BOARD OF DIRECTORS 2020

DAVE PINE, CHAIR
DEVORA "DEV" DAVIS, VICE CHAIR
JEANNIE BRUINS
CINDY CHAVEZ
RON COLLINS
STEVE HEMINGER
CHARLES STONE
SHAMANN WALTON
MONIQUE ZMUDA

JIM HARTNETT
EXECUTIVE DIRECTOR

AGENDA

PENINSULA CORRIDOR JOINT POWERS BOARD

Due to COVID-19, this meeting will be conducted as a teleconference pursuant to the provisions of the Governor's Executive Orders N-25-20 and N-29-20, which suspends certain requirements of the Ralph M. Brown Act.

THE PUBLIC MAY NOT ATTEND THIS MEETING IN PERSON.

Directors, staff and the public may participate remotely* via the Zoom website at https://zoom.us/j/642442715 for audio/visual capability or by calling 1-669-900-9128, Webinar ID: 642 442 715 for audio only. You also may view a video live stream during or after the meeting at http://www.caltrain.com/about/bod/video.html

Public Comment on Items Not on the Agenda (limit one per person) must be submitted via email prior to the meeting's call to order to publiccomment@caltrain.com .
Public comments on individual agenda items (limit one per person PER AGENDA ITEM) must be submitted (a) via email prior to the meeting's call to order to publiccomment@caltrain.com or (b) via Zoom Q&A before each agenda item is presented. Please indicate in your email or Q&A the agenda item to which your comment applies. Any written public comments received after the deadlines specified above will be included in the Board's weekly correspondence posted online at http://www.caltrain.com/about/bod/Board_of_Directors_Meeting_Calendar.html .
Although public comments are generally limited to two minutes per person per comment, the Board Chair shall have the discretion to manage the Public Comment process in a manner that achieves the purpose of public communication and assures the orderly conduct of the meeting.

April 2, 2020 – Thursday **9:00 am**

1. Call to Order / Pledge of Allegiance
2. Roll Call
3. Public Comment For Items Not on the Agenda

Comments by each individual speaker shall be limited to two (2) minutes. Items raised that require a response will be deferred for staff reply.

4. Consent Calendar

Members of the Board may request that an item under the Consent Calendar be considered separately

a. Approve Special and Regular Meeting Minutes of March 5, 2020 MOTION

Note: All items appearing on the agenda are subject to action by the Board. Staff recommendations are subject to change by the Board.

b. Receive Key Caltrain Performance Statistics	MOTION
c. Receive State and Federal Legislative Update	MOTION
d. Caltrain Business Plan - Update Covering March 2020	INFORMATIONAL

Approved by the Finance Committee

e. Accept Statement of Revenues and Expenditures for February 2020	MOTION
f. Agreement with Sprint for Relocation of Communication Facilities for the South San Francisco Station Improvement Project	RESOLUTION
g. Authorize Application for San Mateo County Shuttle Program Funds	RESOLUTION
h. Award Contract for MP36PH-3C Locomotives Mid-Life Overhaul Services	RESOLUTION

5. Report of the Chair
6. Report of the Executive Director
   - a. COVID-19 Status Update
   - b. Peninsula Corridor Electrification Project Monthly Progress Report — INFORMATIONAL
   - c. Monthly Report on Positive Train Control Project — INFORMATIONAL
7. Report of the Work Program-Legislative–Planning (WPLP) Committee
   - a. Update on 25th Ave Grade Separation/Hillsdale Station Closure — INFORMATIONAL
8. Replace Fuel Hedging Policy with New Diesel Fuel Hedging Program and Statement Of Policy and Strategy to Maintain a Futures Account to Acquire, Hold and Dispose of Diesel Futures Contracts and Authorize Executing Commodity Futures Accounts — MOTION
9. Correspondence
10. Board Member Requests
11. General Counsel Report
12. Closed Session: Conference with Real Property Negotiators
    (via confidential teleconference number)
    Property: 2121 South El Camino Real, San Mateo California Pursuant to Government Code Section 54956.8.
    Agency Negotiators: Joan Cassman, General Counsel, Brian Fitzpatrick, Director of Real Estate Program, and Gary Cardona, Manager, Capital Project Support & Property Management
    Negotiating parties: LPC West, Inc. and RREF III-P Tower Plaza, LLC Under Negotiation: Lease price and terms of payment
13. Date/Time of Next Regular Meeting: Thursday, May 7, 2020 at 9:00 am, San Mateo County Transit District Administrative Building, 2nd Floor, 1250 San Carlos Avenue, San Carlos, CA
14. Adjourn

INFORMATION FOR THE PUBLIC

All items appearing on the agenda are subject to action by the Board. Staff recommendations are subject to change by the Board.

If you have questions on the agenda, please contact the JPB Secretary at 650.508.6242. Agendas are available on the Caltrain website at www.caltrain.com. Communications to the Board of Directors can be e-mailed to board@caltrain.com.

Free translation is available; Para traducción llama al 1.800.660.4287; 如需翻译 请电 *1.800.660.4287*

Date and Time of Board and Committee Meetings
JPB Board: First Thursday of the month, 9:00 am; JPB Finance Committee: Fourth Monday of the month, 2:30 pm. Date, time and location of meetings may be changed as necessary. Meeting schedules for the Board and committees are available on the website.

Location of Meeting
Due to COVID-19, the meeting will only be via teleconference as per the information provided at the top of the agenda. The Public may not attend this meeting in person.

Public Comment*
Public Comment on Items Not on the Agenda (limit one per person) must be submitted via email prior to the meeting's call to order to publiccomment@caltrain.com .
Public comments on individual agenda items (limit one per person PER AGENDA ITEM) must be submitted (a) via email prior to the meeting's call to order to publiccomment@caltrain.com or (b) via Zoom Q&A before each agenda item is presented. Please indicate in your email or Q&A the agenda item to which your comment applies. Any written public comments received after the deadlines specified above will be included in the Board's weekly correspondence posted online at http://www.caltrain.com/about/bod/Board_of_Directors_Meeting_Calendar.html .
Although public comments are generally limited to two minutes per person per comment, the Board Chair shall have the discretion to manage the Public Comment process in a manner that achieves the purpose of public communication and assures the orderly conduct of the meeting.

Accessible Public Meetings/Translation
Upon request, the JPB will provide for written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in and provide comments at/related to public meetings. Please submit a request, including your name, phone number and/or email address, and a description of the modification, accommodation, auxiliary aid, service or alternative format requested at least at least 72 hours in advance of the meeting or hearing. Please direct requests for disability-related modification and/or interpreter services to the Title VI Administrator at San Mateo County Transit District, 1250 San Carlos Avenue, San Carlos, CA 94070-1306; or email titlevi@samtrans.com; or request by phone at 650-622-7864 or
TTY 650-508-6448.

Availability of Public Records
All public records relating to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body will be available for public inspection at 1250 San Carlos

Avenue, San Carlos, CA 94070-1306, at the same time that the public records are distributed or made available to the legislative body.

Peninsula Corridor Joint Powers Board
Board of Directors
1250 San Carlos Avenue, San Carlos CA 94070

MINUTES OF MARCH 5, 2020
SPECIAL MEETING

MEMBERS PRESENT:	J. Bruins, C. Chavez, R. Collins, S. Heminger, S. Walton, M. Zmuda, D. Davis
MEMBERS ABSENT:	D. Pine, C. Stone
STAFF PRESENT:	J. Hartnett, J. Cassman, M. Bouchard, D. Seamans, S. Wong

1. CALL TO ORDER

Acting-Chair Dev Davis called the meeting to order at 8:34 am.

2. ROLL CALL

District Secretary Dora Seamans called the roll and confirmed a quorum.

3. GENERAL COUNSEL REPORT

Closed Session: Public Employee Performance Evaluation Pursuant To Government Code Section 54957(B)(1) Title: Executive Director

The Board convened a closed session at 8:34 am.

The Board reconvened into open session at 9:01 am.

Joan Cassman, Legal Counsel, reported no disclosures from the closed session.

4. ADJOURN

The special meeting adjourned at 9:03 am.

DRAFT

Peninsula Corridor Joint Powers Boar
Board of Directors Meeting
1250 San Carlos Avenue, San Carlos CA

MINUTES OF MARCH 5, 2020

MEMBERS PRESENT: D. Davis (Vice/Acting Chair), C. Brinkman, J. Bruins, C. Chavez, R. Collins,
C. Stone (arrived 9:26 a.m.), S. Walton, M. Zmuda

MEMBERS ABSENT: D. Pine, Chair

STAFF PRESENT: J. Hartnett, C. Mau, J. Cassman, M. Bouchard, A. Chan, J. Funghi, D. Hansel, S. Murphy, M. Jones, S. Petty, D. Seamans, S. Wong

1. CALL TO ORDER / PLEDGE OF ALLEGIANCE
Acting Chair Dev Davis called the meeting to order at 9:13 am. Director Steve Heminger led the Pledge of Allegiance.

Director Davis requested Item #6a follow Item #2.

2. SWEARING-IN OF STEVE HEMINGER REPRESENTING THE SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY (SFMTA)
District Secretary Dora Seamans administered the Oath of Office.

Jim Hartnett, Executive Director, stated that there was nothing to report for the Closed Session prior to this meeting.

6. REPORT OF THE CHAIR
a. Resolution of Appreciation for former Director Cheryl Brinkman
Director Davis presented the resolution. Director Brinkman expressed her appreciation and good wishes.

3. ROLL CALL
District Secretary Seamans called the roll and confirmed a quorum.

4. PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA
Roland Lebrun, San Jose, commented on the TASI contract.

5. CONSENT CALENDAR

Public Comment
Jeff Carter, Millbrae, requested methodology and revenue data for each Caltrain fare product online.

Motion/Second: Walton/Zmuda approved the Consent Calendar, as follows:
Ayes: Davis, Chavez, Collins, Heminger, Walton, Zmuda
Noes: None
Absent: Pine, Bruins, Stone

DRAFT

a. **Approve Meeting Minutes of February 6, 2020**
b. **Receive Key Caltrain Performance Statistics**
c. **Receive State and Federal Legislative Update**
d. **Accept Statement of Revenues and Expenditures for January 2020**
e. **Disposition of Taylor Dunn Electric Carts**
f. **Authorize the Application for and Receipt of Annual Cap and Trade Funding for the Peninsula Corridor Electrification Project (PCEP)**
g. **Authorize the Executive Director to execute Amendment No. 2 to Supplemental Agreement No. 2 with Pacific Gas and Electric for construction of 115 kilovolt Interconnections for the Peninsula Corridor Electrification Project**

6. REPORT OF THE CHAIR

Director Cindy Chavez, provided the following updates from the February 21st Governance Ad Hoc Committee, which included the following: real estate ownership, accountability, special counsel work, electrification work, and the SB (Senate Bill) 797 Funding Measure.

7. REPORT OF THE EXECUTIVE DIRECTOR

Jim Hartnett, Executive Director, stated that Chair Dave Pine's absence was due to a national award from the Climate Leadership Conference. He provided an update on the corona virus status and Caltrain cleaning procedures.

In response to Director Monique Zmuda's inquiry on the change in passenger counts procedure, staff noted it would be addressed in the next agenda item staff report.

a. Peninsula Corridor Electrification Project Monthly Progress Report

John Funghi, Chief Officer, Caltrain Planning/CalMod, provided a monthly update on the electrification project; highlights include 48% required foundation complete, Balfour Beatty not advancing foundation work, and the new Balfour Beatty construction manager. Mr. Funghi reported all other electrical infrastructure were on schedule, PG&E advances, and program finances.

In response to various Board member questions and comments, Mr. Funghi provided clarification on changes, future impacts, timeline, schedule, and cost creep.

b. Senate Bill 797 Implementation

Michelle Bouchard, Chief Operating Officer, Rail, informed the Board that testing with Amtrak is complete and now fully operable. She discussed working on a maintenance agreement with Wabtec and understanding overall PTC maintenance finances. She emphasized the deadline for Safety Certification in December and the next big report out from Wabtec in May.

Public Comment:
Jeff Carter, Millbrae, pointed out reduced delays and livestream meetings since Mr. Hartnett's arrival in office.

Roland Lebrun, San Jose, commented on rusty rebars and EMUs (Electric Multiple Units).

8. REPORT OF THE CITIZENS ADVISORY COMMITTEE

Brian Shaw, Caltrain Citizens Advisory Committee Chair, provided the report and highlights included the following: online video summaries, seamless transit act, Hayward park citing issue, CAC presentations on Caltrain land, and public comments on single bathrooms. He noted that the March meeting would touch on Transit Oriented Development (TOD), industry safe functionality, and grade crossing solutions.

9. REPORT OF THE WORK PROGRAM-LEGISLATIVE–PLANNING (WPLP) COMMITTEE

Director Charles Stone provided a summary of the items from the last WPLP meeting which included the Caltrain Business Plan and SB 797.

a. Caltrain Business Plan - Update Covering January & February 2020

Sebastian Petty, Director of Policy Development, provided a report; highlights include the intent to provide the Plan in May, electrified service in 2022, station service improvements, connecting well with other transit, and overall funding strategies.

As proposed by Acting Chair Davis and by informal Board consensus, the staff presentations for Items 9a and 9b were both heard first and public comment would follow for both items next.

b. Senate Bill 797 Implementation

Seamus Murphy, Chief Communications Officer, provided an update; highlights include the need for dedicated funding, maximizing service with the 1/8th cent sales tax, projected future ridership, and enhanced growth scenarios. Mr. Murphy affirmed that this would be wrapped up in August to be put on the November ballot.

Public comment

Roland Lebrun, San Jose, remarked on increasing fare box by doubling the length of current platforms and keeping six trains.

Jeff Carter, Millbrae, commented on SB 797 and continued 3-partner agency contributions.

Adina Levin, Friends of Caltrain, remarked on enhanced growth meeting current demands without backtracking, and presentation of tax to voters.

Director Stone inquired about rider feedback regarding trading off express service for less packed trained.

Director Ron Collins emphasized regularity ensuring reliability, with more ridership if the public knows a train will arrive every 15 minutes.

Director Monique Zmuda asked if the plan would maintain current farebox revenue subsidy levels and asked about equity adjustments for fares as service increased. Mr. Petty said the plan assumed no reductions, and that the equity model has not been experimented with at this stage.

Mr. Murphy said the staff solutions include an equity component in regards to SB 797.

DRAFT

Director Cindy Chavez expressed concern on riders being able to afford to ride Caltrain and VTA (Santa Clara Valley Transportation Authority) financial stability.

Director Jeannie Bruins commented on revenues prioritization and Faster Bay Area on the ballot.

Director Stone expressed concern on the timing of both measures and thanked State Senator Jerry Hill and Charles Bordino for getting this measure passed and ready.

Acting Chair Davis asked about cost estimates for eight trains per hour and cars per set. Mr. Petty said it was seven cars per set and that it would require more storage and longer trains would make Centralized Equipment Maintenance and Operations Facility (CEMOF) non-functional. He clarified that train expansion would be to increase peak hour duration and not trains per hour.

Acting Chair Davis reiterated the schedule for SB 797 having no space for re-scheduling for a couple of Boards (that is, VTA and the San Francisco Board of Supervisors).

10. REPORT FROM SPECIAL COUNSEL AD HOC COMMITTEE
Director Shamman Walton reported the RFQ (request for quotation) for special counsel services for governance work had several responses from a pool of qualified applicants, and the Board decided to recommend Olson Remcho LLP.
Director Walton and Executive Director Hartnett thanked the committee for their time and thorough work.

Approved by Resolution 2020-10, Awarding a contract to Olson Remcho, LLP for special counsel services
Motion/Second: Walton/Bruins
Ayes: Davis, Bruins, Chavez, Collins, Heminger, Stone, Walton, Zmuda
Noes: None
Absent: Pine

11. CORRESPONDENCE
Correspondence was included in the Board's reading folders and available on line.

12. BOARD MEMBER REQUESTS
None.

Director Walton left at 11:42 a.m.

13. GENERAL COUNSEL REPORT
Director Bruins reported on the February 27th LPMG (Local Policy Maker Group) meeting. She stated that they discussed high speed rail, including a Virgin train from Victorville to Las Vegas, government funding, EMUs requiring higher doors, and concerns with land use at development sites in Millbrae.

The Board convened in closed session at 11:46 a.m.

a. Closed Session: Conference with Real Property Negotiators
Government Code Section 54956.8:

Property Location: Near intersection of Asbury Street (vacated) and Caltrain tracks, San Jose, CA, APN 259-09-049
Agency Negotiators: Joan L. Cassman, General Counsel and Brian Fitzpatrick Director, Real Estate & Development
Negotiating Parties: Union Pacific Railroad Company
Under negotiation: Price and terms of payment

The Board reconvened in open session at 11:57 a.m.

Joan Cassman, Legal Counsel, reported a pending transaction with Union Pacific from closed session. She stated it was in regards to obtaining the rights to upgrade and replace a signal hut near College Station in San Jose. They have a resolution the Board is willing to consider at this point.

Public Comment
Roland Lebrun, San Jose, commented on public comment-closed session procedures.

Approved by Resolution 2020-11, Authorizing the Executive Director to execute agreements with Union Pacific Railroad Company for relocation of a signal hut
Motion/Second: Bruins/Stone
Ayes: Davis, Bruins, Collins, Heminger, Stone, Zmuda
Noes: None
Absent: Pine, Chavez, Walton

13. DATE/TIME OF NEXT REGULAR MEETING: Thursday, April 2, 2020 at 9:00 am, San Mateo County Transit District Administrative Building, 2nd Floor, 1250 San Carlos Avenue, San Carlos, CA

14. ADJOURN
The meeting adjourned at 11:58 am.

An audio/video recording of this meeting is available online at www.caltrain.com. Questions may be referred to the Board Secretary's office by phone at 650.508.6242 or by email to board@caltrain.com.

DRAFT

AGENDA ITEM # 4b
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
Executive Director

FROM: Michelle Bouchard
Chief Operating Officer, Rail

SUBJECT: **KEY CALTRAIN PERFORMANCE STATISTICS – FEBRUARY 2020**

ACTION

Staff Coordinating Council recommends that the Board receive the Performance Statistics Report for February 2020.

SIGNIFICANCE

Staff will provide monthly updates to Key Caltrain Performance Statistics, Caltrain Shuttle Ridership, Caltrain Promotions, Special Event Updates, Digital Metrics, Social Media Analytics and News Report Coverage. It should be noted that this report reflects the last "unimpacted" report prior to the COVID-19 impact.

BUDGET IMPACT

There is no budget impact.

MONTHLY UPDATE

In February 2020, Caltrain's Average Weekday Ridership (AWR) increased by 5.0 percent to 67,218 from February 2019 AWR of 64,041. The total number of passengers who rode Caltrain in February 2020 increased by 6.3 percent to 1,406,951 from 1,323,427 February 2019 ridership.

This month ticket sales increased from February 2019 for:

- One Way tickets: 13.8 percent
- ED One Way tickets: 14.3 percent
- Day Passes: 8.8 percent
- ED Day Passes: 23.7 percent

This month ticket sales decreased from February 2019 for:

- Monthly Passes: 1.1 percent
- ED Monthly Passes: 7.5 percent

Caltrain Mobile Ticketing accounted for approximately 6.6 percent (92,781 rides) of February 2020 rides and 7.6 percent ($650,776) of February 2020 Monthly Ticket Sales

Revenue. The number of Eligible Go Pass Employees increased to 86,059 from 83,102 from February 2019. The number of participating Go Pass Companies decreased to 120 from 125 from February 2019. Total Farebox Revenue increased by 13.5 percent to $8,488,031 from $7,481,216 in February 2019. The increase in fare revenue was primarily due to an increase in Go Pass revenue.

On-time performance (OTP) for February 2020 was 93.5 percent compared to 92.2 percent OTP for February 2019. In February 2020, there were 819 minutes of delay due to mechanical issues compared to 529 minutes in February 2019.

Looking at customer service statistics, there were 6.5 complaints per 100,000 passengers in February 2020 compared with 8.6 in February 2019.

Shuttle ridership for February 2020 decreased 2.9 percent from February 2019. When the Marguerite shuttle ridership is removed, the impact to ridership was a increase of 1.7 percent. For station shuttles:

- Millbrae-Broadway shuttle: 207 average daily riders
- Weekend Tamien-San Jose shuttle: 16 average daily riders

Due to ongoing service issues with the Shuttle Contractor (MV Transportation) as a result of staffing shortage, there were a total of 431 DNOs (Did Not Operate) trips for Caltrain shuttles in February 2020. After months of decreases, DNOs increased after the holiday season. There is continued service loses beyond previously implemented service reductions and suspensions to match available operator counts. The Menlo Park Midday Shuttle, one of the two Twin Dolphin and one of the two Belle Haven vehicles remain temporarily discontinued.

