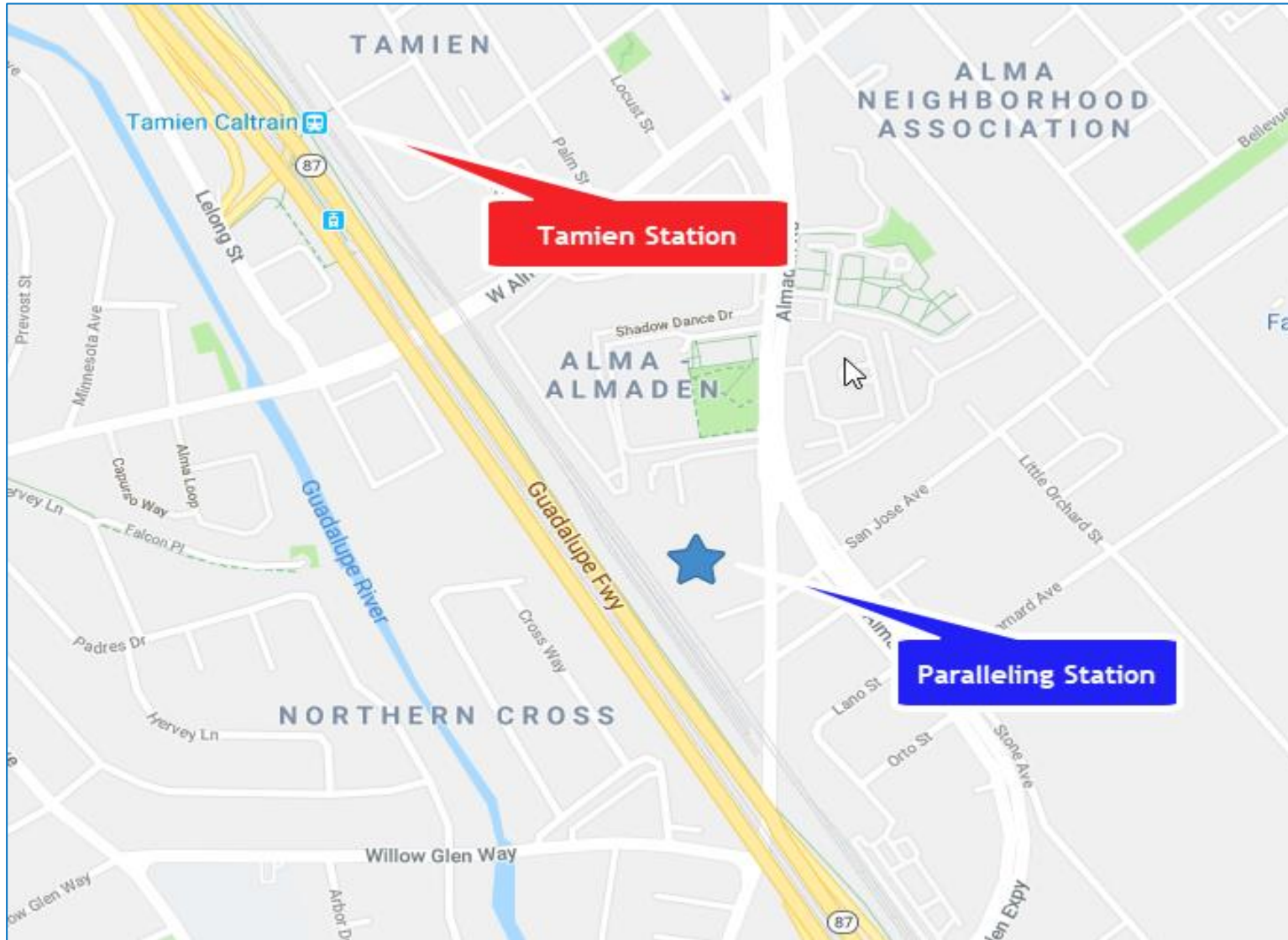
# TRACTION POWER FACILITIES

- 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



# PARALLELING STATION LOCATION





# PARALLELING STATION EXAMPLE



Paralleling Station - Amtrak Northeast Corridor

# GANTRY EXAMPLES



Main Gantry – San Mateo

