

# Caltrain Electrification Update

**San Jose Transportation and Environment  
Committee  
May 1, 2023**

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# Caltrain Corridor Overview



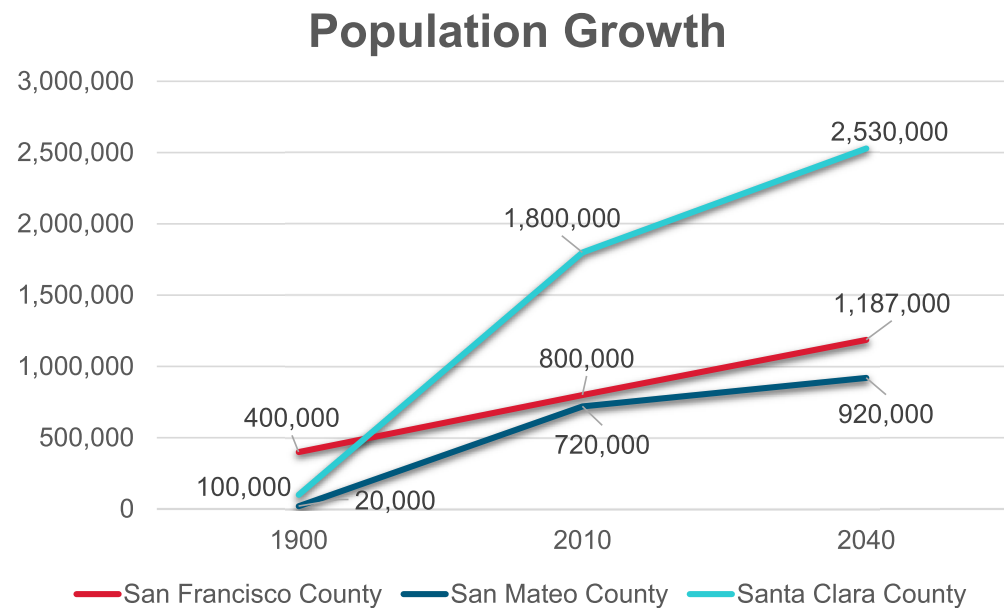
# Caltrain Corridor

- 77 miles of track from end to end
- 31 stations
- Bi-directional commute
- 41 at-grade crossings
- Pre-pandemic:
  - 7<sup>th</sup> largest commuter rail in the country
  - 70% farebox recovery
  - Over 18 million Unlinked Passenger Trips (UPT) in 2019
  - Frequently overcrowded trains, standing room only



# Corridor Growth 40% Increase

By 2040, an additional 1.2 million people will work and live within 2 miles of the Caltrain corridor.



