A photograph of a red and white Caltrain train on tracks. The train is moving from left to right. The front of the train is red with the number 322. The side of the train is white with the Caltrain logo. Overhead power lines and a utility pole are visible. A metal fence is in the foreground.

# **Descriptions and Benefits for Caltrain 10-Year CIP Portfolio of Capital Projects and Programs**

# **B**

Appendix B provides descriptions of all projects and programs included in the CIP.

Projects and programs are listed in the same order as shown in Appendix A, grouped by Strategic Initiative and separated between Discrete Projects and Recurring Programs. Simplified financial information and timeframe data is also reflected in Appendix B, matching the data included in Appendix A:

- Total Capital Cost Estimate at Completion (EAC) and Total CIP 10-Year Funding Needs
  - » Costs are in FY2024 dollars
  - » Figures are rounded to the nearest million (M) or thousand (k), to one decimal place
  - » Recurring Programs will show an average amount per FY, where applicable
- Assumed FY start dates and ends dates
  - » Projects and programs that have been initiated are shown as “Ongoing” for the start date
  - » Recurring Programs that occur annually are shown as “Ongoing”
  - » Unknown dates are represented as To Be Determined (TBD)

The location of the project is identified, whether it is in a single county or corridor-wide.

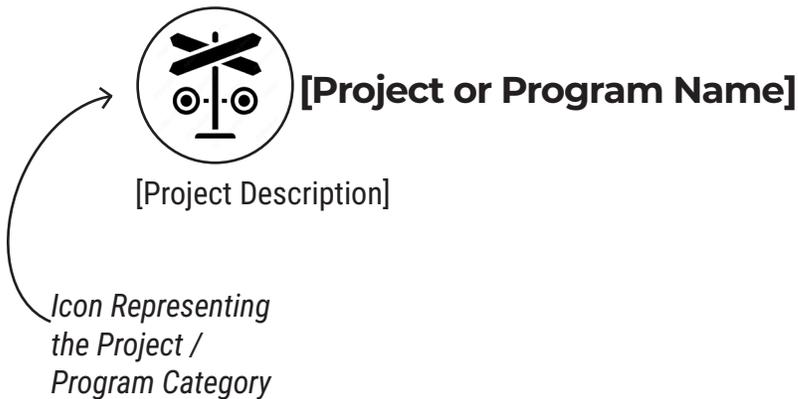
Project/Program categories represent the primary item being improved by the project or program and are identified with icons (**refer to legend on following pages**).

Appendix B also highlights the benefits that each capital project and program provide:

- The overall project benefit is either reflected as “Local” or “Systemwide” (**refer to page 02-6 of the CIP for a full definition of “Systemwide”**)
- The magnitude of the improvement the project or program provides within the four pillars – *Safety; Reliability; Accessibility; and Sustainability* – is presented as “Significant,” “Moderate,” “Minimal,” or “Not Applicable” based on the total score within each pillar (**refer to legend on following pages**)

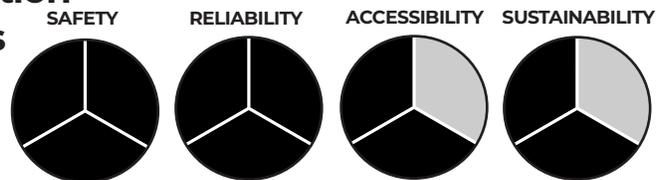
Key to elements included to describe each capital project and program...

# [Strategic Initiative] [Discrete Projects] or [Recurring Programs]



[County] or [Corridor-wide] Location  
[Local] or [Systemwide] Benefits

CIP 10-Year Funding Needs: [\$x]  
Total Capital Cost EAC: [\$x]  
or  
Average FY Funding Need: [\$x]  
Estimated Timeline: [FY20xx to FY20xx]

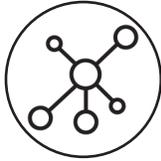


*Project Improvements:  
Symbols representing the magnitude of the improvement the project or program provides for each criterion.*

# Project/Program Category



*Bridges and Civil Structures*



*Connecting Service*



*Facilities*



*Grade Crossing*



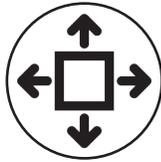
*Non-Revenue Vehicles*



*Planning Support/ Study*



*Rolling Stock*



*Service Expansion*



*Stations*



*Systems*



*Tracks, Yard, and Right-of-Way*

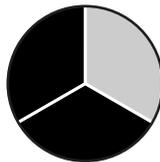
# Project Improvements

**Significant**



*Project or Program scored in the **top third (67% and above)** as providing a benefit to the criterion.*

**Moderate**



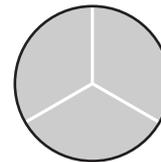
*Project or Program scored in the **middle third (34% to 66%)** as providing a benefit to the criterion.*

**Minimal**



*Project or Program scored in the **bottom third (33% and below)** as providing a benefit to the criterion.*

**None**



*Project or Program scored as **Not Applicable** to providing a benefit to the criterion.*

# Provide a Safe and Secure Railroad Discrete Projects



## Systemwide CCTV System - Replacement and Expansion

As part of the holistic measures to improve safety and security at grade crossings and throughout the Caltrain system, additional measures allow monitoring to assist in deploying assistance, as needed. The Systemwide CCTV System - Replacement and Expansion program will replace the old, obsolete CCTV system and integrate the soon-to-be-released FRA compliance requirement for CCTV. Cameras will be installed at critical locations, such as grade crossings, stations, and facilities, to proactively address any safety and security issues that may arise.

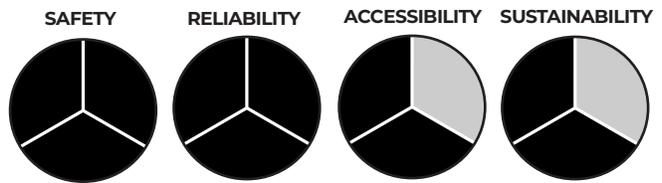
### Corridor-wide

#### Systemwide Benefits

CIP 10-Year Funding Needs: \$31M

Total Capital Cost EAC: \$33M

Estimated Timeline: Ongoing to FY2029



## San Mateo Grade Crossing Improvements

This project will design and implement safety improvements at 4th and 5th Avenues in Downtown San Mateo including four-quadrant gates, which will improve safety and visibility for motorists, pedestrians, and trains while reducing the likelihood of collisions at the crossing.

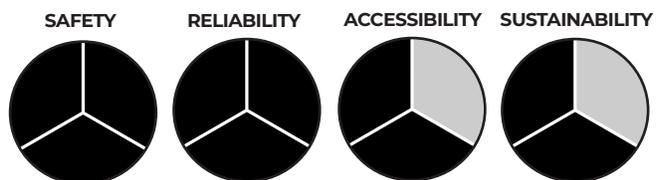
### San Mateo County

#### Local Benefits

CIP 10-Year Funding Needs: \$0

Total Capital Cost EAC: \$5.5M

Estimated Timeline: Ongoing to FY2025



# Provide a Safe and Secure Railroad Discrete Projects



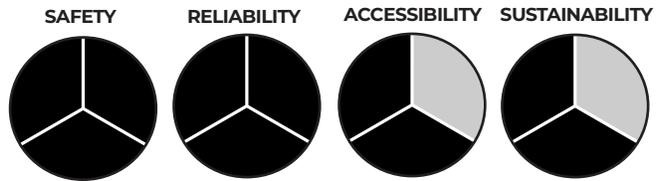
## Churchill Avenue Grade Crossing Improvements

This project will implement safety improvements at one at grade crossing located on Churchill Avenue in Palo Alto. Improvements will include widening the northern pedestrian crosswalk and holding area, adding new 10-foot concrete track panels on the north end, modifying the existing pedestrian gates, installing pavement markers and markings to clearly identify the railroad tracks, and adding advanced signal preemption. This crossing improvement is also part of the Intrusion Detection Pilot Program.

### Santa Clara County

#### Local Benefits

CIP 10-Year Funding Needs: \$0  
 Total Capital Cost EAC: \$2.5M  
 Estimated Timeline: Ongoing to FY2025



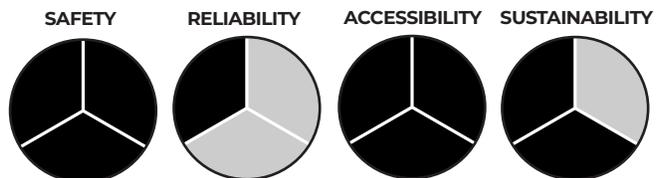
## Intrusion Detection Program

The Intrusion Detection Program Pilot Program will plan, procure, and install hardware along the right-of-way at critical locations, such as grade crossings, tunnels, and other high-risk right-of-way locations, to detect trespasser activities and enable quick and efficient response. Upon successfully completing the pilot program, the *Safety and Security Strategic Plan* findings will inform other locations where Caltrain can apply the intrusion detection technology. CCTV cameras will fill the gaps where Caltrain does not install intrusion detection technology.

### Corridor-wide

#### Systemwide Benefits

CIP 10-Year Funding Needs: \$3.5M  
 Total Capital Cost EAC: \$5.2M  
 Estimated Timeline: Ongoing to FY2027



# Provide a Safe and Secure Railroad Discrete Projects



## Security Assessment and Improvement at Critical Locations

This program will assess the improvements needed to secure critical areas of the Caltrain system, which includes the San Francisco 4th and King Yard, CEMOF, Diridon-San José Station, and Millbrae Station. Improvements will include strategically placed camera and server replacements and additional safety measures, such as new fencing to ensure the new trains are fully secured.

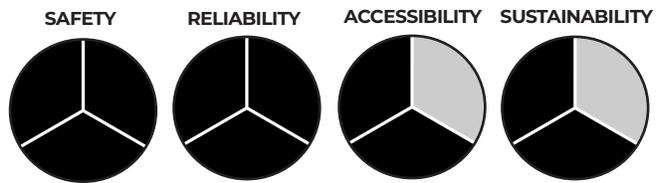
### Corridor-wide

#### Systemwide Benefits

CIP 10-Year Funding Needs: \$0

Total Capital Cost EAC: \$1M

Estimated Timeline: Ongoing to FY2025



## Safety and Security Strategic Plan

The Safety and Security Strategic Plan aims to identify high-risk safety and security items and develop strategies to mitigate them. Pilot projects inform the Strategic Plan, which also identifies several capital projects, such as right-of-way improvements, signage, lighting, fencing, and technology provisions to provide a safe and secure railroad for all.

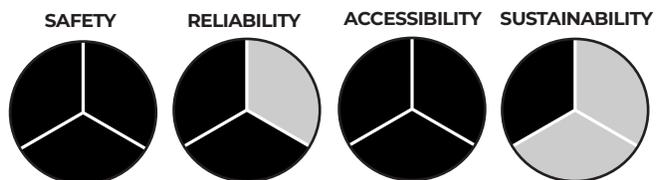
### Corridor-wide

#### Systemwide Benefits

CIP 10-Year Funding Needs: \$500k

Total Capital Cost EAC: \$1M

Estimated Timeline: FY2025 to FY2026



# Provide a Safe and Secure Railroad Discrete Projects



## Main Street Grade Crossing Improvements

This project will implement safety improvements at one at grade crossing located on Main Street in Redwood City, which was identified in the 2021 Caltrain Grade Crossing Hazard Analysis Report. Improvements to the crossing may include pavement markers and marking, signage, channelization, and signaling.

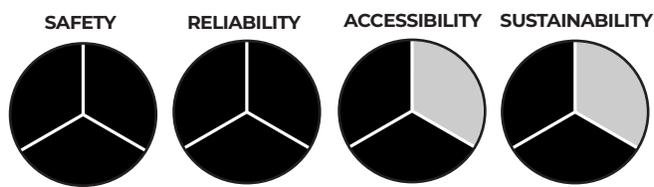
### San Mateo County

#### Local Benefits

CIP 10-Year Funding Needs: \$3M

Total Capital Cost EAC: \$3.5M

Estimated Timeline: FY2025 to FY2028



## Grade Crossing Improvements (Various Locations)

This legacy project implements safety improvements at five different at grade crossings, based on findings from the 2021 Caltrain Grade Crossing Hazard Analysis Report:

1. 16th Street, San Francisco
2. Mission Bay, San Francisco
3. East Meadow, Palo Alto
4. Whipple Avenue, Redwood City
5. Ravenswood Avenue, Menlo Park

Safety improvements for each at grade crossing location include pavement markers and marking, signage, channelization, and signaling.

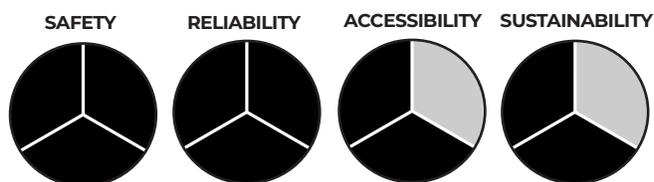
### Corridor-wide

#### Local Benefits

CIP 10-Year Funding Needs: \$0

Total Capital Cost EAC: \$1.54

Estimated Timeline: Ongoing to FY2026



# Provide a Safe and Secure Railroad *Discrete Projects*



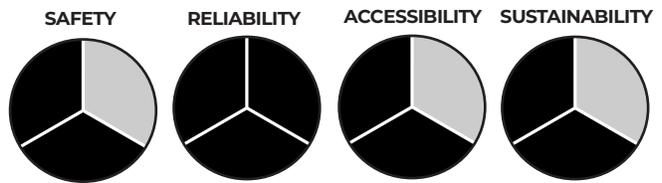
## Charleston Road Grade Crossing Improvements

This project will implement safety improvements at one at grade crossing located on Charleston Road in Palo Alto, which was identified in the *2021 Caltrain Grade Crossing Hazard Analysis Report*. Improvements for this intersection include advanced signal preemption, replacement of grade crossing warning devices, and installation of new pedestrian gates with flashers.

### Santa Clara County

#### Local Benefits

CIP 10-Year Funding Needs: \$2.1M  
 Total Capital Cost EAC: \$2.9M  
 Estimated Timeline: Ongoing to FY2028



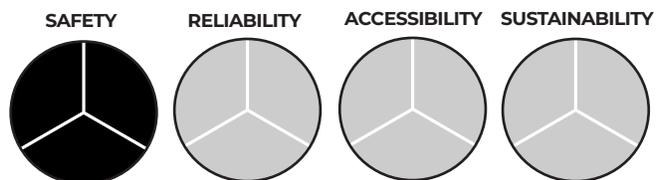
## RWP Safety Program Technology Upgrade

This program includes the design, implementation, and testing of a RWP Safety System to protect workers in the Caltrain right-of-way. The system will provide continuous communication between the workers and the Central Control Center and will be integrated with the Caltrain PTC system. This project will be an enhancement of the system currently in place.

