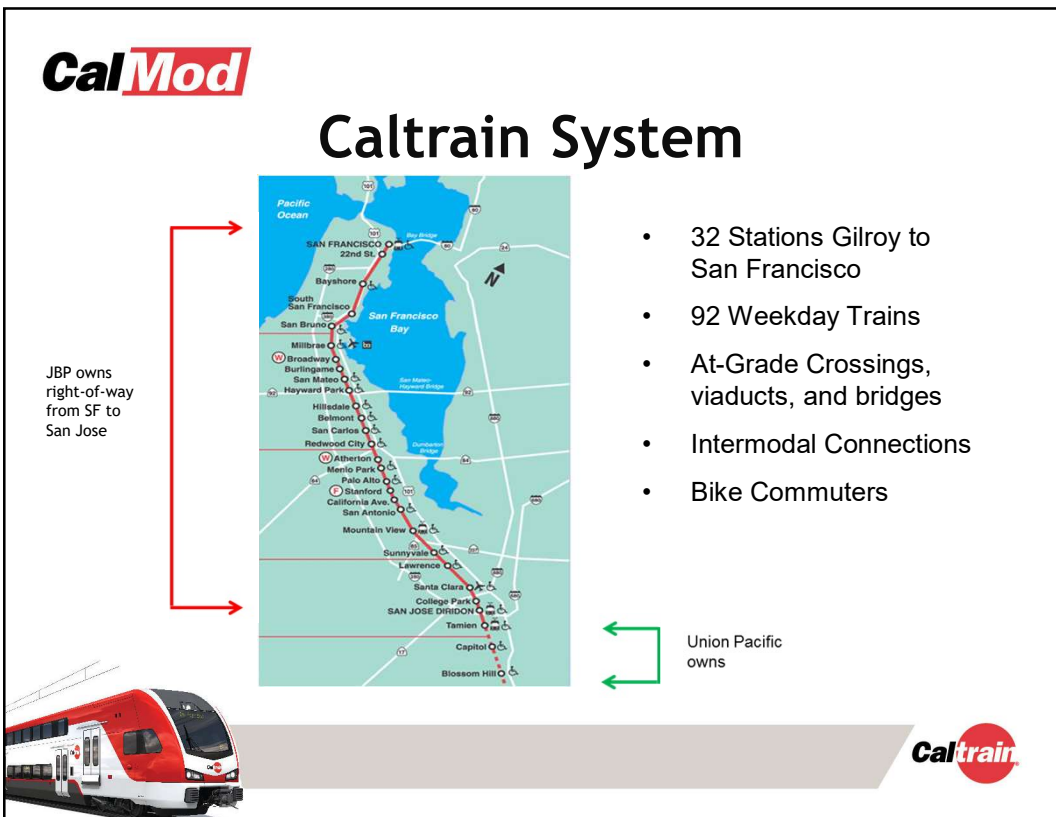




Peninsula Corridor Electrification Update Meeting

Burlingame Recreation Center
August 23, 2017





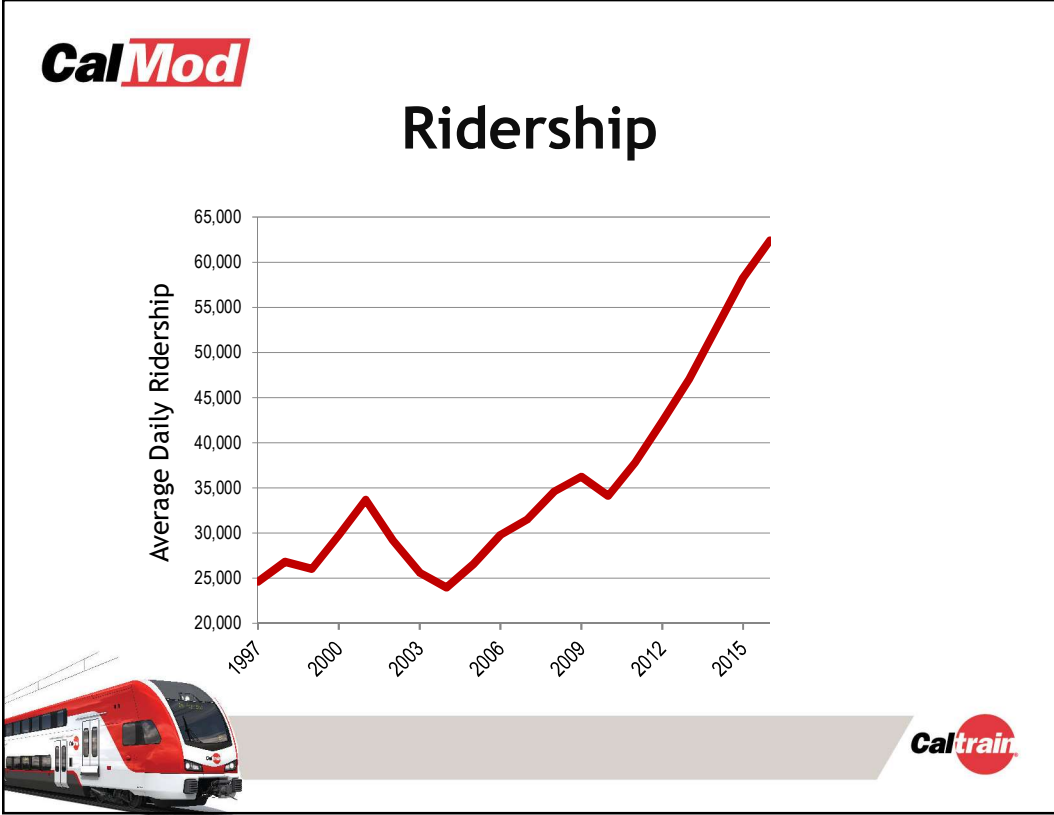
Caltrain System

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

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

Union Pacific owns







Aging Fleet

Table 1.2: Caltrain Fleet Inventory

SERIES	QUANTITY	NUMBER OF SEATS	YEAR OF MANUFACTURE	MAKE	RETIRE DATE
Locomotives					
F40 PH-2	5	na	1985	GM - EMD	2015
F40PH-2-CAT	15	na	1985-1987	GM - EMD	2015-2017
F40 PH-2C	3	na	1998	Boise Locomotive	2028
MP36PH-3C	6	na	2003	Motive Power	2033
Passenger Cars					
Gallery Trailer	26	142	1985-1987	Nippon Sharyo	2015-2017
Gallery Trailer	16	148	1985-1987	Nippon Sharyo	2015-2017
Gallery Trailer	14	120	1999-2000	Nippon Sharyo	2030
Gallery Cab (Bike)	10	108	1985-1987	Nippon Sharyo	2015-2017
Gallery Cab (Bike)	6	78	1999-2000	Nippon Sharyo	2030
Gallery Cab (Bike)	21	97	1985	Nippon Sharyo	2015
Bi-Level Trailer*	16	149	1997	Bombardier	2027
Bi-Level Trailer	9	144	2002	Bombardier	2032
Bi-level Trailer (Bike)	2	114	2002	Bombardier	2032