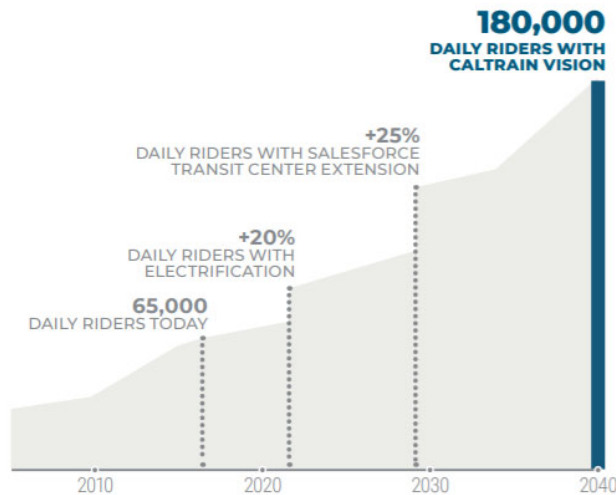
# 2040 Vision

## Zero Emission Future

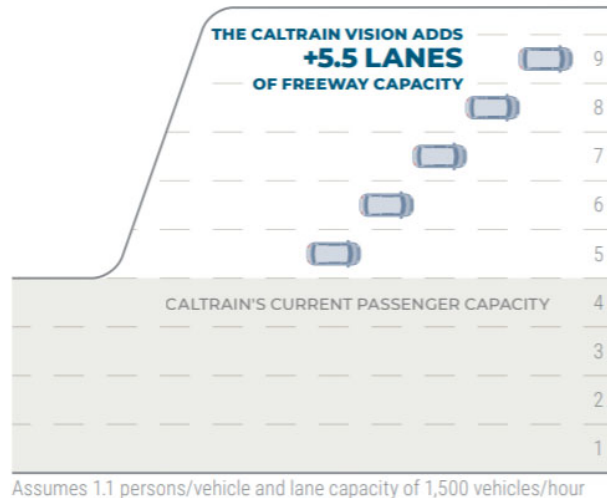
### MORE TRANSPORTATION CAPACITY



#### CARRYING MORE PEOPLE



#### TRAINS VS LANES



Caltrain's 2040 future service vision supports regional growth, arrival of high-speed rail, and more equitable, sustainable service.





# Transformational Moment

Electrification will help Caltrain become a cleaner, more efficient component of the transportation network.



Steam 1860s



Diesel 1950s to present



Electric 2024



# A Connected Future

- Electrified Caltrain corridor will enable additional investments expanding the Bay Area intercity rail network.
- Existing and future tenants
  - Capital Corridor (Amtrak)
  - Altamont Corridor Express
  - California High Speed Rail
- Expansion projects
  - San Francisco Downtown Extension
  - San Jose Diridon Station Rebuild
  - Grade Separations