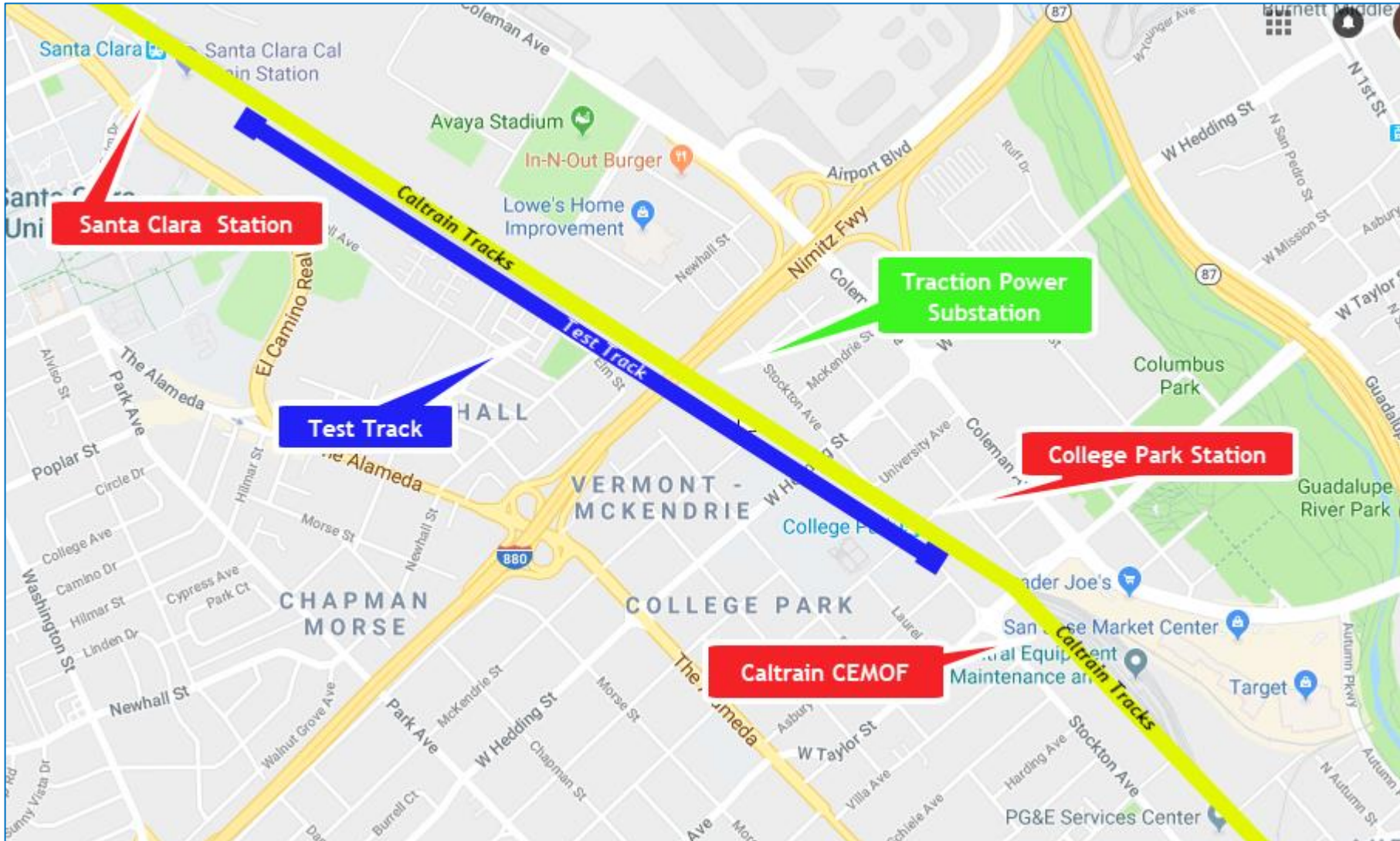


Strain Gantry – Palo Alto

# TESTING SCHEDULE

Start Date	Work Activity
Late 2021	Electric Locomotive Testing
Early 2022	Powering On Overhead Wire Santa Clara & San Jose Segment
Early 2022	Arrival of New Electric Train
Spring 2022	New Electric Train Testing

