

Caltrain Electrification Update

San Francisco County
Transportation Authority
Board Meeting

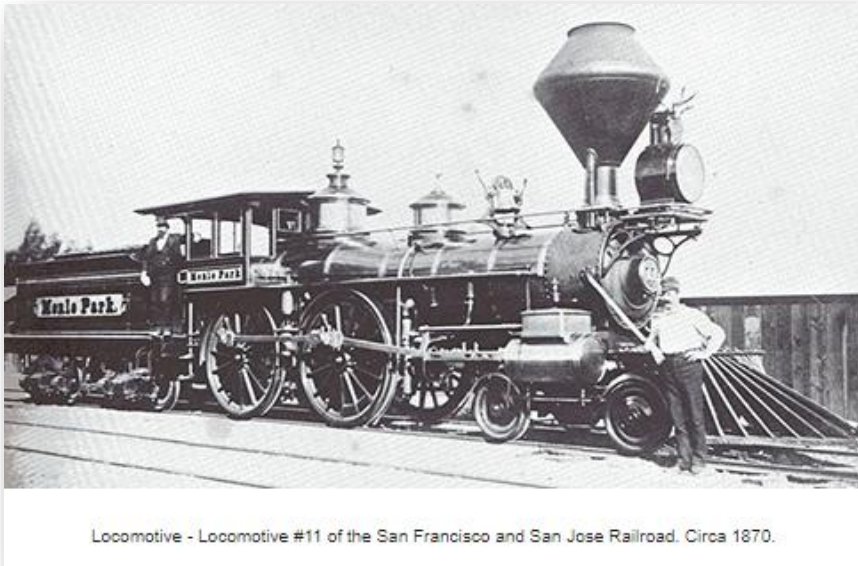
February 27, 2024



Transformational Moment

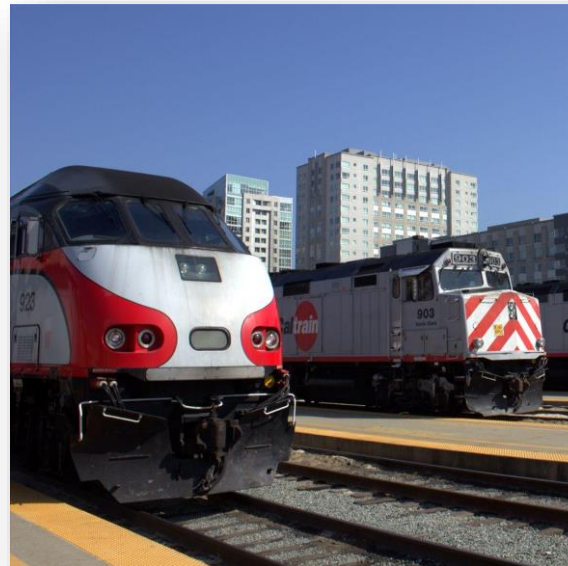
First Time in 30 years any US system fully converted from diesel to electric system

160-Year-Old History of Caltrain's Passenger Rail



Locomotive - Locomotive #11 of the San Francisco and San Jose Railroad. Circa 1870.