California High-Speed Rail, Draft Business Plan, Pg. 23

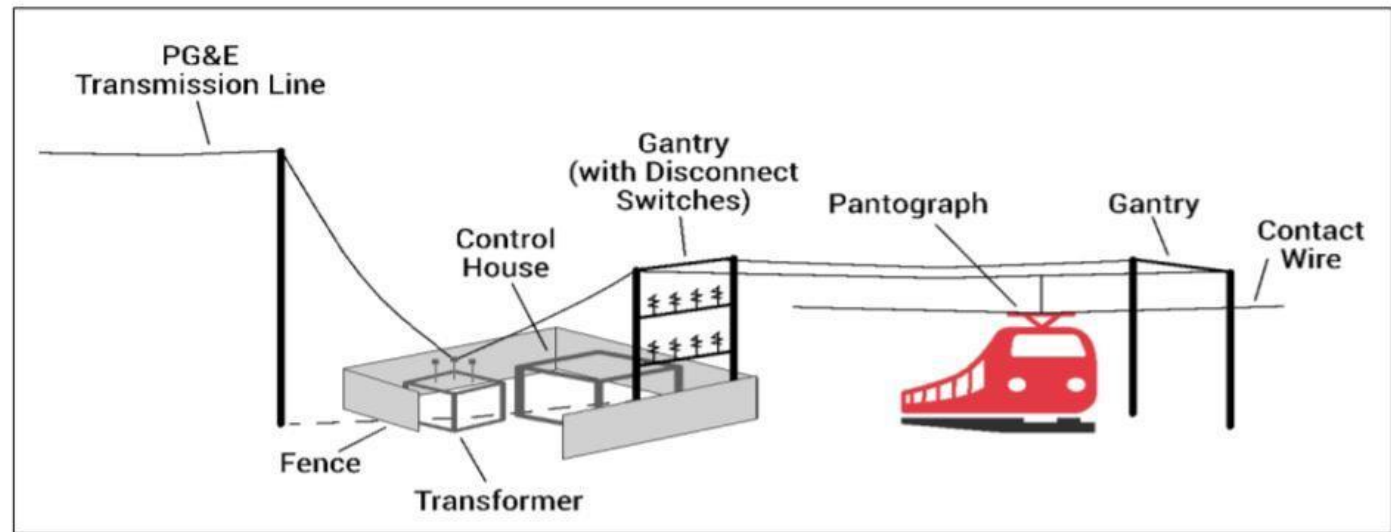
# Electrification Project Overview



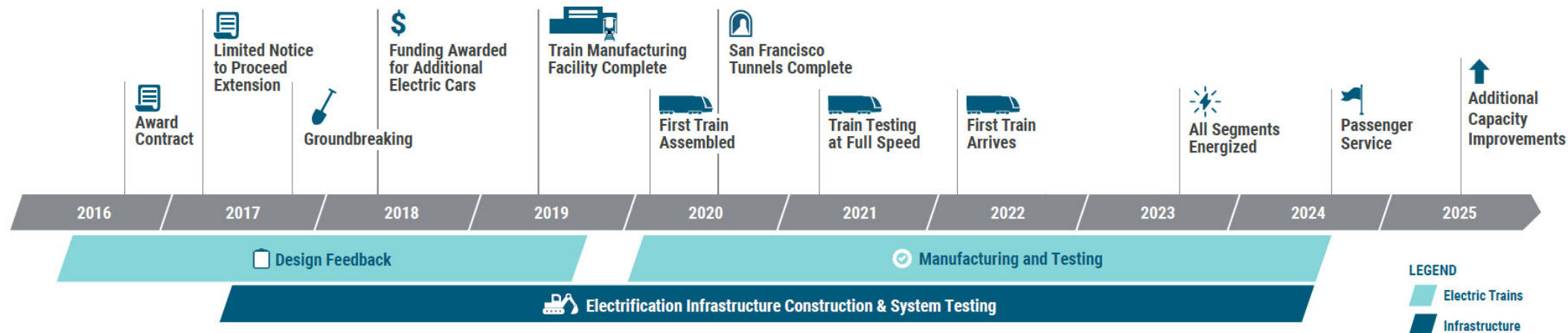
# Transition from Diesel to Electric

## First Electric Commuter Railroad in CA

- 25KV Overhead Contact System (used by high-speed rail system)
- 19 EMU 7-car trainsets (replaces 75% of diesel fleet)
- Two-Speed Check signal system (approved by FRA, UP and CHSRA)



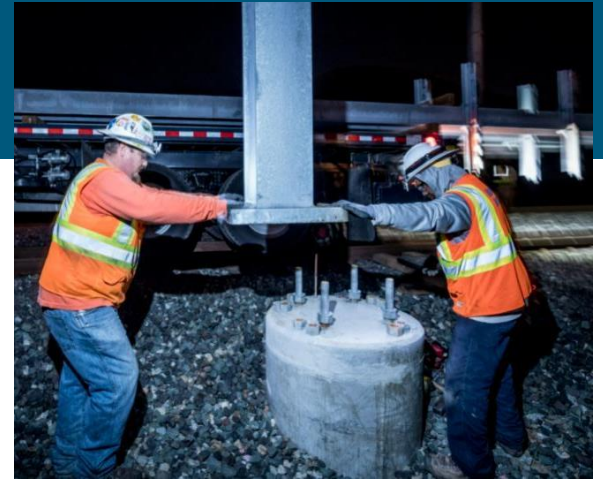
# Timeline



# Project Update

- **Foundations:** All 3,092 foundations complete (January 2022)
- **Poles:** 98% of all poles installed
- **Traction Power Facilities:** All 10 facilities to be completed 2023
- **Wire:** Installation to be completed Fall 2023
- **Signal Work / System Integration and Testing:** 2022-2024
- **Next Two Trainsets:** Expected Fall 2023