## TEST TRACK LOCATION



# TEST TRACK INFORMATION

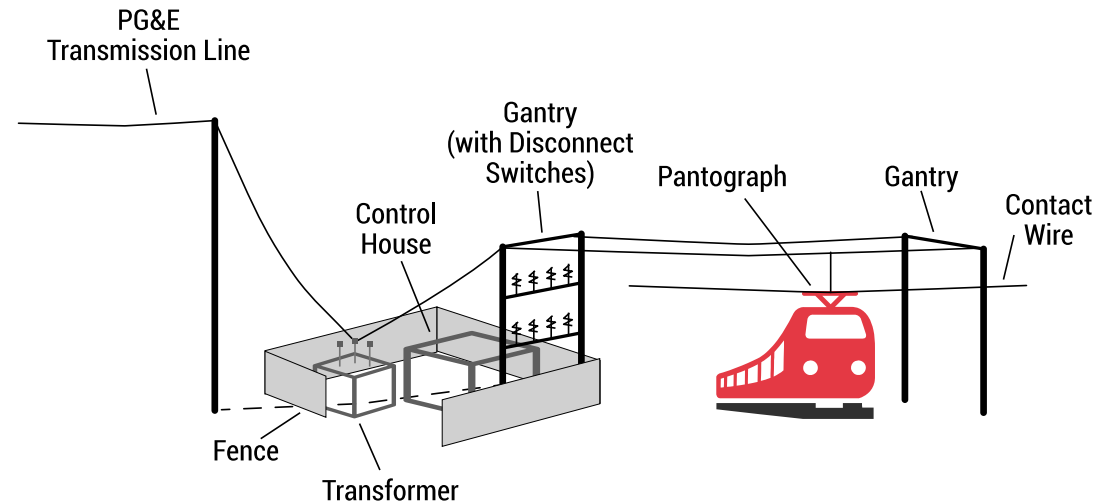
- Approximately 1.5 miles of existing maintenance track
- Located between Santa Clara Station and Caltrain maintenance facility (CEMOF)
- Trains will be tested first on test track before tested on main track

# ELECTRIC TEST TRAIN

- Caltrain procured two electric locomotives from Amtrak for testing
- Used to ensure infrastructure is ready for new electric trains
- Testing to start late 2021 in Santa Clara and San Jose

# POWERING ON TRACTION POWER FACILITY AND OVERHEAD WIRE

- Traction Power Facilities in San Jose will be fully tested before being powered on
- Once Traction Power Facilities are tested, overhead electric lines will be powered on
- Overhead wires will be tested in sections to ensure infrastructure is ready for new electric trains



# NEW ELECTRIC TRAIN TESTING

- Testing of new electric trains to start in Spring 2022
- Each trainset tested for approx. 3 months
- Last trainset scheduled to arrive in Spring 2024
- Testing will expand to include additional parts of the corridor as they are electrified





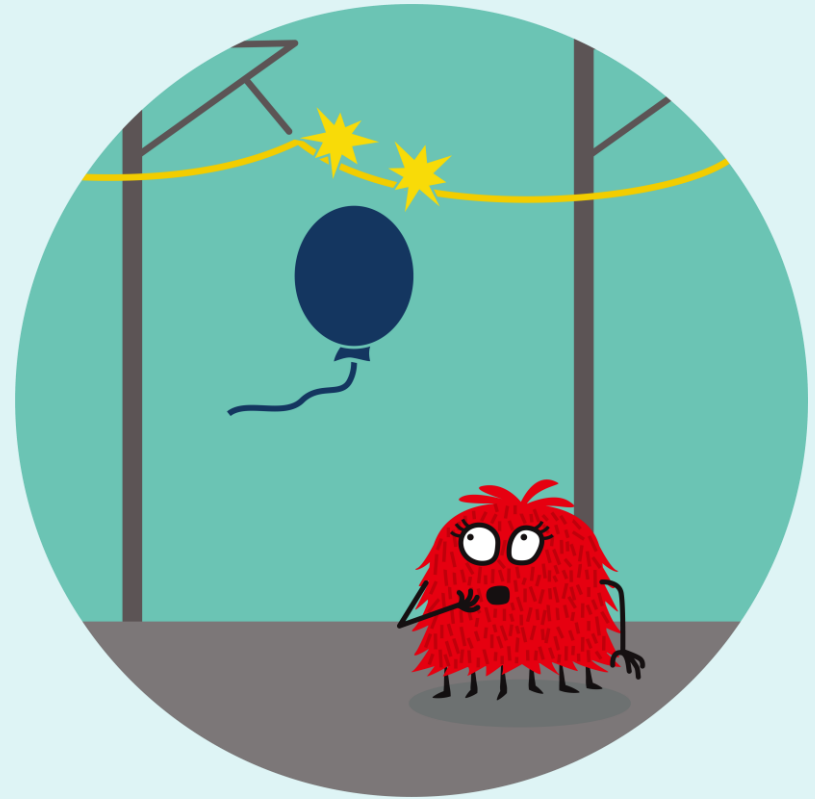
# **CalMod** BE AWARE OF OVERHEAD WIRES

- Caltrain's electric overhead wires carry 25,000 volts of electricity and can be dangerous. Treat all overhead wires as live.