Steam 1860s



Diesel 1950s to present



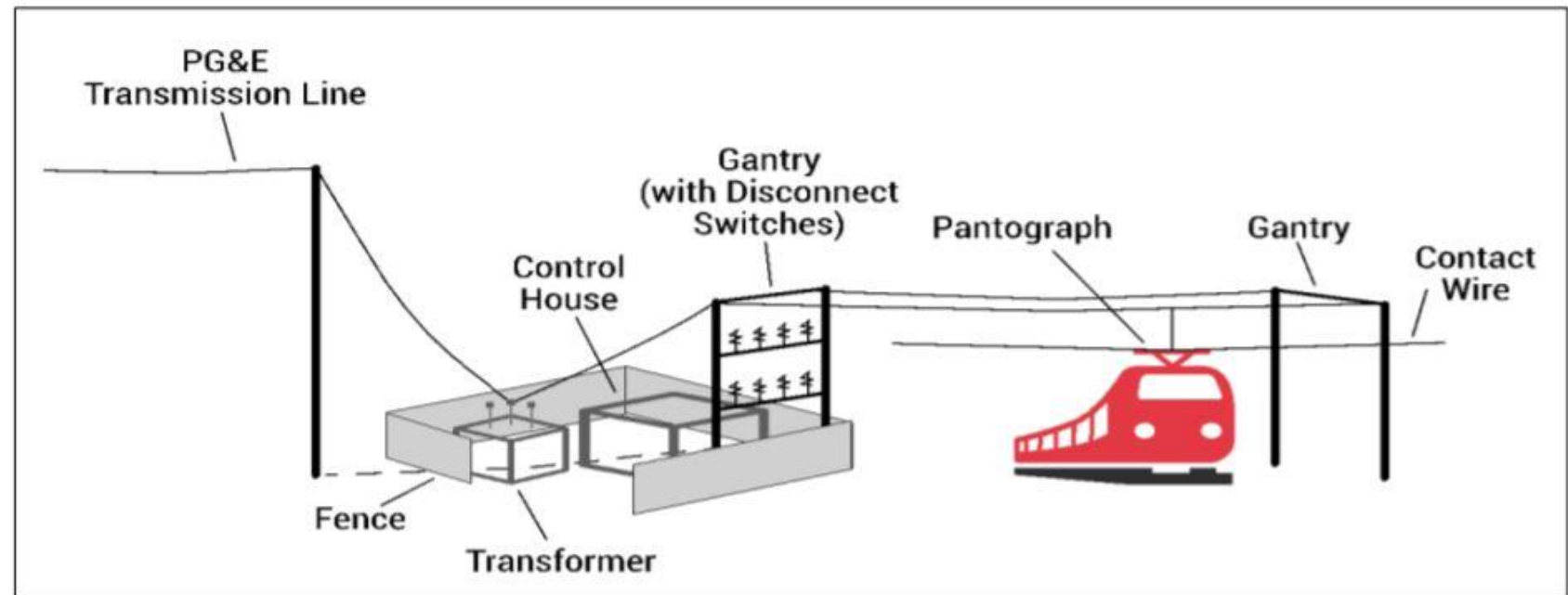
Electric 2024



Transition from Diesel to Electric

First Electric Commuter Railroad in CA

- 25KV Overhead Contact System (used by high-speed rail system)
- 23 Electric Trainsets
- Two-Speed Check signal system (approved by Federal Railroad Administration, Union Pacific and CA High Speed Rail)



Key Milestones

Complete:

- Foundations (3,000+)
- Poles (2,500+)
- Traction Power Facilities (10)
- Overhead Wire (2.5 million feet)
- Upgraded the Signal System San Francisco to San Jose (31 at grade crossings)
- Energized: Mountain View to San Jose (15 miles)
- 8 trainsets on Caltrain property (1,000 mile passed by 4 trains)
- Over 1,000 First Responders Trained



Upcoming:

- Repairs of Winter Storm Damage
- Full Corridor Energized (Spring 2024)
- Additional trainsets on property and testing (Spring - Fall 2024)
- Soft Launch (Summer 2024)
- **Passenger Service: September 2024**



Top Risks

- Contractor Quality Control and Quality Assurance
- Theft of Impedance Bonds Cables
- Contractor Overhead Contact System Productivity
- Traction Power Energization and Short Circuit Testing (TPS-1)
- Timely Completion of Integrated Testing and Live Runs