### Corridor-wide

#### Systemwide Benefits

CIP 10-Year Funding Needs: \$19.5M  
 Total Capital Cost EAC: \$19.5M  
 Estimated Timeline: FY2027 to FY2029



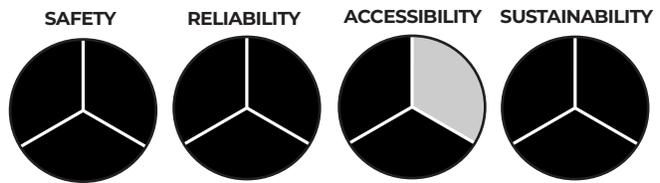
# Provide a Safe and Secure Railroad Recurring Programs



## Right-of-Way Fencing

This program supports the installation of 9.5-foot-tall, vandal-resistant fencing with barbed wire at the top along the full length of the corridor to provide a barrier to and reduce trespassing along the Caltrain right-of-way. Implementation of this program will fulfill Caltrain’s long-term goal of ensuring continuous fencing on at least one side along the entire corridor to reduce intrusion in the right-of-way.

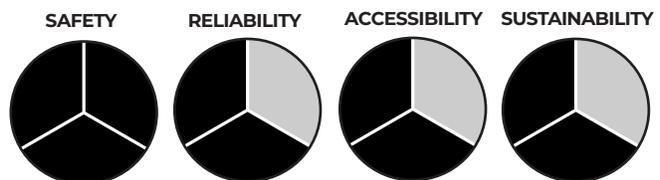
**Corridor-wide Systemwide Benefits**  
 Average FY Funding Need: \$2M  
 Estimated Timeline: Ongoing



## Corridor Crossing Strategy - Programmatic Delivery

The Corridor Crossings Strategy was originally identified as part of the Caltrain Business Plan to enhance the current grade separation process and develop corridor-wide consensus on a strategy to deliver grade separation projects at the regional scale. Currently, projects are implemented on a project-by-project basis, and funding is largely first come, first served. This effort will be a partner-led and directed process. The Crossings Delivery Guide will be developed as a user-friendly, web-based guide to clearly define processes, procedures, roles, and responsibilities of Caltrain and local partners in implementing the grade separation or closure of an existing crossing.

**Corridor-wide Systemwide Benefits**  
 Average FY Funding Need: \$7M FY26;  
 \$3.5M FY27-FY30  
 Total Capital Cost EAC: \$21M  
 Estimated Timeline: FY2026 to FY2030



# Provide a Safe and Secure Railroad *Recurring Programs*



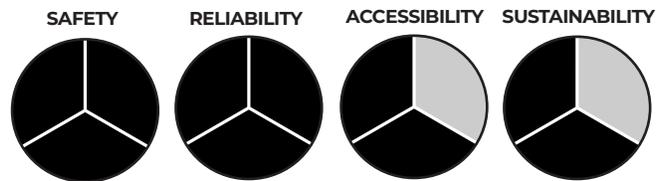
## Grade Crossing Improvements Program

The Grade Crossing Improvements Program encapsulates future Grade Crossing Improvement projects that will be sequenced through the next *Grade Crossing Hazard Risk Analysis* processes. Caltrain promotes at grade crossing safety improvements through its Hazard Analysis process, which is performed every three to four years and allows Caltrain to quantify crossing hazards and prioritize mitigation measures to improve crossing safety. Caltrain recognizes that grade crossings require ongoing maintenance and improvements along the entire corridor. This program is part of a holistic approach to maintaining grade crossing safety.

### Corridor-wide

#### Local Benefits

Average FY Funding Need: \$500k  
Estimated Timeline: Ongoing



# Maintain Core Services

## Discrete Projects

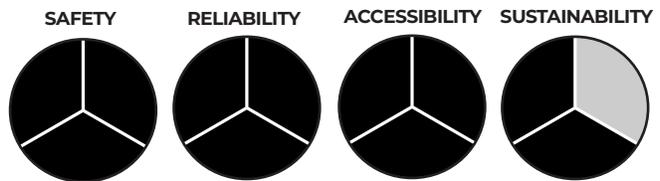


### Network Architecture Redesign

The Network Architecture Redesign project will address network design limitations in terms of redundancy, resiliency, and scalability, especially when bringing online new systems such as traction power Supervisory Control And Data Acquisition (SCADA) control systems, CCTV, and connecting the Caltrain stations to the fiber backbone. This projects seeks to evaluate and improve the network design by introducing more nodes and redundant communication pathways to reduce the impact of single-point failures that result in train delays and catastrophic downtimes.

#### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$4M  
Total Capital Cost EAC: \$4M  
Estimated Timeline: FY2026 to FY2028

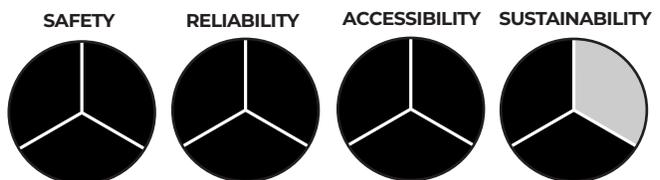


### Fiber Optic Permanent Repair

Fiber optic is the backbone of all critical operational train control systems and broadband communication infrastructure for safe train movements. The fiber optic infrastructure connects the dispatch centers, central office, and cloud services for system redundancy, resiliency, cybersecurity, and disaster recovery in major outages or cyber-attacks. The current fiber optic network has deteriorated and sustained damage requiring temporary repairs; therefore, Caltrain must complete the Fiber Optic Permanent Repair as soon as possible.

#### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$4M  
Total Capital Cost EAC: \$8M  
Estimated Timeline: FY2025 to FY2026



# Maintain Core Services

## Discrete Projects

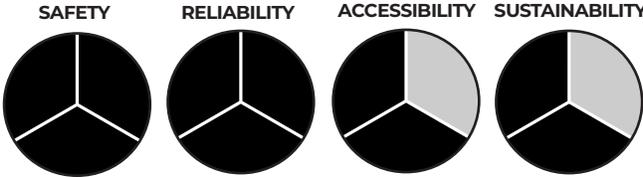


### PTC BOS - Technology Refresh and Replacement

PTC is the FRA-mandated train control safety system that controls train movement in the event of human error. The PTC BOS - Technology Refresh and Replacement project will procure a new PTC BOS that is modern, supported, and meets evolving industry standards. Caltrain procured the current PTC system in 2019 and it is nearing technological obsolescence.

#### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$2M  
 Total Capital Cost EAC: \$2M  
 Estimated Timeline: FY2027 to FY2028

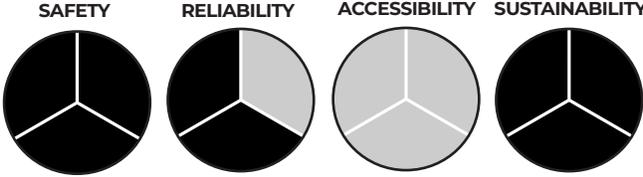


### Guadalupe Bridges Replacement

This project will address the structural vulnerability of two existing bridges that accommodate the Caltrain main tracks (MT1 and MT2), spanning the Guadalupe River in San José. The project will upgrade and extend the bridge structures to ensure long-term public safety and service reliability. It will also make environmental improvement to the Guadalupe River by widening and stabilizing the river channel. The MT1 bridge has been structurally damaged by multiple fires and has reached the end of its useful life; it will be fully replaced with a modern 265-foot bridge to meet structural design standards and seismic criteria. The MT2 bridge will be partially replaced and extended to 250 feet to gain resilience against river flow speeds and bank erosion. This project will also relocate communications and fiber optic lines and enable extensive channel grading and stabilization.

#### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$22.5M  
 Total Capital Cost EAC: \$77.3M  
 Estimated Timeline: Ongoing to FY2026



# Maintain Core Services

## Discrete Projects

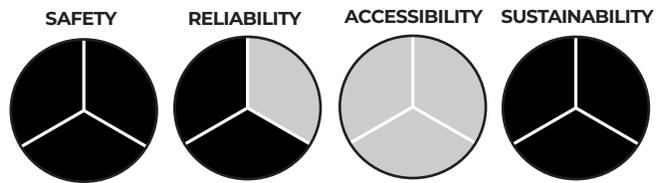


### San Francisquito Creek Bank Stabilization

The purpose of this project is to restore and protect the northern bank of the San Francisquito Creek to prevent erosion from undermining an abutment of Caltrain’s Bridge, the City of Palo Alto’s Alma Street Bicycle Bridge, and the City of Menlo Park’s existing drain outfall. Heavy rain events eroded the soil on the creek bank supporting the northern abutment of the bridge. Further investigation showed that additional erosion resulting from future storms could undermine the abutment, bridge, and tracks. An emergency was declared to support immediate action to protect the bridge and other nearby public assets. In November 2023, Caltrain implemented temporary stabilization measures, which protected Caltrain’s rail bridge during the winter while Caltrain pursued the final permit for a permanent stabilization solution.

#### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$5.46M  
 Total Capital Cost EAC: \$9M  
 Estimated Timeline: Ongoing to FY2026

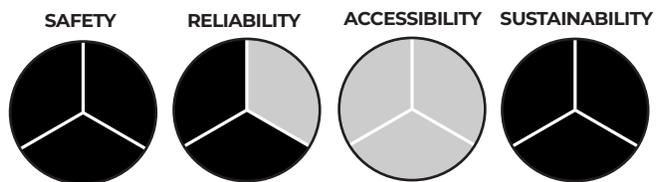


### San Francisquito Creek Bridge Replacement

The San Francisquito Creek Bridge carries two mainline tracks across one bridge structure. Built in 1902, the San Francisquito Creek Bridge is one of the oldest assets along the Caltrain corridor and has reached the end of its useful life. Additionally, the bridge location has been experiencing severe storms and high creek flows that have eroded the soil on the northern creek bank that supports the bridge. Caltrain is currently implementing temporary stabilization to the creek bank. The permanent replacement project is designed to maintain safe rail operations over the bridge, as well as protect the creek itself. It will reinforce the creek’s bank that also supports the Alma Street Bicycle Bridge and the Menlo Park drainage outfall. In addition, the project will make aesthetic enhancements.

#### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$136.5M  
 Total Capital Cost EAC: \$145.6M  
 Estimated Timeline: Ongoing to FY2034



# Maintain Core Services

## Discrete Projects



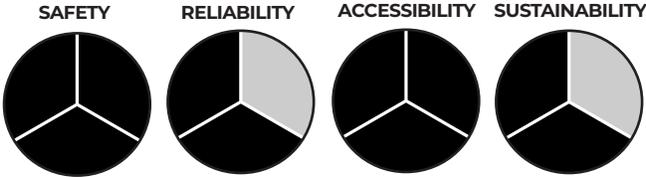
### PADS Phase 1: Gap Coverage and Enabling Work

PADS is a back-end system that receives input from the ROCS and provides output to passenger information systems such as the PA, VMS, and LCDs at stations. The existing PADS was designed in 2012 and deployed in 2014. It relies primarily on track circuit occupancy information, and then leverages the Global Positioning System (GPS) data to refine a train’s location. Track circuit occupancy information has less accuracy compared with GPS data, so a new modernized system is warranted.

The first phase of the overall PADS is included in the Strategic Initiative to maintain core services, which will create the technical specification for the request for proposal (RFP) package to implement the modernized system as the second phase.

#### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$480k  
 Total Capital Cost EAC: \$2.1M  
 Estimated Timeline: Ongoing to FY2026

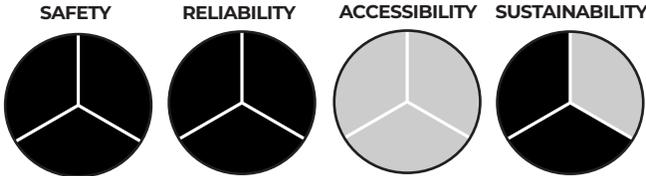


### Control Centers Power Resiliency and Enhancement

project represents the initial phase of a larger effort to overhaul and modernize Caltrain’s train control data center infrastructure necessary to deliver revenue service. The project focuses first on improving the existing SOGR by procuring a replacement UPS at the SJCC, which is well beyond its useful life, is undersized, and has failed multiple times since 2022. This project will then evaluate the existing system and provide recommendations for infrastructure and system enhancements at both the MPCC and the SJCC.

#### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$5M  
 Total Capital Cost EAC: \$5M  
 Estimated Timeline: FY2026 to FY2029



# Maintain Core Services

## Discrete Projects

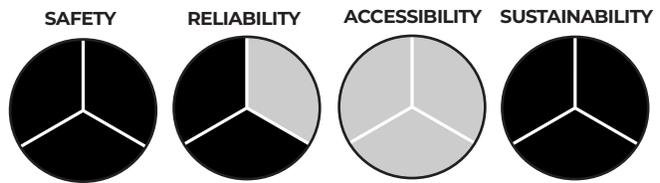


### Concrete Tie Program

This three-year program includes the purchase and installation of 6,000 main line concrete crossties a year to replace wood crossties, which benefit Caltrain by being a longer-lasting and more climate-resilient material that would need replacement less often than wood ties. This project is a breakout element from the MOW Tracks SOGR Program.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$6M  
 Total Capital Cost EAC: \$9M  
 Estimated Timeline: Ongoing to FY2027

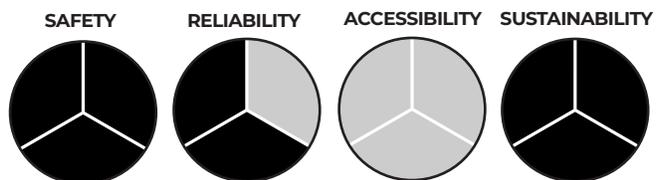


### Tunnel 1, 2, 3 and 4 Weep Hole Rehabilitation and Drainage Improvements

This project will rehabilitate the weep holes along Tunnel 1, 2, 3, and 4 and improve the drainage system to maintain the tunnels in a state of good repair. Tunnel rehabilitation is critical in ensuring service throughout Caltrain’s corridor.

### San Francisco County Systemwide Benefits

CIP 10-Year Funding Needs: \$3.5M  
 Total Capital Cost EAC: \$3.5M  
 Estimated Timeline: FY2026 to FY2027



# Maintain Core Services

## Discrete Projects

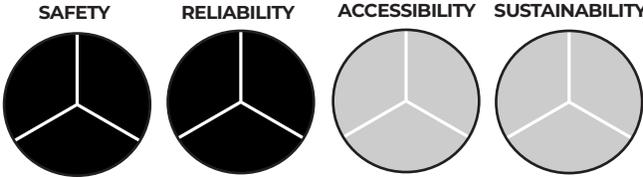


### Computer Aided Dispatch System Replacement

This project will procure a new computer-aided dispatch system that will keep system features up to date with more recent technology. The existing dispatch system is a key component of the PTC system but has reached technical obsolescence and it is getting increasingly difficult to add features. Modernized dispatch system will make it easier to increase service in the future.

#### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$4M  
 Total Capital Cost EAC: \$4M  
 Estimated Timeline: FY2028 to FY2029

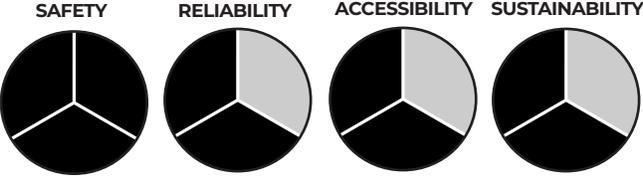


### 4th and King Station Building Corrosion Repair

This project remediates the corrosion of the building frame at the 4th and King Station to ensure the safety of Caltrain passengers and staff.