Bi-level Trailer (Bike)	5	114	2001-2002	Bombardier	2031-2032
Bi-level Trailer (Bike)	2	114	2008	Bombardier	2038
Bi-level Trailer (Bike)	1	127	2002	Bombardier	2032
Bi-Level Trailer	6	140	2008	Bombardier	2038

*Trailers recently acquired from Metrolink with refurbishment ongoing.



Regional Transportation Needs

- US 101 and Interstate 280 Congested
- Corridor supports growing economy
 - 14% CA GDP; 52% CA patents; 20% CA tax revenue
- Caltrain Commuter Coalition (formed 2014)
 - 75% Caltrain rider's commute to work; 60% choice riders



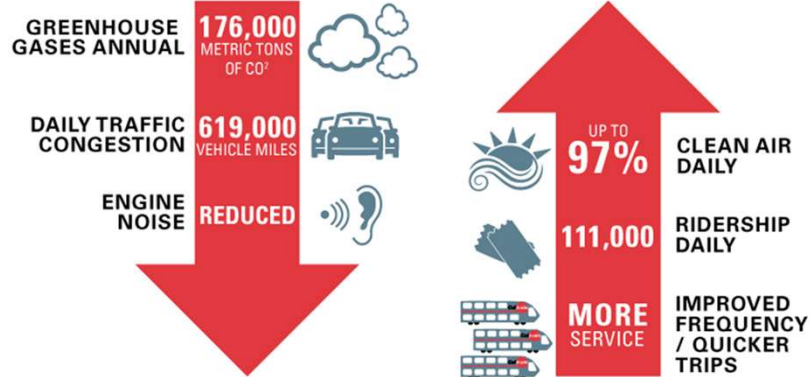


Project Description

Area	Project	Service
51 miles San Francisco to San Jose (Tamien Station)	Electrification: <ul style="list-style-type: none"> Overhead Contact System (OCS) Traction Power Facilities Electric Trains (EMUs) <ul style="list-style-type: none"> 75 percent of fleet 	Up to 79 mph Service Increase <ul style="list-style-type: none"> 6 trains / hour / direction More station stops / reduced travel time Restore Atherton & Broadway service Mixed-fleet service (interim period) Continue tenant service <ul style="list-style-type: none"> ACE, Capital Corridor, Amtrak, Freight