Project Budget

	(A)	(B)	(C)	(D)	(E)	(F) = (D) + (E)
Description of Work	Re-Baseline Budget	Current Budget	Cost This Month	Cost To Date	Estimate To Complete	Estimate At Completion
Electrification	\$1,097,149,881	\$1,094,958,881	\$5,228,468	\$1,024,348,284	\$68,980,596	\$1,093,328,881
EMU Procurement	\$556,072,601	\$564,986,271	\$4,620,386	\$462,211,880	\$102,774,391	\$564,986,271
Minor Construction Contracts (SSF, 25th Grade, Tunnel, CEMOF, SCADA, Non-BBI OCS)	\$67,055,072	\$68,091,194	\$0	\$64,972,201	\$2,353,867	\$67,326,067
Real Estate Acquisition & Support	\$34,914,177	\$34,914,177	\$292,003	\$24,883,289	\$10,030,889	\$34,914,177
PG&E, Utilities	\$132,088,994	\$132,088,994	\$6,388	\$207,547,623	-\$74,621,629	\$132,925,994
Management Oversight & Support	\$312,699,697	\$315,007,767	\$2,983,304	\$293,127,153	\$21,880,614	\$315,007,767
TASI Support	\$114,488,767	\$136,528,469	\$2,698,913	\$115,864,211	\$25,013,112	\$140,877,323
Finance Charges	\$9,898,638	\$9,898,638	\$373,315	\$11,009,861	\$458,669	\$11,468,530
Insurance	\$6,581,851	\$6,581,851	\$0	\$6,291,001	\$290,850	\$6,581,851
Other Required Projects & Services	\$9,084,176	\$10,484,176	\$21,341	\$6,014,442	\$4,669,734	\$10,684,176
Environmental Mitigation	\$14,438,866	\$13,038,866	\$2,882	\$1,307,851	\$9,961,123	\$11,268,974
Caltrain Capital Overhead (ICAP)	\$48,217,887	\$48,217,887	\$594,356	\$29,976,839	\$18,241,049	\$48,217,887
Contingency	\$40,000,089	\$7,893,525	\$0	\$0	\$5,102,797	\$5,102,797
Total	\$2,442,690,697	\$2,442,690,697	\$16,821,354	\$2,247,554,636	\$195,136,061	\$2,442,690,697

Notes: "Re-Baseline Budget" includes executed change orders and awarded contracts;

"Cost This Month" represents cost of work performed December 2023;

"Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) as of December 2023;

"Contingency" budget is drawn down and transferred to other elements after CMB approvals as reflected in the Estimate at Completion.



Project Contingency and Shared Risk Pool

Item	Amount	Drawn in December 2023	Drawn To Date	Amount Remaining
BBII Shared Risk Pool	\$50.00M	\$0.35M	\$15.40M	\$34.60M
Project Contingency	\$40.00M	\$0.00M	\$32.11M	\$7.89M
Total	\$90.00M	\$0.35M	\$47.51M	\$42.49M

Electrified Service Plan Benefits

Improved service for all riders



Get There Faster

Express from SF to SJ in under an hour

Quicker local service, 75 minutes instead of 100

Save nearly 30 minutes on trips from Southern Santa Clara County to SF



Ride More, Wait Less

Half-hourly service during weekends and off-peak, more service during peak

20% more train service

26% more train service at equity priority stations



First Class for Everyone

Free Wi-Fi

Smoother, quieter experience

Outlets at every seat

Digital trip information onboard

Spacious, accessible bathrooms



Clean and Green

GHG emissions reduced by 250K MTCO2 annually – equivalent to taking 55,000 cars off the road each year

Improves local air quality

Quieter trains, both onboard and off

Electrified Service Plan Benefits

San Francisco

FINAL ELECTRIFIED CALTRAIN SERVICE FOR SAN FRANCISCO

STATIONS	STATION STOPS	CURRENT SERVICE	ELECTRIFIED SERVICE
SAN FRANCISCO	Stops per Weekday	104	104
	Weekday Stops per Peak Hour*	4	4
	Weekday Stops per Off Peak Hour	2	2
22ND STREET	Stops per Weekday	91	104
	Weekday Stops per Peak Hour*	4	4
	Weekday Stops per Off Peak Hour	2	2
BAYSHORE	Stops per Weekday	46	75
	Weekday Stops per Peak Hour*	1	2
	Weekday Stops per Off Peak Hour	1	2

*PEAK HOURS VARY BY STATION, GENERALLY COVERING 6:30AM-9:30AM AND 3PM-7PM ON WEEKDAYS.
NOTE: TRAVEL TIMES MAY CHANGE PENDING FURTHER ELECTRIC TRAIN TESTING.