#### San Francisco County Local Benefits

CIP 10-Year Funding Needs: \$20M  
 Total Capital Cost EAC: \$20M  
 Estimated Timeline: FY2026 to FY2031



# Maintain Core Services

## Discrete Projects

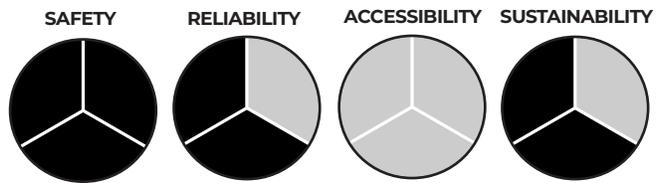


### MP-36 Locomotive Mid-Life Overhaul

This project enables the mid-life overhaul of six MP-36 locomotives and occurs off-site at the contractor's facility location. This project requires staggered scheduling of the overhauls to ensure locomotives are available for revenue service while others are being worked on. The MP-36 will continue to be in operation for the service to Gilroy after the start of the electrified service.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$0  
Total Capital Cost EAC: \$14.5M  
Estimated Timeline: Ongoing to FY2025

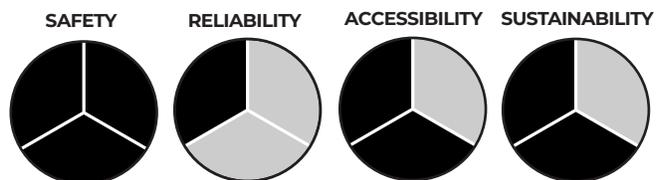


### Enterprise GIS Software Implementation

This program will evaluate needs, facilitate procurement, and implement an Enterprise GIS that will centralize, modernize, map, integrate, and augment existing tools and resources to deliver comprehensive, current, and accurate data about Caltrain's assets and right-of-way.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$1M  
Total Capital Cost EAC: \$4.5M  
Estimated Timeline: Ongoing to FY2026



# Maintain Core Services

## Discrete Projects

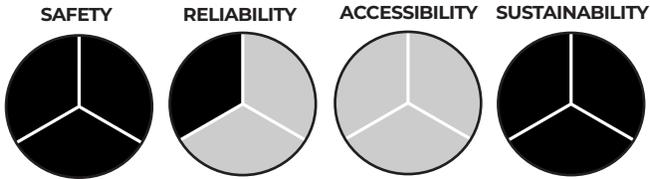


### SSF Yard Drainage Improvements

This project will identify recommendations to rehabilitate the drainage throughout the SSF Yard and reconstruct yard tracks, retaining walls, right-of-way fencing, and enable better access throughout the yard for vehicles and personnel. This project will improve the safety of the employees working in the right-of-way as well as Caltrain’s tenants.

### San Mateo County Systemwide Benefits

CIP 10-Year Funding Needs: \$5M  
 Total Capital Cost EAC: \$5M  
 Estimated Timeline: FY2026 to FY2030

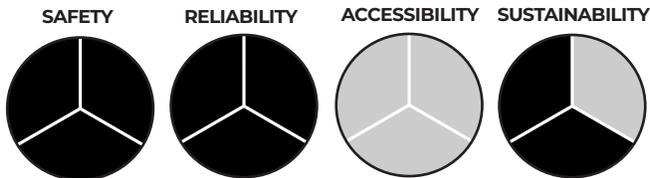


### CEMOF Modifications to Accommodate EMUs

This project will develop a feasibility study to optimize the yard to accommodate the new electric fleet and the legacy diesel fleet. The yard is currently close to capacity and is not configured to maintain the electric fleet effectively because it was designed as a diesel train facility. Recommendations from the feasibility study may include potential building expansion, the addition of a mezzanine level to the access top of vehicles, the replacement of equipment at the end of their useful life like the wheel truing machine, drop tables, and the extension of existing maintenance pits.

### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$49M  
 Total Capital Cost EAC: \$53.5M  
 Estimated Timeline: Ongoing to FY2030



# Maintain Core Services

## Discrete Projects

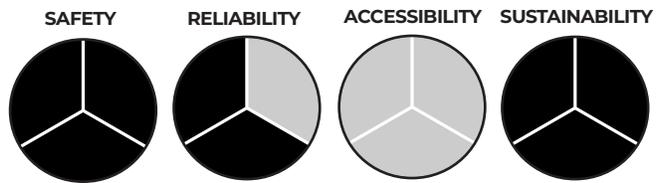


### Stevens Creek Bridge Rehabilitation/Replacement and Channel Stabilization

This project will replace or rehabilitate the Stevens Creek Bridge and stabilize the channel beneath it. The bridge was built in 1903 and beyond its useful life of 100 years. The bridge’s structural integrity has declined due to previous seismic events. Bridge rehabilitation is critical in ensuring service throughout Caltrain’s corridor.

### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$5M  
 Total Capital Cost EAC: \$5M  
 Estimated Timeline: FY2029 to FY2034

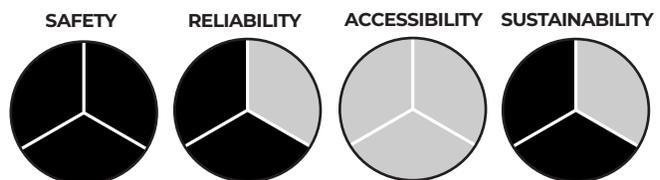


### Backup Control Center Datacenter Migration to Cloud Environment

This project will move the datacenter to a Cloud Environment. Migration of server and datacenter to the cloud will reduce physical, electrical and heating, ventilation, and air conditioning needs at existing or future facilities, and provides opportunities for geographic diversity. Thus, it will precede the datacenter and facility power needs and the potential need for a new building. Decentralized backup systems separate from Caltrain property leverage and expand upon scalability, improved cybersecurity, and cyber/disaster recovery. The system is already connected to the Amazon Web Services (AWS) cloud and; therefore, not a significant lift to migrate to this setup.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$6M  
 Total Capital Cost EAC: \$6M  
 Estimated Timeline: FY2026 to FY2028



# Maintain Core Services

## Discrete Projects

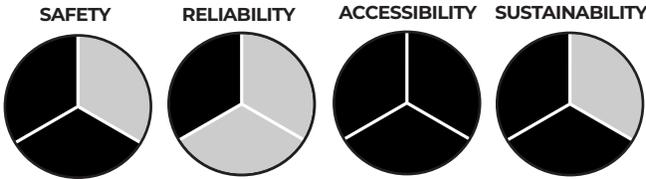


### Broadband System Mid-Life Technology Refresh

This project enables a technology refresh at the mid-life point of the Broadband System, including the replacement of antennas at year seven.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$1.5M  
 Total Capital Cost EAC: \$1.5M  
 Estimated Timeline: FY2031 to FY2031

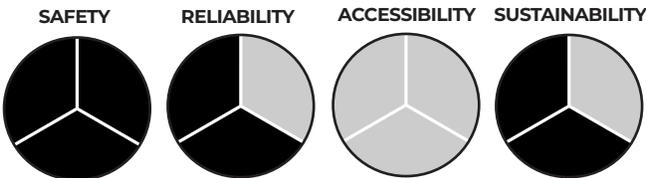


### Waterway Timber Planking and Box Culverts Replacement

This project will replace the Waterway timber planking and box culverts, which were built in 1907 and are beyond their useful life of 40 years. There is a creek that goes underneath the main line, which would compromise the trackway if it collapsed. Replacement of these assets would bolster Caltrain’s resilience to seismic events and other natural disasters. Bridge rehabilitation is critical in ensuring service throughout Caltrain’s corridor.

### San Mateo County Systemwide Benefits

CIP 10-Year Funding Needs: \$5M  
 Total Capital Cost EAC: \$5M  
 Estimated Timeline: FY2026 to FY2031



# Maintain Core Services

## Discrete Projects

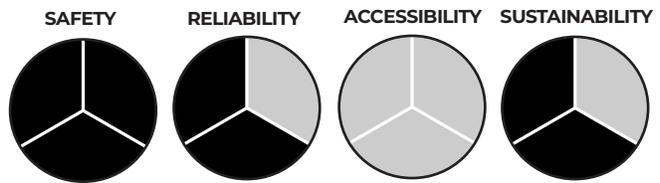


### SFPUC Water Main - 2 Bridge Rehabilitation/ Replacement

This project will replace the SFPUC Water Main - 2 bridge, which is a rail-only bridge that goes over the SFPUC easement. The bridge was built in 1924 and has reached the end of its useful life of 100 years. Repairing the structure will ensure that it can carry the expected loading, as the existing structure is deteriorated and requires structural support replacement. Bridge rehabilitation is critical in ensuring service throughout Caltrain’s corridor.

### San Mateo County Systemwide Benefits

CIP 10-Year Funding Needs: \$5M  
Total Capital Cost EAC: \$5M  
Estimated Timeline: FY2027 to FY2032

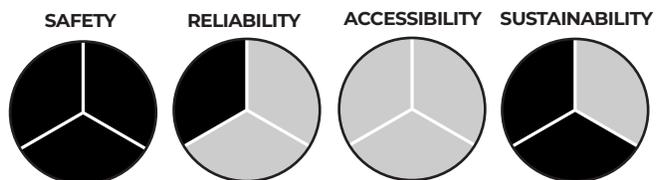


### San Francisquito Bridge Acoustic Monitoring System

This project will procure and install an acoustic monitoring system to provide more timely notice of potential cracks or damage to key structural elements that may render the San Francisquito Bridge unsafe until the full replacement is constructed. Caltrain regularly monitors the condition of tracks and structures as part of its ongoing efforts and commitment to ensuring high-quality, safe, dependable, and reliable rail services.

### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$1M  
Total Capital Cost EAC: \$2.1M  
Estimated Timeline: Ongoing to FY2026



# Maintain Core Services

## Discrete Projects

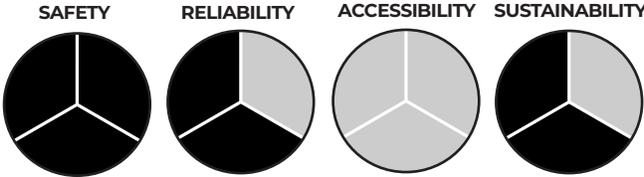


### EAM Software System

This project will benefit Caltrain by making asset data more readily available through an EAM Strategic Procurement Plan, EAM Procurement Strategy, and the implementation of an Enterprise EAM Software System. The current strategy anticipates the ability to utilize the Enterprise GIS System to meet desired EAM business needs.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$4.5M  
 Total Capital Cost EAC: \$8M  
 Estimated Timeline: Ongoing to FY2029

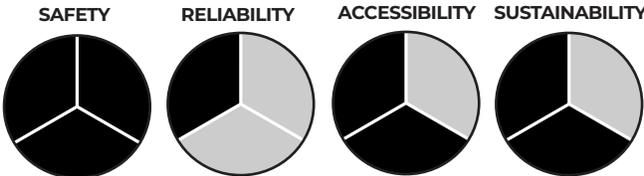


### San Antonio Station Pedestrian Underpass Rehabilitation

This project will replace or rehabilitate the Pedestrian Underpass at San Antonio Station. This underpass was built in 1988 and will ensure that Caltrain can continue to meet the multimodal needs of the surrounding community. Bridge rehabilitation is critical in ensuring service throughout Caltrain’s corridor.

### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$4.7M  
 Total Capital Cost EAC: \$4.7M  
 Estimated Timeline: FY2029 to FY2034



# Maintain Core Services

## Discrete Projects

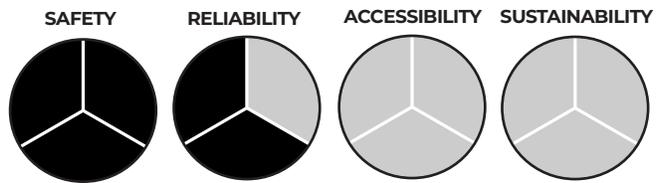


### Onboard and MOW Crew Radios Digitization

Current onboard crew radios are incompatible with Caltrain's forthcoming digital radios that match industry standards. Digitizing the MOW radios will eliminate the need for leased mountaintop antenna locations and will provide a modernized system with enhanced monitoring and support capabilities.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$3M  
Total Capital Cost EAC: \$3M  
Estimated Timeline: FY2028 to FY2029

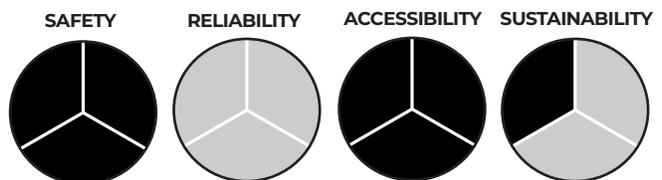


### Climate Risk and Vulnerability Study

This study will analyze the vulnerability of Caltrain's service, infrastructure, right-of-way, operations, and passengers to the negative impacts of climate change, including high heat, wildfire and smoke, severe storms, and sea level rise. This analysis will result in recommendations for climate improvements and/or adaptations that could include capital improvements.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$214k  
Total Capital Cost EAC: \$535k  
Estimated Timeline: Ongoing to FY2026



# Maintain Core Services

## Discrete Projects

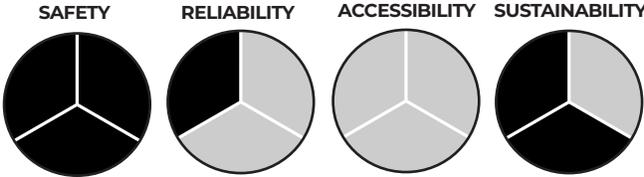


### EMU 8-Year Overhaul

The newly introduced EMUs require an eight-year overhaul and a 15-year overhaul to maintain onboard safety. This project cover the eight-year overhaul that will likely be done in-house whereas the 15-year overhaul will be completed by an outside third party. This SOGR project will ensure the safe and reliable continuation of revenue service along the electrified corridor.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$24M  
 Total Capital Cost EAC: \$24M  
 Estimated Timeline: FY2032 to FY2035

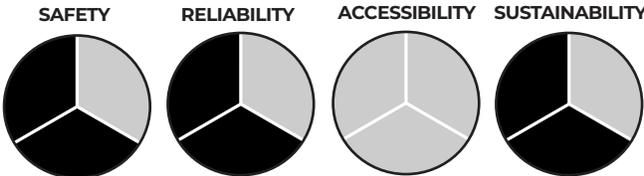


### Cesar Chavez Street Bridge Rehabilitation/Replacement

Constructed in 1907, the Cesar Chavez Street Bridge is a rail-only bridge that goes over the roadway and is beyond its useful life of 100 years. This project will replace the Cesar Chavez Street Bridge to bolster its resilience to seismic events and other natural disasters. Bridge rehabilitation is critical in ensuring service throughout Caltrain’s corridor.

### San Francisco County Systemwide Benefits

CIP 10-Year Funding Needs: \$22.5M  
 Total Capital Cost EAC: \$22.5M  
 Estimated Timeline: FY2027 to FY2032



# Maintain Core Services

## Discrete Projects

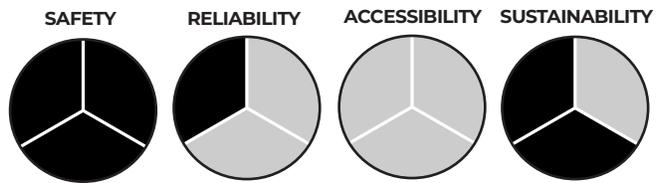


### Storm Drain Bridge Rehabilitation/Replacement

This project will replace the Storm Drain Bridge, which was built in 2002. The bridge has been strained by past seismic events, prompting its replacement to gain resilience against other seismic events and natural disasters. Bridge rehabilitation is critical in ensuring service throughout Caltrain’s corridor.