Key Regional Benefits (2040)



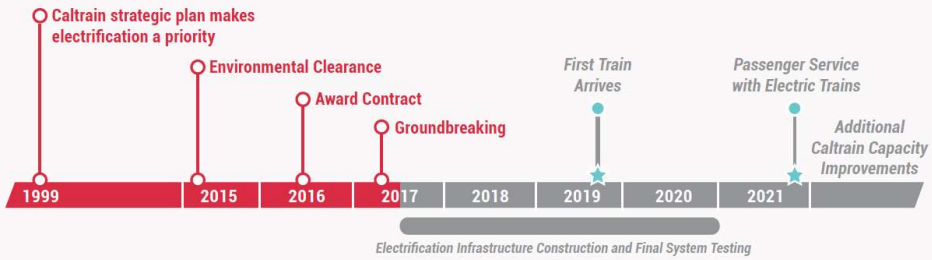
Note: 2013 BAC Report, generates \$2.5B economic activity and 9,600 jobs





Schedule

MILESTONES



Note: Schedule Subject to Change



Electric Train Design & Public Input

Peninsula Corridor Electrification Project





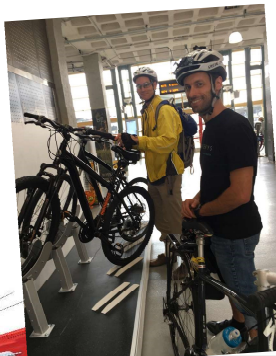
Electric Train Outreach: Phased

- 2016 Capacity Board Decision (bike to seat ratio, onboard bathrooms, upper doors)
- ➔ • 2017 Design Progressing, Additional Public Input
 - Past: Exterior design and Seat colors
 - Upcoming: Bike Storage and signage content
- 2018 Virtual Reality 360 Tour



EMU Onboard Bike Storage Outreach

- Public Poll from August 8 to September 1
- Station Outreach with Samples





EMU Bike Outreach Events

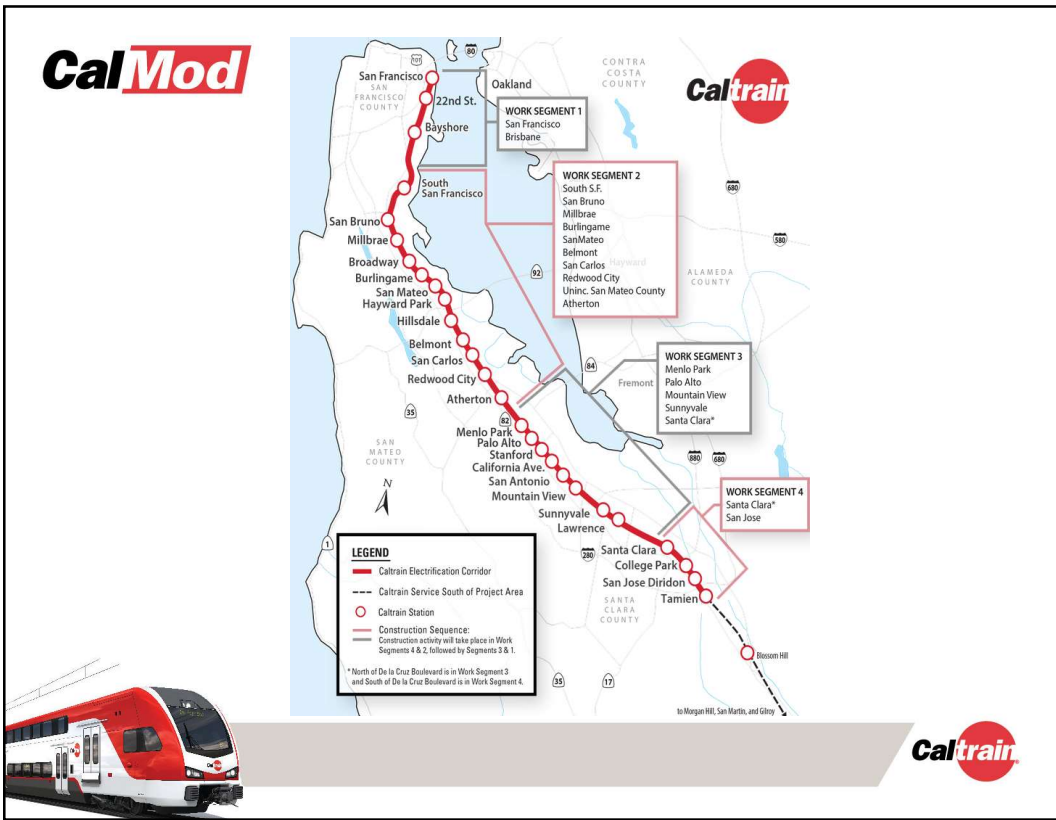
Date	Time	Event
August 8	9:00 a.m. - 6:00 p.m.	Silicon Valley Bike Summit Mt. View
August 9 & 10	7:30 a.m. - 7:00 p.m.	4 th & King Station outreach
August 14	4:30 p.m. - 6:30 p.m.	Redwood City Station outreach
August 15	4:30 p.m. - 7:00 p.m.	Palo Alto Station outreach
August 16	5:30 p.m. - 8:00 p.m.	Menlo Park Block Party
August 22 to Sept. 1	9:00 a.m. - 6:00 p.m. Monday through Friday	Project Outreach Office 2121 S. El Camino, San Mateo
August 24	5:45 p.m.	Bicycle Advisory Committee