www.caltrain.com/servicebenefits

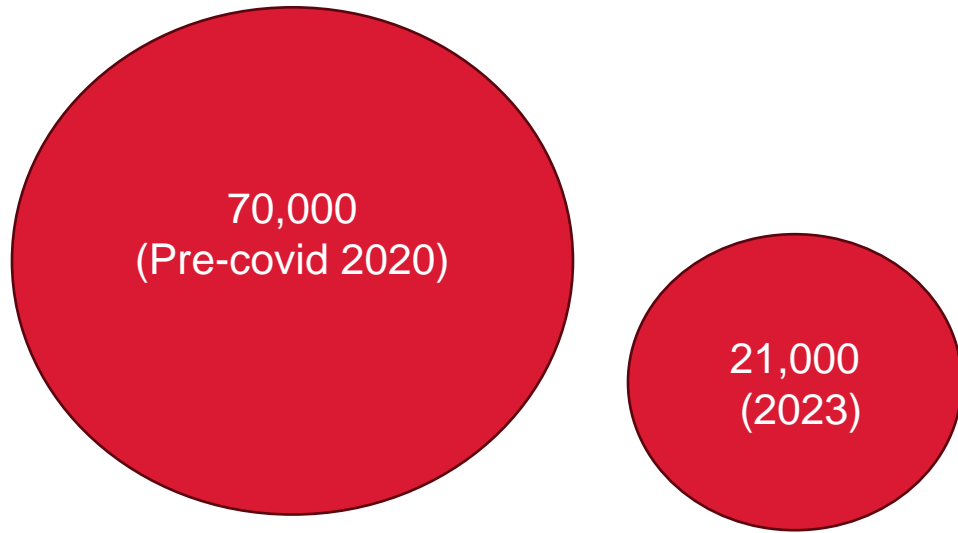


Electric Train Public Tours – Over 8,000 People Attended San Jose – August 2023; San Francisco – September 2023 (Photos Below); San Mateo County - Spring 2024