#### San Mateo County Systemwide Benefits

CIP 10-Year Funding Needs: \$7.5M  
 Total Capital Cost EAC: \$7.5M  
 Estimated Timeline: FY2027 to FY2032

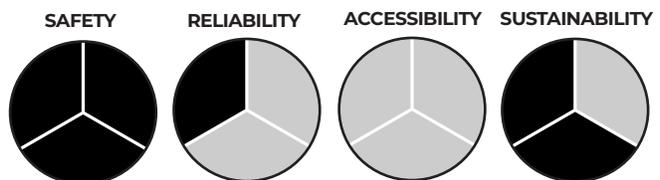


### Almaden Road Bridge Rehabilitation/Replacement

This project will replace or rehabilitate the rail bridge at Almaden Road, which has faced structural degradation due to past seismic events. This bridge was built in 1936 and nearing the end of its useful life of 100 years. Bridge rehabilitation is critical in ensuring service throughout Caltrain’s corridor.

#### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$12.5M  
 Total Capital Cost EAC: \$12.5M  
 Estimated Timeline: FY2030 to FY2035



# Maintain Core Services

## Discrete Projects

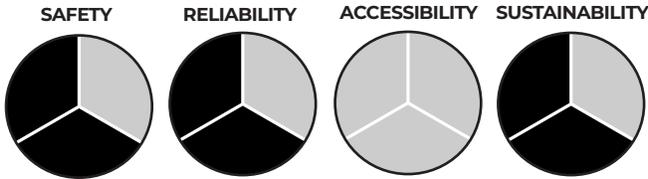


### New MOW Facility Acquisition

This project will procure a new MOW facility to meet the needs of Caltrain’s maintenance team, which has grown to accommodate the addition of the Electrification assets. Currently, MOW equipment is stored on the street due to limited indoor space, which puts it at risk of theft or damage. The new facility will be strategically located along the Caltrain corridor to reduce response time and will provide sufficient square footage to secure equipment and provide a comfortable and safe environment for the maintenance crews.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$33M  
 Total Capital Cost EAC: \$33.25M  
 Estimated Timeline: Ongoing to FY2027

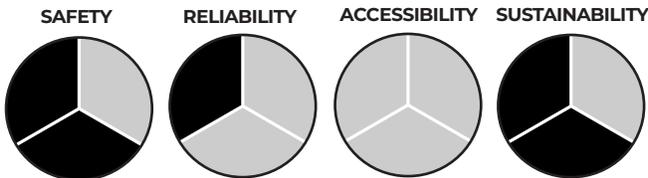


### Airport Boulevard Bridge Rehabilitation/Replacement

This project will replace the Airport Boulevard Bridge, which is a rail-only bridge that was built in 1935 and is reaching the end of its useful life of 100 years. The bridge has been strained by past seismic events, prompting its replacement to gain resilience against other seismic events and natural disasters. Bridge rehabilitation is critical in ensuring service throughout Caltrain’s corridor.

### San Mateo County Systemwide Benefits

CIP 10-Year Funding Needs: \$50M  
 Total Capital Cost EAC: \$50M  
 Estimated Timeline: FY2028 to FY2033



# Maintain Core Services

## *Discrete Projects*



### TVM Replacement or Rehabilitation

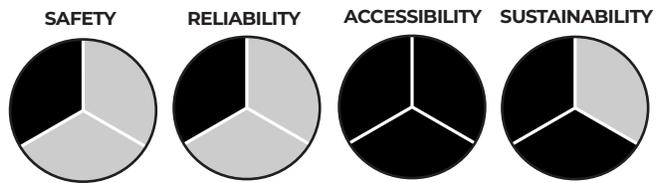
This program supports the replacement or rehabilitation of the TVMs and Next Generation Clipper Readers for the FY2031-FY2035 period. TVMs have a 12-year useful life and were last upgraded and rehabilitated in 2023.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$10M

Total Capital Cost EAC: \$10M

Estimated Timeline: FY2031 to FY2035



# Maintain Core Services

## Recurring Programs

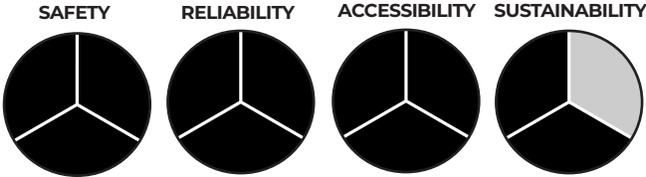


### SOGR Program - EMU Stadler Car

This SOGR program provides continuous maintenance of the Stadler Car, including the Clean, Oil, Test, and Stencil inspections (COTS) of the air brakes. COTS is required to be conducted every four years but will be staggered for vehicles to maintain continuous revenue service while some vehicles are out for service.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$4.75M  
 Estimated Timeline: FY2025 to Ongoing

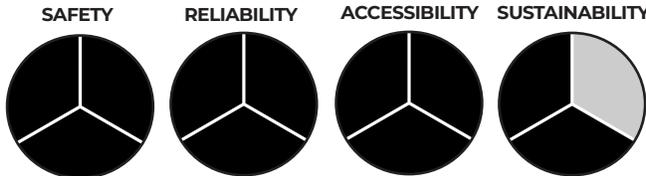


### SOGR Program - Bombardier Car Rail Vehicles and Truck

This program provides the maintenance, refurbishment, and replacement of the legacy Bombardier passenger cars and trucks to enable continued along the non-electrified portion of the Caltrain corridor south of San José.

#### Corridor-wide Local Benefits

Average FY Funding Need: \$5.7M (through FY30)  
 Estimated Timeline: Ongoing to FY2030



# Maintain Core Services

## Recurring Programs

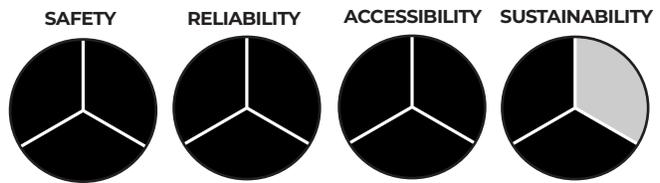


### SOGR Program - Right-of-Way

The Right-Of-Way SOGR program enables general maintenance of drainage systems, right-of-way signage, vegetation management, graffiti abatement, soil/concrete waste/garbage dumping and removal, tree pruning and removal, retaining walls repair, and improved access for operations and maintenance. This program enables to protect Caltrain's most valuable asset, its property, and to ensure it is more resilient to the natural environment and safer for the maintenance team.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$2.8M  
 Estimated Timeline: Ongoing

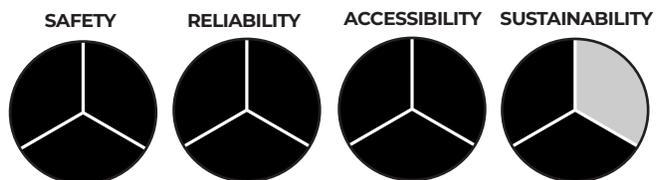


### SOGR Program - Stations North of CP Lick

This Station SOGR program recurs support capital maintenance at stations north of CP Lick owned by Caltrain, which improves station safety and security and the customer experience.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$3.5M  
 Estimated Timeline: Ongoing



# Maintain Core Services

## Recurring Programs

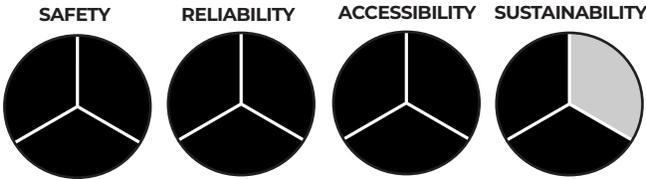


### SOGR Program - Systems Technology

This recurring SOGR program provides maintenance and a refresh to the office systems hardware and software updates including Central Train Control, PTC, PADS, CCTV, Fiber Optic, and other safety systems that have reached the end of their useful life.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$1M  
 Estimated Timeline: Ongoing

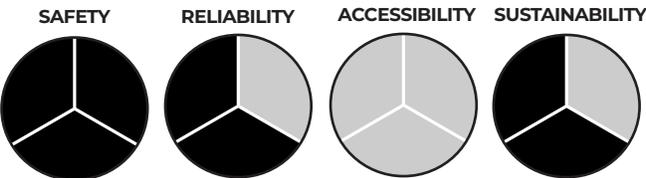


### SOGR Program - MOW Tracks

The MOW Tracks SOGR Program includes work activities to keep the tracks maintained and includes elements such as the purchase and installation of new rail and crossties, special track components, thermite welds, and other track materials. Additionally, this program enables maintenance welding and grinding at special track locations, track surfacing throughout the corridor, rail grinding, highway-grade crossing restoration and repair, ballast purchase and placement, etc. to maintain federal safety compliance requirements.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$15M  
 Estimated Timeline: Ongoing



# Maintain Core Services

## Recurring Programs

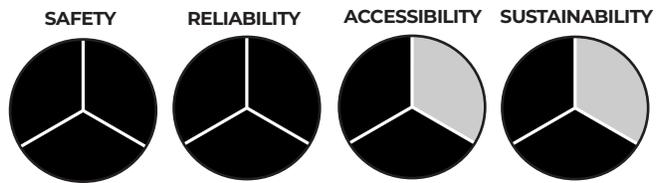


### SOGR Program - Communication

This recurring SOGR program for Communication provides maintenance and replacement of Caltrain's Communications to ensure ongoing reliable and safe service.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$1.3M  
Estimated Timeline: Ongoing

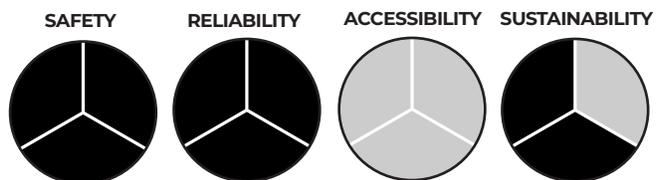


### SOGR Program - Track Equipment

This program supports the purchase of track equipment for the various teams at Caltrain (MOW and Maintenance of Equipment) to keep track and the vehicles in a SOGR and directly helps to facilitate the SOGR Program - MOW Tracks. The replacement of some trucks with only electric ones will be required to comply with carbon-neutral operating requirements. This is also the case for the diesel switchers that would be required to move to electric/battery-operated switchers, which are necessary for rescuing trains that encounter a failure on the mainline.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$3.5M  
Estimated Timeline: Ongoing



# Maintain Core Services

## Recurring Programs

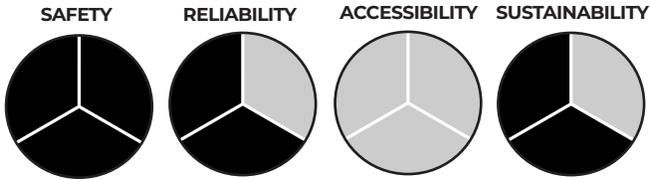


### SOGR Program - OCS

This SOGR program provides for the maintenance and rehabilitation of Overhead Catenary System (OCS) components. All OCS assets are brand new, therefore, the scope of the program is in development and will be based on the recommended intervals from item manufacturers and the reception of as-built drawings of the OCS.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$1.5M  
 Estimated Timeline: FY2026 to Ongoing

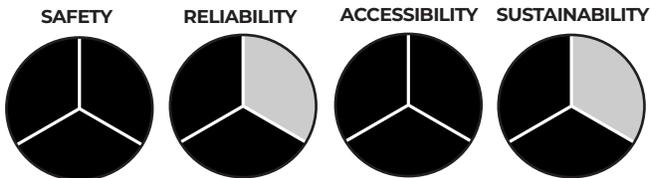


### SOGR Program - Stations South of CP Lick

This Station SOGR program support capital maintenance at stations south of CP Lick owned by VTA, which improves station safety and security and the customer experience.

#### Corridor-wide Local Benefits

Average FY Funding Need: \$500k  
 Estimated Timeline: FY2028 to Ongoing



# Maintain Core Services

## Recurring Programs

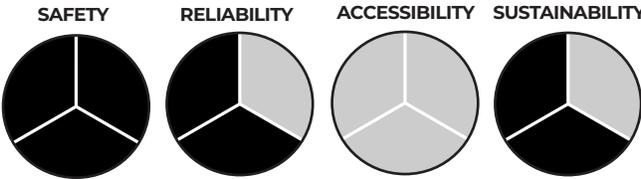


### SOGR Program - TPS

This SOGR program provides for the maintenance and rehabilitation of Traction Power Substations (TPS) components for the two substations located in South San Francisco and San José, one switching station located in Redwood City, and seven parallel stations. All TPS assets are brand new, therefore, the scope of this program is in development and will be based on the recommended intervals from item manufacturers and the reception of as-built drawings of the TPS system.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$500k  
 Estimated Timeline: FY2026 to Ongoing

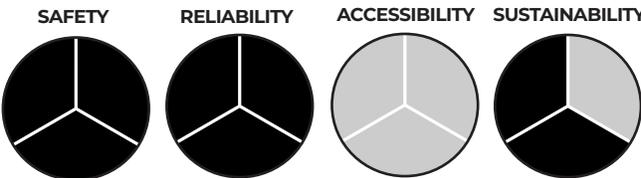


### SOGR Program - Bridges and Civil Structures

This SOGR program will enable maintenance repairs to restore the integrity of the bridges and structures to a fair condition while increasing the safety, security, and useful life of the assets, as identified in the Caltrain’s Annual Bridge Inspection Program.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$1.6M  
 Estimated Timeline: Ongoing



# Maintain Core Services

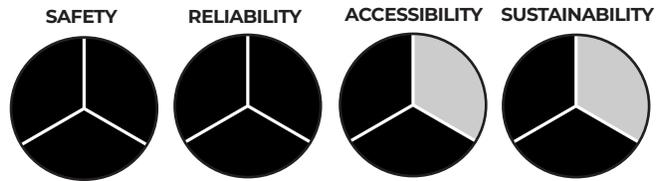
## Recurring Programs



### SOGR Program - Signals

The Signals SOGR Program provides for the maintenance and replacement of Caltrain's train control signals and grade crossing signals to ensure ongoing reliable and safe service.

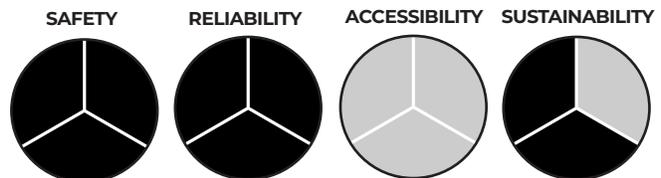
**Corridor-wide**  
**Systemwide Benefits**  
Average FY Funding Need: \$500k  
Estimated Timeline: Ongoing



### SOGR Program - F40 Locomotives

This SOGR program provides the maintenance of the legacy F-40 locomotives to enable continued service along the non-electrified portion of the Caltrain corridor south of San José.