Next Steps

- Capture feedback on design elements
- Continue rollout of key design features for public input and education
 - Onboard Bike Storage Designs: Occurring Now
 - Interior Destination Sign Content: Fall 2017
- Public feedback paired with technical analysis
- Virtual Reality Tour: 2018







Work Segment 2, Area 4

- Millbrae
- Burlingame



Field Work Status

Work Completed to Date	<ul style="list-style-type: none"> • Utility Survey • Geotechnical Investigations • Soil Resistivity Testing • Site Surveys
Work In Progress and Upcoming	<ul style="list-style-type: none"> • Overhead Contact System (OCS) Foundation Potholing • Signal Cable Potholing • Disposal of Soil from Geotechnical Investigations • Signal Cable Inspections • Tree Pruning and Removal • OCS Foundation Construction
Future Work	<ul style="list-style-type: none"> • OCS Pole Installation • OCS Wire Installation



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Potholing









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Future Construction Activities

Millbrae and Burlingame

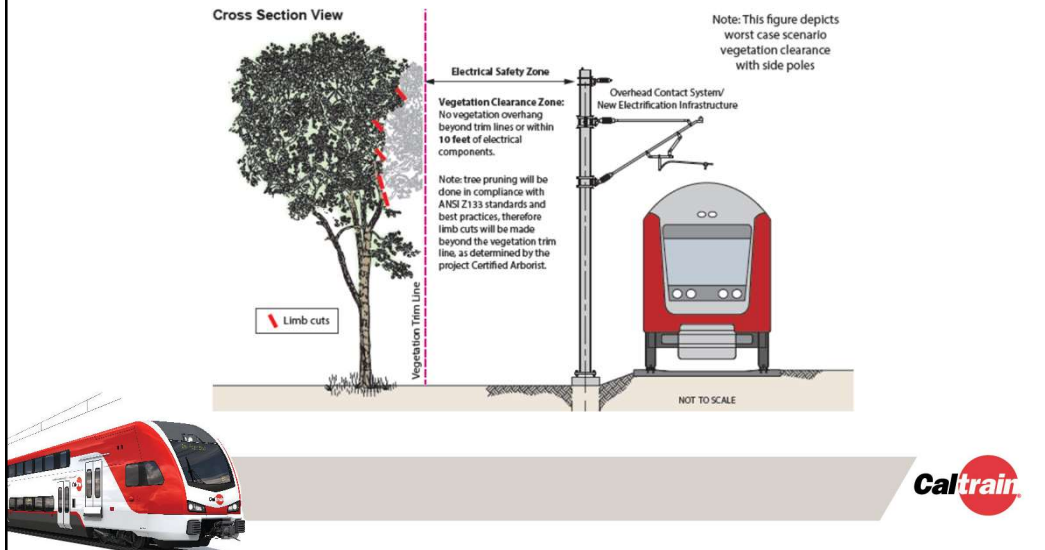
Date	Work Activity	Expected Duration
Late Summer/ Fall 2017	Tree Pruning/Removal	2 months
Winter 2017 / Early 2018	Foundation Construction	3-5 months
Summer 2018	Traction Power Substation (Burlingame only)	1 year
Mid-2018	OCS Pole and Wire Installation	3 months