# **CalMod** KEEP YOURSELF AND OBJECTS AWAY

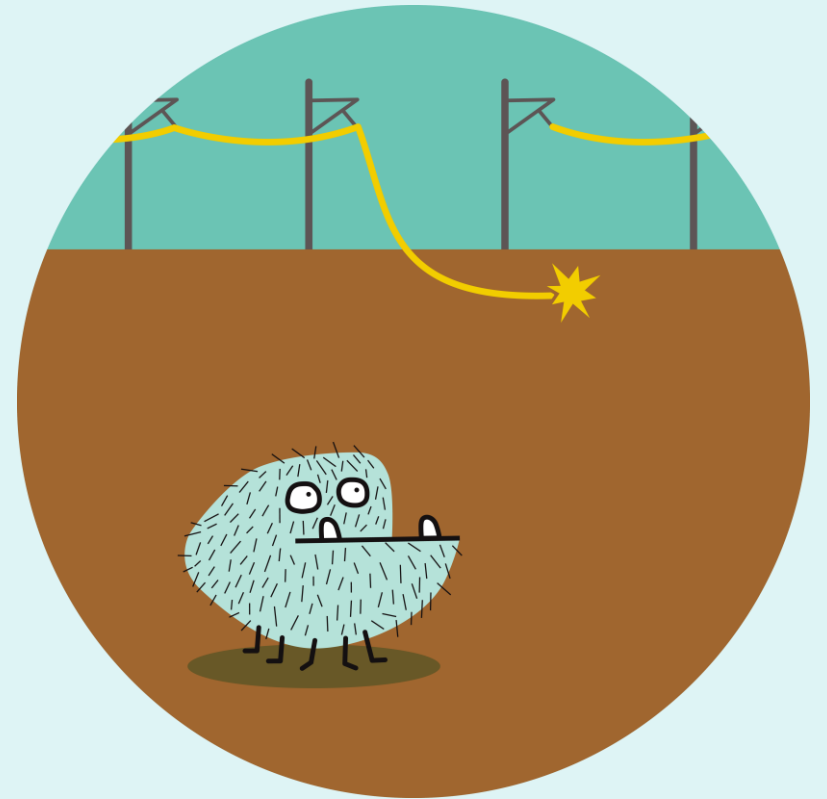
- Never approach overhead wires with things like ladders, antennas, balloons, and most importantly, yourself!





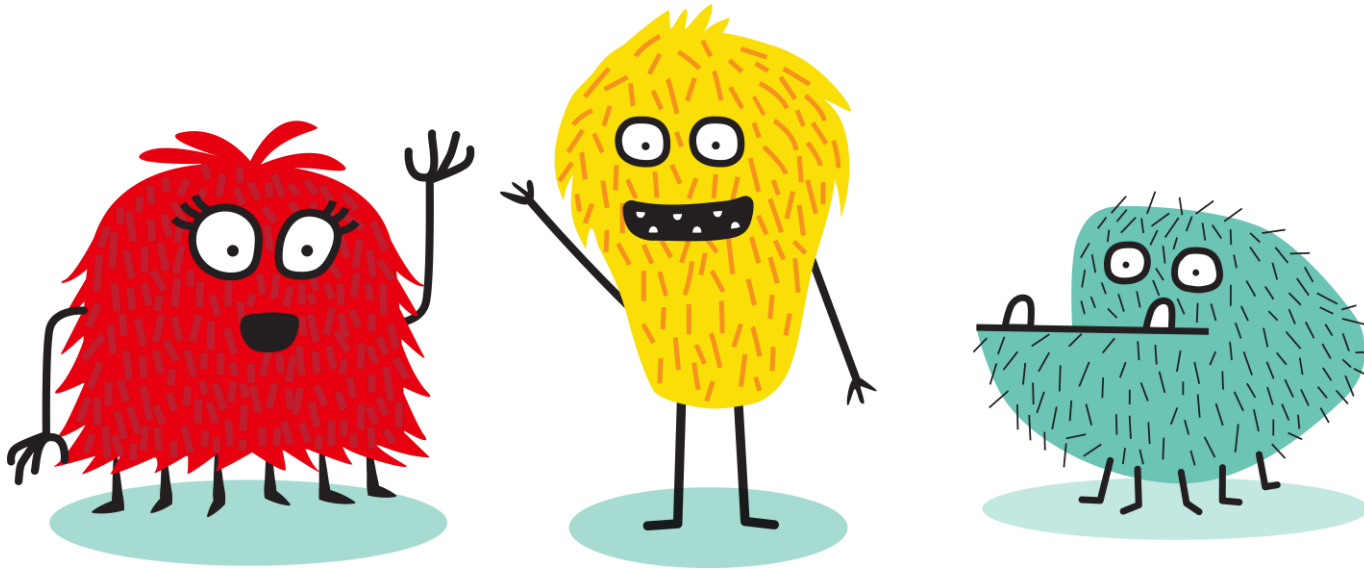
# STAY AWAY FROM DAMAGED WIRES

- If you see a downed or otherwise damaged overhead wire, stay at least 25 feet away. For emergencies or suspicious activity on Caltrain, call the Transit Police at 1.877.SAF-RAIL (1.877.723.7245).