**Revenue Service: September 2024**



*Foundations*



*Electric Trains*





## Electric Trains Have Arrived! Public Tour Summer 2023



# Project Fully Funded!



**\$43M Federal**

**\$367M State**

**\$410M Total**





# Project Support

- US Senators: Feinstein, Padilla
- US Reps: Pelosi, Eshoo, Speier, Lofgren, Khanna
- State Senators: Wiener, Becker, Laird
- State Assembly: Mullin, Berman, Chui, Lee, Kalra, Ting, Low, Rivas, Wieckowski, Stone
- California Governor
- 21 Local Jurisdictions along the Corridor including Mayors Breed (San Francisco) and Liccardo (San Jose)
- Silicon Valley large and small employers; Labor
- Transportation and environmental advocates
- Caltrain riders





FOR MORE INFORMATION

[WWW.CALTRAIN.COM](http://WWW.CALTRAIN.COM)



# Background Information

# Electrification Project Benefits

# Safety

- Crash energy management technology (meets FRA Alternate Compliance requirements for mixed traffic).
- Crash absorption system protecting train driver and passengers (meets FRA crashworthiness standard).
- Latest generation of vehicle control systems including detailed diagnostic features.
- Improved braking performance.



# Sustainability

- Eliminates 2.09 million tons of carbon emissions.
- Future Caltrain will carry equivalent of 5½ lanes of freeway traffic.



## SUSTAINABILITY

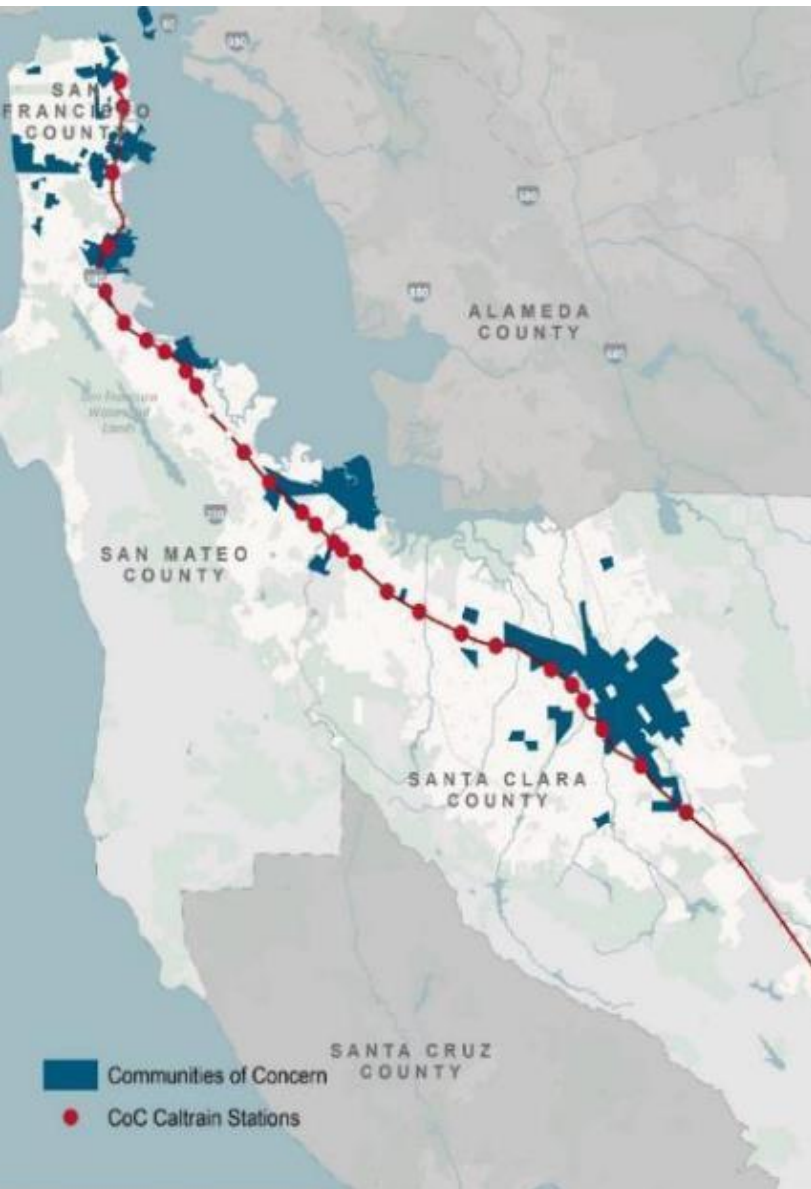
Replacing old diesel trains with new electric trains will reduce GHG emissions and improve air quality