**Corridor-wide**  
**Local Benefits**  
Average FY Funding Need: \$200k (through FY30)  
Estimated Timeline: Ongoing to FY2030



# Maintain Core Services

## Recurring Programs

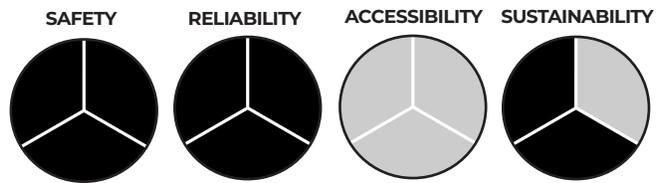


### SOGR Program - MP-36 Locomotives

This SOGR program provides the maintenance of the legacy MP-36 locomotives to enable continued service along the non-electrified portion of the Caltrain corridor south of San José.

#### Corridor-wide Local Benefits

Average FY Funding Need: \$300k (through FY30)  
Estimated Timeline: Ongoing to FY2030

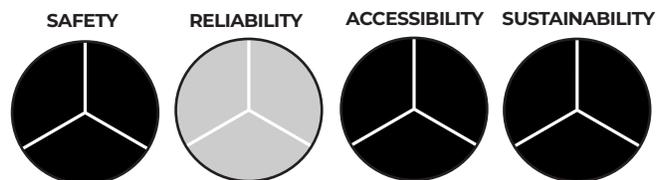


### Sustainability and Resiliency Program Support

This recurring program supports the development of policies, programs, and partnerships that help implement Caltrain's *Strategic Sustainability Plan* and *Climate Resiliency and Vulnerability Plan*. It identifies and advances innovative investments and process improvements to reduce waste and energy consumption, improve environmental stewardship, increase Caltrain's resiliency, and contribute to equity and quality of life in the region in the development of capital projects.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$125k  
Estimated Timeline: FY2026 to Ongoing



# Maintain Core Services

## Recurring Programs

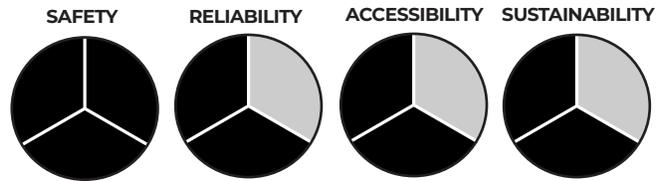


### Rail Network and Operations Planning Support

This recurring program supports planning activities that develop solutions to optimize Caltrain's service with performance, ridership, events, and other variables requiring detailed modeling and analysis. This program aims to identify efficiencies in delivering the service to have a positive impact on the operating budget. This program also guarantee Caltrain's ability to coordinate with its local and regional partners on schedules, transit transfer points by supporting the development of schedules and early operational review of capital projects to understand potential impacts/ design solutions related to operations.

### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$1.5M  
Estimated Timeline: Ongoing

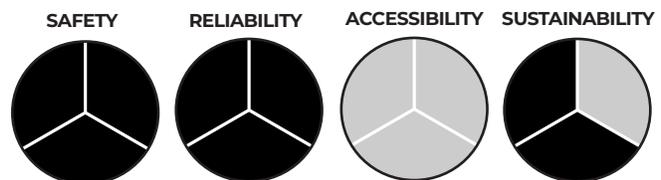


### SOGR Program - Non-Revenue Vehicles

The SOGR program for non-revenue vehicles supports the purchase of rubber tire vehicles for the operations and maintenance crews to efficiently maintain the corridor utilities and infrastructure. The replacement of some vehicles by only electric ones will be required to comply with carbon-neutral operating requirements and will require additional charging infrastructures and vehicles.

### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$1.7M  
Estimated Timeline: Ongoing



# Maintain Core Services

## Recurring Programs

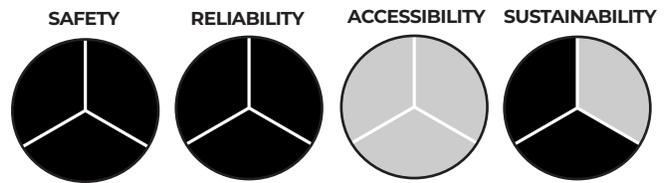


### SOGR Program - CEMOF and Other Facilities

The SOGR Program for facilities covers the work required to maintain the reliability and safety of Caltrain's two Central Control Facilities, Train Crew Trailers, and MOW facilities. The type and scope of work scheduled for each fiscal year are based on the condition of the facilities, inspections, and maintenance performed throughout the year.

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$3M  
Estimated Timeline: Ongoing

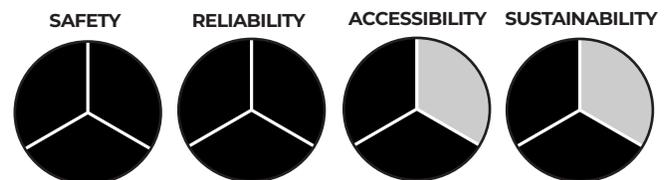


### SOGR Program - Historical Stations

The Station SOGR program works toward the preservation of the seven historic station buildings and keeps them in a state of good repair and is coordinated with the South Bay Historical Railroad Society (SBHRS).

#### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$2.5M  
Estimated Timeline: Ongoing



# Maintain Core Services

## Recurring Programs

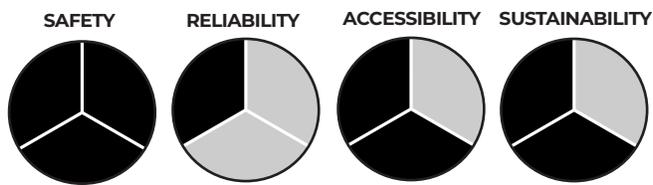


### CIP Update and Maintain

This recurring program will support the update to the long-term CIP and Rolling Program, thereby improving Caltrain's ability to plan, evaluate, prioritize, and report on its capital improvement program.

### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$250k  
Estimated Timeline: FY2026 to Ongoing



### Property Mapping Support

This recurring program supports the yearly procurement of land surveying services necessary to produce and maintain accurate mapping of JPB's properties, specifically identifying what the JPB owns and where the owned parcels are located. Having accurate property mapping will reduce real estate costs during capital project implementation.

### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$1M  
Estimated Timeline: FY2025 to Ongoing



# Enhance Service and Customer Experience

## Discrete Projects



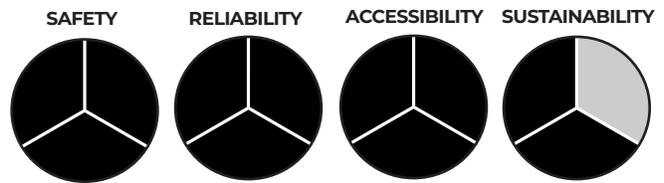
### VMS Replacement

This project will determine the new VMS and passenger information system at Caltrain stations. There are currently 122 VMS to be replaced that were installed between 1997 and 2015, all of which are at the end of or beyond their useful life. The current VMS are no longer supported by the manufacturer.

Modern VMS signs carry modern interfaces, color capability, improved resolution, graphics capabilities, which improve the customer experience for all passengers.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$40k  
Total Capital Cost EAC: \$6.8M  
Estimated Timeline: Ongoing to FY2026

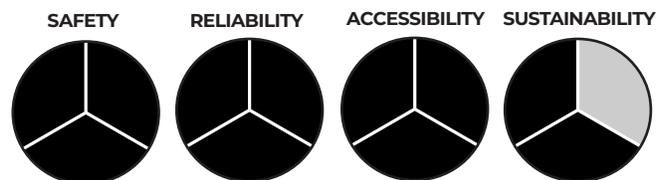


### PADS Phase 2: Modernization

The PADS is a critical system that receives input on the location of a train, makes train arrival time predictions, and provides output to the passenger messaging systems including the PA audio system, VMS station digital signs, and LCDs for station messaging, wayfinding, and external data feeds such as Caltrain.com and MTC511. The existing PADS was designed in 2012, deployed in 2014, and has reached the end of its useful life. New systems provide more accurate information that are now the industry standard. The PADS modernization will provide significant benefits to the riders.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$7M  
Total Capital Cost EAC: \$7M  
Estimated Timeline: FY2026 to FY2029



# Enhance Service and Customer Experience *Discrete Projects*

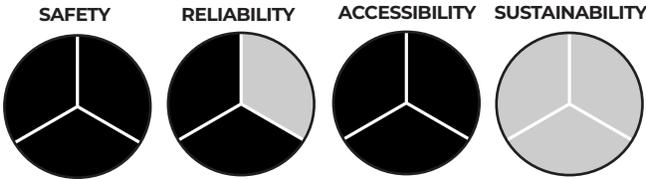


## Level Boarding Program

As a legacy system, Caltrain does not currently provide level boarding access to its passenger cars. As Caltrain modernizes the system through significant projects like electrification, Caltrain commits to improving its system to ensure safe and accessible boarding for people of all abilities. Universal Level Boarding brings significant safety and accessibility benefits to all passengers. Additionally, it allows for faster boarding and alighting to support enhanced service levels and schedule reliability, reducing train dwell times at stations. Implementing level boarding is a complex, expensive, and long-term program. Caltrain recently developed a roadmap of cost-effective improvements the agency can undertake with platform raising.

### Corridor-wide Systemwide Benefits

**CIP 10-Year Funding Needs: \$237M**  
**Total Capital Cost EAC: \$620M**  
**Estimated Timeline: Ongoing to FY2035**

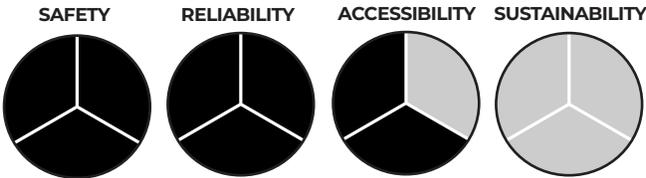


## Crossover Trackwork in the Diridon-San José Station Area

This project was identified as part of the minimal investment needed on Caltrain corridor to meet the Board-Adopted Moderate Growth Service Vision without blended services as part of the systemwide effort of the Business Plan Development. There is a need to install an additional crossover track north of the Diridon-San José Station Area to improve operational flexibility and increase capacity at the Diridon-San José Station. This project will allow use of all the tracks at Diridon-San José Station, provide more flexibility for Caltrain’s tenants and allow an increase in the capacity.

### Santa Clara County Systemwide Benefits

**CIP 10-Year Funding Needs: \$6.3M**  
**Total Capital Cost EAC: \$6.3M**  
**Estimated Timeline: FY2026 to FY2031**



# Enhance Service and Customer Experience *Discrete Projects*

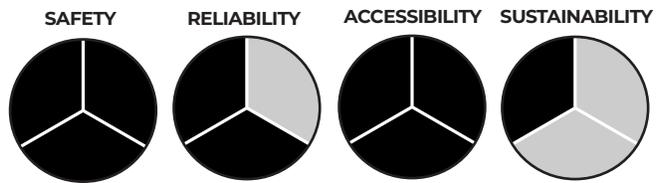


## Bike Parking Improvement Program

This program will provide systemwide improvements to bicycle parking and includes bike lockers at 23 stations and bicycle rooms for up to eight stations. The program will help make Caltrain a more attractive option for passengers with bicycles while freeing up physical on-board space. This program will also reduce dwell time at station due to boarding/alighting at the bike car.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$300k  
Total Capital Cost EAC: \$5.3M  
Estimated Timeline: Ongoing to FY2026

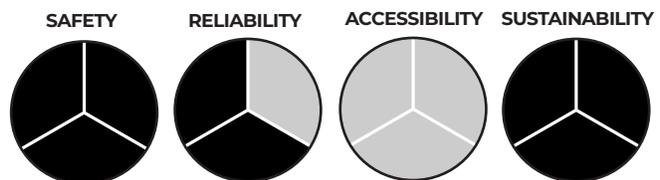


## VHF Voice Radio Modernization and Optimization - Tunnels Coverage and New Emergency Services Capability

The current voice and PTC systems utilize a leaky coaxial design to provide radio coverage in Caltrain's tunnels, which has been inadequate for train crews to communicate to dispatch, primarily conductors or other crews not located in the train cab. This project consolidates and modernizes the voice radio system to enable seamless coverage in tunnels and adds Emergency Services (i.e., 911, Police, Fire, etc.) capabilities that do not exist today, which will greatly improve safety and reliability for both passengers and crews.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$3M  
Total Capital Cost EAC: \$3M  
Estimated Timeline: FY2027 to FY2028



# Enhance Service and Customer Experience *Discrete Projects*

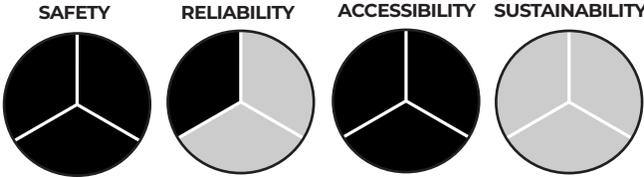


## Digital Customer Displays (Multi-Level Stations)

The Digital Customer Displays program will install digital customer displays with text-to-speech capabilities at key entrance areas at stations to provide boarding and other relevant information to the customers. This solution was identified at the Customer Experience Task Force to address multi-level stations where customers need to walk up or down the stairs, or long distances to be able to see and/or hear the VMS/PA announcements about single-tracking at the station. Riders will be able to identify the correct platform at the impacted stations, which will improve customer experience and provide a safer environment by reducing the risks of bad behaviors, such as running on the platform afraid of missing the train, crossing tracks in unauthorized locations, and forgetting to purchase a ticket or tag a Clipper card.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$400k  
Total Capital Cost EAC: \$430k  
Estimated Timeline: Ongoing to FY2026

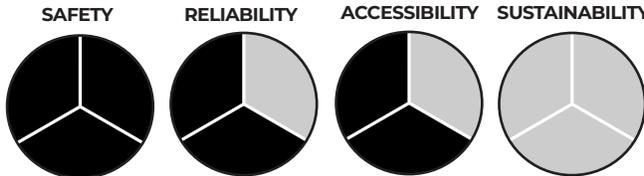


## Universal Crossover Trackwork at Strategic Locations

This project will do a systemwide assessment to first identify the strategic location to add new universal crossovers. The assessment will shortlist six locations along Caltrain Corridor. The addition of new crossovers special trackwork will provide more operational flexibility during single tracking, especially during capital project construction (such as grade separation and bridge rehabilitation). The timing of the design and construction of crossovers may depend on regional and local projects.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$46M  
Total Capital Cost EAC: \$46M  
Estimated Timeline: FY2026 to FY2035



# Enhance Service and Customer Experience

## Discrete Projects

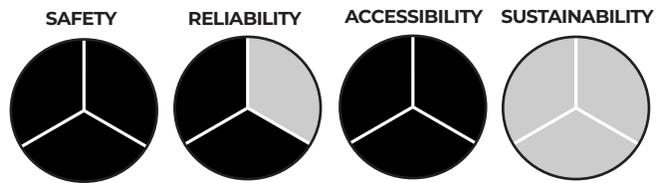


### Stations Connections to Fiber Optic

This project will connect the stations to the Caltrain Fiber Optic Backbone once permanently repaired, which is being addressed through a separate project. The current station connection via lease-lines managed by SamTrans IT for systems including CCTV, VMS, PA, and Train Control poses a cybersecurity threat that will be mitigated through the merging with the Caltrain Fiber Optic Backbone. This project should run concurrently with the Network Architecture Redesign project.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$4M  
Total Capital Cost EAC: \$4M  
Estimated Timeline: FY2028 to FY2029

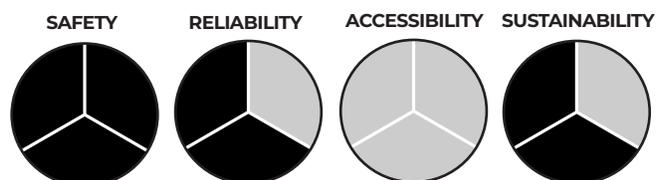


### MPCC Facilities Modernization

This project includes the renovation of the two Caltrain-owned buildings in Menlo Park and transformation to a campus-type facility for future occupancy by Caltrain departments (TBD).