# LEARN MORE

- Visit **CalMod.org/safety** for more information about how to stay safe around the new electric overhead wires.



# PUBLIC OUTREACH

- Subscribe to Weekly Updates at [calmod.org/get-involved](https://calmod.org/get-involved)
- Social Media
  - [facebook.com/caltrain](https://facebook.com/caltrain)
  - [twitter.com/caltrain](https://twitter.com/caltrain)
- All project materials at [calmod.org/resources/](https://calmod.org/resources/)

# PUBLIC OUTREACH

**CalMod**

**CALTRAIN MODERNIZATION PROGRAM**  
Test Pile Construction Activities

**DAY TIME WORK**  
**08/28/17 - 09/1/17**

**ANTICIPATED WORK HOURS**  
7:00 a.m. - 5:00 p.m.

**CREWS CONDUCTING WORK IN YOUR AREA TO INSTALL AND TEST FOUNDATION PILES**

During the week of August 28, Caltrain electrification crews will be working in your area to construct one test pile foundation for integrity testing. The piles will be installed within the Caltrain right-of-way.

Crews will be conducting the work over a two day period between Monday, August 28 and Friday, September 1, between the hours of 7 a.m. and 5 p.m. Crews will return at a later date to test the integrity of the installed piles.

**Main construction activities include:**

- Survey and layout of proposed pile test location
- Trucks and equipment working near Caltrain right of way
- Drill holes for placement of test piles
- Pour concrete and install rebar
- Backfill holes to cover work areas

We apologize for any inconvenience this may cause. The field team will work as quietly as possible. Thank you for your patience and understanding as we deliver these critical benefits to our communities.

Please visit our website at [www.caltrain.com/PCPEconstruction](http://www.caltrain.com/PCPEconstruction) to sign-up for weekly construction updates.

**We appreciate your patience during construction.**

Doorhanger

**CalMod**

**CALTRAIN ELECTRIFICATION PROJECT**  
STATUS UPDATE | January 2018

**MILESTONES**

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

**KEY REGIONAL BENEFITS 2040**

- GREENHOUSE GASES (ANNUAL)** 176,000 METRIC TONS CO<sub>2</sub>
- DIESEL TO ELECTRIC** LOWER FUEL COSTS
- TRAFFIC CONGESTION** 619,000 VEHICLE MILES
- 21% INCREASE** DAILY RIDERSHIP
- \$2.5 BILLION** ECONOMIC BENEFITS
- MORE SERVICE** MORE FREQUENT & FASTER TRIPS

**FOR MORE INFORMATION**

- [www.calmod.org](http://www.calmod.org)
- 650.399.9659
- Para traducción lláma al 1.800.660.4287
- 查詢詳情請電: 1.800.660.4287
- Cần dịch thuật, xin gọi 1.800.660.4287
- Project Outreach Office: 9:00a.m. to 5:00p.m., 2121 S. El Camino Real, Bldg A, Ste A-100, San Mateo, CA 94403

Factsheet

**CALTRAIN MODERNIZATION**

- IMPROVING CONVENIENCE**  
An electrified system means the trains can run more frequently and more efficiently.
- BOOSTING ECONOMIES**  
CalMod will also provide economic benefits, including creating nearly 10,000 jobs across the country.
- INCREASING CAPACITY**  
CalMod upgrades give us room to grow, initially increasing capacity by over 30%.
- ADVANCING SUSTAINABILITY**  
Replacing old diesel trains with new electric trains will reduce GHG 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](http://CalMod.org) and stay in touch with us on social media!

**CALTRAIN**

Postcard




Public Meeting

## CALMOD CONTACT INFORMATION

**WEEKLY UPDATES**  CalMod.org/get-involved

**EMAIL**  CalMod@caltrain.com

**PHONE**  650-399-9659  
800-660-4287 (Toll Free)

**WEBSITE**  CalMod.org

**FACEBOOK**  www.facebook.com/caltrain

**TWITTER**  @caltrain