Caltrain Fiscal Cliff Update

Caltrain Ridership / Fiscal Challenges

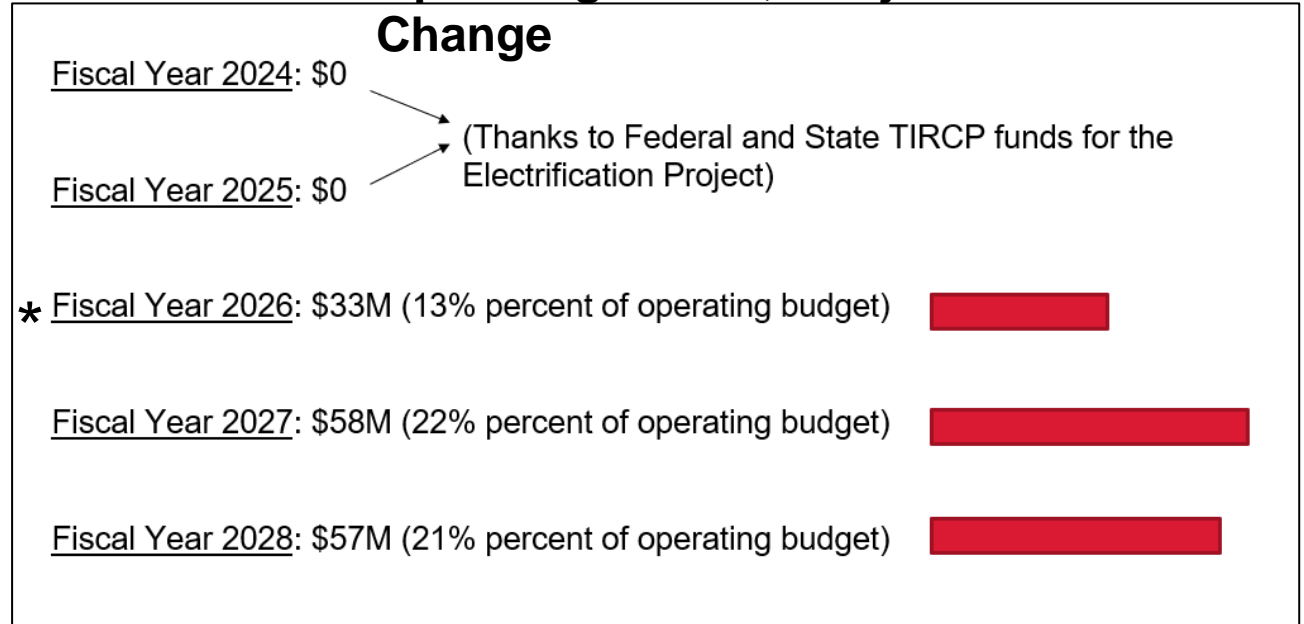


Average Daily Riders

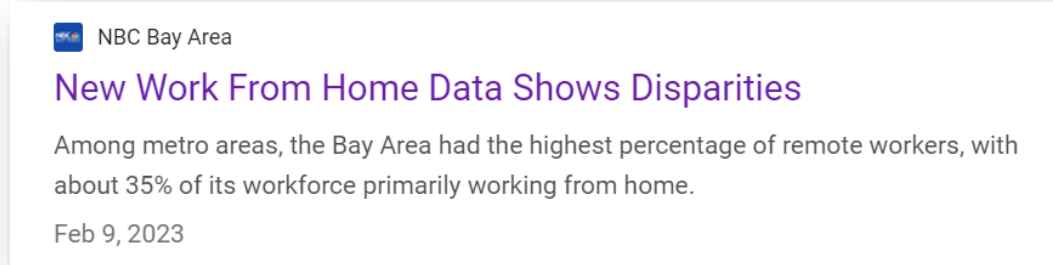
Notes:

- Farebox Recovery 74% (2020); 30% (2023)
- 20+ closures in 2023 for electrification construction
- Average weekday ridership increased by 14% compared to the same month in prior year

Operating Deficit, Subject to Change



* Current MTC recommendation \$25M, reduce deficit to \$8M in FY26



Ridership Growth / Cost Containment Actions

- Board Adopted **Equity, Growth, and Recovery Policy**
- **Revised schedule:** Standard and balanced schedule, focused on more midday, evening and weekend service (diversify ridership)
- **Regional Coordination:** coordinated transfers, better signage Millbrae, GM group, Bay Pass participation, Clipper Start
- **Pass Forward Program:** Bringing in new riders by providing free passes for low-income and equity priority community riders
- **Fare promotions:** \$1 youth; hybrid worker pass; 50% off ticket sales
- **Customer Experience:** 300 new bicycle eLockers, new ticket options, new visual display signs being installed, positive brand recognition
- **Cost Containment:** Smaller trainsets, scheduling efficiencies, reduced overtime
- **Electrification Planned 2024**