Tree Pruning and Replacement

- Vegetation cleared for Electrical Safety Zone



Tree Pruning and Replacement

JPB Property

- 1:1 replacement for any non-riparian tree in JPB right-of-way (ROW)

Public or Private Property

- 1:1 / 2:1 City/County replacement ratio for trees being removed on public or private property
 - **Millbrae:** A replacement ratio of 1:1 is used for all trees
 - **Burlingame:** A replacement ratio of 2:1 is used for protected-trees and 1:1 for non-Protected trees
- 1:1 replacement for any tree pruned over 25%*

Environmental Permit Requirements

- 6:1 replacement for any riparian oaks removed
- 3:1 replacement for any other native riparian species removed
- 1:1 replacement for any non-native riparian species removed

*Trees pruned over 25% will remain in place and will not be removed. A replacement tree will also be planted. Also applies to environmental permits.





Millbrae: Tree Pruning and Replacement Plan
Caltrain Right of Way - Private Property

Millbrae	Trees Impacted	Replacement Ratio	Replacement Trees
JPB ROW Caltrain Right of Way			
Tree Removed	9 / 2	1:1 / 6:1*	9 / 12
Tree Pruned >25%	6	1:1	6
Tree Pruned <25%	0	n/a	n/a
Private Property			
Tree Removed	0	1:1	0
Tree Pruned >25%	0	1:1	0
Tree Pruned <25%	0	n/a	n/a

*6:1 replacement for any riparian trees removed

Note: Information may change as the design progresses



Millbrae: Tree Pruning and Replacement Plan
Public Property

Millbrae	Trees Impacted	Replacement Ratio	Replacement Trees
Public Property (SFPUC)			
Tree Removed	0	1:1	0
Tree Pruned >25%	3	1:1	3
Tree Pruned <25%	18	n/a	n/a

Note: Information may change as the design progresses



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Burlingame: Tree Pruning and Replacement Plan

Caltrain Right of Way - Private Property

Burlingame	Trees Impacted	Replacement Ratio	Replacement Trees
Caltrain Right of Way			
Tree Removed	10 / 1	1:1 / 6:1*	10 / 6
Tree Pruned >25%	15	1:1	15
Tree Pruned <25%	128	n/a	n/a
Private Property			
Tree Removed	0	2:1 / 1:1	0
Tree Pruned >25%	0	1:1	0
Tree Pruned <25%	0	n/a	n/a

* 6:1 replacement for any riparian trees removed

Note: Information may change as the design progresses

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Burlingame: Tree Pruning and Replacement Plan

Public Property

Burlingame	Trees Impacted	Replacement Ratio	Replacement Trees
Public Property (SFPUC)			
Tree Removed	0	1:1	0
Tree Pruned >25%	0	1:1	0
Tree Pruned <25%	1	n/a	n/a

Note: Information may change as the design progresses



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Foundation Work

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

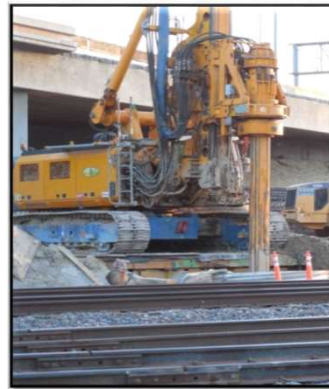
**Caltrain****CalMod**

Pole Foundation Work

Will take place on and off track



DrillTech on track foundation train



DrillTech off-track OCS Drill Rig

**Caltrain**

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OCS Wire Installation


Will take place on-track

**Caltrain****CalMod**

Construction Impacts




- Daytime work and night work from 8 p.m. - 6 a.m.
- Some 24 hour weekend work
- Crews will utilize acoustical barrier blankets and position lights away from homes
- Dedicated hotline for construction complaints