Table A

February 2020

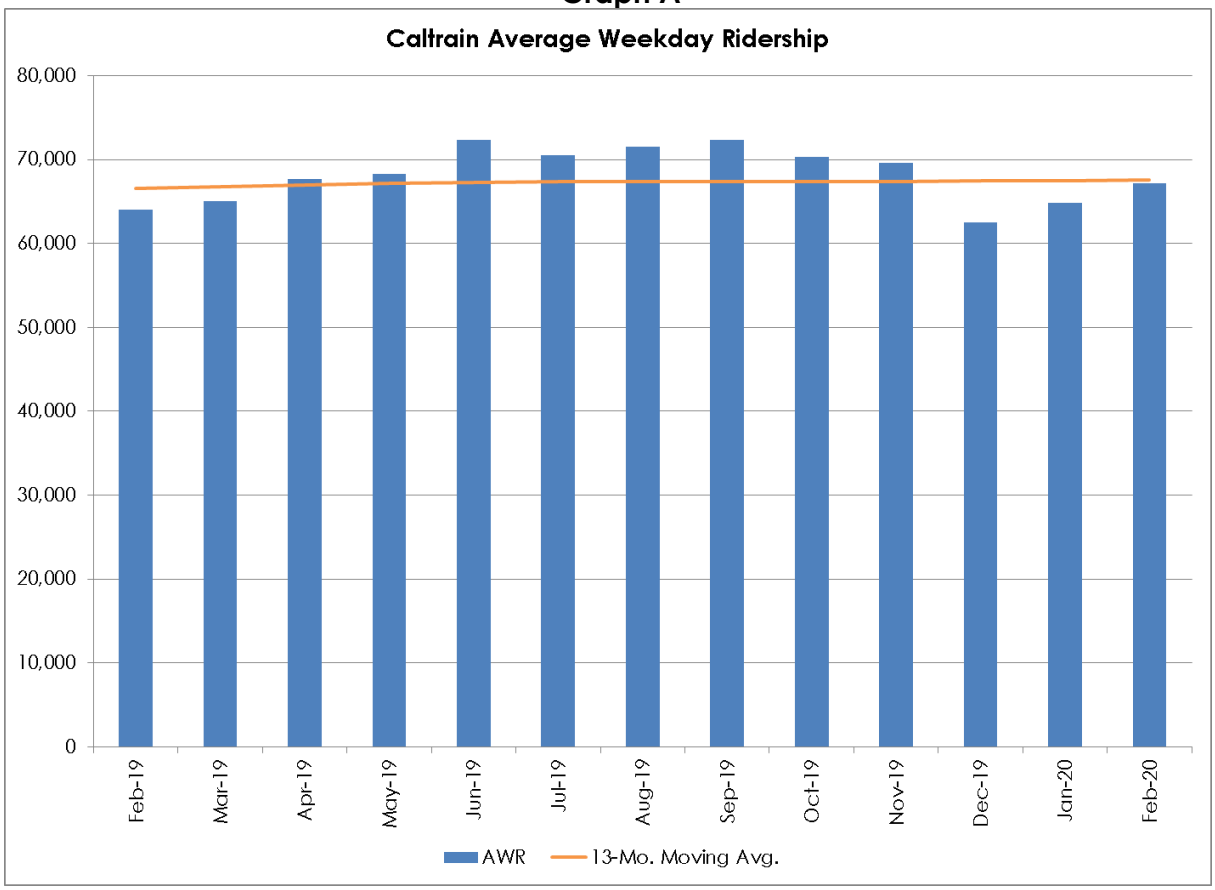
	FY2019	FY2020	% Change
Total Ridership	1,323,427*	1,406,951	6.3%
Average Weekday Ridership	64,041*	67,218	5.0%
Total Farebox Revenue	$ 7,481,216	$ 8,488,031	13.5%
On-time Performance	92.2%	93.5%	1.4%
Average Weekday Caltrain Shuttle Ridership	9,204	8,941	-2.9%

Fiscal Year to Date

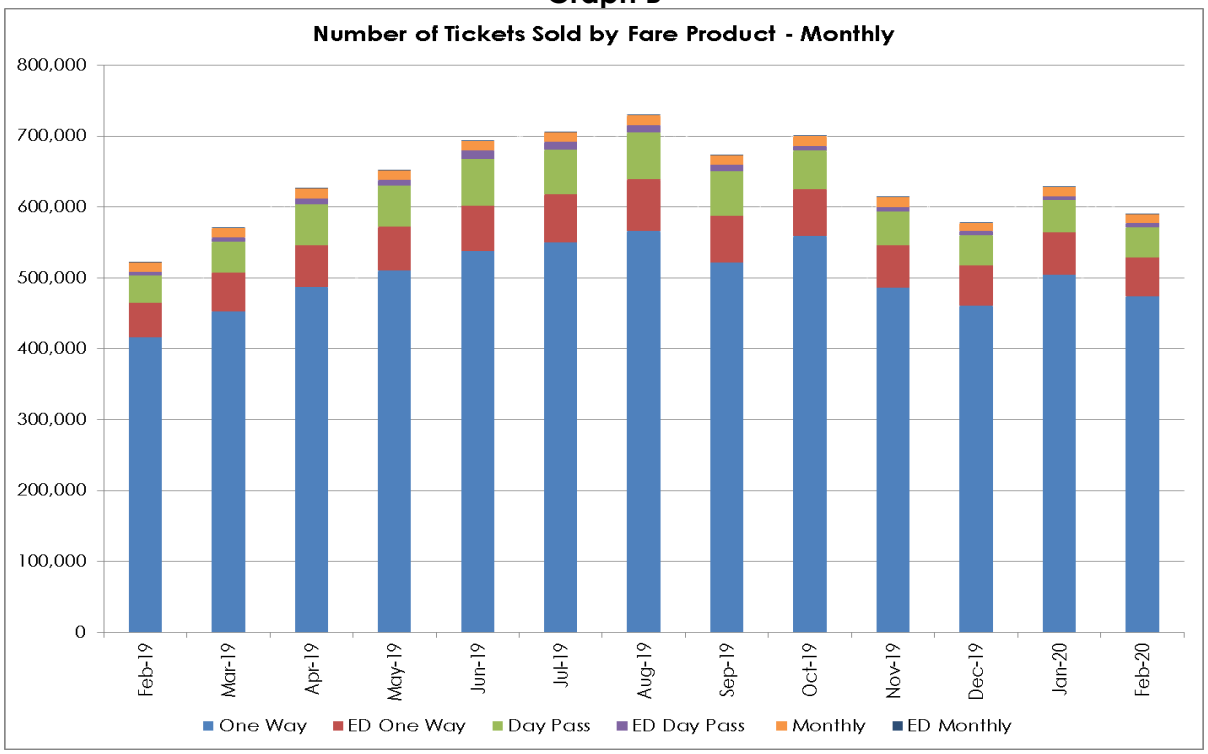
	FY2019	FY2020	% Change
Total Ridership	12,074,856*	12,534,948*	3.8%
Average Weekday Ridership	76,070*	78,415*	3.1%
Total Farebox Revenue	$ 66,330,153	$ 70,494,830	6.3%
On-time Performance	93.0%	93.6%	0.6%
Average Weekday Caltrain Shuttle Ridership	8,250	8,480	2.8%

** = Items revised due to calibration to the ridership model*

Graph A

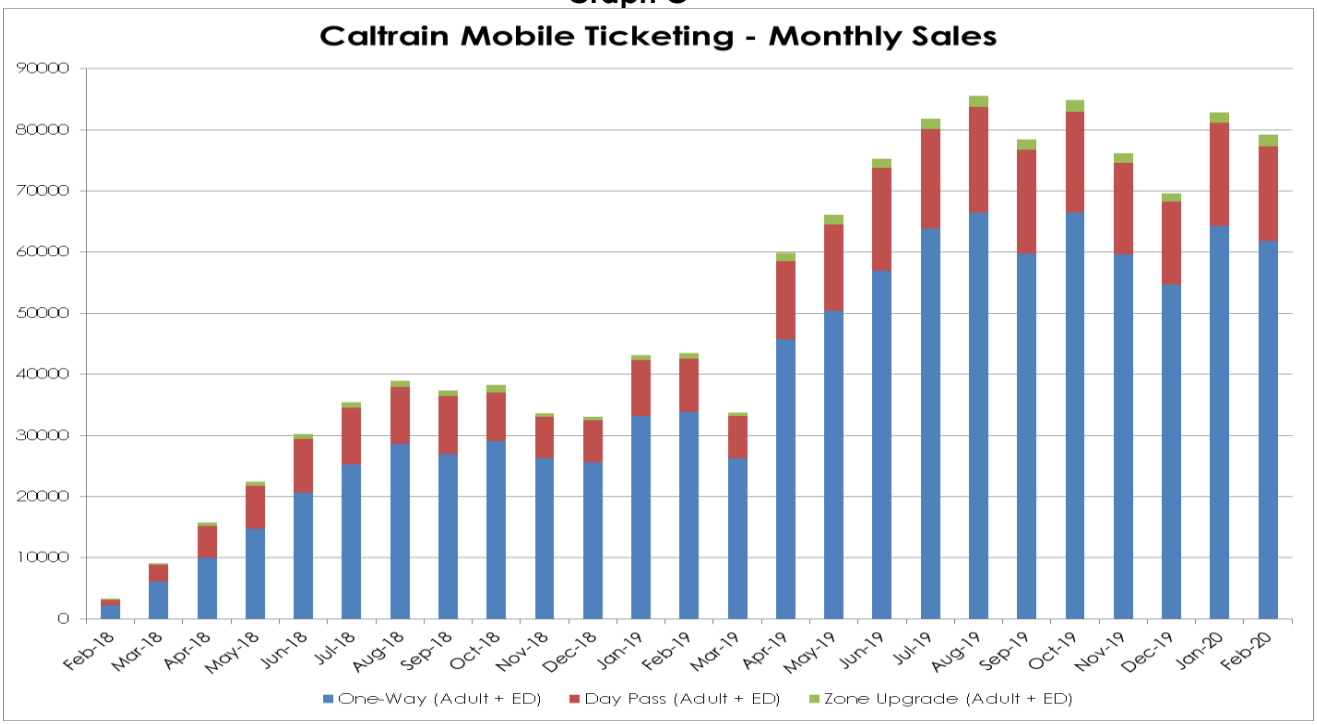


Graph B

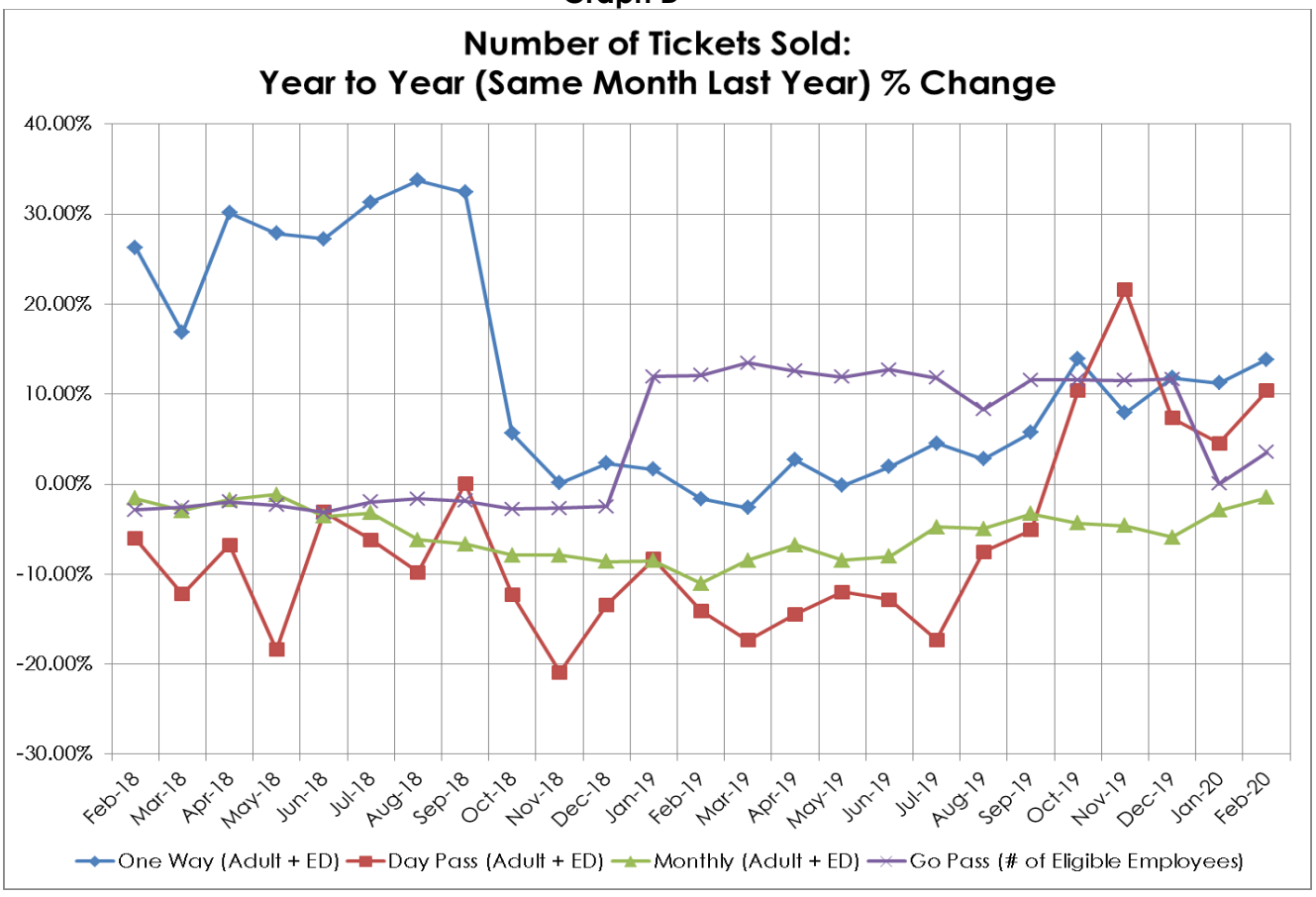


**Go Passes tracked by Monthly Number of Eligible Employees (not by Sales)*

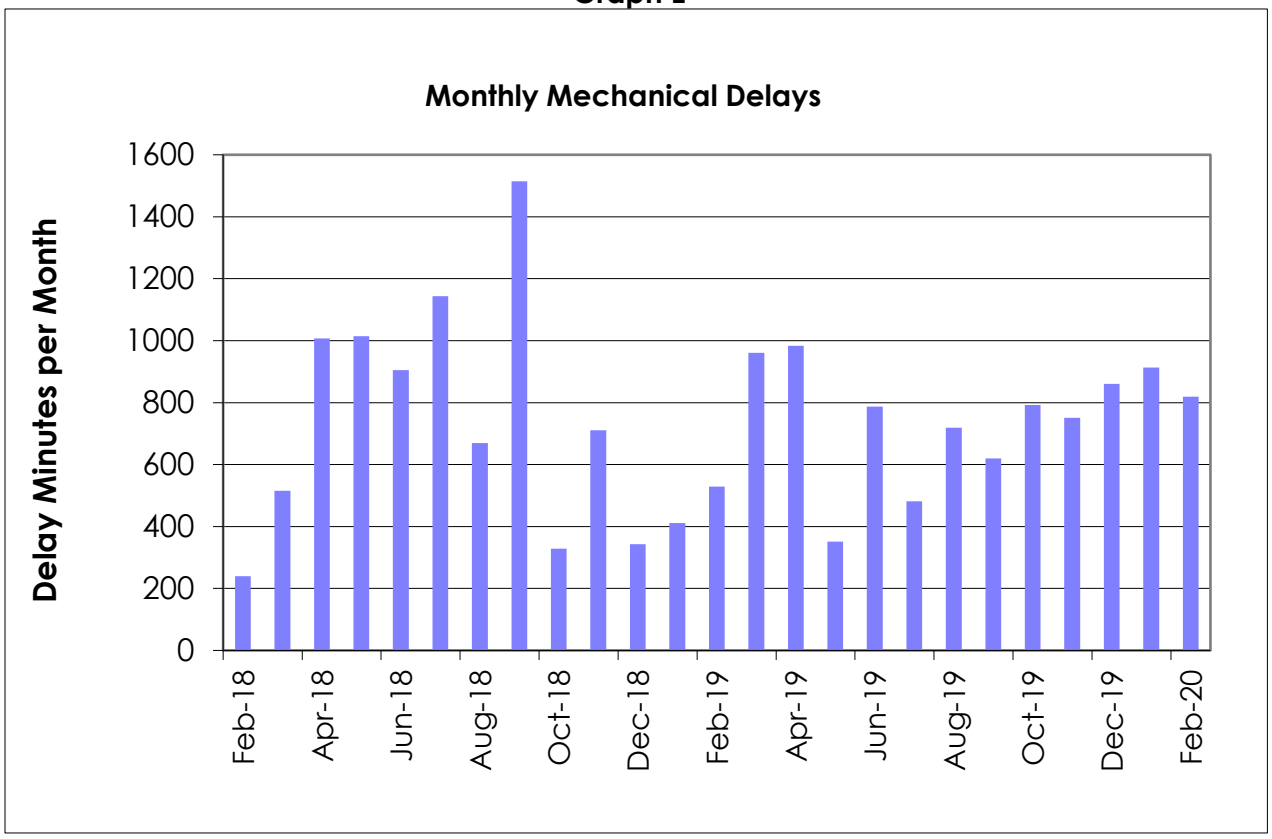
Graph C



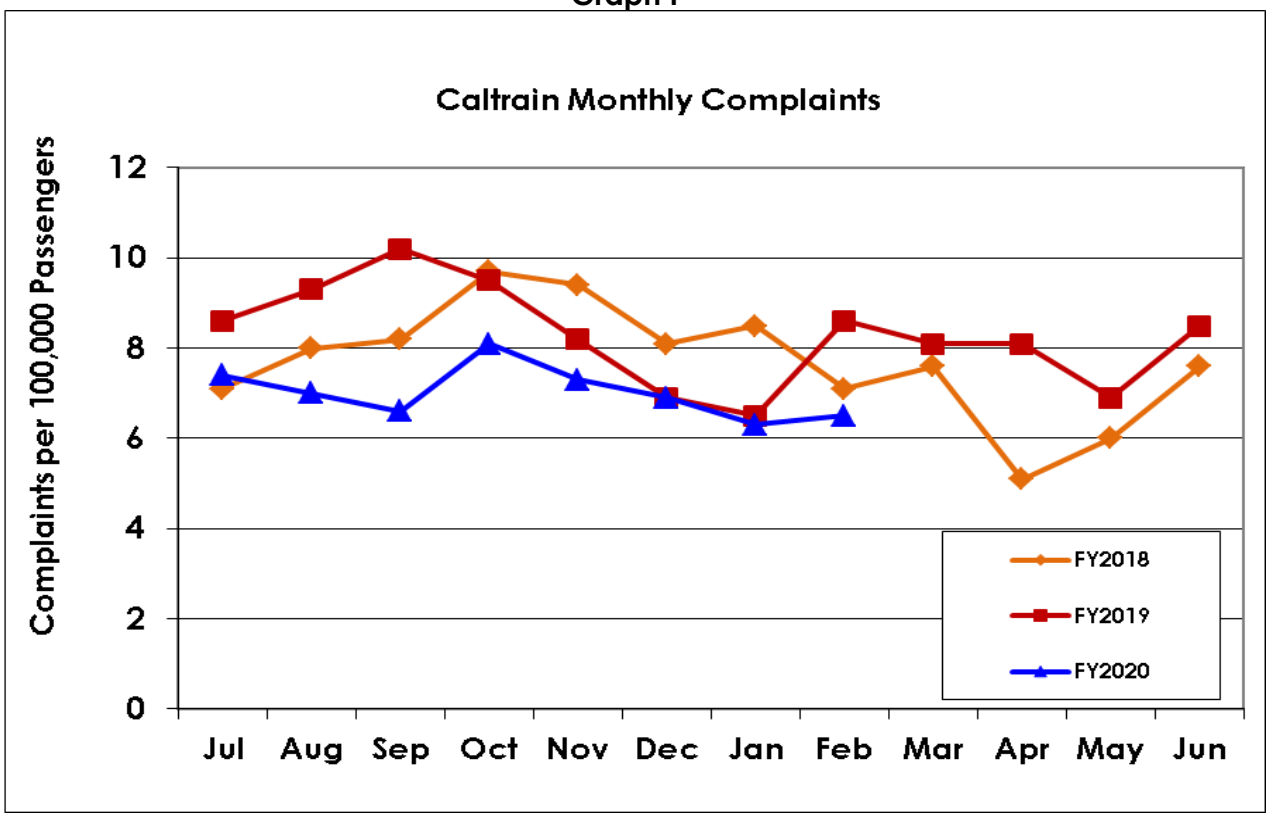
Graph D



Graph E

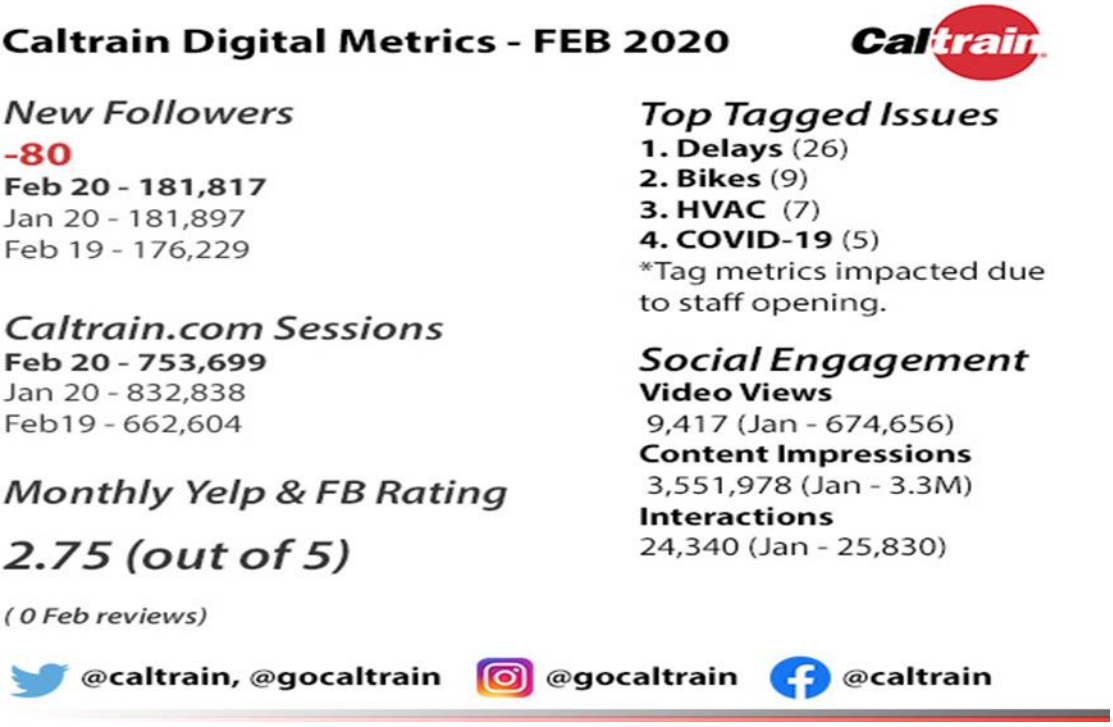


Graph F



Caltrain Promotions – February 2020

Giants FanFest – Giants FanFest was held on Saturday, February 8, at Oracle Park. For the first time, Oracle Park hosted its own public transportation section which included Caltrain, Golden Gate Ferry, BART and The Silicon Valley Bike Coalition. FanFest provided the perfect touch point to educate fans about Caltrain's special baseball service and other service related information. For FanFest, Caltrain adding extra pre- and post-event service trains to handle the extra passengers. Staff engaged with approximately 300 riders about special service and other Caltrain related information. Staff handed out over 1,200 squeeze stress baseballs, bats and gloves. Total alighting and boarding at San Francisco 774. Communications to promote the extra service included a news release, a post on the Peninsula Moves blog, a listing on the Caltrain Special Events website and heavy organic social media posts. This year's attendance was estimated to be 30,000 fans.



Twitter Impression Spikes
Feb, 2020

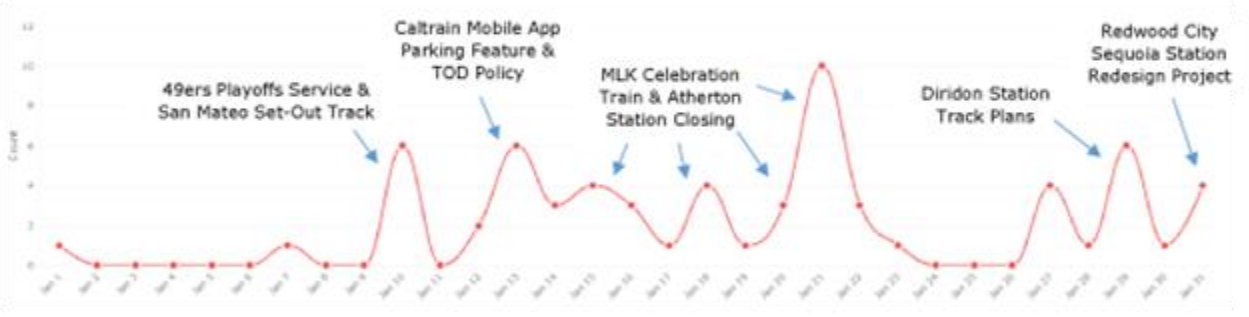
Your Tweets earned **1.6M impressions** over this **29 day** period

Feb 18
SJD Bomb Threat
889 Incident Delay Mins
18 M o E Delay Mins
1143 Total Delay Mins

Impressions of Tweets
Paid Impressions
Tweets Sent

Impressions sometimes appear the day after an incident as Twitter users view the post the next day.

Caltrain News Coverage Report – January 2020



Total # of articles: 65 (compared to 115 in December)

Prepared by: Patrice Givens, Administrative Analyst II 650.508.6347
James Namba, Marketing Specialist 650.508.7924
Jeremy Lipps, Social Media Officer 650.622.7845

AGENDA ITEM #4C
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
General Manager/CEO

FROM: Seamus Murphy
Chief Communications Officer

SUBJECT: **STATE AND FEDERAL LEGISLATIVE UPDATE**

ACTION

This report is for information only. No Board action is required.

SIGNIFICANCE

The 2020 Legislative Program establishes the principles that will guide the legislative and regulatory advocacy efforts. Based on those principles, staff coordinates closely with our Federal and State advocates on a wide variety of issues that are considered in Congress and the State legislature. The attached reports highlight the recent issues and actions that are relevant to the Board.

Prepared By: Casey Fromson, Government and Community Affairs Director 650-508-6493

SHAW/YODER/ANTWIH, inc.
LEGISLATIVE ADVOCACY • ASSOCIATION MANAGEMENT

EDELSTEIN GILBERT ROBSON & SMITH LLC

March 13, 2020

TO: Peninsula Corridor Joint Powers Board Members

FROM: Mike Robson and Trent Smith, Edelstein Gilbert Robson & Smith, LLC
Joshua W. Shaw and Matt Robinson, Shaw / Yoder / Antwih, Inc.