FOR MORE INFORMATION

WWW.CALTRAIN.COM



Caltrain Corridor Overview

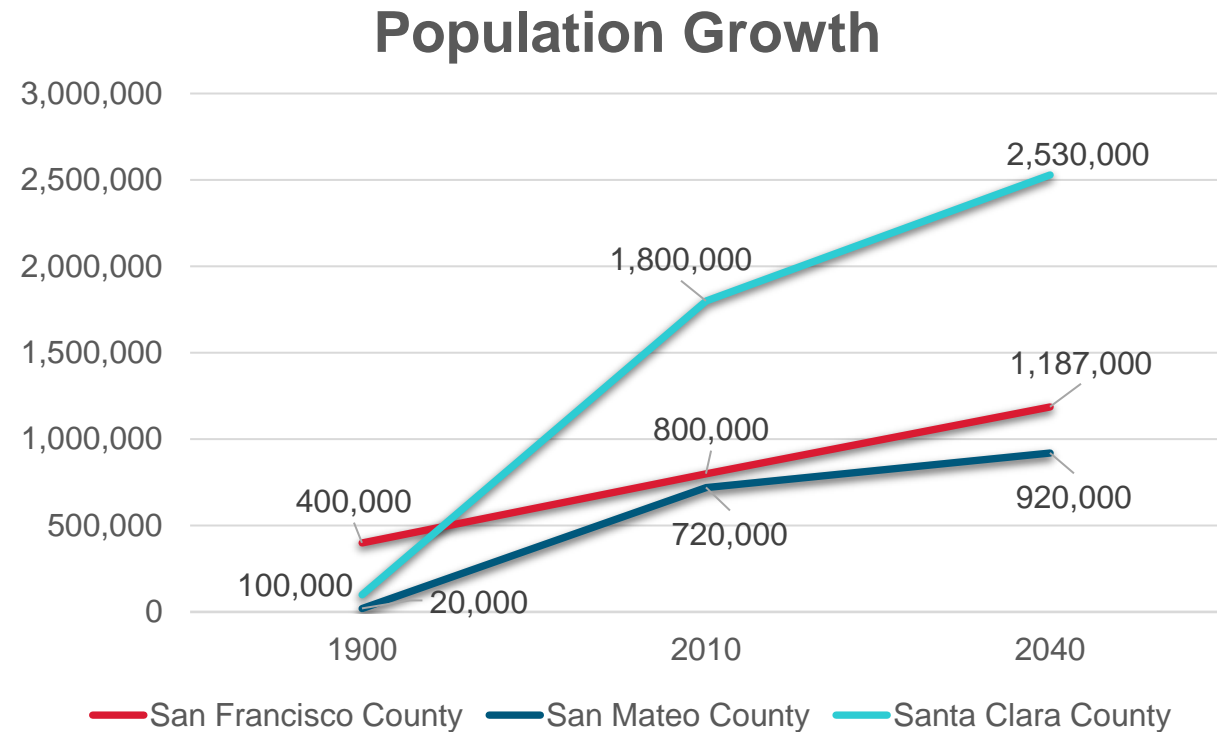
Caltrain Corridor

- 77 miles of track from end to end
- 31 stations
- Bi-directional commute
- 41 at-grade crossings
- Pre-pandemic:
 - 7th 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.