### San Mateo County Systemwide Benefits

CIP 10-Year Funding Needs: \$1.28M  
Total Capital Cost EAC: \$3.4M  
Estimated Timeline: FY2025 to FY2027



# Enhance Service and Customer Experience *Discrete Projects*

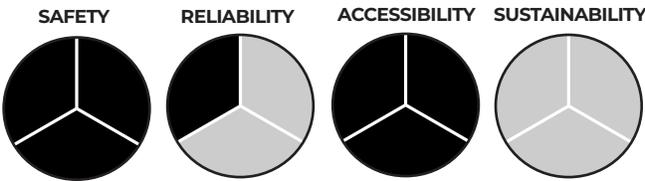


## Platform Improvements for Bike Loading and Passengers Needing Assistance (All Stations)

This program will re-stripe platforms at all stations to clearly identify loading zones for people with bicycles with the roll-out of the new EMU trains. EMU trains will always have the same configuration and the clear identification of locations for bicyclists will reduce crowding on the platforms for non-bikers/scooter passengers, improve safety and the customer experience.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$60k  
Total Capital Cost EAC: \$80k  
Estimated Timeline: Ongoing to FY2027

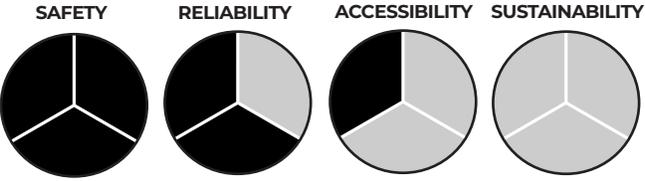


## Rail Operations Real-time Database/Data Warehouse

This project will consolidate numerous databases and data streams from various operational systems into a primary database. Currently, numerous independent systems do not share information adequately. This project provides a single repository of real-time operational data, seamless user interaction, and improved cybersecurity by enabling a single interface for new systems to be more easily tapped into. The design will include a new standard of data structure to be followed by all subsequent projects.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$300k  
Total Capital Cost EAC: \$300k  
Estimated Timeline: FY2030 to FY2030



# Enhance Service and Customer Experience

## Discrete Projects

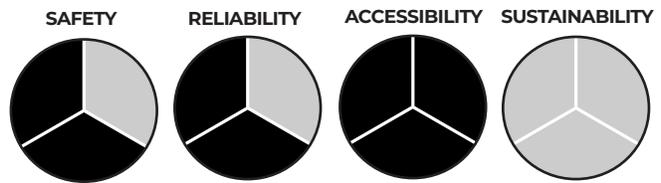


### PA Overhaul and Digitization at Stations

This project will analyze the potential to do a full re-design of the Public Address (PA) System at all stations. The audio (speaker, amplifier, zone controller) at stations are obsolete. It includes a review of the location of the speakers on the platforms and modernizes the system by replacing the speakers, amplifier, and zone controllers, and converting to a fully digital network-based solution. This project provides significant benefits to all passengers, especially visually impaired passengers.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$3M  
Total Capital Cost EAC: \$3M  
Estimated Timeline: FY2026 to FY2027

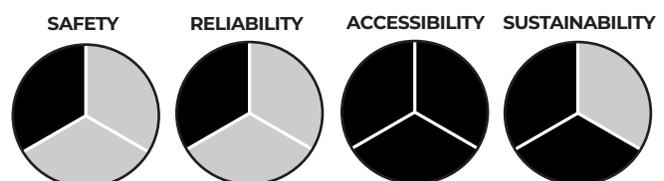


### Electric Fleet for Service to Gilroy (Expansion)

This project includes the procurement of six additional BEMU trains to provide additional service to Gilroy before the electrification of this part of the corridor, which is part of the HSR project.

### Corridor-wide Local Benefits

CIP 10-Year Funding Needs: \$235M  
Total Capital Cost EAC: \$300M  
Estimated Timeline: FY2030 to FY2036



# Enhance Service and Customer Experience *Discrete Projects*

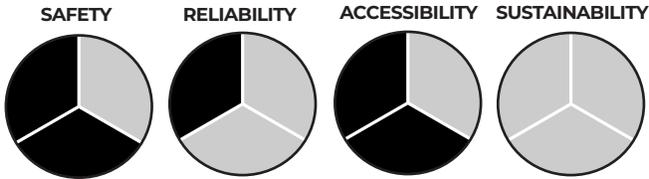


## Mini-High Platforms - Stations North of CP Lick

This project will install mini-high platforms at eight remaining stations to support EMU service (Bayshore, Burlingame, Hayward Park, Belmont, California Avenue, San Antonio, Lawrence, Tamien). Mini-high platforms were originally installed at five “Express” train stations in 2003 and installed at five additional stations in 2009. Grounding and bonding will be required at all of the stations within the areas that will be electrified. This project will improve accessibility for passenger of all abilities. It will allow for more efficient ADA access, thus decreasing dwell time, improving service and reducing operating costs.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$0  
Total Capital Cost EAC: \$4.26M  
Estimated Timeline: Ongoing to FY2025

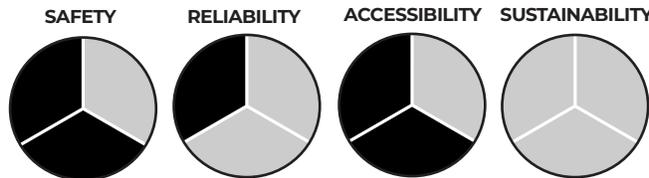


## Mini-High Platforms - Stations South of CP Lick

This project follows the first phase to install mini-high platforms at eight remaining stations north of CP Lick and will install mini-high platforms at five stations south of CP Lick (Capitol, Blossom Hill, Morgan Hill, San Martin, Gilroy).

### Santa Clara County Local Benefits

CIP 10-Year Funding Needs: \$0  
Total Capital Cost EAC: \$2.4M  
Estimated Timeline: Ongoing to FY2026



# Enhance Service and Customer Experience *Discrete Projects*

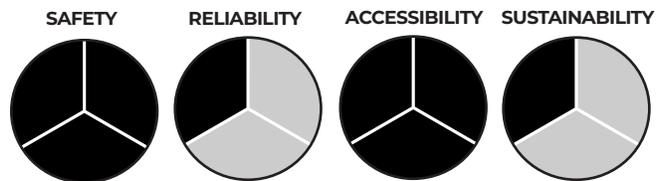


## Station Amenities Improvement Program

This program includes a systemwide assessment of improvements at station facilities along the corridor to incorporate Universal Design and Crime Prevention Through Environmental Design (CPTED) principles. These improvements may include passenger shelters, circulation (pick-up and drop-off areas), and landscaping to enhance station areas and support ridership growth. This program is a long-term planning effort to identify strategic improvements for the Board-Adopted Moderate Growth Service Vision. Caltrain will implement these improvements in phases, which will be rooted in the Caltrain Station Access Policy.

### Corridor-wide Systemwide Benefits

**CIP 10-Year Funding Needs: \$37M**  
**Total Capital Cost EAC: \$47M**  
**Estimated Timeline: FY2026 to FY2036**

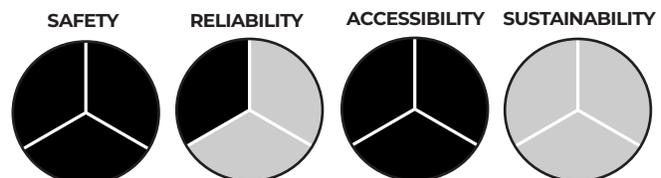


## Digital Customer Displays (South Santa Clara County Stations)

This project will install digital customer displays with text-to-speech capabilities in South Santa Clara County stations to provide boarding and other relevant information to customers. This will provide up-to-date train service information to customers using these stations, which currently do not have VMS. This is a significant improvement to the customer experience.

### Santa Clara County Local Benefits

**CIP 10-Year Funding Needs: \$200k**  
**Total Capital Cost EAC: \$200k**  
**Estimated Timeline: FY2025 to FY2026**



# Enhance Service and Customer Experience *Discrete Projects*

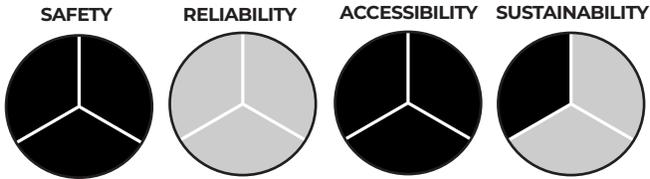


## Station Placemaking Pilot Project

This pilot project will analyze the potential to improve landscaping through the implementation of artwork, green walls, etc. at select stations to enhance the customer experience, comfort, and safety.

### Corridor-wide Local Benefits

CIP 10-Year Funding Needs: \$480k  
Total Capital Cost EAC: \$510k  
Estimated Timeline: FY2025 to FY2032

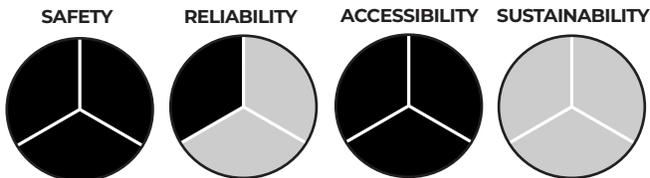


## Broadband Wireless Communications System

This program will design a broadband wireless communications system along the Caltrain corridor for the wayside train maintenance diagnostics and passenger Wi-Fi service. The program will investigate leveraging the existing infrastructure such as OCS poles and the JPB fiber network to communicate with passing trains. Wayside antennas may be mounted on the OCS poles at constant intervals to communicate with moving trains that will be equipped with radios and antennas. This project enable future operational improvement and will significantly improve the customer experience.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$0  
Total Capital Cost EAC: \$30.4M  
Estimated Timeline: Ongoing to FY2025



# Enhance Service and Customer Experience

## Discrete Projects

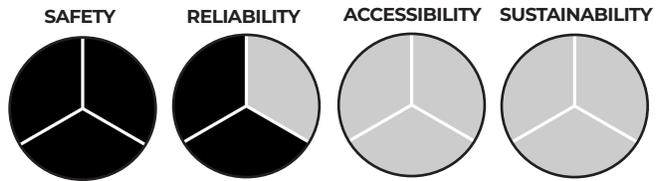


### Migration to Digital Voice Radio System

This program is part of the continual effort to migrate toward a digital voice radio system to replace existing obsolete equipment for crews working in the operating right-of-way or onboard trains.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$0  
Total Capital Cost EAC: \$2M  
Estimated Timeline: Ongoing to FY2025

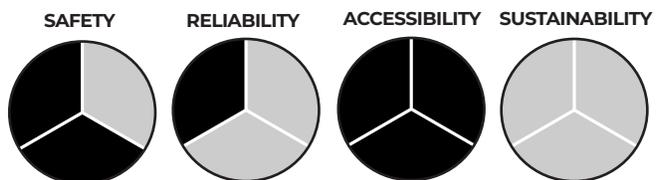


### Broadband Wireless Communications System Enhancements

This program expands upon Caltrain's broadband wireless communication system currently under construction to permit the transfer of onboard operational systems data, separate from the public Wi-Fi service. This expansion will be integrated with the EMU train systems to provide real-time information from the train to the control center and allow real-time monitoring of the EMUs, CCTV, and data collection systems such as the passenger counting system. This project significantly improve the service performance.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$3M  
Total Capital Cost EAC: \$3M  
Estimated Timeline: FY2026 to FY2028



# Enhance Service and Customer Experience *Discrete Projects*

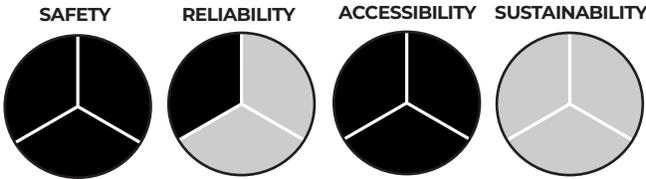


## 22nd Street ADA Access Improvements

This project will provide ADA access to the 22nd Street Station, which does not have existing ADA accessibility. ADA access improvements will include ramps to the platforms and other necessary ADA-related improvements including tactile surfacing, wayfinding, lighting, disabled parking, and drainage at the toe of the embankment along the edge of the platform.

### San Francisco County Local Benefits

CIP 10-Year Funding Needs: \$10.5M  
Total Capital Cost EAC: \$11.2M  
Estimated Timeline: Ongoing to FY2028

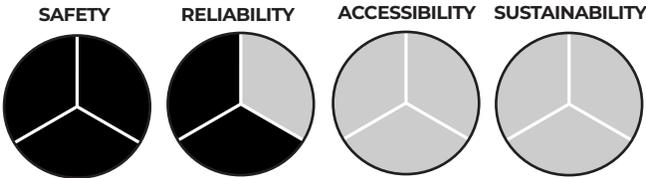


## San José Backup Central Control and Crew Facilities Assessment and Replacement

The assessment will evaluate the current condition of the San José Backup Central Control and Crew Facilities, including the dispatch and datacenter structures, both interior and exterior finishes, as well as the electrical and mechanical systems. This will result in the replacement or renovation of the facilities and will align with the requirements outlined in the *Network Architecture Redesign* project to meet the needs of the SJCC.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$4.7M  
Total Capital Cost EAC: \$4.7M  
Estimated Timeline: FY2027 to FY2032



# Enhance Service and Customer Experience

## Discrete Projects

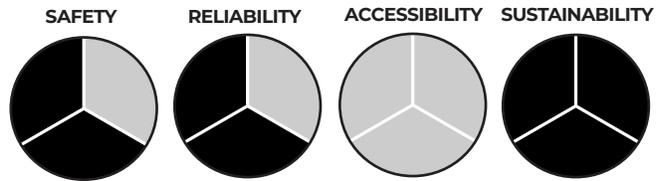


### OCS Improvements

The Catenary System is a critical component of the Caltrain electrification system, providing electrical power to trains. This project aims to enhance the OCS reliability, safety, and efficiency to make our electrified system more robust, responsive, and resilient to potential disruptions. This program include a monitoring system for the OCS.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$2M  
Total Capital Cost EAC: \$2.8M  
Estimated Timeline: Ongoing to FY2027

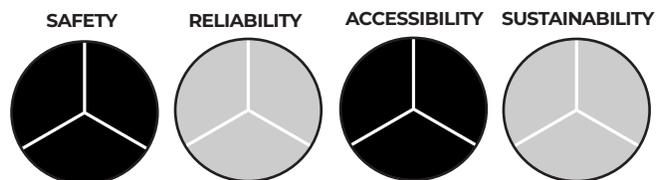


### Stations Digital Displays for Messaging and Advertising Planning Study

This project will explore additional strategies to implement advertising opportunities at stations that will result in additional revenue for Caltrain. Currently, Caltrain's advertising capacity is limited to the 4th and King Station. This project will review station amenities and policies and propose station improvements that will enable improved digital customer messaging.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$400k  
Total Capital Cost EAC: \$400k  
Estimated Timeline: FY2026 to FY2027



# Enhance Service and Customer Experience

## Discrete Projects

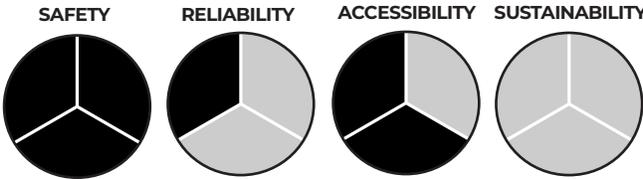


### New Private Wireless Network as Fiber Backup

This project creates a private wireless network as the backup to Caltrain’s fiber optic architecture and provides a significant improvement to overall system resiliency and reliability for critical systems. This backup system will reduce or eliminate the need for ongoing leasing costs of a third-party fiber backup and provide more autonomy to Caltrain.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$6M  
 Total Capital Cost EAC: \$6M  
 Estimated Timeline: FY2028 to FY2029

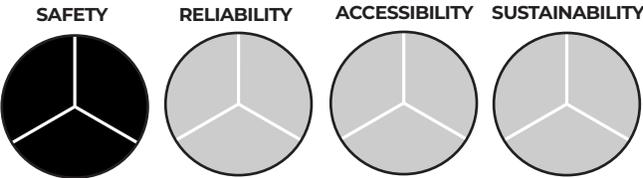


### New O&M Training Center

This project will design and construct a state-of-the-art high-voltage OCS training center to be located near one of the TP substations and include designated OCS (foundation, pole, cantilever, wiring) and a mile-long training track for the equipment (train or hi-rail). Caltrain will develop training curriculum for OCS operation and maintenance certifications, and isolations training that could be offered to industry partners and universities. The training center will not only provide ongoing training for Caltrain employees and contractors but will also provide an additional revenue stream for the railroad.