RE: **STATE LEGISLATIVE UPDATE – March 2020**

Overview

The Assembly and Senate acted to trigger an early Spring Recess, starting upon adjournment of the Monday, March 16 floor session. They will reconvene on April 13th. The regularly scheduled Spring Recess was to start April 3 and end April 13.

The Legislature recently reached its first major legislative deadline of 2020, the bill introduction deadline on February 21. From January 6 to the February 21, over 2,200 bills were introduced between the Assembly and the Senate. A large proportion of the introduced bills are "spot bills," which are bills that are introduced as placeholders until the author can finalize language to amend into the bill. These bills must be amended with more substantive language in the coming weeks before being referred to committee for a hearing.

All bills need to be in print for 30 days before being heard in a Committee so that the public and stakeholders have ample time to review the bills. Because of this, we will expect to see committee hearings start to ramp up at the end of March.

Legislation

AB 2237 (Berman) – Bay Area County Transportation Authorities Contracting. This bill would require each of Bay Area county transportation authority to award contracts greater than $150,000 either to the lowest responsible bidder or the responsible bidder whose proposal provides the best value based on the factors identified in the solicitation. The bill excludes projects during emergency declarations. Current law sets the threshold at $75,000, so this bill would double that value.

AB 2249 (Mathis) – High Speed Rail Legislative Oversight. This bill would create the Joint Legislative Committee on High-Speed Rail Oversight that would make recommendations to the Legislature related to the state's programs, policies and investments in High Speed Rail. The bill would require the Authority and any entity contracting with the Authority to provide the committee with information upon request and would require that the Authority submit monthly information regarding their operations and the development on High Speed Rail service.

This bill is pushed by an Assembly Republican from the Central Valley. Historically, Central Valley Republicans have introduced High Speed Rail oversight bills. Although they play well in their district, none of them have gotten any traction in Sacramento.

SB 278 (Beall) – Metropolitan Transportation Commission. This bill will likely become the FASTER funding bill that would raise up to $70 billion for FASTER Bay Area through an added sales tax. Along with a sales tax, the author is working with stakeholders on language regarding fees from large employers in the Bay Area that would raise up to $30 billion for investments in transit. The bill would require a two-thirds vote. This will likely be a big lift given the hesitancy in the Legislature to approve any additional taxes, especially in an election year.

AB 2057 (Chiu) San Francisco Bay Area Public Transit. This bill will include language that integrates transit systems parallel to the FASTER effort. This bill is not linked to SB 278, although their goals are aligned. The author's office has been engaged in discussions with transit agencies to ensure that creating seamlessness will not negatively affect their budgets. Unlike SB 278, this bill requires a majority vote and is more likely to move through the Legislature while the more complicated funding discussion occurs.

High Speed Rail

High Speed Rail Oversight Hearings. The Assembly Transportation Committee, chaired by Assemblymember Frazier, is holding an oversight hearing on the High Speed Rail Authority's 2020 Business Plan on March 16. The Senate Transportation Committee, chaired by Senator Beall, will hold an equivalent hearing on March 24th.

Statewide Competitive Grant Programs

Below is a list of major competitive grant programs administered by the State from which transit and rail projects are eligible/can be funded.

Transit and Intercity Rail Capital Program (TIRCP)

The TIRCP was created to fund capital improvements to modernize California's intercity rail, bus, ferry, and rail transit systems to reduce emissions, expand and improve transit service and ridership, integrate rail services and improve transit safety. Funds available are estimated at $450-500 million for Cycle 4 but could change on auction proceeds and changing cash flow requirements of already awarded projects.

Important Dates:
January 2020 – Applications Due
April 2020 – CalSTA Award Announcement

Solutions for Congested Corridors Program (SCCP)

The SCCP provides funding to achieve a balanced set of transportation, environmental, and community access improvements to reduce congestion throughout the state. The program makes $250 million available annually (programmed in 2-year increments) for projects that implement specific transportation performance improvements.

Important Dates:
October 2019 – Guidelines Adopted
January 2020 – Applications Due
June 2020 – Program Adoption

Local Partnership Program (LPP)
The LPP is intended to provide local and regional transportation agencies that have passed sales tax measures, developer fees, or other imposed transportation fees with a continuous appropriation of $200 million annually from the Road Maintenance and Rehabilitation Account to fund road maintenance and rehabilitation, sound walls, and other transportation improvement projects. The Competitive program is funded at $100 million annually.

Important Dates:
October 2019 – Guidelines Adopted
January 2020 – Applications Due
June 2020 – Program Adoption

Trade Corridor Enhancement Program (TCEP)
The TCEP provides funding for infrastructure improvements on federally designated Trade Corridors of National and Regional Significance, on the Primary Freight Network as identified in California Freight Mobility Plan, and along other corridors that have a high volume of freight movement. There is approximately $300 million provided per year (programmed in 2-year increments) for the competitive program.

Important Dates:
January 2020 – Guidelines Adopted
March 2020 – Applications Due
June 2020 – Program Adoption

Grade Separation Funding
Below is a list of the funding sources that we are aware of and/or that have been used to fund grade separations in the recent years. The funding sources below are managed across various state agencies and departments, including the Public Utilities Commission (PUC), the California State Transportation Agency (CalSTA), the California Transportation Commission (CTC), and Caltrans.

PUC Section 190 Grade Separation Program – The Program is a state funding program to grade separate crossings between roadways and railroad tracks and provides approximately $15 million annually, transferred from Caltrans. Agencies apply to the PUC for project funding.

State Transportation Improvement Program – The STIP, managed by Caltrans and programmed by the CTC, is primarily used to fund highway expansion projects throughout the state, but also supports grade separations. The STIP is programmed

every two years (currently the 2018 STIP added $2.2 billion in new funding). Local agencies receive a share of STIP funding, as does the State. The STIP is funded with gasoline excise tax revenues.

Transit and Intercity Rail Capital Program – The TIRCP is managed by CalSTA and is available to fund rail and transit projects that reduce greenhouse gas emissions. The program receives funding from Cap and Trade and the recently created Transportation Improvement Fee to the tune of approximately $500 million per year. The TIRCP is programmed over 5 years, with the most recent cycle beginning in May 2018. Caltrain received $160 million for the CalMod project.

Proposition 1A – This $9.9 billion Bond Act is the primary funding source for the high-speed rail project and has been used to fund a very limited number of grade separation projects in the past, including in the City of San Mateo.

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State Legislative Matrix 3/17/2020

Bill Number (Author)	Summary	Location	Position
AB 145 (Frazier D) High-Speed Rail Authority: Senate confirmation.	Existing law creates the High-Speed Rail Authority with specified powers and duties relative to development and implementation of a high-speed train system. The authority is composed of 11 members, including 5 voting members appointed by the Governor, 4 voting members appointed by the Legislature, and 2 nonvoting legislative members.This bill would provide that the members of the authority appointed by the Governor are subject to appointment with the advice and consent of the Senate. Introduced: 12/13/2018	Senate Rules	Watch
AB 1350 (Gonzalez D) Free youth transit passes: eligibility for state funding.	Existing law declares that the fostering, continuance, and development of public transportation systems are a matter of state concern. Existing law authorizes the Department of Transportation to administer various programs and allocates moneys for various public transportation purposes.This bill would require transit agencies to offer free youth transit passes to persons 18 years of age and under in order to be eligible for state funding under the Mills-Deddeh Transit Development Act, the State Transit Assistance Program, or the Low Carbon Transit Operations Program. The bill would also require a free youth transit pass to count as a full price fare for purposes of calculating the ratio of fare revenues to operating costs. Amended: 1/15/2020	Senate Rules	Watch
AB 1991 (Friedman D) Transit and Intercity Rail Capital Program: passenger tramways.	Existing law establishes the Transit and Intercity Rail Capital Program, which is funded in part by a continuously appropriated allocation of 10% of the annual proceeds of the Greenhouse Gas Reduction Fund, to fund transformative capital improvements that will modernize California's intercity, commuter, and urban rail systems and bus and ferry transit systems to achieve certain policy objectives. Existing law requires the Transportation Agency to evaluate applications for funding under the program and to approve a multiyear program of projects, as specified, and requires the California Transportation Commission to allocate funding to applicants pursuant to the program of projects approved by the agency.This bill would expand the purpose of the program to authorize funding for passenger tramway transit systems. By expanding the purposes for which continuously appropriated moneys may be used, the bill would make an appropriation. Introduced: 1/27/2020	Assembly Transportation 3/23/2020 3 p.m. or upon adjournment of Session - State Capitol, Room 4202 ASSEMBLY HEARING POSTPONED - TRANSPORTATION, FRAZIER, Chair	Watch
AB 1992 (Friedman D) Transportation:	Existing law vests the Department of Transportation with full possession and control of the state highway system. Existing law requires the department, in consultation with the California Transportation Commission, to prepare a robust asset management plan that assesses the health and condition of the state highway system and with which the	Assembly Transportation	Watch

transportation infrastructure: climate change.	department is able to determine the most effective way to apply the state's limited resources.This bill would state the intent of the Legislature to enact legislation that would establish a new program to fund climate change adaptation planning for transportation impacts, data collection, modeling, and training. The bill would require the department, in consultation with the commission, to update the asset management plan on or before December 31, 2022, and every 4 years thereafter, and for the updates to take into account the forecasted impacts of climate change on transportation infrastructure. The bill would require the updates to the California Transportation Plan and the Strategic Growth Council's report to include a forecast of the impacts of climate change on transportation infrastructure and measures to address those impacts. The bill would require the commission's revisions to the guidelines for the preparation of regional transportation plans to include a requirement that designated transportation planning agencies take into account the forecasted transportation infrastructure impacts of climate change. By requiring regional transportation plans to take into account this additional factor, the bill would impose a state-mandated local program.This bill contains other existing laws. Amended: 3/11/2020		
AB 2012 (Chu D) Free senior transit passes: eligibility for state funding.	Existing law declares that the fostering, continuance, and development of public transportation systems are a matter of state concern. Existing law authorizes the Department of Transportation to administer various programs and allocates moneys for various public transportation purposes. This bill would require transit agencies to offer free senior transit passes to persons over 65 years of age in order to be eligible for state funding under the Mills-Deddeh Transit Development Act, the State Transit Assistance Program, and the Low Carbon Transit Operations Program. The bill would require those free senior transit passes to count as full price fares for purposes of calculating the ratio of fare revenues to operating costs. Introduced: 1/28/2020	Assembly Transportation	Watch
AB 2057 (Chiu D) San Francisco Bay area: public transportation.	Existing law creates the Metropolitan Transportation Commission as a local area planning agency for the 9-county San Francisco Bay area with comprehensive regional transportation planning and other related responsibilities. Existing law creates various transit districts located in the San Francisco Bay area, with specified powers and duties relative to providing public transit services. This bill would state the intent of the Legislature to later enact legislation relating to public transportation in the 9-county San Francisco Bay area. Introduced: 2/3/2020	Assembly Print	Watch
AB 2176 (Holden D) Free student transit passes: eligibility for state funding.	Existing law declares that the fostering, continuance, and development of public transportation systems are a matter of state concern. Existing law authorizes the Department of Transportation to administer various programs and allocates moneys for various public transportation purposes.This bill would require transit agencies to offer free student transit passes to persons attending the California Community Colleges, the California State University, or the University of California in order to be eligible for state funding under the Mills-Alquist-Deddeh Act, the State Transit Assistance Program, or the Low Carbon Transit Operations Program. The bill would also require a free student transit pass to count as a full price fare for purposes of calculating the ratio of fare revenues to operating costs.This bill contains other related provisions and other existing laws. Introduced: 2/11/2020	Assembly Transportation	Watch

AB 2237 (Berman D) Bay area county transportation authorities: contracting.	The Bay Area County Traffic and Transportation Funding Act authorizes each of the 9 counties in the bay area to impose a 1/2 of 1% or 1% sales tax for transportation purposes, subject to voter approval. Existing law provides for the establishment of a county transportation authority in each county imposing a sales tax under these provisions, requires the development of a county transportation expenditure plan, and specifies the powers and duties of a county board of supervisors and the county transportation authority in this regard. Existing law requires each county transportation authority to award contracts for the purchase of supplies, equipment, and materials in excess of $75,000 to the lowest responsible bidder after competitive bidding, except in an emergency declared by the vote of 2/3 of the voting membership of the county transportation authority.This bill would require each county transportation authority to award contracts for the purchase of supplies, equipment, and materials in excess of $150,000, rather than $75,000, either to the lowest responsible bidder or to the responsible bidder whose proposal provides the best value, as defined, on the basis of the factors identified in the solicitation, except in a declared emergency, as specified. Introduced: 2/13/2020	Assembly Transportation	Watch
AB 2249 (Mathis R) High-speed rail: legislative oversight.	The California High-Speed Rail Act creates the High-Speed Rail Authority to develop and implement a high-speed rail system in the state, with specified powers and duties. Existing law requires the authority, on or before March 1, 2017, and every 2 years thereafter, to provide a project update report, approved by the Secretary of Transportation as consistent with specified criteria, to the budget committees and the appropriate policy committees of both houses of the Legislature, on the development and implementation of intercity high-speed train service, as provided.This bill would create the Joint Legislative Committee on High-Speed Rail Oversight consisting of 3 Members of the Senate and 3 Members of the Assembly and would require the committee to ascertain facts, review documents, and take action thereon, and make recommendations to the Legislature concerning the state's programs, policies, and investments related to high-speed rail, as specified. The bill would require the authority and any entity contracting with the authority to give and furnish to the committee upon request information, records, and documents as the committee deems necessary and proper to achieve its purposes. The bill would require the authority to submit to the committee on a monthly basis certain information relating to the authority's ongoing operations in the development and implementation of intercity high-speed train service, as provided.This bill contains other related provisions and other existing laws. Introduced: 2/13/2020	Assembly Print	Watch
AB 2943 (Ting D) Surplus property: disposal.	Existing law prescribes requirements for the disposal of surplus land, as defined, by a local agency, as defined. Existing law requires land to be declared surplus land or exempt surplus land, as supported by written findings, before a local agency takes any action to dispose of it consistent with the agency's policies or procedures.This bill would provide that the provisions regulating the disposal of surplus land shall not be construed to require a local agency to dispose of land that is determined to be surplus. Introduced: 2/21/2020	Assembly Local Government	Watch
AB 2987 (Flora R) Local agency public contracts: bidding procedures.	The Uniform Public Construction Cost Accounting Act authorizes a public agency to elect to become subject to uniform construction cost accounting procedures. The act authorizes bidding procedures for public projects, as specified. Those bidding procedures include procedures for the publication or posting and electronic transmission of notice inviting formal bids.This bill would authorize a public agency, as an alternative to the publication	Assembly Local Government	Watch

	or posting requirement, to meet the notice inviting formal bids requirement by transmitting notice electronically, as specified, and publishing the notice electronically in a prescribed manner on the public agency's internet website at least 14 calendar days before the date of opening the bids.This bill contains other related provisions and other existing laws. Introduced: 2/21/2020		
AB 3128 (Burke D) Electricity: deenergization events: fuel cells.	Under existing law, the Public Utilities Commission has regulatory authority over public utilities, including electrical corporations. Existing law requires each electrical corporation to annually prepare a wildfire mitigation plan and to submit its plan to the commission for review and approval, as specified. Existing law requires the wildfire mitigation plan to include, among other things, protocols for disabling reclosers and deenergizing portions of the electrical distribution system, also known as public safety power shutoffs, that consider the associated impacts on public safety.This bill would provide that it is the intent of the Legislature to enact legislation that would incentivize the use of fuel cells to address reliability issues associated with public safety power shutoffs. Introduced: 2/21/2020	Assembly Print	Watch
AB 3213 (Rivas, Luz D) High-Speed Rail Authority: high-speed rail service: priorities.	Existing law establishes the High-Speed Rail Authority within the state government with various powers and duties related to developing and implementing high-speed passenger rail service. Existing law requires the authority to direct the development and implementation of intercity high-speed rail service that is fully integrated with specified forms of transit. This bill would require the authority, in directing the development and implementation of intercity high-speed rail service, to prioritize projects based on specified criteria. Introduced: 2/21/2020	Assembly Transportation	Watch
ACA 1 (Aguiar-Curry D) Local government financing: affordable housing and public infrastructure: voter approval.	(1)The California Constitution prohibits the ad valorem tax rate on real property from exceeding 1% of the full cash value of the property, subject to certain exceptions.This measure would create an additional exception to the 1% limit that would authorize a city, county, city and county, or special district to levy an ad valorem tax to service bonded indebtedness incurred to fund the construction, reconstruction, rehabilitation, or replacement of public infrastructure, affordable housing, or permanent supportive housing, or the acquisition or lease of real property for those purposes, if the proposition proposing that tax is approved by 55% of the voters of the city, county, or city and county, as applicable, and the proposition includes specified accountability requirements. The measure would specify that these provisions apply to any city, county, city and county, or special district measure imposing an ad valorem tax to pay the interest and redemption charges on bonded indebtedness for these purposes that is submitted at the same election as this measure.This bill contains other related provisions and other existing laws. Amended: 3/18/2019	Assembly Reconsideration	Supported June 2019
SB 146 (Beall D) Peninsula Rail Transit District.	Existing law, operative under certain conditions, redesignates the Peninsula Corridor Study Joint Powers Board as the Peninsula Rail Transit District, comprised of 9 members appointed from various governing bodies situated in the City and County of San Francisco and the Counties of San Mateo and Santa Clara, with specified powers.This bill would repeal the provisions relating to the Peninsula Rail Transit District. Introduced: 1/18/2019	Assembly 2 year	Watch

SB 147 (Beall D) High-Speed Rail Authority.	The California High-Speed Rail Act creates the High-Speed Rail Authority to develop and implement a high-speed train system in the state, with specified powers and duties. Existing law authorizes the authority, among other things, to keep the public informed of its activities.This bill would revise that provision to instead authorize the authority to keep the public informed through activities, including, but not limited to, community outreach events, public information workshops, and newsletters posted on the authority's internet website. Introduced: 1/18/2019	Assembly 2 year	Watch
SB 278 (Beall D) Metropolitan Transportation Commission.	The Metropolitan Transportation Commission Act creates the Metropolitan Transportation Commission as a local area planning agency to provide comprehensive regional transportation planning for the region comprised of the 9 San Francisco Bay area counties. The act requires the commission to continue to actively, on behalf of the entire region, seek to assist in the development of adequate funding sources to develop, construct, and support transportation projects that it determines are essential.This bill would also require the commission to determine that those transportation projects are a priority for the region.This bill contains other related provisions and other existing laws. Amended: 3/28/2019	Assembly Desk	Watch
Previously Tracked Bills That Are No Longer Active			
SB 43 (Allen D) Carbon intensity and pricing: retail products.	The California Global Warming Solutions Act of 2006 designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to ensure that statewide greenhouse gas emissions are reduced to at least 40% below the 1990 level by 2030.This bill would require the state board, no later than January 1, 2022, to submit a report to the Legislature on the findings from a study, as specified, to determine the feasibility and practicality of assessing the carbon intensity of all retail products subject to the tax imposed pursuant to the Sales and Use Tax Law, so that the total carbon equivalent emissions associated with such retail products can be quantified. This bill contains other existing laws. Amended: 7/1/2019	Assembly Transportation Committee Failed Passage	Watch
SB 50 (Wiener D) Planning and zoning: housing development: streamlined approval: incentives.	(1)Existing law authorizes a development proponent to submit an application for a multifamily housing development that satisfies specified planning objective standards to be subject to a streamlined, ministerial approval process, as provided, and not subject to a conditional use permit.This bill would authorize a development proponent of a neighborhood multifamily project located on an eligible parcel to submit an application for a streamlined, ministerial approval process that is not subject to a conditional use permit. The bill would define a "neighborhood multifamily project" to mean a project to construct a multifamily structure on vacant land, or to convert an existing structure that does not require substantial exterior alteration into a multifamily structure, consisting of up to 4 residential dwelling units and that meets local height, setback, and lot coverage zoning requirements as they existed on July 1, 2019. The bill would also define "eligible parcel" to mean a parcel that meets specified requirements, including requirements relating to the location of the parcel and restricting the demolition of certain housing development that may already exist on the site.This bill contains other related provisions and other existing laws.	Senate Floor Failed Passagef	Watch

	Amended: 1/6/2020		

Total Measures: 19

Total Tracking Forms: 15

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As of March 17, 2020 Federal Transportation Report

FY 2021 Budget Request/Appropriations

On February 10, President Donald Trump released his FY 2021 budget request. The budget request includes:

- $1 billion for the Better Utilizing Investments to Leverage Development (BUILD) grant program, level with current funding--FY 2020 enacted levels.

- $1.9 billion for the Capital Investment Grant (CIG) Program, an $89 million decrease from FY 2020 enacted levels.

- $50 billion from the Highway Trust Fund for the highway program; consistent with the Fixing America's Surface Transportation (FAST) Act and a $3.6 billion increase from FY 2020 enacted levels.

- $11 billion for transit infrastructure grants, a $536 million increase from FY 2020 enacted levels.

In addition, the Administration outlined its request for a new ten-year, $1 trillion surface transportation reauthorization proposal, $810 billion of which will be dedicated to supporting the Department of Transportation's (DOT) highway, transit, safety, and rail programs. Along with the $810 billion request, the reauthorization proposal requests $190 billion for other infrastructure improvements including: $60 billion for a new mega-projects program, including transit and rail capital investments; and $20 billion for a Mass Transit State-of-Good-Repair Program to reduce the nation's transit state-of-good-repair backlog.

On February 27, Transportation Secretary Elaine Chao testified before the House Transportation, Housing and Urban Development Appropriations Subcommittee where she was given the opportunity to defend the FY 2021 DOT budget. She highlighted the proposed $89 billion total for the department, which is a two percent increase over the FY 2020 enacted level. She also told the committee that the full text of the ten-year surface transportation reauthorization bill mentioned above would be released "in a few short months." Secretary Chao was questioned about DOT's role in the coronavirus outbreak, lack of Gateway funding, timing on the ban on Chinese rolling stock, the perceived inconsistencies in BUILD grants awards, as well as the slowness in issuing already appropriated discretionary grants.

Secretary Chao testified in front of the Senate Transportation, Housing and Urban Development Appropriations Subcommittee on March 5. Subcommittee Chairwoman Susan Collins (R-ME) opened the hearing with an outline of how transportation and infrastructure in the U.S. would be impacted by the FY 2021 budget request. Chairwoman Collins commended the level of funding

for the BUILD grant program in the budget. Secretary Chao shared with the subcommittee members that the administration is following surface transportation reauthorization to ensure highway systems are supported.

Per Senate Minority Leader Schumer's Office:

Leader Schumer, in consultation with his Ranking Members, is preparing a new comprehensive proposal (for coronavirus legislation part 3) that will provide an immediate infusion of **AT LEAST $750 billion** to wage war against COVID-19 and the economic crisis facing every American. **Schumer will present the comprehensive proposal to Congressional appropriators.**

Among other people-focused measures, the new Schumer proposal will get money directly into hands of American people and include federal funding to:

- Address hospital and treatment capacity issues;
- Expand Unemployment Insurance and Increase Medicaid Funding;
- Ensure affordability of all COVID-19 treatment
- Provide Immediate Loan Payment Forbearance for ALL Federal Loans & Moratoriums on Evictions/Foreclosures;
- Deliver Immediate help to small businesses;
- Fund emergency child care, especially for health care workers and first responders;
- Help schools with remote learning;
- Ensure senior citizen medicine and food delivery;
- Provide assistance to keep public transportation running;
- Utilize the Defense Dept to provide personnel, equipment, supplies, and critical response capabilities to support on the nationwide response;
- Address public health and economic needs in Indian Country

Surface Transportation Reauthorization

Following actions by the House and Senate to begin work on transportation reauthorization bills, President Donald Trump, during his State of the Union address to Congress on February 4, endorsed S. 2302, *America's Transportation Infrastructure Act of 2019*, a $287 billion, five-year surface transportation bill that passed out of the Senate Environment and Public Works (EPW) Committee on July 30, 2019.