**Caltrain**



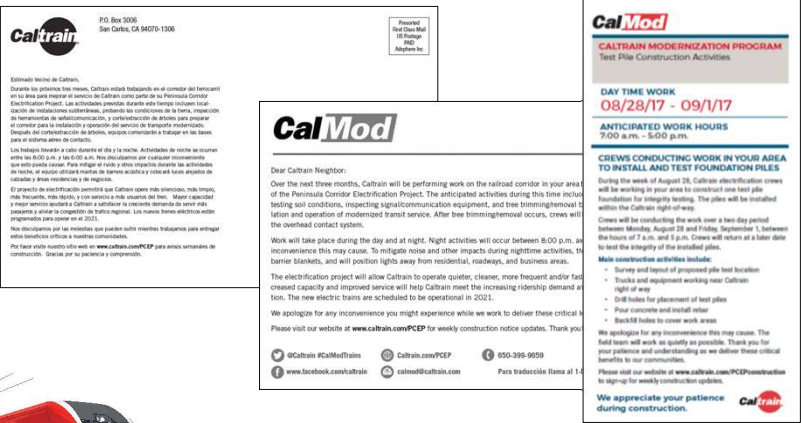
Public Outreach

- Subscribe to Weekly Updates
 - Visit caltrain.com/pcepconstruction
- Additional Community Meetings
 - Pole and Wire Installation
- Construction Outreach Office

Public Outreach

- Physical Notices



CalMod
725 Box 3000
San Carlos, CA 95070-1300

Estimado vecino de Caltrain:

Durante los próximos tres meses, Caltrain estará trabajando en el corredor del ferrocarril en la zona para mejorar el servicio del Caltrain como parte del Proyecto de Modernización del Ferrocarril de California. Las actividades previstas durante este tiempo incluyen la instalación de infraestructura eléctrica, el reemplazo de los conductores de la línea, la instalación de sistemas de señalización y comunicación, y la construcción de pilas de prueba para probar el control para la instalación y operación del servicio de transporte modernizado. Después del completamiento de algunas, algunas actividades se trabajarán en las bases para el sistema antes de concluir.

Los trabajos tendrán lugar durante el día y la noche. Actividades de noche se realizarán entre las 8:00 p.m. y las 5:00 a.m. No dude en llamar por cualquier inconveniente que haya durante el día o por la noche. Para obtener más información sobre las actividades de noche, el equipo utilizará métodos de trabajo nocturno y utilizará luces azules de estacionamiento y áreas de estacionamiento.

El proyecto de electrificación permitirá que Caltrain opere más silenciosamente, más rápido, más frecuente, más seguro y con servicio más cómodo del tren. Mayor capacidad y mejor servicio ayudará a Caltrain a satisfacer la creciente demanda de servicio más seguro y a nivel de la capacidad de trabajo regular. Los nuevos trenes eléctricos están programados para operar en el 2021.

No debe preocuparse por las molestias que pueden sufrir mientras trabajamos para entregar estos beneficios críticos a nuestros consumidores.

Por favor visite nuestro sitio web en www.caltrain.com/PCEP para más actualizaciones de construcción. Gracias por su paciencia y comprensión.

Respectfully,
Paul Chen, Mail
157 Project
PMP
August 16, 2017

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Dear Caltrain Neighbor:

Over the next three months, Caltrain will be performing work on the railroad corridor in your area of the Peninsula Corridor Electrification Project. The anticipated activities during this time include testing soil conditions, inspecting signal/communication equipment, and tree trimming/removal to allow for the installation and operation of modernized transit service. After tree trimming/removal occurs, crews will be installing overhead contact systems.

Work will take place during the day and at night. Night activities will occur between 8:00 p.m. and 5:00 a.m. To mitigate noise and other impacts during nighttime activities, we will position lights away from residential, roadways, and business areas.

The electrification project will allow Caltrain to operate quieter, cleaner, more frequent and/or faster, and provide improved service to help Caltrain meet the increasing ridership demand. The new electric trains are scheduled to be operational in 2021.

We apologize for any inconvenience you might experience while we work to deliver these critical benefits to our communities.

Please visit our website at www.caltrain.com/PCEP for weekly construction notice updates. Thank you for your patience and understanding as we deliver these critical benefits to our communities.

Please visit our website at www.caltrain.com/PCEPconstruction to sign-up for weekly construction updates.

We appreciate your patience during construction.

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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
- Drilling 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/PCEPconstruction to sign-up for weekly construction updates.

We appreciate your patience during construction.





CalMod

Construction Contact Information

Email: calmod@caltrain.com

Phone: 650.399.9659

Toll Free: 800.660.4287

2121 S. El Camino Real, Suite A-100

San Mateo, CA 94403

9 a.m. - 6 p.m. Monday-Friday

www.caltrain.com/pcepconstruction