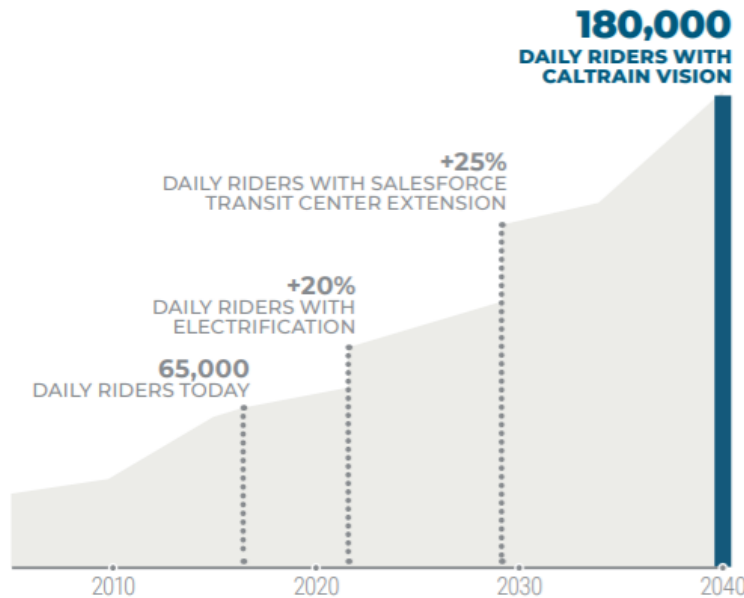
2040 Vision

Zero Emission Future

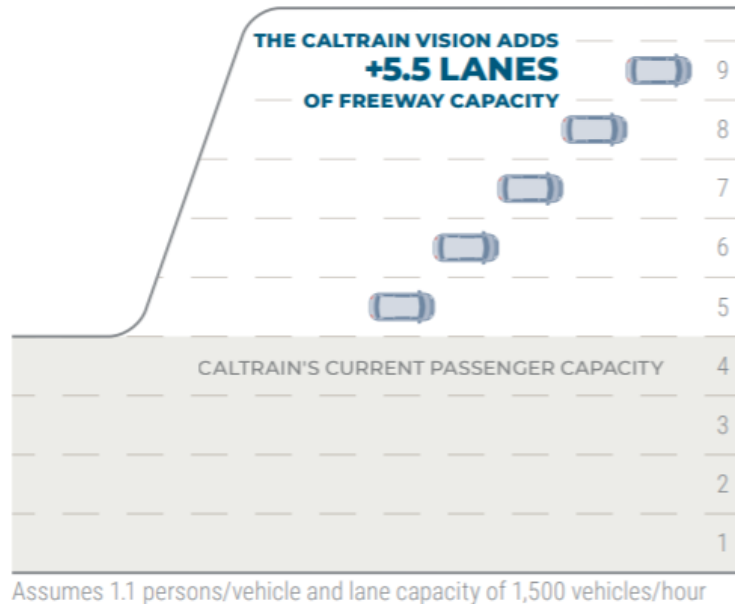
MORE TRANSPORTATION CAPACITY



CARRYING MORE PEOPLE



TRAINS VS LANES

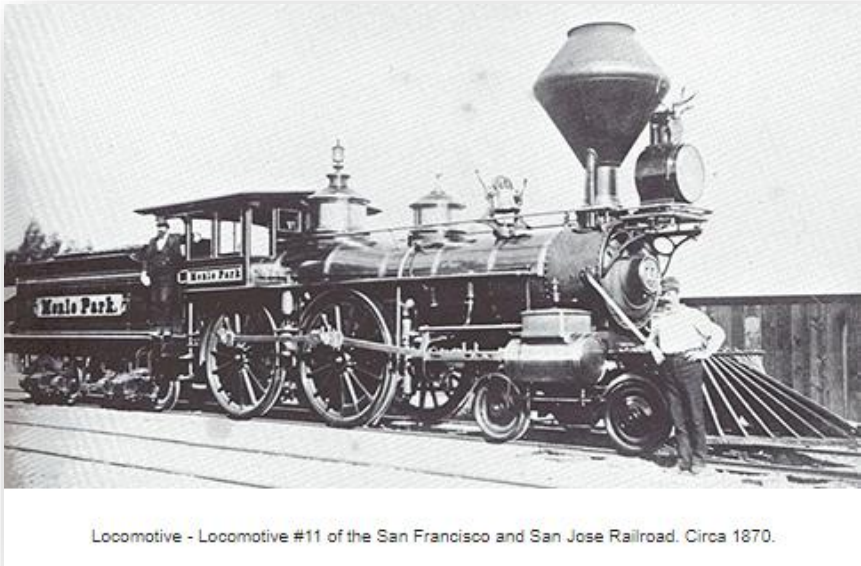


Caltrain's 2040 future service vision supports regional growth, arrival of high-speed rail, and more equitable, sustainable service.



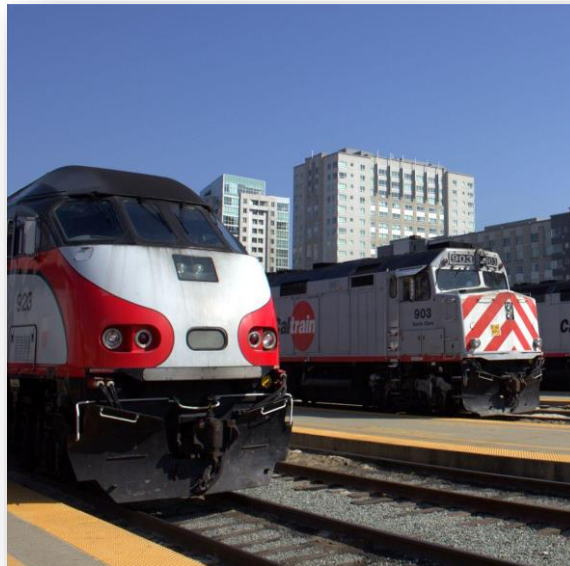
Transformational Moment

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



Locomotive - Locomotive #11 of the San Francisco and San Jose Railroad. Circa 1870.