The Senate Banking Committee (oversees transit) and Commerce, Science and Transportation Committee (oversees rail) have yet to pass their bills. The Senate Banking Committee, which oversees all of FTA formula and grant programs and policy, is working on its title for the FAST Act reauthorization. The committee has been holding hearings, including one on February 25, and meeting with stakeholders and transportation agencies. The committee does not plan to release a draft until Senate leadership has identified how to pay for the Highway Trust Fund.

The Senate Finance and House Ways and Means Committees are responsible for identifying how to fund the Highway Trust Fund for the authorization bill. This is an important job since over the next five years, the Highway Trust Fund will need an estimated $72 billion in new revenues to be sustainable. Senate EPW Committee leadership have asked the Joint Committee on Taxation to provide how a few sources could provide funding for the surface transportation bill including, inflating the gas tax to inflation, tax on electric vehicles (EV), and vehicle miles traveled (VMT).

The House Transportation and Infrastructure Committee (oversees all transportation modes) is planning to release a draft of its surface transportation authorization bill in March/early April and plan to pass the bill in April. The full House should consider the bill in May on the floor.

Both the House and Senate authorization committees admit that identifying funding and passing a reauthorization bill is impossible before the FAST Act expires on September 30 during an election year. Congress will mostly likely pass several extensions for the bill that will allow DOT to continue to fund the transportation programs at current funding levels.

Banking Committee Hearing on Surface Transportation Reauthorization

On February 25, the Senate Committee on Banking, Housing and Urban Affairs held a hearing entitled, "Surface Transportation Reauthorization – Public Transportation Stakeholders' Perspectives." The committee, which has jurisdiction over federal mass transit policy, along with witnesses, discussed the need for the Highway Trust Fund to be fully funded and Capital Investment Grant Program to be expanded. Other topics included the need to draft a proposal that serves rural communities as well as urban centers, and movement towards low emission buses and other policies to protect the environment. A number of witnesses and Senators also emphasized that the reauthorization bill must account for the rising demand of mobile transportation options, such as ride sharing apps. Chairman Mike Crapo (R-ID) described the solvency of the Highway Trust Fund as the biggest issue standing between the committee and reauthorization. He explained that $18 billion is needed for transit in the FAST Act authorization. Ranking Member Sherrod Brown (D-OH) focused on the issue of rising transit costs in coordination with other increasing living costs and reported that 13% of a family's income is spent on transportation.

Witnesses included:

- **Paul Skoutelas**, President and CEO, American Public Transportation Association Testimony
- **Patrick McKenna**, President, American Association of State Highway Officials Testimony

- **Scott Bogren**, Executive Director, Community Transportation Association of America
  Testimony

- **Ed Mortimer**, Vice President, Transportation and Infrastructure for the U.S. Chamber of Commerce
  Testimony

- **Larry Willis**, President of the Transportation Trades Department, AFL-CIO Testimony

Improving Rail Safety

On February 5, the House Transportation & Infrastructure's Railroad Subcommittee held a hearing entitled, "Tracking Toward Zero: Improving Grade Crossing Safety and Addressing Community Concerns." The hearing examined the best ways to address grade crossing safety while looking at community concerns regarding communication, blocked crossings, and persistent trespassing that has led to high rates of injuries and fatalities. The witnesses discussed the need for an increase in federal funding for grade separations and other infrastructure that would improve the safety and quality of life of residents across the United States. Members stressed the necessity of enhanced safety regulations and questioned Federal Railroad Administration (FRA) about where improvements can be made. Subcommittee Chairman Dan Lipinski (D-IL-3) identified that the issues that many communities face including blocked crossings; train horn noise; idling trains; injuries at grade crossings; and railroad property upkeep. He emphasized that the current amount authorized by the Section 130 grade crossing program is vastly insufficient and voiced support for more federal funding for quiet zones. Furthermore, he stated that railroad property needs to be sufficiently maintained to be reflective of communities across the United States. The Chairman concluded that the railroad network helps businesses and job creation but some aspects need mitigation. Ranking Member Rick Crawford (R-AR-1) emphasized that railroad grade crossing safety, blocked crossings, railroad trespassing, and rail suicide are serious issues that impact the rail industry and many others across America. He recognized that the FRA is taking steps to fix these problems. Moreover, he noted federal grants and federal funding opportunities through Section 130 and other grant programs that assist railroads, states, and communities with grade crossing updates and improvements are of immense importance.

Witnesses included:

- **Karl Alexy,** Associate Administrator for Railroad Safety & Chief Safety Officer, Federal Railroad Administration
  Testimony

- **Brian Vercruysse**, Rail Safety Program Administrator, Illinois Commerce Commission
  Testimony

- **Mark Christoffels**, Chief Engineer, San Gabriel Valley Council of Governments/Alameda Corridor-East Project Testimony

- **Rachel Maleh**, Executive Director, Operation Lifesaver, Inc. Testimony

- **The Honorable Matthew O'Shea**, Alderman, 19th Ward of Chicago, Chicago City Council
  Testimony

- **Jason Morris**, Assistant Vice President, Safety & Environment, Norfolk Southern Corporation Testimony

DOT Prioritizes Crackdown on Human Trafficking

On January 28, DOT Secretary Elaine Chao hosted an event to raise awareness about human trafficking. During the Put the Brakes on Human Trafficking "100 Pledges in 100 Days" event, Secretary Chao launched several new initiatives aimed at fighting human trafficking, and encouraged transportation agencies to train their workforce and raise awareness. Secretary Chao has established an annual $50,000 award for innovative solutions to combat trafficking, and announced $5.4 million in grant selections for 24 organizations, through the FTA's Human Trafficking Awareness and Public Safety Initiative.

Grant Opportunities

- **BUILD:** $1 billion available. Applications due May 18, 2020.
- **Low to No Emission Bus Grants:** $130 Million available. Applications due March 17, 2020.
- **Bus & Bus Facilities:** $454.6 Million available. Applications due March 30, 2020.

AGENDA ITEM# 4d
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
Executive Director

FROM: Michelle Bouchard
Chief Operating Officer, Caltrain

SUBJECT: **CALTRAIN BUSINESS PLAN – UPDATE COVERING MARCH 2020**

ACTION

Staff Coordinating Council recommends the Board of Directors (Board) receive a presentation providing an update on Caltrain Business Plan activities and progress during March of 2020.

SIGNIFICANCE

Peninsula Corridor Joint Powers Board (JPB) staff has prepared the attached presentation describing analysis and project activities related to the Caltrain Business Plan that have been ongoing in March of 2020.

Staff will provide the JPB with written updates or presentation materials on a monthly basis throughout the duration of the Business Plan project. These written updates will periodically be supplemented by a full presentation to the Board.

BUDGET IMPACT

There is no budget impact associated with receiving this presentation.

BACKGROUND

In 2017, the JPB secured full funding for the Peninsula Corridor Electrification Project and issued notices to proceed to its contractors for corridor electrification and purchase of Electric Multiple Unit railcars. Now that construction on this long-awaited project is underway, the agency has the opportunity to articulate a long-term business strategy for the future of the system.

The initial concept for a Caltrain "Business Plan" was brought to the Board in April of 2017. The Board reviewed a draft scope of work for the Business Plan in December of 2017 and adopted a final Business Strategy and Scope of Work in February of 2018. Technical work on the Plan commenced in the summer of 2018. The Business Plan has been scoped to include long-range demand modeling, and service and infrastructure planning, as well as organizational analysis and an assessment of Caltrain's interface with the communities it traverses. In October of 2019, the JPB marked a major milestone

in the Business Plan process with its adoption of a "2040 Service Vision" for the Caltrain system. This action sets long-range policy guidance for the future of the Caltrain service and allows staff to move forward with completion of the overall plan by spring of 2020

Prepared by: Sebastian Petty, Deputy Chief, Caltrain Planning 650.622.7831

Caltrain Business Plan

JPB Board

April 2, 2020

Caltrain

Agenda for Today

Process Overview

Rounding out the Long Range Vision

- Station Access and Connectivity
- Existing Opportunities & Challenges

Caltrain

Process Overview

What is the Caltrain Business Plan?

What Addresses the future potential of the railroad over the next 20-30 years. It will assess the benefits, impacts, and costs of different service visions, building the case for investment and a plan for implementation.

Why Allows the community and stakeholders to engage in developing a more certain, achievable, financially feasible future for the railroad based on local, regional, and statewide needs.

What Will the Business Plan Cover?

Technical Tracks

Service
- Number of trains
- Frequency of service
- Number of people riding the trains
- Infrastructure needs to support different service levels

Business Case
- Value from investments (past, present, and future)
- Infrastructure and operating costs
- Potential sources of revenue

Community Interface
- Benefits and impacts to surrounding communities
- Corridor management strategies and consensus building
- Equity considerations

Organization
- Organizational structure of Caltrain including governance and delivery approaches
- Funding mechanisms to support future service

Timeline

July 2018 – July 2019
Development and Evaluation of Growth Scenarios

October 2019
Adoption of Long-Range Service Vision

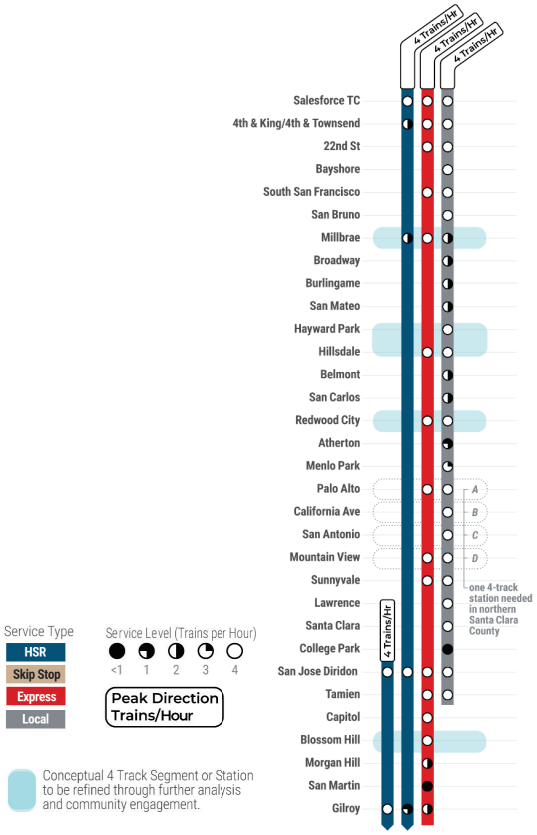
Fall 2019

Winter 2019-2020
Rounding Out the Vision and Implementation Planning

Spring 2020
Completion of Business Plan

Caltrain's 2040 Service Vision
Illustrative Service Details

Trains per Hour, per Direction	Peak: 8 Caltrain + 4 HSR Off-Peak: Up to 6 Caltrain + 3 HSR
Stopping Pattern	Local / Express with timed transfer in Mid Peninsula
Travel Time, STC-Diridon	61 Min (Express) 85 Min (Local)
New Passing Tracks	Millbrae, Hayward Park-Hillsdale, Redwood City area, Northern Santa Clara County, Blossom Hill
Service Plan Description	• Local and Express trains each operating at 15-minute frequencies with timed cross-platform transfer at Redwood City • All trains serve Salesforce Transit Center • Trains serve Capitol and Blossom Hill every 15 minutes and Morgan Hill and Gilroy every 30 minutes • Skip stop pattern for some mid-Peninsula stations



Caltrain's 2040 Service Vision - Investments

CAPITAL COSTS

$23 BILLION
TOTAL CAPITAL COSTS*

Capital costs include all projects from SF to Gilroy, knitting together a connected corridor with greatly improved service.

$9.4B
GRADE SEPARATIONS

$7.8B
TERMINAL IMPROVEMENTS

$3.3B
RAIL INFRASTRUCTURE AND SYSTEMS

$1.4B
STATION IMPROVEMENTS

$1.1B
FLEET UPGRADES

OPERATING COSTS

$370 MILLION
2040 ANNUAL OPERATING COSTS*

Caltrain is one of the leanest, most efficient transit services in the country. Today's annual operating and maintenance costs are $135 million, and 73% is covered by fares. The vision would benefit from a similarly high farebox recovery ratio.

$266M
OPERATING COSTS COVERED BY FAREBOX (72%)

$104M
ANNUAL OPERATING INVESTMENT NEEDED (28%)

Rounding Out the Vision

Remaining Technical Analysis

Rounding Out the Vision

With a 2040 Service Vision adopted, how can Caltrain "Round Out" its vision for the future?

Additional technical and policy analysis are underway with a focus on areas that that were highlighted as important through stakeholder outreach and help complete the picture of the railroad Caltrain hopes to become.

Analysis of connections to other systems & station access options

Equity analysis & focus on making Caltrain accessible to all

Review of funding options and revenue generation opportunities to support the overall 2040 Vision (will be presented in April)

Connecting to Caltrain

Getting to Caltrain

The Service Vision plans for ridership to triple over the next two decades.

Achieving this kind growth will mean big changes for how riders connect to and access the Caltrain system.

As it plans for the future, Caltrain must decide how to invest in first- and last- mile programs and prioritize the use of resources to improve access and connectivity to the system.

This assessment considers how station access needs may change over time, and potential paths forward to realizing the service vision.

Caltrain's Roles in Station Access

Today Caltrain plays a limited and uneven institutional role in providing and coordinating access to the system. Access and connectivity functions not provided or coordinated through Caltrain are undertaken by Caltrain's partners (MUNI, SamTrans and VTA), by cities and local jurisdictions, and at times by the private sector.

Current Roles

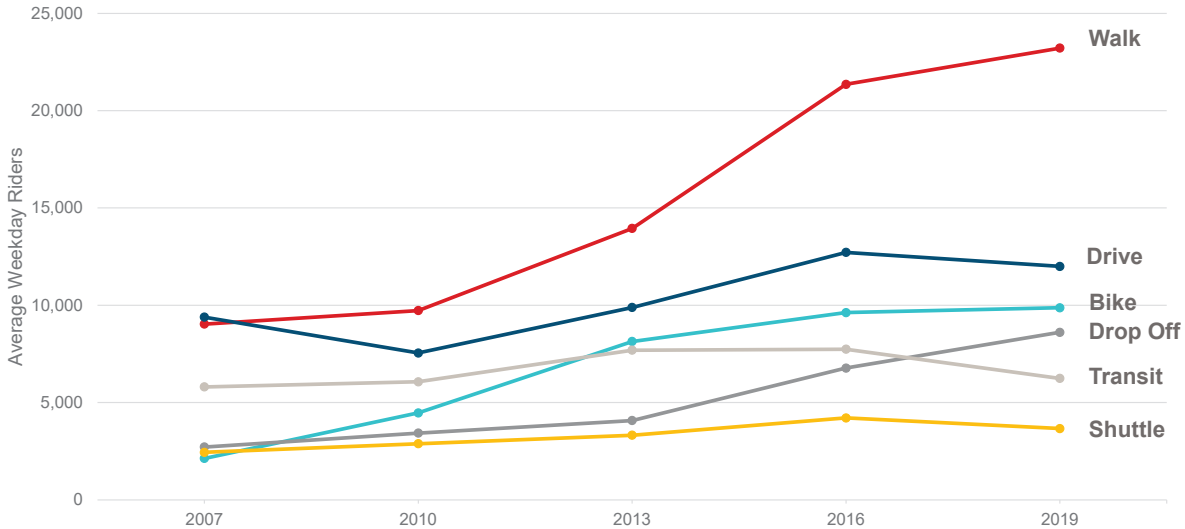
Partially funds some first/last mile shuttle operations

Provides and manages parking at some stations

Provides on-board and wayside bike parking; responsible for onsite pedestrian circulation on JPB-owned station facilities

How do Weekday Passengers Travel to and from Caltrain?

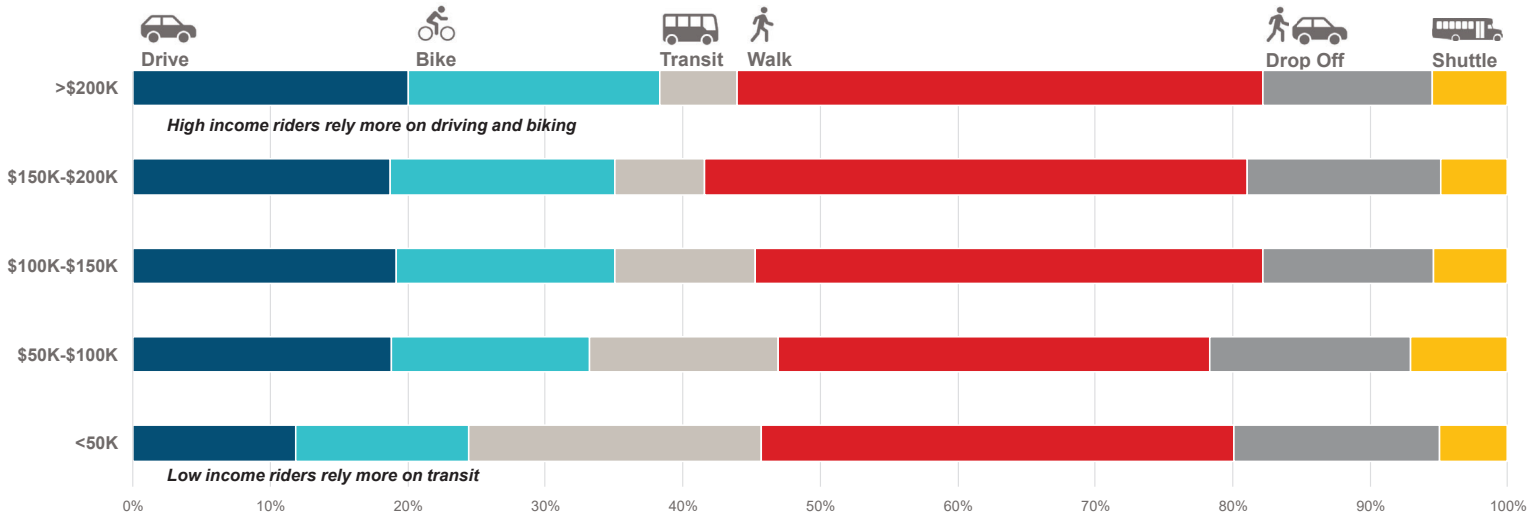
Data from Caltrain's Triennial Surveys- 2007 through 2019



Equity

Station Access by Household Income

Data from Caltrain's 2019 Triennial Survey



Caltrain Manages 7,600 Parking Spaces for Low or No Fees

SF

0

JPB-Managed Spaces

Bayshore – Diridon

5,400

JPB-Managed Spaces

Parking Rates

Weekday	$5.50 daily flat fee
	$82.50 monthly flat fee
Weekend	Free

Tamien – Gilroy

2,200

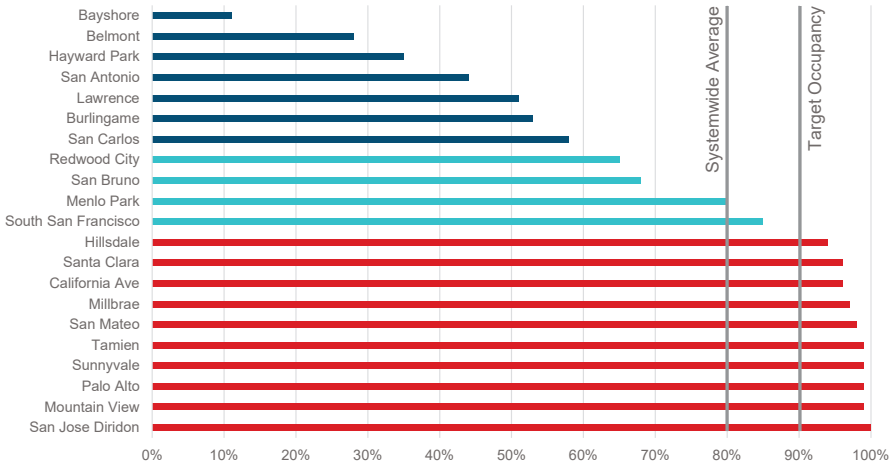
VTA-Managed Spaces

Parking Rates

Free

Parking is Undersubscribed at Some Stations and Oversubscribed at Others

Parking Occupancy



Demand

7

Mainline stations with <60% parking occupancy, where parking is potentially overpriced relative to demand & service levels

10

Mainline stations with >90% parking occupancy, where parking is underpriced compared to nearby public and private lots

Revenue and Pricing

$5.6M

Annual Caltrain Parking Revenues

Including daily rates of $5.50 per day or $82.50 per month

1.5-5X

Price of Nearby Public & Private Parking Lots

Daily Rate Examples at public lots:

- Downtown San Mateo: $7.50/day
- Menlo Park: $10/day
- Downtown Palo Alto: $25/day

Free

Parking at stations south of Diridon (owned by VTA)

Free lots may be used by non-Caltrain passengers

Managing and Pricing Parking Are Key Opportunities

Current Operations

Caltrain Subsidizes Parking at Some Stations Relative to Market Rates

By charging a uniform rate across the system, Caltrain underprices parking at 10 high-demand stations relative to nearby public and private lots, which charge two to three times Caltrain's price

The benefits of this underpriced parking tend to accrue to high-income riders who are more likely to park at stations

This trend is likely to continue over time, although some spreading may occur as service improves across all stations

Future Operations

Active Parking Management Will Become More Important as Caltrain Increases Service

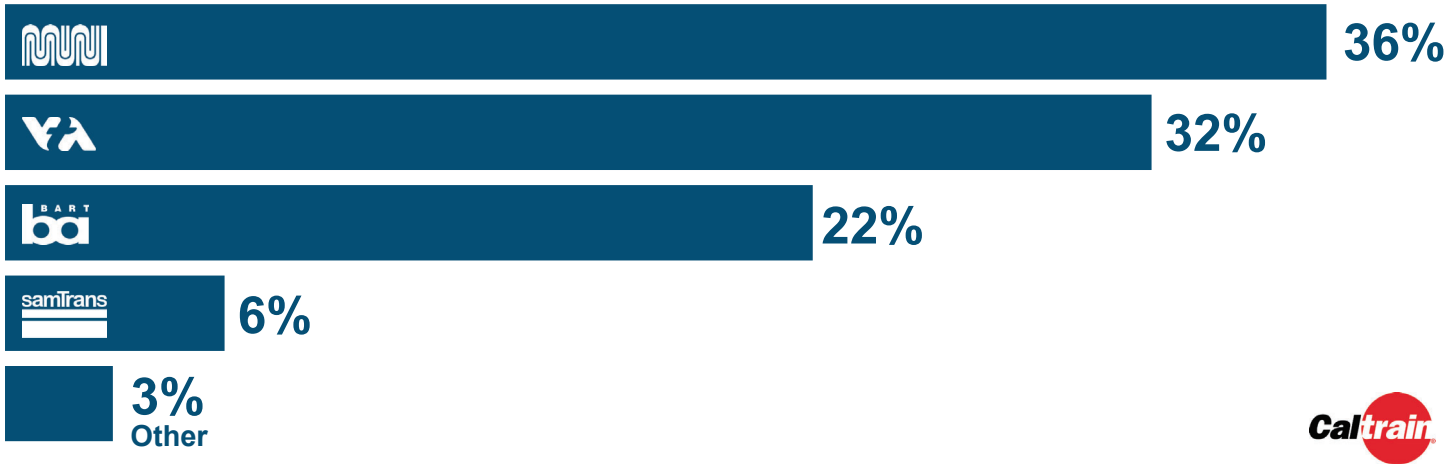
Caltrain may consider market-based pricing to better manage supply and demand during weekdays and weekends, similar to BART's proposed program

A market-based program could increase prices at some stations and decrease prices at other stations in order to reach a target weekday occupancy of around 90 percent

Pricing could be tied to occupancy surveys and service frequency

10% of Caltrain Riders Connect to Other Transit Services

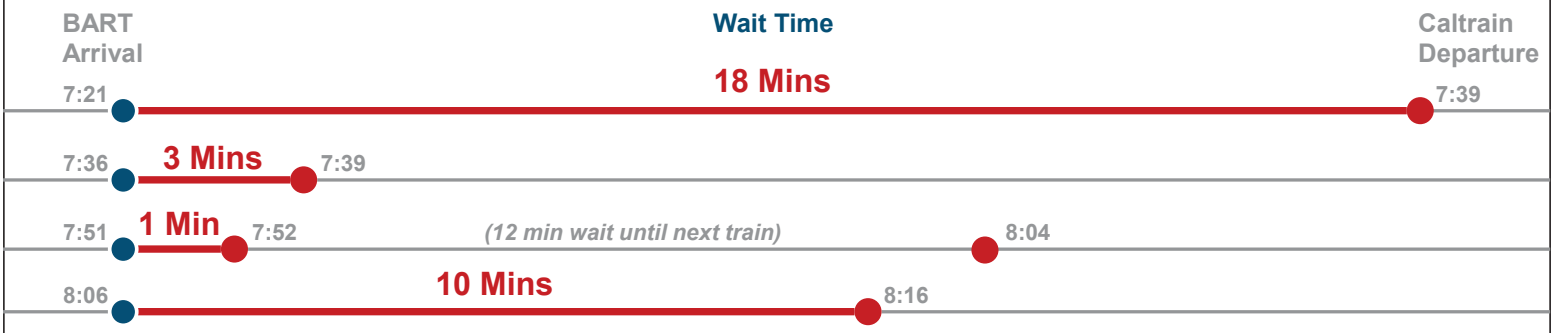
Percent of Caltrain transfers to other operators



Caltrain's Complex Service Pattern Limits Schedule Coordination

Today, Caltrain's highly customized schedule prevents regular coordinated transfers (~5 Minutes) with bus and rail services at most stations

Example: Southbound AM BART-Caltrain Connection at Millbrae



Bus Operators Provide Discounted Transfers for Some Caltrain Fares

VTA and SamTrans offer transfer discounts to most Caltrain Monthly Pass holders, while Muni provides a discount for all Caltrain riders using a Clipper Card. Fare savings tend to accrue to higher income passengers, who represent a disproportionate share of Monthly Pass users

Muni

- ✓ 50 cent fare discount to all riders using a Clipper Card
- ❑ No discount on paper tickets

SamTrans

- ✓ Free local rides for two-zone or greater Monthly Pass holders
- ❑ No discount for one-way fares and other products

VTA

- ✓ Free local rides for two-zone or greater Monthly Pass holders
- ❑ No discount for one-way fares and other products

BART

- ❑ No discounts

Caltrain

Standardizing Caltrain Service Allows Improved Schedule Coordination

Coordinating Schedules

Shifting to standardized clockface schedules with electrification will help Caltrain better coordinate transit connections

A Distributed Skip Stop pattern could offer timed connections to high and low frequency buses, BART, and VTA Light Rail.