### Santa Clara or San Mateo County Systemwide Benefits

CIP 10-Year Funding Needs: \$25M  
 Total Capital Cost EAC: \$30M  
 Estimated Timeline: FY2025 to FY2027



# Enhance Service and Customer Experience

## Discrete Projects

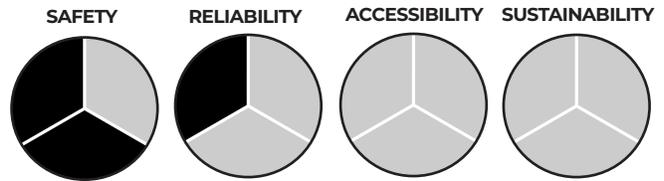


### San Mateo Parking Track Electrification and Signaling

This project will enable the design and construction of the OCS and signaling for the San Mateo Parking Track, which is being replaced as part of the 25th Avenue Grade Separation project, and tie into the main OCS.

#### San Mateo County Systemwide Benefits

CIP 10-Year Funding Needs: \$4.7M  
 Total Capital Cost EAC: \$5.7M  
 Estimated Timeline: FY2025 to FY2027

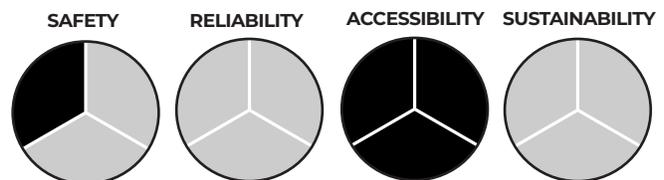


### Broadband Wireless Communications System for Diesel Trains

Broadband is only offered on Caltrain Mainline Service between San Francisco and Tamien on board EMUs. This project will implement a cellular-based broadband wireless system on diesel trains, enabling better passenger Wi-Fi services while onboard. Broadband is needed for the diesel trains, as they will continue to operate between San José and Gilroy until they are retired per the State Mandate.

#### Corridor-wide Local Benefits

CIP 10-Year Funding Needs: \$5.35M  
 Total Capital Cost EAC: \$5.35M  
 Estimated Timeline: FY2026 to FY2027



# Enhance Service and Customer Experience Recurring Programs

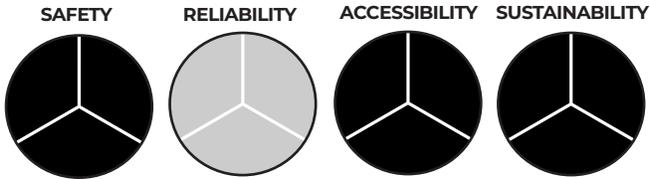


## Real Estate and TOD Support

This recurring program supports Caltrain real estate activities including the implementation of Caltrain’s TOD Policy and the development and implementation of a TOD and Real Estate Work Plan. The program advances development and public-private partnerships on Caltrain property and supports ongoing collaboration with cities, developers, and property owners to advance Caltrain’s real estate and TOD interests. The program also provides real estate support to manage Caltrain’s portfolio of properties, provide facilities to meet rail operations and maintenance needs, advance capital projects, and support special projects in conjunction with Commercial and Business Development.

### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$560k  
Estimated Timeline: Ongoing

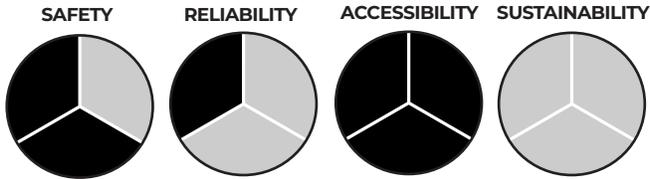


## First/Last Mile Wayfinding Program (All Stations)

This recurring program will develop solutions to improve the wayfinding for first- and last-mile access to stations through connecting transit services and bike facilities (e.g., bike valet, bike rooms, and on-demand bike eLockers). This program will be mindful of the current regional effort led by MTC on the *Regional Mapping and Wayfinding Standards*. This program will be implemented in phases focusing first on major transit hubs. This program will provide significant improvement to station access and will enhance the customer experience.

### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$100k through FY2031  
Estimated Timeline: Ongoing to FY2031



# Enhance Service and Customer Experience

## Recurring Programs

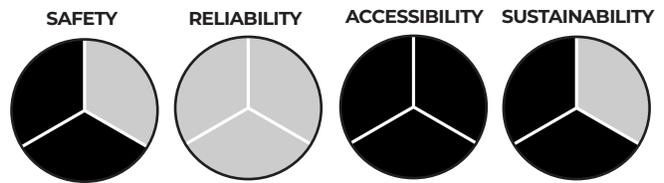


### Planning Policy Development Support

This recurring program advances the development of strategic policies and programs and supports planning activities including those related to fare and equity, implementation, and the update of the Rail Corridor Use Policy and required local, regional, state, or federal reporting, and the Business Plan (every five years). Policies and programs are needed to help guide decision-making for Caltrain staff, the Caltrain Board, funding entities including JPB member agencies, and Caltrain's external partners, such as cities and partner transit agencies.

### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$500k  
Estimated Timeline: Ongoing

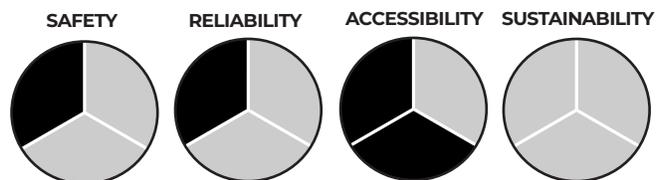


### Systemwide Planning Support

This recurring program supports systemwide planning activities required to advance Caltrain investments and participation in multi-agency planning activities related to the development of major rail stations, partnerships with regional rail and transit partners and projects, participation in local jurisdiction projects and plans affecting the railroad, and Caltrain-led station area planning/access efforts.

### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$500k  
Estimated Timeline: Ongoing



# Enhance Service and Customer Experience

## *Recurring Programs*

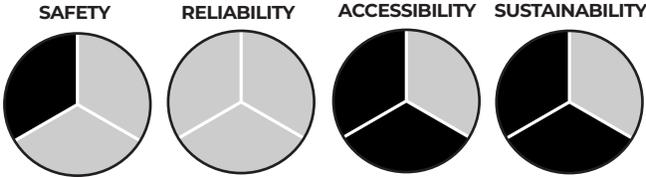


### Capital Planning Technical Support

This recurring program supports the technical expertise necessary to advance individual capital projects' planning, development, delivery, and funding efforts in collaboration with partner agencies, local jurisdictions, and internal stakeholders.

### Corridor-wide Systemwide Benefits

Average FY Funding Need: \$200k  
Estimated Timeline: Ongoing



# Deliver the Long-Range Service Vision

## Discrete Projects



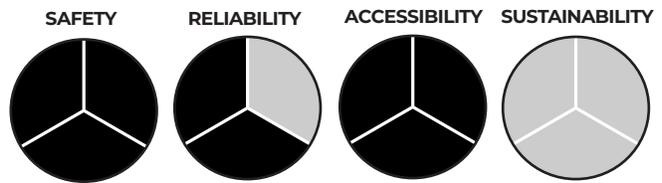
### 4-Track Station and Grade Separation at Redwood City Station

Caltrain and the City of Redwood City are studying and planning for a relocated and elevated four-track transfer station and passing tracks in the downtown area, which also includes six grade separations in Redwood City: Whipple Avenue, Brewster Avenue, Broadway, Maple, Main, and Chestnut. The four-track station project is critical to advancing the Adopted Long-Range Service Vision that will allow transfers between Express and Local Trains. In 2022, Caltrain and the City completed the selection of the locally preferred alternative and the next step to secure funding for preliminary engineering and environmental clearance.

Concurrently, Caltrain is working closely with the City as it plans for a future Downtown Transit District that will accommodate transit-oriented, mixed-use development.

### San Mateo County Systemwide Benefits

CIP 10-Year Funding Needs: \$44.5M  
 Total Capital Cost EAC: \$960M  
 Estimated Timeline: Ongoing to FY2040

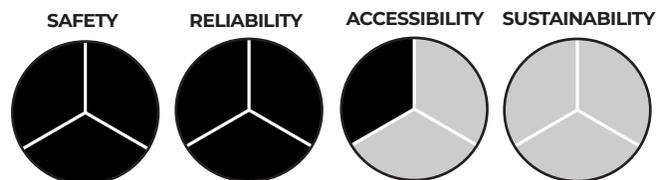


### New Signal and Train Control System

Improving Caltrain service requires investment across multiple areas. More frequent and faster service requires systems that allow trains to safely and seamlessly operate closer together by improving the precision of train location and stop detection. The current PTC system would require a significant overhaul to achieve the shorter headways and higher operating speeds needed for the Board-Adopted Moderate Growth Service Vision. Implementing the Program of Interconnected System Technology Projects and the new PADS lays the foundation for a modernized signaling and train control system. New signal and train control systems will provide significant safety and reliability benefits.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$450M  
 Total Capital Cost EAC: \$500M  
 Estimated Timeline: FY2026 to FY2036



# Deliver the Long-Range Service Vision

## Discrete Projects

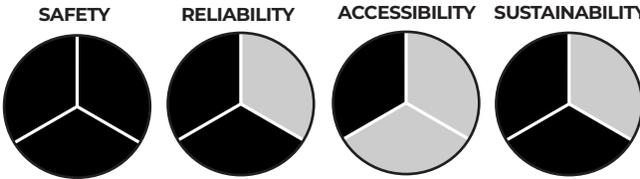


### Systemwide Electric Fleet Expansion

This program covers the planning, engineering, and procurement of additional electric trains for fleet expansion to meet the Board-Adopted Moderate Growth Service Vision between San Francisco and San José.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$425M  
 Total Capital Cost EAC: \$550M  
 Estimated Timeline: FY2030 to FY2036

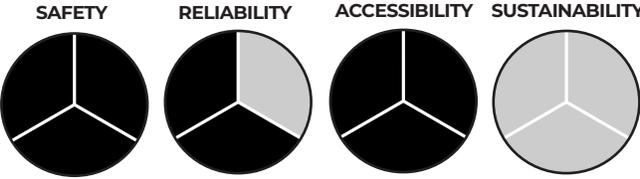


### Platform Lengthening Needs Assessment

This project will study the path toward implementing new platforms to accommodate ten-car trains. The Board-Adopted Moderate Growth Service Vision currently calls for longer trainsets, which requires longer platforms at 14 stations: 22nd Street, Millbrae, Burlingame, San Mateo, Hayward Park, Belmont, San Carlos, Redwood City, Menlo Park, California Avenue, San Antonio, Mountain View, Sunnyvale, and College Park.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$125k  
 Total Capital Cost EAC: \$250k  
 Estimated Timeline: FY2025 to FY2026



# Deliver the Long-Range Service Vision

## Discrete Projects

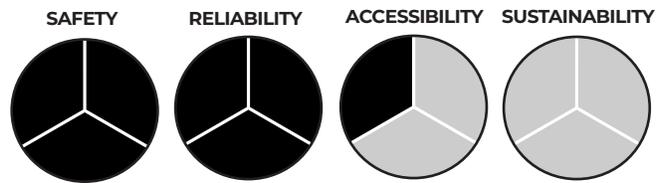


### CEMOF Yard Capacity Enhancement

CEMOF accommodates inspections, maintenance, repairs, train washing, and storage and is the “nerve center” of Caltrain. This project will optimize CEMOF to accommodate the storage and maintenance of a more extensive electrified fleet needed for the Board-Adopted Moderate Growth Service Vision. Expanding the yard capacity of CEMOF is a significant improvement to the service performance to enable the operation of additional fleet.

### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$750M  
 Total Capital Cost EAC: \$800M  
 Estimated Timeline: FY2026 to FY2036

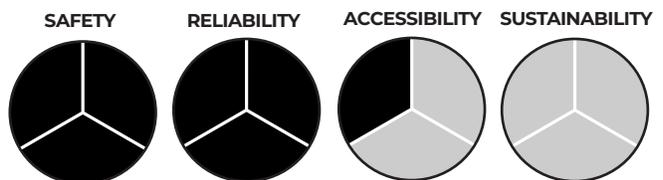


### Train Control Crossover Signaling in the Diridon-San José Station Area

This project was identified as part of the minimal investment needed on Caltrain corridor to meet the Moderate Growth Service Level without blended services as part of the systemwide effort of the Business Plan Development. This project aims to redo the entire signal system near the Diridon-San José Station to allow for greater frequency of trains that will serve the station.

### Santa Clara County Systemwide Benefits

CIP 10-Year Funding Needs: \$22M  
 Total Capital Cost EAC: \$22M  
 Estimated Timeline: FY2026 to FY2031



# Mandate, Compliance, and Emergency Projects

## Discrete Projects



### Electric Fleet for Service to Gilroy (Pilot Project)

This project will develop a hybridized EMUs capable of off-wire operation to be able to run electrified service to Gilroy. It will include the procurement of one BEMU train as a pilot project to test the vehicle prior to purchasing additional trainset. This project will enable the replacement of the remaining diesel fleet, which is approaching end of useful life and will eventually be banned by CARB.