# Energy Independence

- Reduce dependence on foreign energy sources; Rely on cleaner, renewable domestic energy sources.
- California committed to renewable and zero-carbon energy resources supplying 100% electric retail sales to customers by 2045.
- EMU trains include regenerative braking for additional energy savings



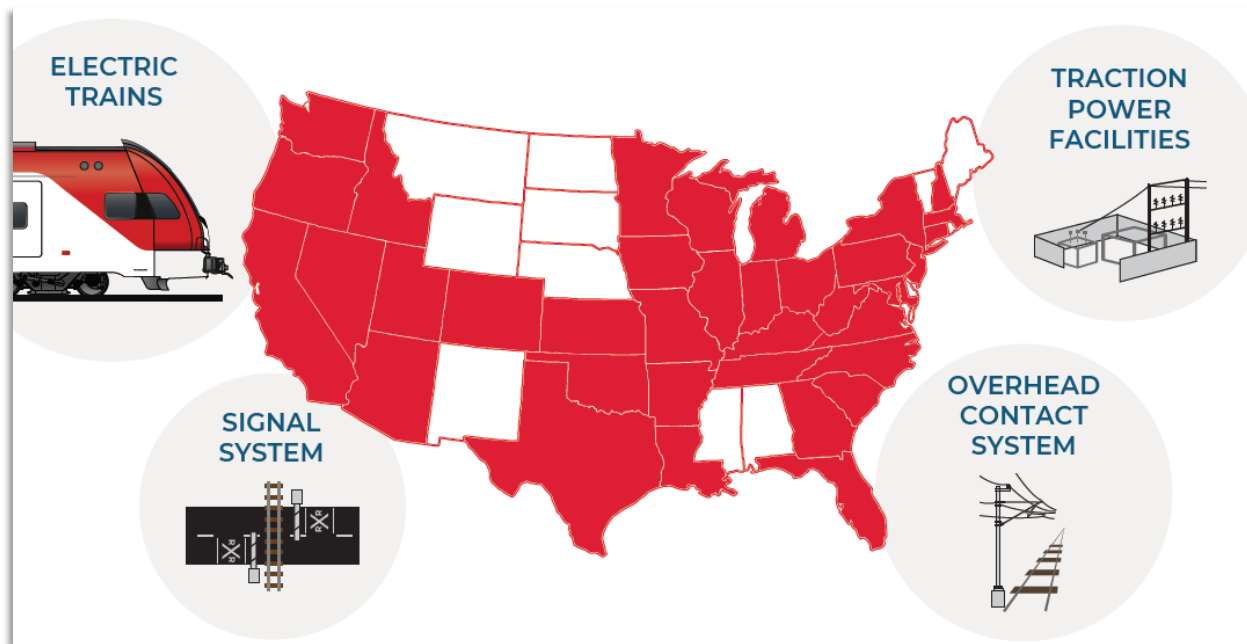


# Equity

- Decreases emissions and noise pollution in communities of concern
- Benefits disadvantaged communities:
  - San Francisco (Bayview)
  - Santa Clara
  - Redwood City
  - San Bruno
  - South San Francisco
- Improves mid-day and off-peak service for essential workers

# Economic Growth and Job Creation

33,000 Jobs Created in 36 States



# Buy America Compliant

- Stadler (Switzerland based company) opened **first facility in the US** with guarantee of Caltrain Electrification Project contract
- Stadler Salt Lake City Facility:
  - 400+ employees
  - Local apprenticeship program
- Additional foreign suppliers opening US locations in order to be Buy America compliant