A Two Zone with Express pattern could offer timed connections to BART and low frequency buses but would some connections would remain challenging

Coordinating Fares

Further fare coordination presents an opportunity to increase ridership for Caltrain and partner agencies

Improved fare coordination could make transfers more seamless and convenient for all riders and could help Caltrain provide more equitable access for low- and middle-income riders who are more likely to connect via transit

Shuttles Fill Gaps in the Transit Network

Public and Private Shuttles Fill Gaps in Schedules and Service Areas

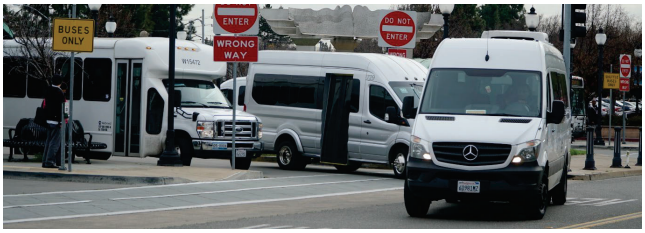
- Service to areas where buses do not operate
- Timed connections when buses can't coordinate with Caltrain's schedule
- Augmented capacity where buses cannot handle peak-period demand

Many Types of Shuttles Operate on the Caltrain Corridor

Publicly Managed

Caltrain and the SMCTA manage 33 shuttles in San Mateo and Santa Clara Counties connecting to Caltrain

- 31 are free to the public
- 26 are co-funded by employers
- 4 are community shuttles oriented toward local travel needs



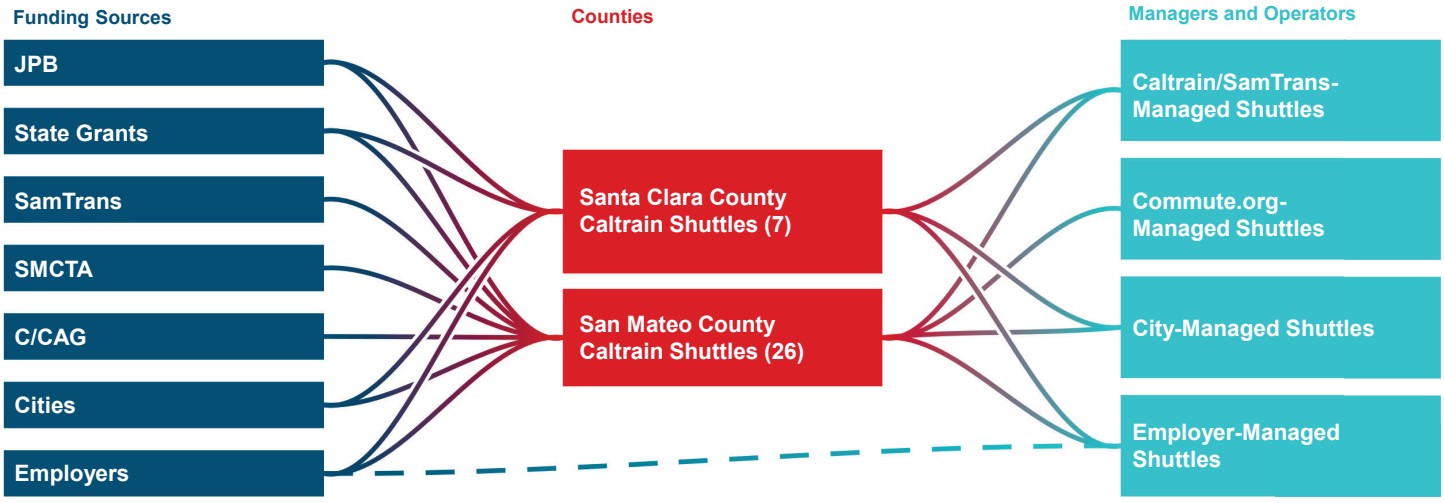
Privately Managed

Major employers like Stanford and Genentech operate first/last mile shuttles free to the public

Dozens of other employers offer private shuttles for employees only

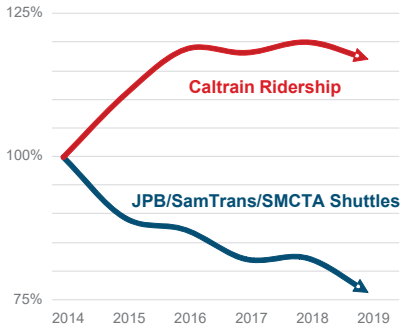
Shuttle Funding Structure

The current system of shuttle funding and operations is extremely varied and complex. Funding comes from many different sources and varies significantly from route to route.



Ridership on Publicly Managed Shuttles is Declining

Ridership Comparison: Caltrain vs. Publicly-Managed Shuttles



Shuttle Ridership is Declining as Caltrain Ridership Grows

Shuttle ridership on publicly managed shuttles has declined by 25% since 2014 while Caltrain ridership increased by 17%

Three quarters of routes have lost ridership over the past five years, with 14 routes experiencing losses greater than 40%

Publicly Managed Shuttles Struggle to Match SamTrans /VTA Productivity Goals

6 of 33 routes meet SamTrans fixed route performance criteria for passengers per revenue hour

Shuttles Lack Reliability and Time-Competitiveness

Limited funding, organizational capacity, and administrative complexity have contributed to ridership loss, including:

- Driver shortages
- Circuitous routes
- Inadequate stop infrastructure
- Competition from private services

Privately Managed Shuttles Continue to Grow

Stanford Marguerite

Stanford's shuttle ridership has increased 16% since 2014. About 20% of all their employees commute via Caltrain. Stanford's TDM program offers Caltrain Go Passes and financial incentives to employees to discourage driving to work

Genentech

Genentech and other South San Francisco employers operate two shuttle routes to connect to Caltrain at Millbrae Station. The shuttle is open to the public.

Caltrain's Role in Shuttle Operations

The current publicly-managed system is under-resourced to meet the changing needs of the Caltrain corridor

Demand for first/last mile services will increase substantially as land use intensifies and Caltrain service increases over time

The current system lacks the financial resources and operational capacity to efficiently handle increased demand over time

Caltrain and its partners will need to evolve the shuttle program to better leverage public buses and private partnerships

Caltrain and SamTrans are jointly funding a comprehensive study of the shuttle program

Additional work will be needed to further coordination around shuttles with all of Caltrain's member agencies, local jurisdictions and large employers

Pickup & Dropoff Activity is Increasing, but Facilities are Lacking

Pickup & drop-off activity is increasing at most Caltrain stations

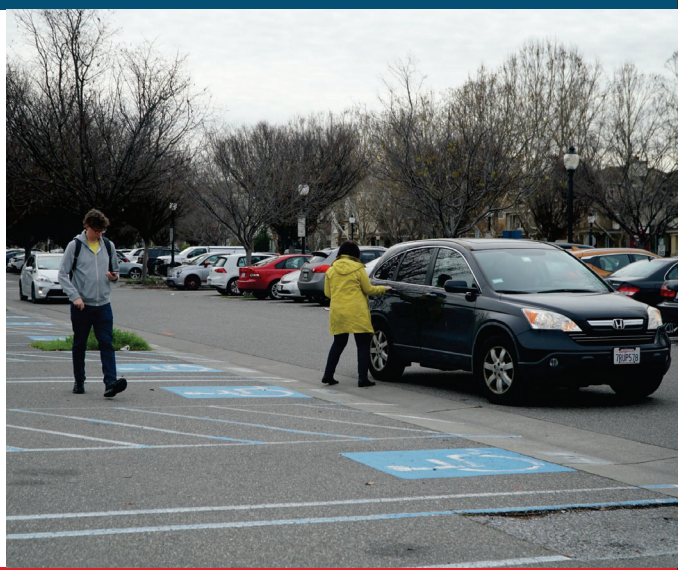
Result of both limited parking as well as Uber/Lyft growth

Half of Caltrain stations lack dedicated passenger loading zones

Most passenger loading activity occurs in existing surface parking lots and nearby streets

Caltrain must think holistically about onsite circulation

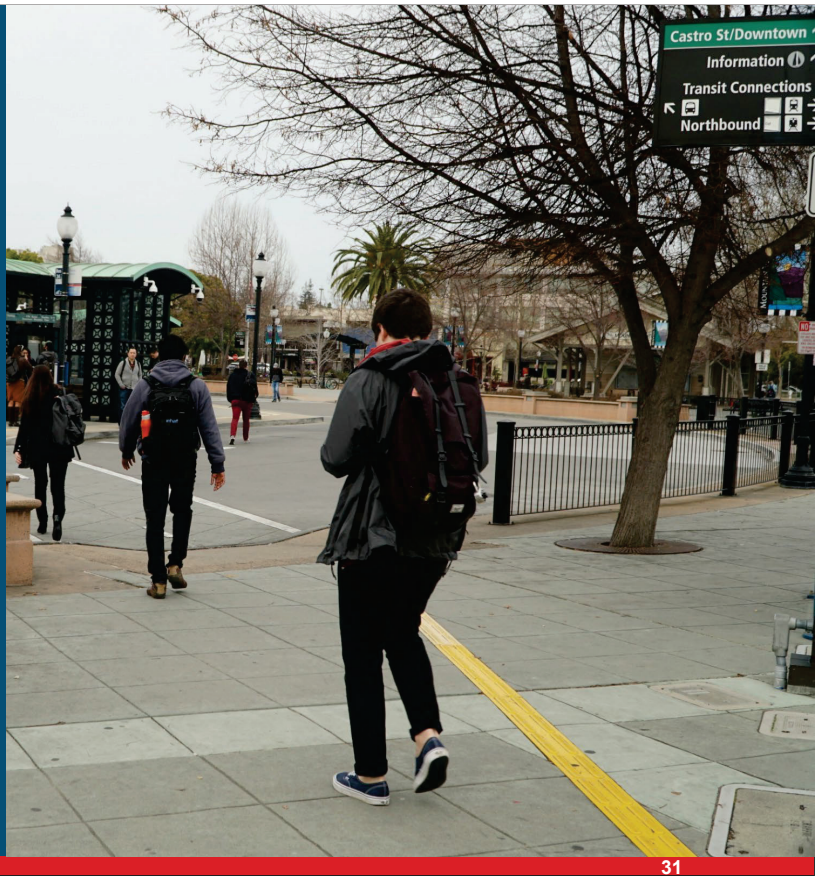
Station circulation and curb programming are critical to handling increased pickup & dropoff activity while minimizing conflicts



Walking & Bicycling Conditions

There is substantial need to invest in offsite and onsite bicycle and pedestrian access to stations. However, offsite improvements are outside of Caltrain's jurisdiction and rely on City-led decisions and processes.

This section will focus on onsite improvements to bike parking and pedestrian circulation.



Wayside Bike Parking and Bike Sharing are Critical to Expanding Bike Access

Onboard bike demand will exceed capacity in the short- and long-term

Caltrain has provided significant on-board capacity within its system, but expanding onboard bike capacity beyond the commitments already made by the JPB will limit overall passenger capacity, exacerbating crowding issues

Improvements to wayside bike parking and shared bikes/scooters show promise to scale access

A $4M investment in bike parking is underway and will be used to fund improved bike parking, including e-lockers

4% of San Francisco and San Jose passengers use shared bikes or scooters to access Caltrain – a total expected to grow with the recent reintroduction of shared e-bikes

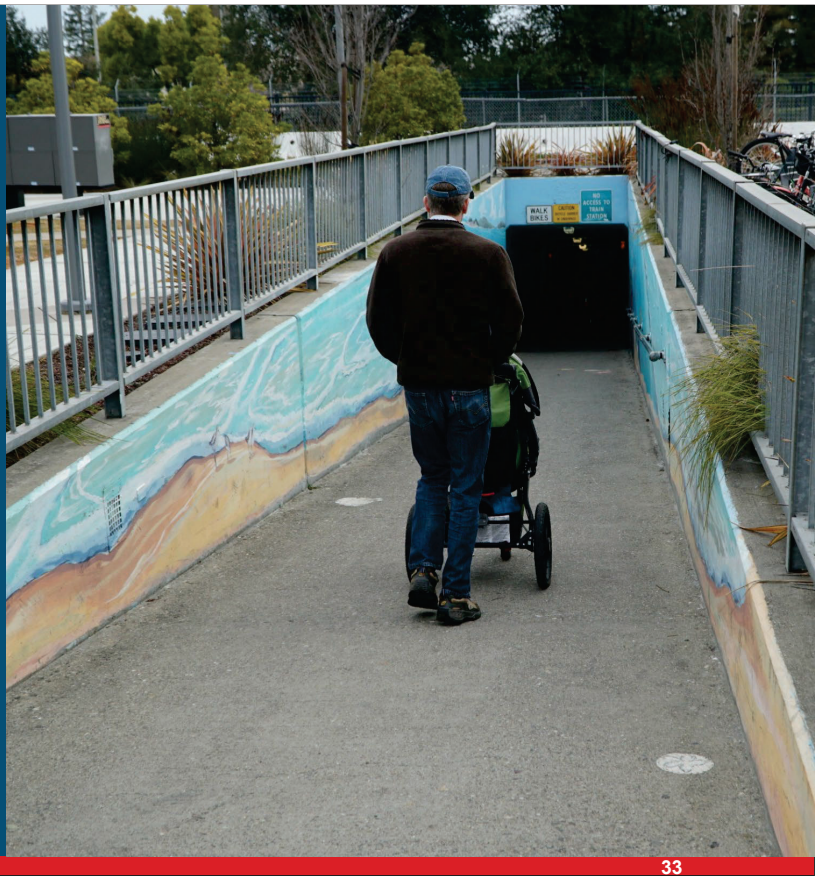
Investing in shared bike stations present an opportunity to scale capacity over time

Pedestrian Facilities Need Improvement

Caltrain stations need to prioritize pedestrians to handle expanded passenger volumes at stations

Most stations will need programmatic investments to accommodate increased ridership, improve onsite circulation, and reduce conflicts between modes

Major stations may need focused design efforts to handle increased volumes, particularly in the context of grade separations and joint development projects



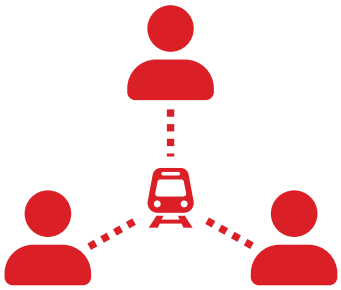
Station Upgrades Needed to Accommodate Increased Ridership

Examples of upgrades needed to accommodate increased ridership

- Expanded Shelters to offer shade and weather protection
- Strategically located Clipper readers at station entrances and along platforms
- Clipper-integrated ticket machines (coming soon to most stations)
- Level boarding
- Improved Wayfinding and Signage
- More Pedestrian-scale lighting

Strong Growth Predicted in Ridership and Station Use by 2040

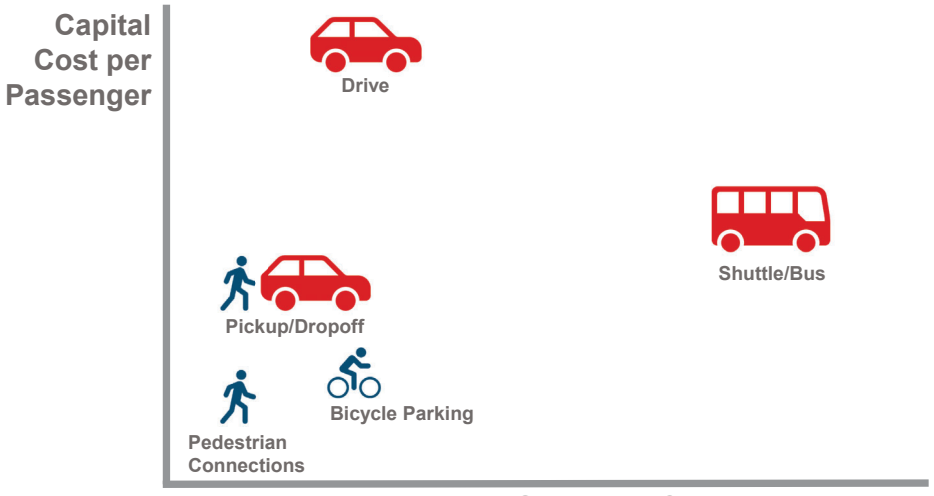
Under the Long Range Service Vision adopted by the Caltrain Board, ridership is projected to triple from today's levels. This will mean significant changes to the way that people access the Caltrain system



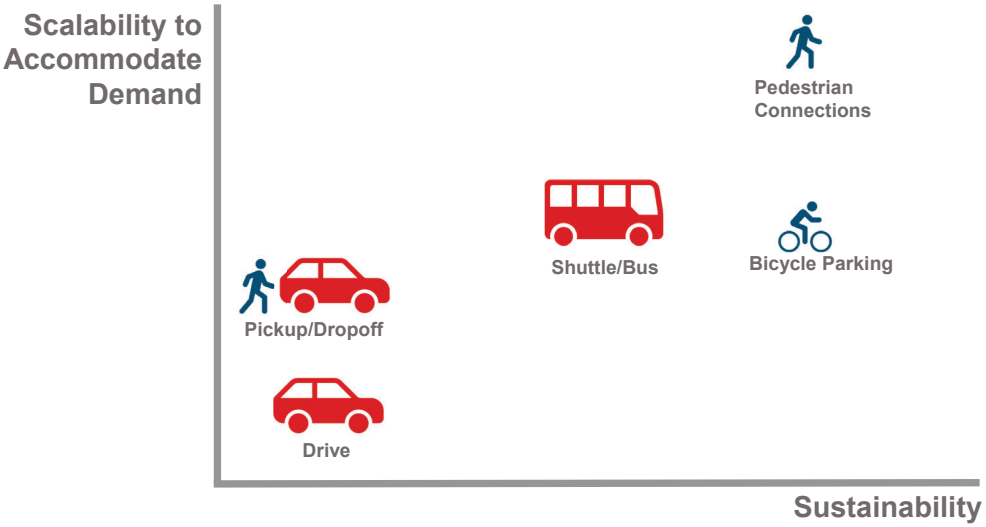
+120,000
Passengers Traveling to and from Caltrain

10X
Growth in use for some stations compared to today

Making improvements to enhance walking, biking, and passenger loading are the least costly access investments



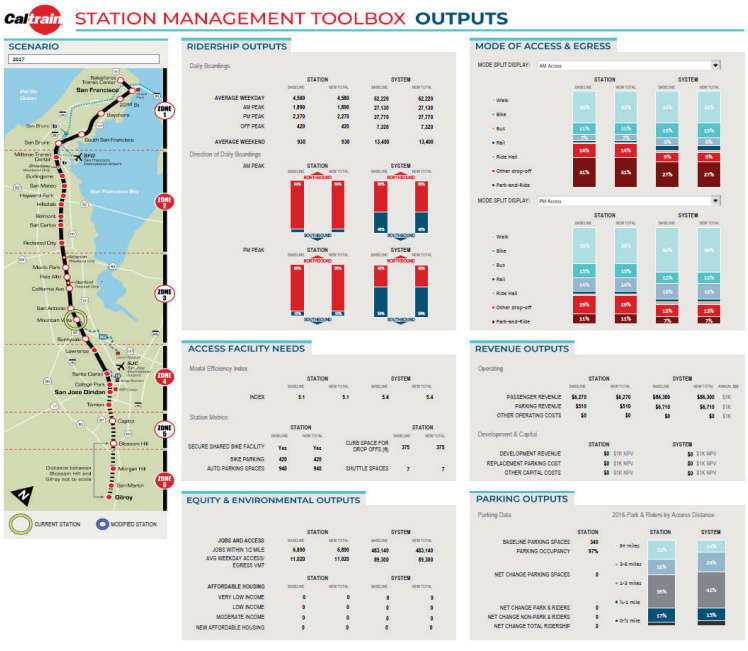
Walking and biking are also the most scalable/sustainable access modes



Caltrain Station Management Toolbox

Caltrain received a grant from the Federal Transit Administration to develop a tool to analyze the effects of access investments and joint development for Caltrain

Based on this analysis, Caltrain developed a Station Management Toolbox for staff use to evaluate individual and system wide changes – this tool has been updated to support the Business Plan analysis



Three Alternative Access Improvement Scenarios Explored

1: Ad-Hoc Approach

- Investments and programs occur as funding becomes available- similar to today
- Investments and programs are mostly led by entities other than Caltrain
- Caltrain is mostly agnostic to the types of investments than occur

2: Expand Parking Supply

- Investments and programs focus on growing parking supply in proportion to ridership
- Caltrain organization becomes more proactive in building new parking garages including land acquisition as needed

3: Prioritize Non-Auto Access and Joint Development

- Investments and programs emphasize modes other than park-and-ride
- Caltrain organization becomes more proactive in shuttles, service integration, pedestrian/bicycle infrastructure, and TOD

Analysis Assumptions Drive Results

The Following Assumptions Were Used in This Scenario Analysis:

1: Ad-Hoc Approach

- 1.5x increase in parking supply
- No change to shuttle services
- Moderate improvement to bike/ped access
- Moderate development intensity at feasible sites with all parking replaced
- New parking assumed to cost $75,000 per space due to garage and parking replacement costs

2: Expand Parking Supply

- 3x increase in parking supply
- No change to shuttle services
- Minimal improvement to bike/ped access
- No new joint development
- New parking assumed to cost $100,000 per space due to garage, parking replacement, and land acquisition costs

3: Prioritize Non-Auto Access and Joint Development

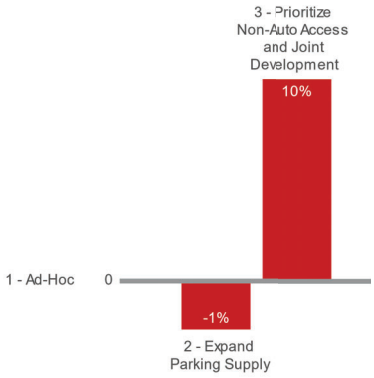
- No new parking supply
- 3x increase in shuttles service
- Substantial improvement to bike/ped access
- High intensity development at all sites without replacement parking

Change in Ridership & Mode of Access through 2040

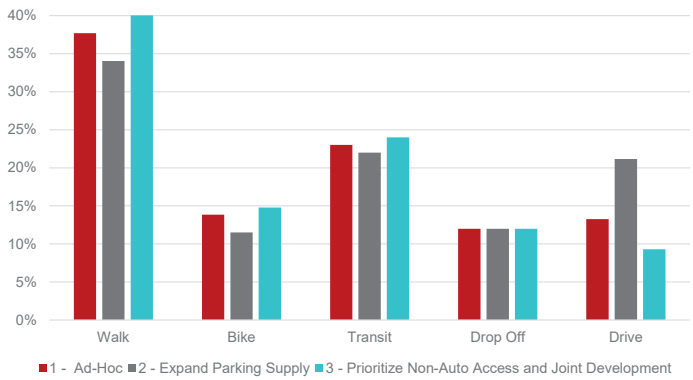
Prioritizing park-and-ride access shifts more passengers to driving but results in *lower* ridership than investing in other modes.