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 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

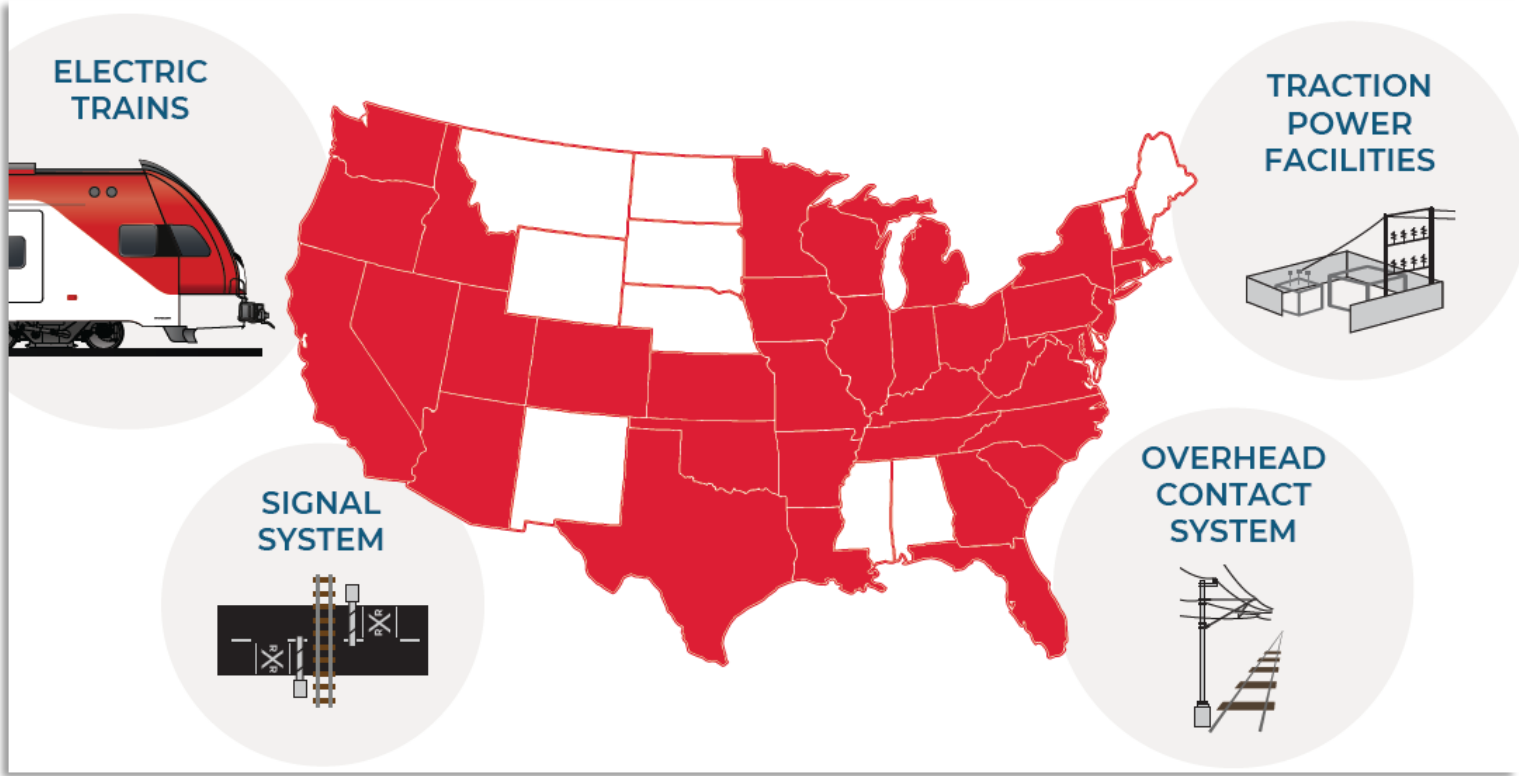


Equity

- 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