### Corridor-wide Local Benefits

CIP 10-Year Funding Needs: \$59M  
Total Capital Cost EAC: \$80M  
Estimated Timeline: Ongoing to FY2029

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### Non-Revenue Vehicle Fleet Electrification

Per the Advanced Clean Fleets Regulation, State and local governments require that 50% of current vehicle purchases are zero-emission followed by 100% of vehicle purchases by 2027. This program will assess the needs, plan for, and implement the appropriate infrastructure to charge the non-revenue vehicles at the various Caltrain facilities.

### Corridor-wide Systemwide Benefits

CIP 10-Year Funding Needs: \$5M  
Total Capital Cost EAC: \$5M  
Estimated Timeline: FY2026 to FY2027

# Mandate, Compliance, and Emergency Projects

## *Discrete Projects*



### **MS4 Trash Management**

This project will design and implement a full trash capture system required to maintain the MS4 NPDES permit.

### **Corridor-wide**

### **Systemwide Benefits**

**CIP 10-Year Funding Needs: \$844k**

**Total Capital Cost EAC: \$1.7M**

**Estimated Timeline: Ongoing to FY2027**

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# Partner with Local Communities



## **Bayview Caltrain Station Location Study and Implementation**

This study, led by the San Francisco County Transportation Authority (SFCTA), follows the Southeast Rail Station Study, which explored options for a future Caltrain station in southeastern San Francisco between the existing 4th and King Station and Bayshore Station. The Bayview Caltrain Station Location Study will recommend a single station location to advance towards implementation using focused and prioritized criteria shaped by community input and will lay out a roadmap for final design, environmental clearance, and implementation.

**San Francisco County**  
**Local Jurisdiction: SFCTA**

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## **Pennsylvania Avenue Extension (PAX)**

This project includes grade separation improvements at Mission Bay Drive and 16th Street (at 7th) and could include the reconstruction and relocation of the Caltrain 22nd Street Station and connection to The Portal. The project would place Caltrain underground, thus allowing transit, pedestrian, bicycle, and vehicular traffic to flow uninterrupted and improve safety for all road users.

**San Francisco County**  
**Local Jurisdiction: City and County of San Francisco**

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## **San Mateo Parking Track Replacement (Part of 25th Avenue Grade Separation)**

This project supports the construction of a set-out-track to replace the one that was removed in the Bay Meadows area to facilitate the construction of the 25th Avenue Grade Separation Project. Electrification of this parking track is a Caltrain-led project that is included in the Enhance Service and Customer Experience Strategic Initiative.

**San Mateo County**  
**Local Jurisdiction: City of San Mateo**

# Partner with Local Communities



## **Middle Avenue Bicycle and Pedestrian Undercrossing**

This project will add a new bicycle and pedestrian undercrossing at Middle Avenue in the City of Menlo Park. The undercrossing will improve safety and connectivity in the area around Middle Avenue in Menlo Park and serve the newly completed Stanford development, which is adjacent to Middle Avenue, as well as a middle school in the area.

**San Mateo County**

**Local Jurisdiction: City of Menlo Park**

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## **Broadway Burlingame Grade Separation**

This project will grade separate the at grade crossing on Broadway Street in the City of Burlingame by elevating the rail over the existing roadway, which will decrease the likelihood of collisions or other delays. The elevated rail alignment will require the reconstruction of the Caltrain Broadway Station and will remove the operational requirement of the hold-out rule.

**San Mateo County**

**Local Jurisdiction: City of Burlingame**

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## **South Linden Avenue and Scott Street Grade Separation**

This project will grade separate the at grade crossings at South Linden Avenue in South San Francisco and at Scott Street in San Bruno. These separations will reduce anticipated traffic congestion and reduce the need for a train horn. At South Linden Avenue, the railroad will be elevated and the roadway partially depressed. At Scott Street, vehicular access will be closed while a bicycle and pedestrian grade separated crossing will be built.

**San Mateo County**

**Local Jurisdiction: Cities of South San Francisco and San Bruno**

# Partner with Local Communities



## Menlo Park Grade Separation

This project will grade separate three at grade crossings at Ravenswood Avenue, Oak Grove Avenue, and Glenwood Avenue in Menlo Park, increasing service efficiency and safety for Caltrain and the community. The project includes the partial elevation of the rail tracks at these three crossings, wherein vehicular traffic would be partially lowered. Encinal Avenue would remain at grade. The project also includes modifications to the Caltrain Menlo Park Station.

**San Mateo County**

**Local Jurisdiction: City of Menlo Park**

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## North Fair Oaks Bicycle and Pedestrian Railroad Crossing

This project will add a new pedestrian and bicycle crossing in the unincorporated community of North Fair Oaks in San Mateo County, in a MTC equity priority area, improving cross-corridor connectivity and safety for active transportation users.

**San Mateo County**

**Local Jurisdiction: County of San Mateo**

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## Ravenswood Avenue and Oak Grove Avenue Grade Crossing Improvements

This project will implement safety improvements at two at grade crossings located on Ravenswood Avenue and Oak Grove Avenue in Menlo Park, which were identified as specific areas for improvement in the *Menlo Park / Palo Alto Quiet Zone Implementation Study*. Improvements will include the installation of four-quadrant gates at the two crossings, as well as the installation of exit gates, curb and sidewalk adjustments, and the replacement of the existing combined vehicle and pedestrian entrance gates.

**San Mateo County**

**Local Jurisdiction: City of Menlo Park**

# Partner with Local Communities



## Encinal Avenue Grade Crossing Improvements

This project will implement safety improvements at one at grade crossing located on Encinal Avenue in Menlo Park, which was identified as a specific area for improvement in the *Menlo Park / Palo Alto Quiet Zone Implementation Study*. Improvements may include the installation of four-quadrant gates, curb and sidewalk adjustments, and the replacement of the existing combined vehicle and pedestrian entrance gates.

**San Mateo County**

**Local Jurisdiction: City of Menlo Park**

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## Glenwood Avenue Grade Crossing Improvements

This project will implement safety improvements at one at grade crossing located on Glenwood Avenue in Menlo Park, which was identified as a specific area for improvement in the *Menlo Park / Palo Alto Quiet Zone Implementation Study*. Improvements may include the installation of four-quadrant gates, curb and sidewalk adjustments, and the replacement of the existing combined vehicle and pedestrian entrance gates.

**San Mateo County**

**Local Jurisdiction: City of Menlo Park**

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## San Mateo Grade Separation Project

This program consists of six grade separations in downtown San Mateo: 1st, 2nd, E. 3rd, E. 4th, E. 5th, and 9th Avenues. Reducing the number of at grade crossings will enhance the system's ability to execute timely, collision-free service in preparation for Caltrain's Enhanced Service Growth Scenario.

**San Mateo County**

**Local Jurisdiction: City of San Mateo**

# Partner with Local Communities



## Mountain View Transit Center Grade Separation

This project includes two components: (1) the closure of the at grade vehicular crossing at Castro Street and (2) the construction of a pedestrian/bicycle underpass and the redesign of the Mountain View Station Transit Center. The project aims at improving safety for all users, improving overall traffic flow, reducing traffic delays caused by gate down times, and supporting the pedestrianization of downtown Mountain View including the Transit Center and Castro Street, while also improving service efficiency and safety for Caltrain passengers.

**Santa Clara County**

**Local Jurisdiction: City of Mountain View**

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## Rengstorff Avenue Grade Separation

This project will grade separate the at-grade crossing at Rengstorff Avenue in the City of Mountain View to enhance Caltrain's operational safety while improving traffic flow and pedestrian safety. The city selected its locally preferred alternative, which was a Complete Street Concept that includes a Rengstorff Avenue underpass and the construction of a new elevated pedestrian walkway parallel to the Caltrain tracks connecting Crisanto Avenue to the commercial area east of Rengstorff Avenue. The grade separation will require lowering Rengstorff Avenue and connecting roadways, including Central Expressway.

**Santa Clara County**

**Local Jurisdiction: City of Mountain View**

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## Bernardo Avenue Bicycle and Pedestrian Undercrossing

This project will add a new bicycle and pedestrian undercrossing at Bernardo Avenue, on the border of the City of Sunnyvale and the City of Mountain View. The proposed undercrossing will provide key access across/under the railroad as well as Central Expressway.

**Santa Clara County**

**Local Jurisdictions: Cities of Sunnyvale and Mountain View**

# Partner with Local Communities



## Connecting Palo Alto

This project will grade separate three at grade crossings at Churchill Avenue, Meadow Drive, and Charleston Road in Palo Alto. The project is intended to address traffic congestion and remediate any consequences for when Caltrain begins offering electrified trains at greater frequencies.

### **Santa Clara County**

**Local Jurisdiction: City of Palo Alto**

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## Mary Avenue Grade Separation

This project will grade separate the at grade crossing at Mary Avenue in Sunnyvale. The city selected the project alternative known as the *Mary Avenue Underpass with Jughandle* option for this grade separation. The road will be lowered to go under the tracks. This option decreases the number of points that bicyclists and pedestrians would need to cross vehicle lanes.

### **Santa Clara County**

**Local Jurisdiction: City of Sunnyvale**

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## Sunnyvale Avenue Bicycle and Pedestrian Undercrossing

This project will transform the at grade crossing at Sunnyvale Avenue in Sunnyvale into a bicycle and pedestrian undercrossing to reduce the pedestrian and bicycle collisions with trains. This consists of improvements along Sunnyvale, Evelyn, Hendy Avenues. The segment of Sunnyvale Avenue between Hendy and Evelyn Avenues will be closed to vehicular traffic and converted to a pedestrian and bicycle undercrossing.

### **Santa Clara County**

**Local Jurisdiction: City of Sunnyvale**

# Partner with Local Communities



## Palo Alto Avenue Grade Crossing Improvements

This project will implement safety improvements at one at grade crossing located on Palo Alto Avenue (Alma Street) in Palo Alto, which was identified as a specific area for improvement in the *Menlo Park / Palo Alto Quiet Zone Implementation Study*. Improvements may include upgrading and lengthening the medians along Alma Street.

**Santa Clara County**

**Local Jurisdiction: City of Palo Alto**

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## Southern San José Grade Separation

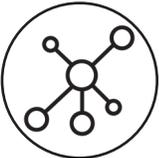
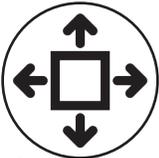
This project will grade separate three at grade crossings at Skyway Drive, Branham Lane, and Chynoweth Avenue in the City of San José. All three crossings, on Union Pacific track, are adjacent to intersections with Monterey Road, a high-fatality corridor, with over 33,000 vehicles daily, and have a recent history of fatality and injury crashes. This project will be built concurrently with the HSR Project through the project area.

**Santa Clara County**

**Local Jurisdiction: City of San José**

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# Contribute to the Region's Economic Vitality



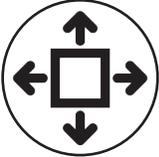
## HSR Blended Service

Blended service with HSR throughout much of the Caltrain corridor. HSR will share Caltrain's tracks with stops in San Francisco, Millbrae, San José, and Gilroy. The San Francisco to San José Project Section includes improvement to the Caltrain corridor to allow for increased train speeds. The San José to Merced Project Section includes the electrification of the UP corridor between San José and Gilroy, which will allow for the extension of Caltrain electrified service throughout the entire Caltrain corridor.

### Corridor-wide

**Lead Agency: CAHSR Authority**

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## DTX/The Portal – Caltrain Extension to Downtown Salesforce Transit Center

The Portal (also known as the DTX project) will move Caltrain from its current northern terminal at 4th and King Streets to a new terminal at the Salesforce Transit Center in Downtown San Francisco. The Portal project is also planned to be compatible with HSR and the potential future rail expansion across the Bay as part of the Link 21 Program.

### San Francisco County

**Lead Agency: TJPA**

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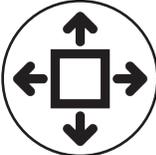
## San Francisco Railyards Redevelopment

The redevelopment of the San Francisco Railyards site into a regional transit center will include a new rail station, housing, offices, and public spaces. The redevelopment will accommodate increased Caltrain service, future Caltrain and HSR operations, generate additional ridership, and support connections to HSR, the Portal, SFMTA Central Subway, and other SFMTA transit lines.

### San Francisco County

**Lead Agencies: Prologis and City of San Francisco**

# Contribute to the Region's Economic Vitality



## Link 21 Program

Link21 (formerly known as the New Transbay Rail Crossing) is a Northern California Megaregional Program sponsored by BART and the CCJPA to transform the passenger rail network serving the 21-county Northern California Megaregion (Megaregion). Link21 is a program of projects that will build on the existing BART and Regional Rail systems and include a new passenger rail crossing under the Bay between Oakland and San Francisco that will connect to the Salesforce Transit Center. The Crossing Program will increase capacity and bring new passenger rail connections and services to the Megaregion.

### San Francisco County

**Lead Agencies: BART and Capital Corridor**

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## Dumbarton Rail Corridor Coordination

The Dumbarton Rail Corridor Program would provide a new mass transit system between the San Francisco Peninsula and the East Bay, connecting the Caltrain Redwood City Station to the BART Union City Station. The program would primarily use an existing railroad right-of-way and bridge owned by SamTrans. The alignments under study could support one of several potential electric transit technologies, including commuter rail, light rail, and other mass transit technologies. SamTrans is currently studying early opportunities to activate the corridor with transportation improvements that will serve the community which could include phasing improvements starting with activation of the Peninsula side.

### San Mateo County

**Lead Agency: SamTrans**

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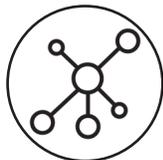
## Diridon-San José Station - Project Implementation

The Diridon-San José Station is an historic station and poised to become one of the busiest intermodal stations in North America with the planned addition of BART to Silicon Valley Phase 2 connecting to the East Bay, HSR service, and improved intercity passenger rail to the San Joaquin Valley (ACE) and to Sacramento (Amtrak Capitol Corridor). Additionally, the San José Airport Connector Project will provide a grade separated transit connection from San José Mineta International Airport to Diridon-San José Station. To best accommodate such planned activity and future capacity needs, the Station must be reconfigured to connect all transit services most effectively with each other and with the surrounding urban environment.

### Santa Clara County

**Lead Agencies: Caltrain, MTC, VTA, HSR, and City of San José**

# Contribute to the Region's Economic Vitality

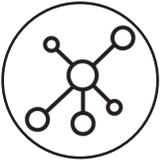


## **BART to Silicon Valley Phase II**

The BART Silicon Valley Phase II Extension Project is a six-mile, four-station extension of BART service from the recently opened Berryessa/North San José Station, built as part of VTA's BART Phase I, through downtown San José to the City of Santa Clara. The Phase II Project will allow connections at Diridon-San José Station and Santa Clara stations between BART and Caltrain.

**Santa Clara County**  
**Lead Agencies: BART and VTA**

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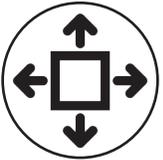


## **San José Airport Connector**

This project develops a grade separated transit connection from San José Mineta International Airport to Diridon-San José Station.

**Santa Clara County**  
**Lead Agency: City of San José**

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## **Monterey County Extension**

The Monterey County Extension Program extends passenger rail from Gilroy Station to Salinas through a phased implementation. The project include the newly completed Salinas Intermodal Center, and the future Salinas layover facility and track improvement at Gilroy Station.

**Corridor-wide**  
**Lead Agencies: TAMC, City of Gilroy, and VTA**