Maximizing joint development, active transportation, and transit access results in *higher* ridership and less driving.

Change in Ridership



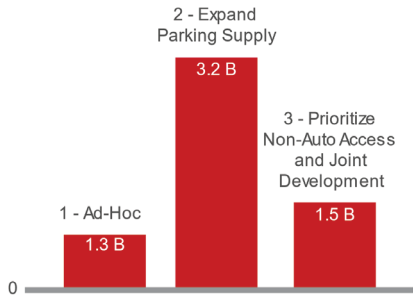
Change in Mode of Access



Change in Costs & Revenues

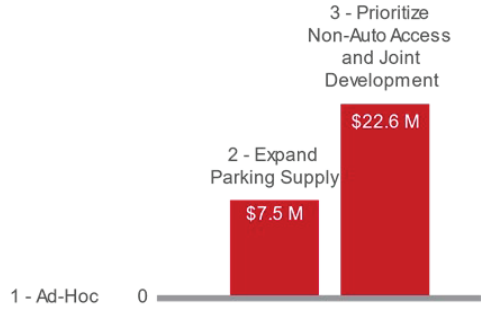
Tripling parking supply could cost double that of investing in non-auto modes.

Approximate Cost over 50 Years



Expanding access for non-auto modes more than triples the revenue generated by expanded parking supply.

Approximate Additional Annual Revenue



Station Access Results Present a Variety of Policy Questions

Is More Parking Worth the Investment?

- Parking garages are costly (analysis assumed $100,000 per new space including replacement parking and land acquisition)
- Building new garages may come at the expense of housing and office TOD
- Increasing parking supply is less effective in supporting ridership growth than investments in other modes

How Should Caltrain Address Shuttle and Bus Connections?

- There is substantial demand to scale shuttle/bus service to match growth of Caltrain service and development
- However, organizational and operational challenges may limit the potential for expansion
- Ongoing operational subsidies are high

What is Caltrain's Role in Bike/Ped Access?

- Improving bicycle parking and shared use at stations represents a key opportunity to accommodate long-term ridership growth
- Addressing offsite barriers to pedestrian and bicycle access are necessary to accommodate ridership growth, but these areas are typically outside Caltrain's jurisdiction

Equity Assessment

Why Focus on Equity?

The equity assessment is intended to help Caltrain understand how it can improve equity within its system- both in the near term and as the Service Vision is implemented over time.

Caltrain is Focusing on Equity for Multiple Reasons

- Stakeholder and Policy maker feedback through the Business Plan and other Caltrain undertakings have made it clear that equity is an important priority for the system
- Caltrain is planning to grow. The Long Range Service Vision calls for tripling the system's ridership. To do this, we want our service to be an accessible, useful and attractive choice for all members of our community
- Caltrain will need public investment to achieve its vision. Focusing on equity helps ensure that we deliver benefits and value to all members of the public

Equity Assessment Work Plan

The equity assessment is intended to help Caltrain understand how the Service Vision could improve equitable access to Caltrain and develop a series of policy interventions that would improve equitable access over time.

Opportunities & Challenges

- Review of existing plans
- Stakeholder interviews
- Market assessment

Analysis of the Service Vision

- Qualitative & quantitative evaluation of the Service Vision

(will be presented in April)

Recommendations

- Context-specific recommendations developed from the analysis of the Service Vision and opportunities and challenges (will be presented in April)

Existing Plans Review

1. Bayview Community Based Transportation Plan (2019)
2. Redwood City Citywide Transportation Plan (2018)
3. Moving San Mateo County Forward: Housing and Transit at a Crossroads (2018)
4. San Bruno/South San Francisco Community-Based Transportation Plan (2012)
5. San Mateo County Transportation Plan for Low-Income Populations (2012)
6. East Palo Alto Community-Based Transportation Plan (2004)
7. Community-Based Transportation Plan for East San Jose (2009)
8. Community-Based Transportation Plan for Gilroy (2006)
9. Equitable Access to Caltrain: Mapping and Scheduling Analysis (2019)

Stakeholder Engagement

To better understand existing barriers for disadvantaged riders and residents in the corridor, surveys were sent to community-based organizations along the corridor. Representatives who wanted to provide more feedback were interviewed in person or over the phone.

11 Community Stakeholder Survey Responses

6 In-Person Community Stakeholder Interviews - 2 in each Caltrain county

6 Community Stakeholder Phone Interviews

Feedback From Stakeholders

Service & Stations

Better Service For Nontraditional Work Schedules And Non-work Trips

Currently, Caltrain is focused on traditional commute hours, whereas low-income and vulnerable populations are more likely to have commutes that fall outside of these times.

Recommendations

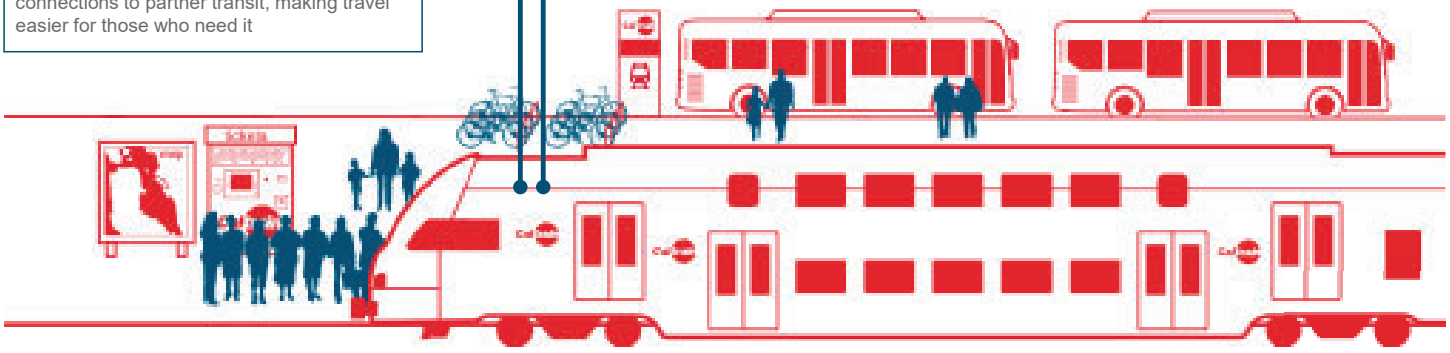
- More mid-day, late evening, and early morning service
- Connecting services during non-typical commute times need to be coordinated

More Frequent Service

Upgraded service would offer more flexibility and choice to access the corridor and better connections to partner transit, making travel easier for those who need it

Open Stations In Communities Of Concern

The Bayview neighborhood of San Francisco would like to see the Oakdale station built to replace the Paul Ave station closed in 1999. North Fair Oaks would like to see a local station on either the Caltrain or Dumbarton rail corridor.



Feedback From Stakeholders

Station Connections

Better Connecting Bus Service

Currently, existing and potential Caltrain riders are poorly served by connecting bus services in San Mateo and Santa Clara Counties

Recommendations

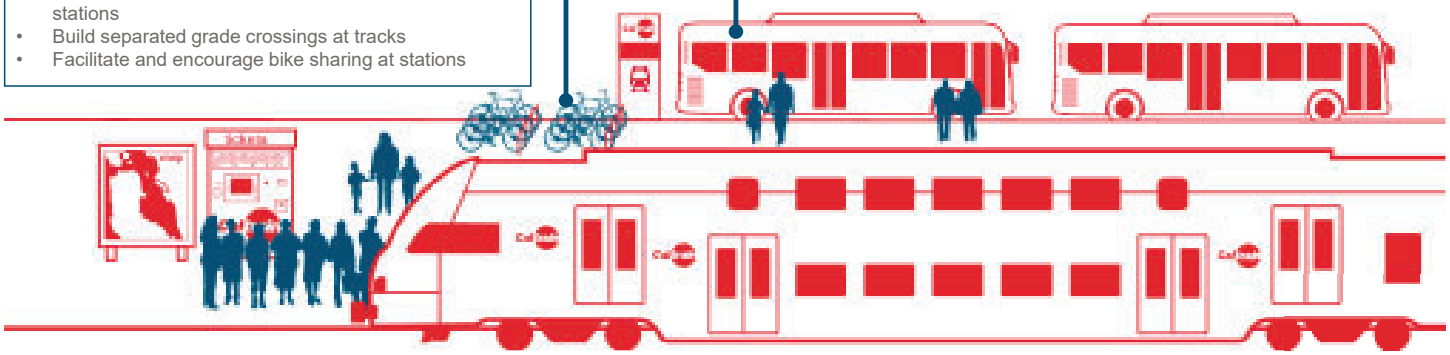
- Better scheduling coordination with SamTrans and VTA to reduce the number of bus connections that result in long waits or insufficient (<5 minutes) transfer times
- More frequent connecting bus services to Caltrain stations

Better Bike & Pedestrian Connections

Biking and walking are low-cost modes that, if enhanced, could expand access to Caltrain services.

Recommendations

- Better bike facilities such as lockers and racks at stations
- Build separated grade crossings at tracks
- Facilitate and encourage bike sharing at stations



Feedback From Stakeholders

System Accessibility

Better Rider Information

The fragmented nature of public transit service in the Bay Area makes it difficult for riders, especially those from marginalized and limited English-proficient backgrounds, to navigate myriad systems and agencies

Recommendations

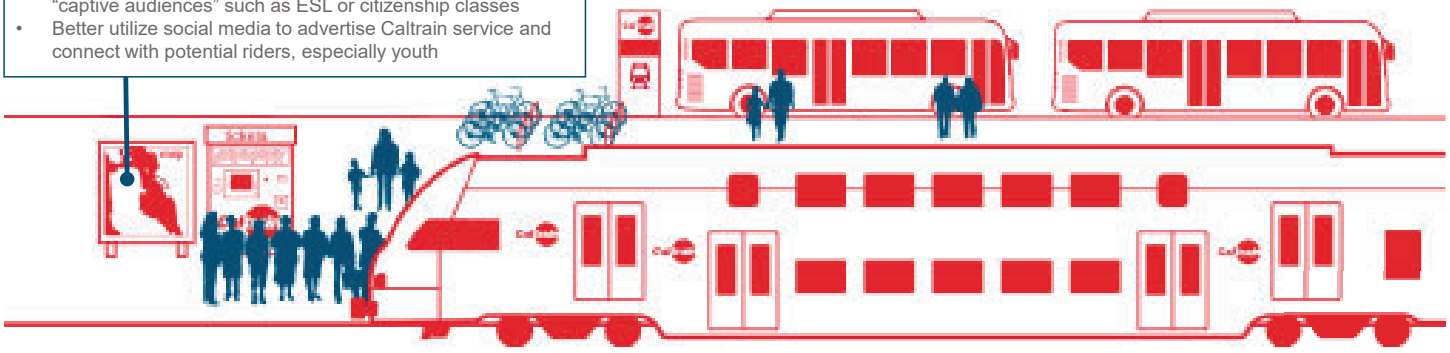
- Area-based maps and schedules that show services from all agencies, ideally in multiple languages
- Conduct outreach to teach people how to ride, perhaps with "captive audiences" such as ESL or citizenship classes
- Better utilize social media to advertise Caltrain service and connect with potential riders, especially youth

Accessible Station Design

Some Caltrain stations are poorly lit, provide limited access to ADA riders, and feel uninviting to riders

Recommendations

- Provide amenities at stations that improve rider experience, such as more lighting, shelter from the elements, and seating
- Implement level boarding at all stations



Feedback From Stakeholders

Fares & TOD

Discounted Fares For Low-income Riders

Currently, Caltrain does not offer discounts for low- income riders and has a significantly lower share of low-income riders compared with other agencies along the corridor (Muni, VTA, and SamTrans)

Recommendations

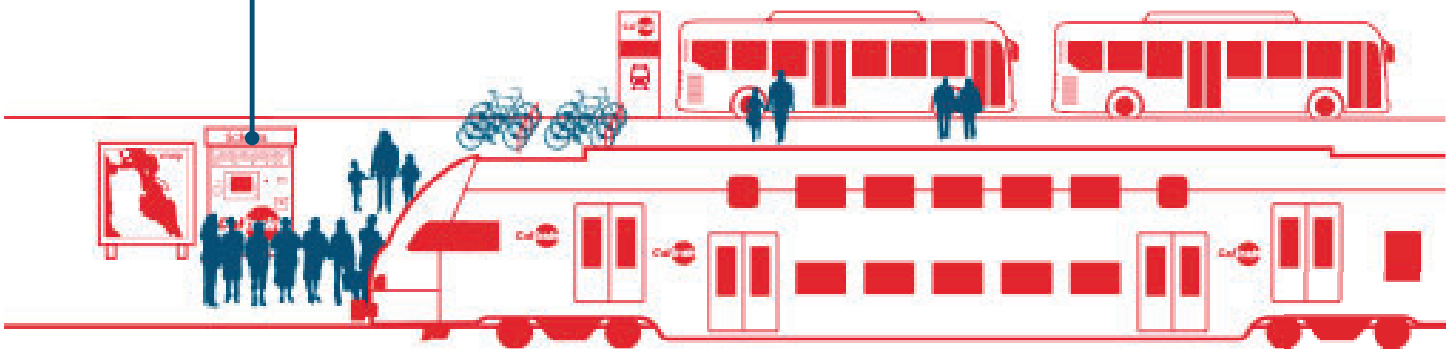
- Offer a reduced fare or subsidy program for low-income riders
- Revisit the zone fare structure to make sure that it is not disincentivizing the use of any connecting bus service

More Affordable Housing Near Stations

Housing along the Peninsula is becoming increasingly expensive and inaccessible to low-income and transit-dependent households.

Recommendation

- Partner with jurisdictions along the corridor to prioritize developing affordable housing and implement anti-displacement or local preference policies near stations



Equity Assessment Key Questions

The equity assessment will help us to understand how the Service Vision affects equitable access to Caltrain and will identify a series of potential policy interventions that could improve equitable access further

1. Does Caltrain ridership reflect corridor communities?
   Tool: census and on-board survey data

2. Do the travel patterns of lower income and minority communities reduce their likelihood of using Caltrain?
   Tool: Census Transportation Planning Products data

3. What policy levers could Caltrain shift to increase ridership from low income and minority communities?
   Tool: Review of fare structure and service plans, stakeholder interviews, plan review

The Corridor is Diverse

Within a two-mile station area:

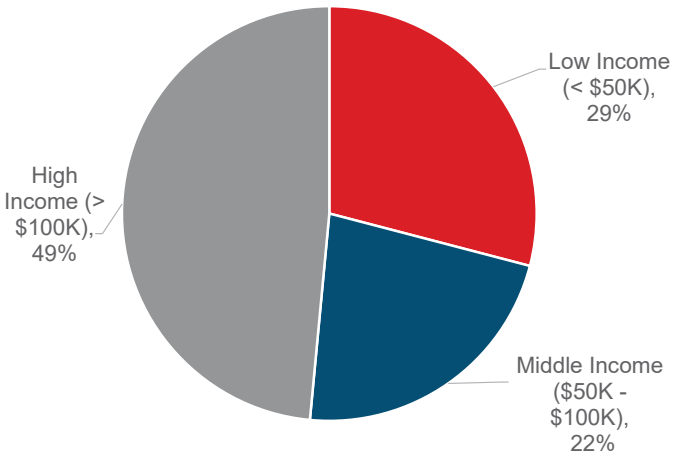
20% of households are located within an MTC-designated Community of Concern

29% of households are low income (annual income less than $50,000)

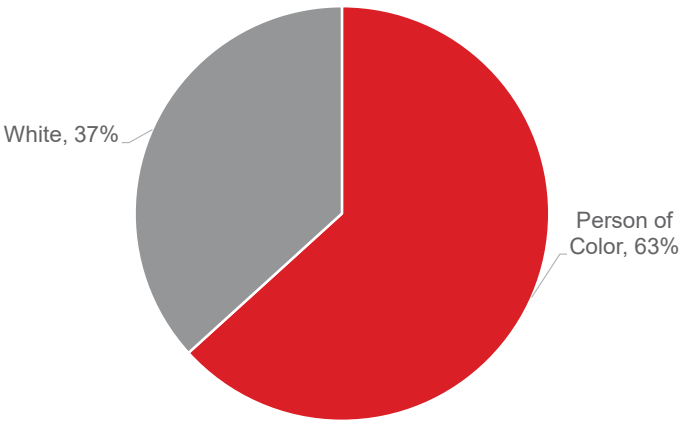
63% of residents identify as a person of color

Residents within 2 Miles

Household Income



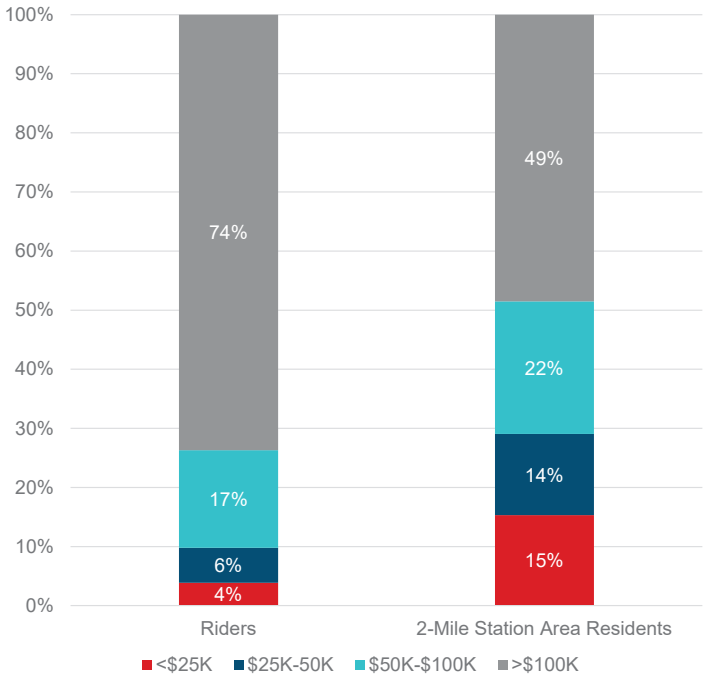
Race



Source: U.S. Census, American Community Survey 2017. Low-income defined by MTC as <$50,000 or <200% of the Federal poverty level; high-income defined as >$100,000.

Caltrain Rider Income does not Match that of Corridor Residents

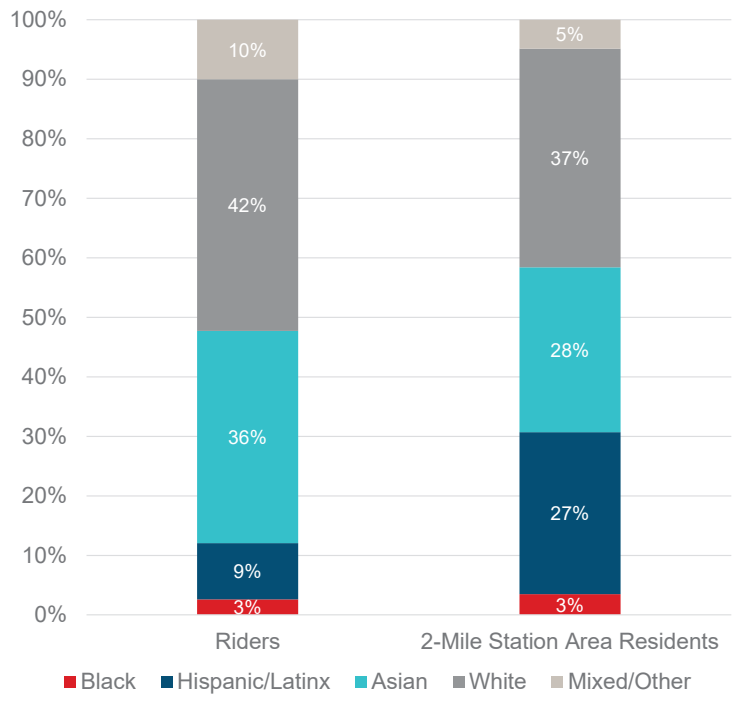
Very-low, low, and middle-income brackets are underrepresented in Caltrain ridership relative to the surrounding corridor



Source: U.S. Census, American Community Survey 2017. 2019 Triennial Caltrain Survey

Caltrain Rider Race/Ethnicity does not Match that of Corridor Residents

White and Asian neighbors are overrepresented in Caltrain ridership and Latinx neighbors are significantly underrepresented relative to the surrounding corridor



Source: U.S. Census, American Community Survey 2017, 2019 Triennial Caltrain Survey

Do the Travel Patterns of Lower Income and Minority Communities Reduce their Likelihood of Using Caltrain?

This question is answered by exploring:

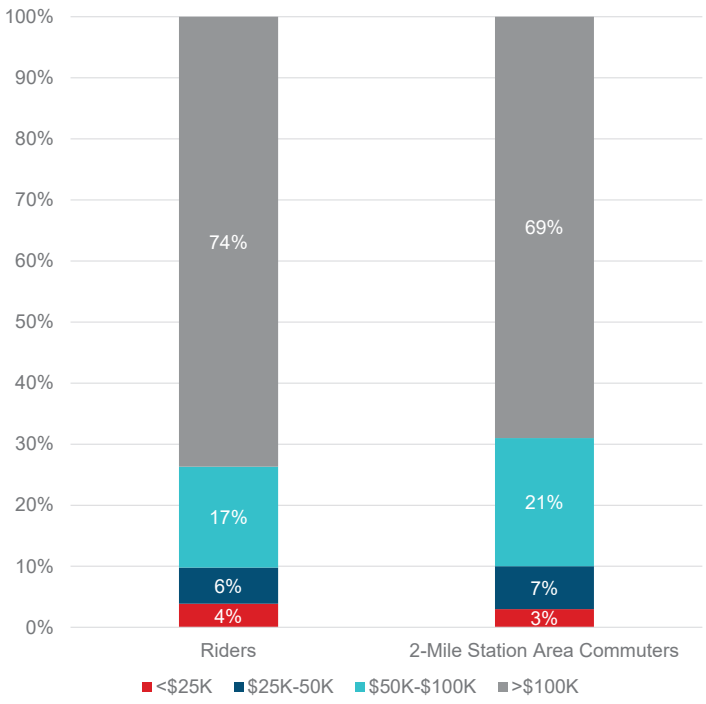
- **Commute Trips vs. Non-Commute Trips:** Does trip-making by Caltrain riders and other commuters within the Caltrain corridor vary by income? Do commute travel patterns vary by income?
- **Parallel Transit Routes:** Is there a difference in the way low-income and minority riders travel along parallel transit routes?

Commuting in the Corridor

Any work trip that has the work, home, or both trip-ends within 2-miles of a Caltrain station is considered a “corridor commute trip”

Trips that start and end in the same city are excluded

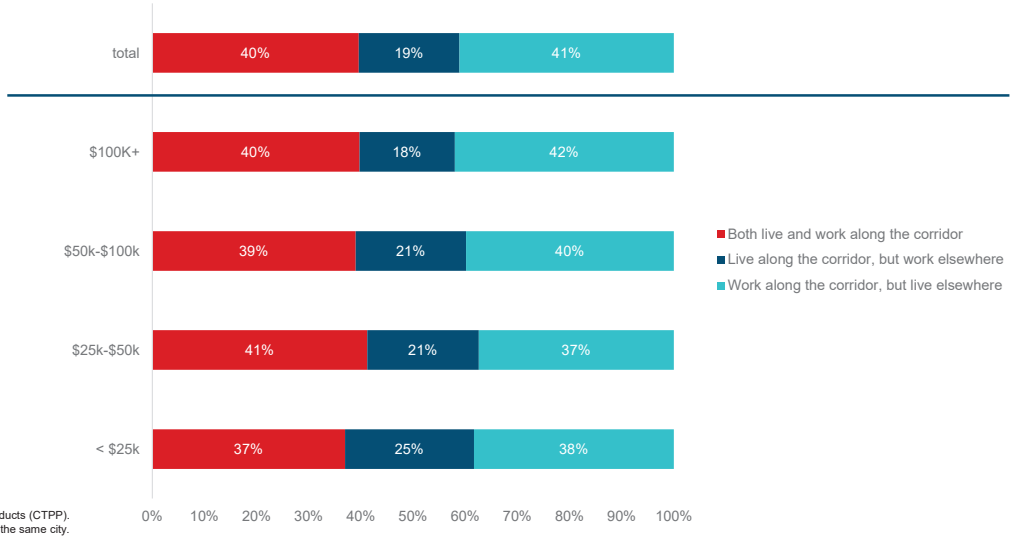
Caltrain Rider Income Closely Matches Income of Commuters within 2 Miles of the Corridor



*Source: U.S. Census, American Community Survey 2017. 2019 Triennial Caltrain Survey, Census Transportation Planning Products (CTPP). *Analysis excludes trips that start and end in the same city.*

Low Income Commuters Have Similar Corridor Travel Patterns as Other Income Brackets

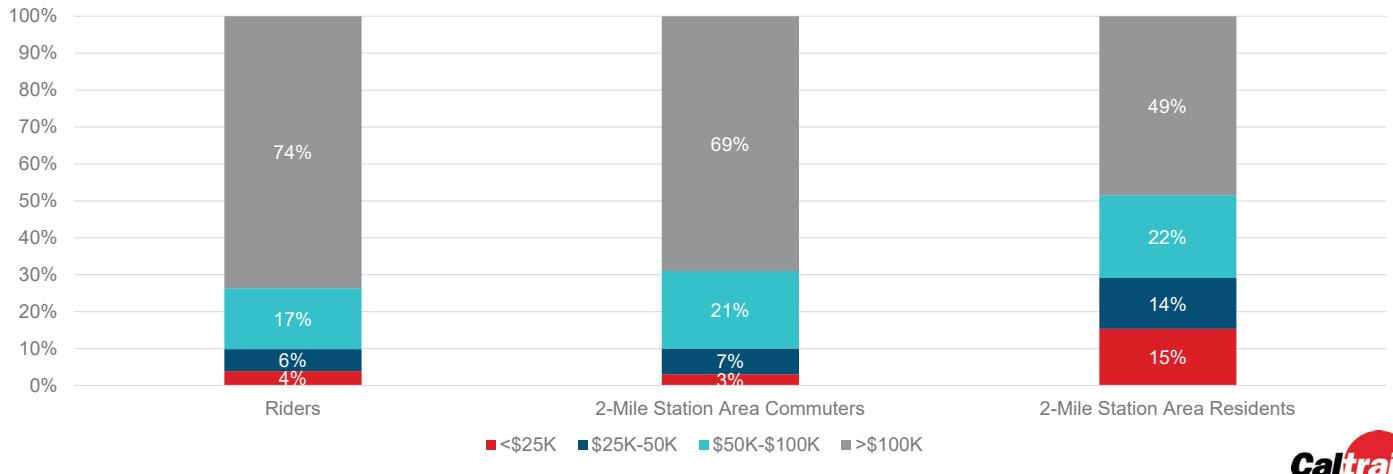
Home-based work trips with at least one end within 2-miles of a station



Source: Census Transportation Planning Products (CTPP).
*Analysis excludes trips that start and end in the same city.

Only 10% of Corridor Commuters Are Low Income Despite Being 29% of Residents

Caltrain is underserving non-work trips. This has the greatest impact on low-income populations.



Source: Census Transportation Planning Products (CTPP).
*Analysis excludes trips that start and end in the same city.

Parallel Transit Service

Several alternative transit lines run parallel to the Caltrain corridor. Although service is geographically similar to portions of the Caltrain route, ridership on these routes looks very different than on Caltrain.

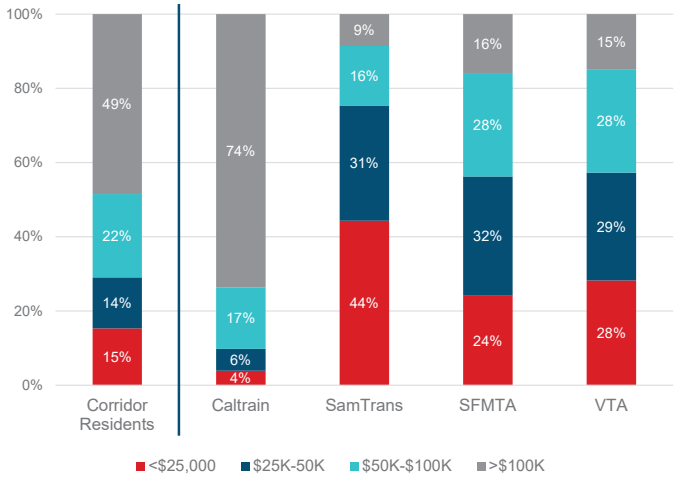
- 8, 8AX, 8BX
- 9, 9R
- T-Third Light Rail

- ECR, ECR Rapid
- 292
- 398
- 397 (OWL)

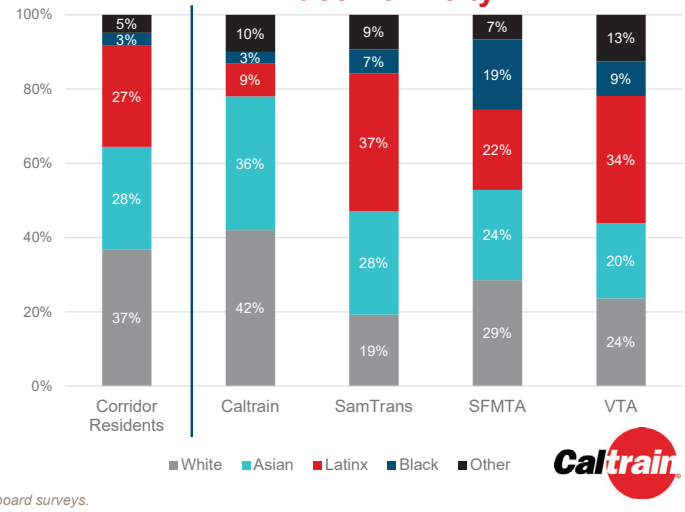
- 22
- 66
- 68
- 102
- 103
- 121
- 122
- 168
- 182
- 185
- 304
- 522

Parallel Routes Proportionally Serve More Low-Income Riders and People of Color than Caltrain

Household Income



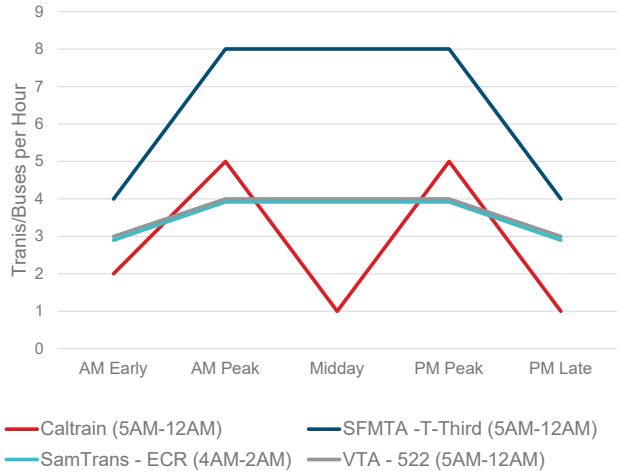
Race/Ethnicity



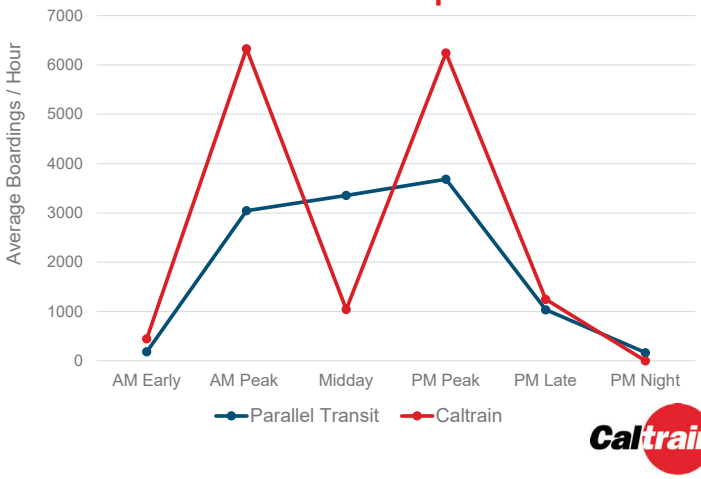
Source: U.S. Census, American Community Survey 2017, Caltrain 2019 Triennial Survey, SamTrans, SFMTA, and VTA on-board surveys.

Parallel Transit Has More Frequent All-Day Service & Serves More Midday Riders

Frequency



Ridership



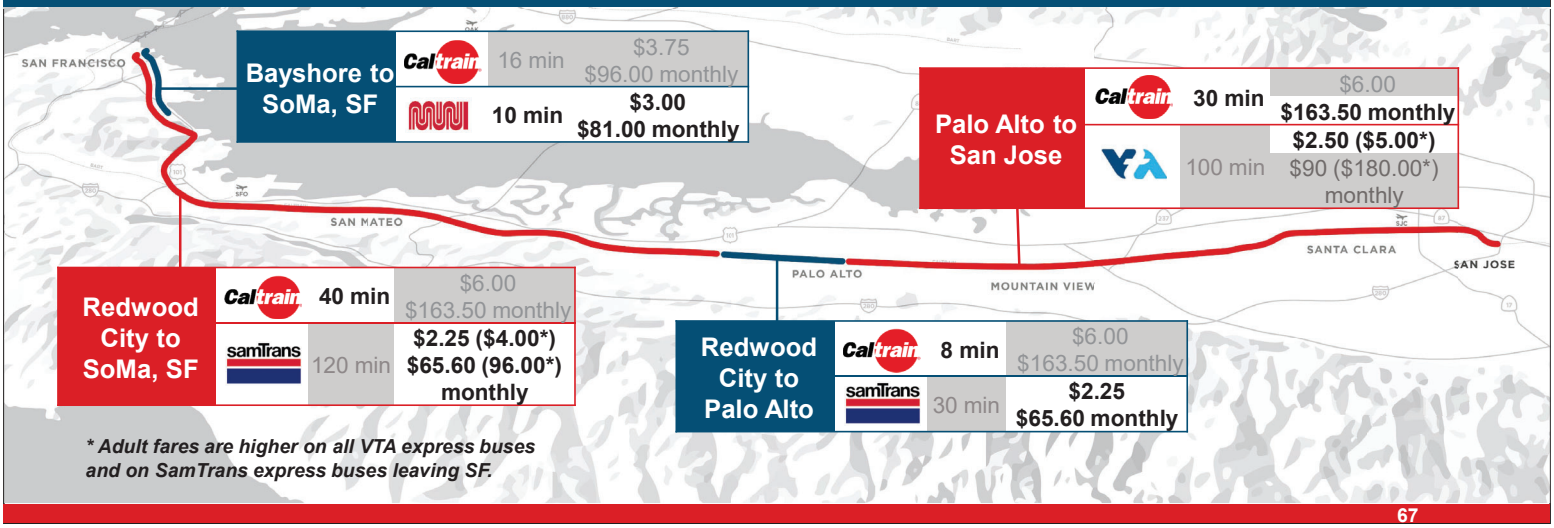
Schedule & Frequency

- Caltrain service is concentrated in the peaks with very little service during the early morning, midday, and evening hours
- Parallel transit service runs consistent headways through the peak and midday hours
- Parallel transit service operates in the corridor 24/7
- As a result, off-peak demand is largely served by parallel transit service

Comparisons: Travel Time & Cost

- **Caltrain is generally faster but more expensive**
- Caltrain has a zone-based fare structure: costs increase with distance travelled
- Parallel systems use flat rates with higher fares for express bus services

Travel Time



** Adult fares are higher on all VTA express buses and on SamTrans express buses leaving SF.*

Cost & Fare Structure

- Within the corridor, SFMTA currently provides a low-income discount fare option
- Caltrain will begin participating in a means-based fare option through MTC's Clipper START Program (20% discount)
- Caltrain's need to maintain an overall high farebox recovery is driven by its underlying funding constraints

Transit Agency	Discount Programs				
	Youth	Senior	Disabled	Low-Income	Approx. Farebox Recovery
Caltrain	✓	✓	✓	20% discount starting in 2020	70%
BART	✓	✓	✓		70%
SFMTA	✓	✓	✓	50% discount	25%
SamTrans	✓	✓	✓		15%
VTA	✓	✓	✓		11%

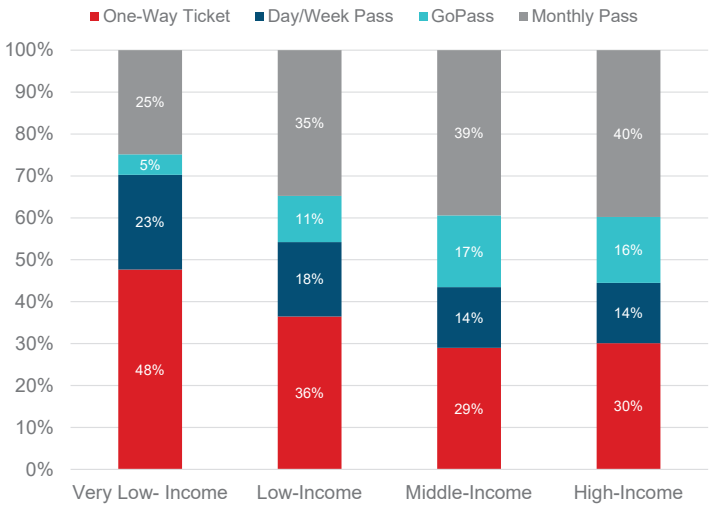
Discount Pass Programs are More Heavily Used By Middle- and High-Income Riders

Caltrain's most discounted pass is the GoPass. In October 2016, the average GoPass customer paid $2.89, versus the non-GoPass customer average of $5.96.*

The GoPass and Monthly Pass are the fare payment options with the least use by very-low and low-income riders.

Household Income and Fare Method

Cost & Fare Structure

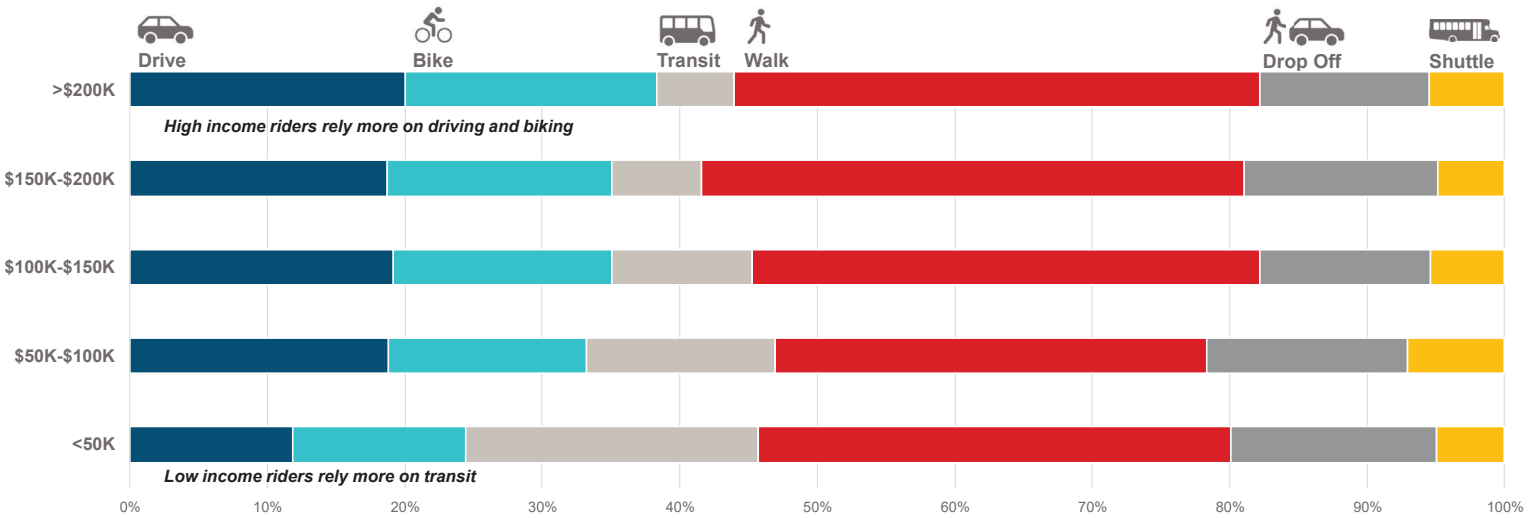


Source: Caltrain 2019 Triennial Survey.

Equity

Station Access by Household Income

Data from Caltrain's 2019 Triennial Survey



Fares & Station Access

Access

A higher share (25%) of Very Low-Income riders take transit to access the Caltrain system – more than any other income group

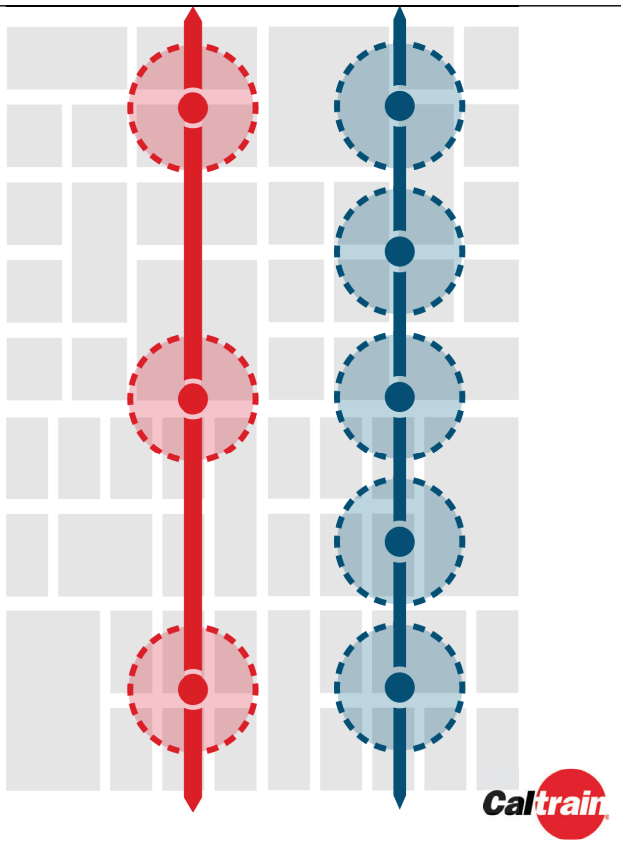
- Bus to Caltrain fare transfers are not offered
- Some Caltrain Monthly Pass holders receive a discounted bus fare when transferring from Caltrain*

Very-low income riders are the least likely of all income groups to use a Monthly Pass.

** Muni provides a 50-cent discount to all Caltrain transfers who use Clipper.*

Access

- Buses and light rail provide more frequent stop spacing, which means easier access to destinations and transfers
- Because Caltrain is unable to easily add more stations, Caltrain can utilize station access policy and time transfers with other transit services to facilitate ease of access



What Policy Considerations Can Caltrain Explore to Increase Ridership from Low-Income Communities?

Caltrain could attract more low-income riders by:

- Expanding service during off-peak hours and non-traditional commute times
- Offering low-income fare products. Caltrain has committed to piloting low-income fare products starting this year as part of the regional MTC SMART program launch
- Evolving and simplifying fare structure so that discounts and transfer benefits accrue equitably to all types of riders
- Expanding and investing in first- and last-mile access that benefits all types of trips and people with a focus on Communities of Concern that have expressed a desire for better station access such as Bayview in SF and North Fair Oaks in San Mateo County

Analysis of the Long Range Service Vision

This analysis of the Long Range Service Vision will include qualitative and quantitative factors – it will focus on illuminating how Caltrain's achievement of the Vision can help equity and will highlight areas where extra focus or reinforcing policies may be needed

Themes in blue are the focus for the evaluation of the service vision. Themes in gray may arise during conversations with stakeholders and will potentially be used to guide policy recommendations.

Evaluation Framework	
Key Questions	**Measure Themes**
How does Caltrain provide service?	Infrastructure Quality
	Fare Structure+
	Transit service (service planning)+
	Network Completeness
Who benefits or is burdened from those services?	Station Access
	Affordability*
	Safety
	User Perceptions
	Distribution of Construction/Supportive Infrastructure
How does Caltrain impact surrounding land use?	Displacement Risk*
	Equitable TOD
	Environmental Impacts*
	Accessibility of Destinations*
How are decisions made?	Stakeholder Representation
	Distribution of Funding
	Quality of Engagement

(MTC Equity Focus Area); (Title VI Equity Focus Area) +*

FOR MORE INFORMATION

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BUSINESSPLAN@CALTRAIN.COM

650-508-6499

AGENDA ITEM #4e
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
Executive Director

FROM: Derek Hansel
Chief Financial Officer

SUBJECT: **STATEMENT OF REVENUES AND EXPENSES FOR THE PERIOD ENDING FEBRUARY 29, 2020**

ACTION

Staff proposes that the Board of Directors accept and enter into the record the Statement of Revenues and Expenses for the month of February 2020.

This staff report provides a brief discussion of significant items and trends on the attached Statement of Revenues and Expenses through February 29, 2020. The statement has been designed to follow the Agency-wide line item rollup as included in the adopted budget. The columns have been designed to provide easy comparison of year-to-date prior to current actuals for the current fiscal year including dollar and percentage variances. In addition, the current forecast of Revenues and Expenses is compared to the Adopted Budget for Fiscal Year 2020.

SIGNIFICANCE

Annual Forecast: The annual forecast was updated for the April board meeting based on actual revenue and expense trends through January 2020. The forecast was derived by analyzing trends and reviewing details with cost center managers.

This forecast predates the development of implications associated with the Covid-19 virus; as such it does not reflect recent financial developments and expectations.

Forecast Revenues: Total revenue (page 1, line 17) is forecast $2.6 million higher than budget. This is primarily driven by higher Farebox Revenue (page 1, line 1) which is $3.1 million higher than budget due to adopted fare changes (Go Pass fare increased by 20%, Clipper discount reduced to $0.25, and implementation of the means based fare pilot program). Other Income (page 1, line 5) is higher than budget by $0.7 million due to increased parking citation revenue. This is partially offset by Shuttles (page 1, line 3), which is lower due to a reduction in service.

The Use of Reserves (page 1, line 13) is $1.1 million lower than budget primarily due to the increased fare revenue.

Forecast Expenses: Total Expense (page 1, line 49) is $0.9 million lower than budget. The variance is primarily due to lower expense trends. Shuttles Services (page 1, line 26) is $0.6 million lower than budget due to a labor shortage of drivers causing a reduction in service. Professional Services (page 1, line 41) is lower than budget by $0.1 million as a result of delays in various planning studies. Facilities &

Equipment Maintenance (page 1, line 31) is lower than budget by $0.1 million due to delayed start of various survey work.

Year to Date Revenues: As of February year-to-date actual, the Total Revenue (page 1, line 17) is $6.6 million higher than the prior year. This is primarily driven by Farebox Revenue (page 1, line 1), Other Income (page 1, line 5), and JPB Member Agencies Contributions (page 1, line 12).

Year to Date Expenses: As of February year-to-date actual, the Grand Total Expense (page 1, line 49) is $5.9 million higher than the prior year-to-date actual. This is primarily due to increases in Rail Operator Service (page 1, line 23), Fuel and Lubricants (page 1, line 27), Wages and Benefits (page 1, line 38), Professional Services (page 1, line 41), and Long Term Debt Expense (page 1, line 47). The increases are partially offset by decreases in Claims, Payments, and Reserves (page 1, line 30), Managing Agency Admin OH Cost (page 1, line 39), and Other Office Expenses and Services (page1, line 43).

Other Information: Starting in January 2019, the Agency modified the basis of reporting from accrual basis to modified cash basis (only material revenues and expenses are accrued) in monthly financial statements. The change in the accounting basis is not retroactively reflected in the prior year actual. As such, the monthly variance between the prior year and the current year actual may show noticeable variances for some line items on the financial statements.

BUDGET IMPACT

There are no budget amendments for the month of February 2020.

STRATEGIC INITIATIVE

This item does not achieve a strategic initiative.

Prepared By :	Danny Susantin, Accountant III	650-622-8073
	Jennifer Ye, Manager, General Ledger	650-622-7890

PENINSULA CORRIDOR JOINT POWERS BOARD

STATEMENT OF REVENUE AND EXPENSE

Fiscal Year 2020

February 2020

% OF YEAR ELAPSED **66.7%**

		YEAR TO DATE					ANNUAL			
		PRIOR ACTUAL	CURRENT ACTUAL	$ VARIANCE	% VARIANCE	CURRENT AS A % OF BUDGET	APPROVED BUDGET	FORECAST	$ VARIANCE	% BUDGET
	REVENUE									
	OPERATIONS:									
1	Farebox Revenue	66,330,153	70,494,830	4,164,677	6.3%	66.5%	106,000,000	109,050,000	3,050,000	2.9%
2	Parking Revenue	3,372,713	3,393,996	21,283	0.6%	63.6%	5,335,000	5,335,000	-	0.0%
3	Shuttles	1,277,880	1,250,819	(27,061)	(2.1%)	50.0%	2,503,200	2,395,314	(107,886)	(4.3%)
4	Rental Income	1,271,716	1,226,082	(45,634)	(3.6%)	59.5%	2,060,540	2,060,540	-	0.0%
5	Other Income	1,690,247	2,345,729	655,483	38.8%	133.8%	1,753,450	2,500,000	746,550	42.6%
6										
7	TOTAL OPERATING REVENUE	73,942,709	78,711,457	4,768,748	6.4%	66.9%	117,652,190	121,340,854	3,688,664	3.1%
8										
9	CONTRIBUTIONS:									
10	AB434 Peninsula & TA Shuttle Funding	1,168,523	1,354,780	186,257	15.9%	78.0%	1,737,950	1,737,950	-	0.0%
11	Operating Grants	4,380,405	3,465,342	(915,063)	(20.9%)	65.0%	5,327,497	5,327,497	-	0.0%
12	JPB Member Agencies	18,882,000	21,488,915	2,606,915	13.8%	71.8%	29,921,971	29,921,971	-	0.0%
13	Use of Reserves	-	-	-	0.0%	0.0%	1,064,614	-	(1,064,614)	(100.0%)
14										
15	TOTAL CONTRIBUTED REVENUE	24,430,928	26,309,037	1,878,109	7.7%	69.1%	38,052,032	36,987,418	(1,064,614)	(2.8%)
16										
17	**GRAND TOTAL REVENUE**	**98,373,637**	**105,020,494**	**6,646,857**	**6.8%**	**67.4%**	**155,704,222**	**158,328,272**	**2,624,050**	1.7%
18										
19										
20	**EXPENSE**									
21										
22	OPERATING EXPENSE:									
23	Rail Operator Service	56,114,071	59,443,919	3,329,847	5.9%	65.5%	90,817,696	90,817,696	-	0.0%
24	Positive Train Control	20,481	207,901	187,420	915.1%	8.7%	2,400,000	2,400,000	-	0.0%
25	Security Services	3,818,904	3,857,219	38,315	1.0%	58.9%	6,544,183	6,544,183	-	0.0%
26	Shuttles Services	2,609,604	2,660,629	51,025	2.0%	50.3%	5,290,100	4,718,692	(571,408)	(10.8%)
27	Fuel and Lubricants	7,008,316	7,491,214	482,898	6.9%	68.1%	11,003,417	11,003,417	-	0.0%
28	Timetables and Tickets	53,414	47,633	(5,781)	(10.8%)	33.2%	143,500	100,000	(43,500)	(30.3%)
29	Insurance	2,802,471	2,883,565	81,093	2.9%	64.0%	4,506,064	4,506,064	-	0.0%
30	Claims, Payments, and Reserves	270,809	(90,688)	(361,497)	(133.5%)	(9.5%)	951,794	951,794		0.0%
31	Facilities and Equipment Maint	1,257,048	1,460,792	203,744	16.2%	43.7%	3,339,391	3,228,522	(110,869)	(3.3%)
32	Utilities	1,192,107	1,259,923	67,816	5.7%	59.8%	2,105,422	2,105,422	-	0.0%
33	Maint & Services-Bldg & Other	719,677	746,825	27,148	3.8%	47.6%	1,567,930	1,567,930	-	0.0%
34										
35	TOTAL OPERATING EXPENSE	**75,866,902**	**79,968,930**	**4,102,028**	5.4%	**62.2%**	**128,669,496**	**127,943,720**	**(725,776)**	(0.6%)
36										
37	ADMINISTRATIVE EXPENSE									
38	Wages and Benefits	6,625,540	8,110,041	1,484,501	22.4%	67.2%	12,066,711	12,066,711	-	0.0%
39	Managing Agency Admin OH Cost	4,254,370	2,810,636	(1,443,734)	(33.9%)	55.1%	5,098,065	5,098,065	-	0.0%
40	Board of Directors	14,334	9,966	(4,369)	(30.5%)	68.3%	14,600	14,600	-	0.0%
41	Professional Services	1,201,410	2,504,317	1,302,907	108.4%	58.6%	4,275,583	4,145,583	(130,000)	(3.0%)
42	Communications and Marketing	178,189	206,042	27,853	15.6%	68.3%	301,500	301,500	-	0.0%
43	Other Office Expenses and Services	2,010,105	1,690,368	(319,737)	(15.9%)	64.1%	2,638,494	2,625,494	(13,000)	(0.5%)
44										
45	TOTAL ADMINISTRATIVE EXPENSE	**14,283,949**	**15,331,370**	**1,047,421**	**7.3%**	**62.8%**	**24,394,953**	**24,251,953**	**(143,000)**	(0.6%)
46										
47	Long Term Debt Expense	1,003,969	1,779,000	775,032	77.2%	67.4%	2,639,773	2,639,773	-	0.0%
48										
49	**GRAND TOTAL EXPENSE**	**91,154,819**	**97,079,300**	**5,924,481**	**6.5%**	**62.3%**	**155,704,222**	**154,835,446**	**(868,776)**	(0.6%)
50										
51	**NET SURPLUS / (DEFICIT)**	**7,218,818**	**7,941,194**	**722,377**	**10.0%**		**(0)**	**3,492,826**	**3,492,826**	

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BOARD OF DIRECTORS 2020

DAVE PINE, CHAIR
DEVORA "DEV" DAVIS, VICE CHAIR
STEVE HEMINGER
JENNIE BRUINS
RON COLLINS
CINDY CHAVEZ
SHAMANN WALTON
CHARLES STONE
MONIQUE ZMUDA

JIM HARTNETT
EXECUTIVE DIRECTOR

PENINSULA CORRIDOR JOINT POWERS BOARD

INVESTMENT PORTFOLIO

AS OF FEBRUARY 29, 2020

TYPE OF SECURITY		MATURITY DATE	INTEREST RATE	PURCHASE PRICE	MARKET RATE
Local Agency Investment Fund (Unrestricted)	*	Liquid Cash	1.912%	12,000,040	12,000,040
County Pool (Restricted)		Liquid Cash	1.776%	624,073	624,073
Other (Unrestricted)		Liquid Cash	0.700%	47,505,660	47,505,660
Other (Restricted)	**	Liquid Cash	0.200%	14,220,082	14,220,082
				$ 74,349,855	$ 74,349,855

Interest Earnings for February 20	$ 52,573.53
Cumulative Earnings FY2020	$ 269,038.47

* The market value of Local Agency Investment Fund (LAIF) is calculated annually and is derived from the fair value factor as reported by LAIF for quarter ending June 30th each year.

** Prepaid Grant funds for Homeland Security, PTMISEA and LCTOP projects, and funds reserved for debt repayment. The Portfolio and this Investment Report comply with the Investment Policy and the provisions of SB 564 (1995). The Joint Powers Board has the ability to meet its expenditure requirements for the next six months.

AGENDA ITEM #4f
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
Executive Director

FROM: Derek Hansel
Chief Financial Officer

Michelle Bouchard
Chief Operating Officer, Rail

SUBJECT: Agreement with Sprint for Relocation of Communication Facilities for the South San Francisco Station Improvement Project

ACTION

Staff Coordinating Council recommends the Board authorize the Executive Director, or his designee, to execute an agreement with Sprint for relocation of communication facilities at the South San Francisco Station Improvement Project (Project) in the City of South San Francisco (City).

SIGNIFICANCE

The South San Francisco station is one of four remaining Caltrain stations, along with Atherton, Broadway, and College Park, that is subject to a safety precaution and operational constraint known as the "hold-out rule." Because the platform configurations at these stations require passengers to cross train tracks to board their trains, a train approaching the station must "hold out" if another train is in the station, and cannot enter the station until it is clear. The hold-out rule at the South San Francisco station can be eliminated with the construction of a wider platform that meets current Caltrain standards, and construction of the underpass that would connect Caltrain users to the center platform without having to cross the tracks. The Project will also serve as an important component of the City's plans for downtown mixed-use development.

The Project will be installing a stairwell and ramp along the east side of the station at Grand Avenue and Poletti Way. This Project element will require the relocation of fiber optic lines owned by Sprint, Verizon, CenturyLink, and Central Valley Independent Network, which are currently located in a ductbank within Union Pacific's fiber optic easement area. In order to facilitate the timely relocation of the co-carriers' facilities, staff proposes that the Peninsula Corridor Joint Powers Board (JPB) enter into an agreement to prepay Sprint (as lead carrier) to relocate the facilities into a fiber optic easement that the City intends to grant to Union Pacific.

Staff has reviewed Sprint's cost estimate, and concluded that the costs are reasonable.

BUDGET IMPACT

The cost to relocate the fiber optic facilities at South San Francisco station is estimated to be $400,000, which includes a contingency of 10 percent. The total Project budget of $71.6 million includes project contingency funds for utility relocations and will cover the cost associated with this agreement.

BACKGROUND

The Board of Directors awarded the construction contract for the Project at its August 2017 meeting for a total value of $32.1 million to Proven Management Construction. The Project is jointly funded by a combination of grants from the San Mateo County Transportation Authority and the City. The Project is currently anticipated to be complete by fall 2020.

Prepared by: Howard Beckford, Project Manager, Capital Projects 650.622.7852

RESOLUTION NO. 2020 –

BOARD OF DIRECTORS, PENINSULA CORRIDOR JOINT POWERS BOARD
STATE OF CALIFORNIA

*** * ***

AUTHORIZING THE EXECUTIVE DIRECTOR TO EXECUTE AN AGREEMENT WITH SPRINT FOR RELOCATION OF COMMUNICATION FACILITIES FOR THE SOUTH SAN FRANCISCO STATION IMPROVEMENT PROJECT

WHEREAS, on December 9, 2015, the City of South San Francisco (City), the Peninsula Corridor Joint Powers Board (JPB), and the San Mateo County Transportation Authority entered into a cooperative agreement under which the JPB is undertaking the design and construction of the South San Francisco Station Improvement Project (Project), which includes an extension and reconfiguration of the station platforms and facilities, construction of a new center boarding platform and a new pedestrian and bicycle undercrossing to eliminate the "hold-out rule," a new shuttle pick-up area and a new pedestrian and bicycle tunnel entry plaza; and

WHEREAS, during the construction phase of the Project, the design team determined that communications facilities located at Grand Avenue and Poletti Way would need to be relocated to accommodate construction of the stairwell and ramp along the east side of the Project; and

WHEREAS, these communication facilities, which are currently located within Union Pacific's fiber-optic easement, much be relocated to avoid significant impacts to the Project construction schedule; and

WHEREAS, the estimated $400,000 cost to relocate the communication facilities, which includes a contingency of 10 percent and which must be pre-paid to Sprint (as lead carrier), is within the total Project budget of $71.6 million.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Peninsula Corridor Joint Powers Board hereby authorizes the Executive Director, or his designee, to execute an agreement with Sprint to relocate communications facilities at Grand Avenue and Poletti Way, pursuant to the terms and conditions set forth above, and to take any other action necessary to give effect to this resolution.

Regularly passed and adopted this 2nd day of April 2020 by the following vote:

AYES:

NOES:

ABSENT:

_____

Chair, Peninsula Corridor Joint Powers Board

ATTEST:

_____

JPB Secretary

AGENDA ITEM #4g
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
Executive Director

FROM: Michelle Bouchard
Chief Operating Officer, Rail

David Olmeda
Chief Operating Officer, Bus

SUBJECT: **AUTHORIZATION FOR THE APPLICATION AND EXECUTION OF A FUNDING AGREEMENT FOR SAN MATEO COUNTY SHUTTLE PROGRAM FUNDS**

ACTION

Staff Coordinating Council (SCC) recommends the Board authorize the Executive Director, or his designee, to:

1. Receive up to $2,700,200 from the San Mateo County Transportation Authority (TA) and/or the San Mateo City/County Association of Governments (C/CAG) for the Caltrain shuttle program;
2. Commit up to $259,600 in Peninsula Corridor Joint Powers Board (JPB) matching funds for the Caltrain shuttle program, with the funding sources to be identified through the annual JPB operating budget process; and
3. Execute a two-year funding agreement and take any other actions necessary for the purpose of obtaining grant funding through the TA and/or C/CAG for the operation of Caltrain shuttles in San Mateo County.

SIGNIFICANCE

Every two years, the Peninsula Corridor Joint Powers Board (JPB) applies for financial assistance from the TA and C/CAG, through the San Mateo County Shuttle Program, to help support Caltrain shuttle operations in San Mateo County. Of the 28 Caltrain shuttles, 11 operate within San Mateo County and are eligible for this fund source. Approval of this item will authorize the Executive Director, or his designee, to enter into a two-year funding agreement with the TA and/or C/CAG to receive up to $2,700,200 for Fiscal Years (FY) 2021 and 2022. While the program requires a minimum local match of 25% based on the total cost of the service, employer contributions toward the shuttle program will be 44% or $2,340,700. The JPB's match is 5%, or $259,600, and is expected to be funded through a combination of member agency contributions and Bay Area Air Quality Management District (BAAQMD) funds. A list of the shuttles to be proposed for funding through the San Mateo County Shuttle Program is included as Attachment A.

Relatedly, the San Mateo County Transit District (District) and the JPB are undertaking a joint study of the San Mateo County Transit District's shuttle program. The project will holistically evaluate SamTrans and Caltrain shuttles with the goal of understanding current shuttle trends (namely, declining ridership and reliability) and identifying how

shuttles may best complement SamTrans fixed route and Caltrain rail services. Ultimately, the study will propose an ideal service and management vision for the program. Staff will be updating the Board periodically as work progresses and recommendations become available.

BUDGET IMPACT

The JPB also anticipates that it will receive funding from BAAQMD in both FY2021 and FY2022 through a competitive call for projects later in calendar year 2020 and again in 2021. Funding from the BAAQMD program fluctuates from year to year and funds received from the BAAQMD will reduce both the TA and JPB member agency contributions to the program. Approximately $500,000 is received annually from the BAAQMD to fund the Caltrain shuttle program. The total estimated budget for the shuttles over the next two years is $5,040,900 and is proposed to be funded as shown in the following table.

Preliminary Budget

Fund Source	Amount
San Mateo County Shuttle Program	$2,700,200
Employer/City Contributions	$2,081,100
JPB Member Agency Funds	$259,600
Total	**$5,040,900**

BACKGROUND

The San Mateo County Shuttle Grant Program is jointly administered by the TA and C/CAG. Caltrain shuttles provide a last-mile connection between Caltrain Stations and employers. The program is funded through Measure A, a half-cent sales tax in San Mateo County, and the C/CAG Local Transportation Services Program under the Countywide Congestion Relief Plan. Caltrain shuttle operations are supported by funding from BAAQMD's Transportation Fund for Clean Air (TFCA), JPB local funds and contributions from employers. In addition to the TA/C/CAG funds,

Prepared By: Michael Stevenson, Associate Operations Contract Administrator 650-508-7979

Attachment A

List of JPB Shuttles to be Funded by the San Mateo County Shuttle Program

Shuttle Route	Grant Request	Employer/City Contribution	JPB Member Agencies	Total
Bayshore Brisbane Commute	$197,900	$0	$65,900	$263,800
Belmont/Hillsdale	$261,600	$0	$87,200	$348,800
Broadway/Millbrae	$266,000	$0	$88,600	$354,600
Campus Drive Area	$265,300	$84,800	$3,600	$353,700
Electronic Arts (EA)	$160,000	$250,000	$0	$410,000
Lincoln Centre	$274,900	$88,000	$3,600	$366,500
Mariners Island	$274,900	$88,000	$3,600	$366,500
Norfolk Area	$251,800	$80,600	$3,300	$335,700
Oracle	$160,000	$697,600	$0	$857,600
Pacific Shores	$300,000	$700,000	$0	$1,000,000
Twin Dolphin	$287,800	$92,100	$3,800	$383,700
Total	**$2,700,200**	**$2,081,100**	**$259,600**	**$5,040,900**

RESOLUTION NO. 2020 –

BOARD OF DIRECTORS, PENINSULA CORRIDOR JOINT POWERS BOARD
STATE OF CALIFORNIA

*** * ***

AUTHORIZING APPLICATION FOR AND RECEIPT OF SAN MATEO COUNTY SHUTTLE PROGRAM FUNDS

WHEREAS, on June 7, 1988, the voters of San Mateo County approved a ballot measure to allow the collection and distribution by the San Mateo County Transportation Authority (TA) of a half-cent transactions and use tax in San Mateo County for 25 years, with the tax revenues to be used for highway and transit improvements pursuant to the Transportation Expenditure Plan presented to the voters (Original Measure A); and

WHEREAS, on November 2, 2004, the voters of San Mateo County approved the continuation of the collection and distribution by the TA the half-cent transactions and use tax for an additional 25 years to implement the 2004 Transportation Expenditure Plan beginning January 1, 2009 (New Measure A); and

WHEREAS, the Board of Directors of the City/County Association of Governments (C/CAG) of San Mateo County, at its February 14, 2002 meeting, approved the Countywide Congestion Relief Plan and subsequently reauthorized the Countywide Congestion Relief Plan in 2007, 2010, and 2015; and

WHEREAS, a component of the C/CAG Countywide Congestion Relief Plan is to support Local and Employer Based Shuttle Programs; and

WHEREAS, the TA and C/CAG issued a joint Call for Projects for the San Mateo County Shuttle Program on January 13, 2020; and

WHEREAS, the TA and C/CAG require a resolution from the Peninsula Corridor Joint Powers Board (JPB) in support of the JPB's application for San Mateo County Shuttle Program funds to support the JPB's shuttle program; and

WHEREAS, there is a need to provide last-mile transit connections between Caltrain stations and major employment centers in San Mateo County; and

WHEREAS, the Caltrain shuttle program serves San Mateo County commuters by providing this last-mile transit connection; and

WHEREAS, to support the Caltrain shuttle program, the JPB seeks $2,700,200 in San Mateo County Shuttle Program funds, which would require matching funds of $259,600.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Peninsula Corridor Joint Powers Board by adopting this resolution hereby:

1. Authorizes the Executive Director, or his designee to file an application for and receive up to $2,700,200 in San Mateo County Shuttle Program funds from the San Mateo County Transportation Authority and/or the City/County Association of Governments of San Mateo County.

2. Commits up to $259,600 in required matching funds for the Caltrain shuttle program, to be identified through the annual JPB Operating Budget process.

3. Authorizes the Executive Director, or his designee, to execute a two-year funding agreement and take any other actions necessary for the purpose of obtaining grant funding through the TA and/or C/CAG for the operation of Caltrain shuttles in San Mateo County.

Regularly passed and adopted this 2nd day of April, 2020 by the following vote:

AYES:

NOES:

ABSENT:

Chair, Peninsula Corridor Joint Powers Board

ATTEST:

JPB Secretary

AGENDA ITEM #4h
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
Executive Director

FROM: Derek Hansel
Chief Financial Officer

Michelle Bouchard
Chief Operating Officer, Rail

SUBJECT: **AWARD OF CONTRACT FOR MP36PH-3C LOCOMOTIVES MID-LIFE OVERHAUL SERVICES**

ACTION

Staff Coordinating Council recommends the Board:

1. Award a contract to Alstom Transportation, Inc. (Alstom) of Naperville, Illinois, to provide mid-life overhaul services for six MP36PH-3C locomotives (Services) for the not-to-exceed amount of $13,941,902.

2. Authorize the Executive Director, or his designee, to execute a contract with Alstom in full conformity with the negotiated contract, and in a form approved by legal counsel.

SIGNIFICANCE

The recommended award will provide the Peninsula Corridor Joint Powers Board (JPB) with a qualified contractor that possesses the necessary expertise and experience to provide the Services. According to industry standard, locomotives should be overhauled after15 years in service. These locomotives are several years past due and are required to increase service to Gilroy and launch electrified service.

BUDGET IMPACT

Funding for this contract was set aside in the JPB capital budgets for Fiscal Year (FY) 2018 and FY2019. The sources of funding include Federal, State, and JPB member agency contributions.

BACKGROUND

The JPB previously attempted to procure these Services in 2018 for the same six locomotives. However, due to the need to clarify and refine the scope of work, staff recommended the JPB reject the two proposals received. A revised Request for Proposals (RFP) was issued on the JPB's Procurement Portal in 2019.

Only Transit Vehicle Manufacturers listed on the Federal Transit Administration's (FTA) certified list of "Eligible Transit Vehicle Manufacturers," or Transit Vehicle Manufacturers that submitted a goal methodology to FTA that had not been disapproved, at the time of solicitation, were eligible to submit proposals in response to the RFP. The JPB did not establish a DBE participation goal for this solicitation because, as Transit Vehicle Manufacturers, all eligible proposers follow their own FTA-approved DBE programs and goals.

Due to the specialized nature of the work, there are a limited number of vendors who perform overhaul services in the United States. Outreach was conducted to these vendors and three interested proposers attended a pre-proposal conference. Four vendors downloaded the solicitation and proposals were received from the following three firms:

1. Alstom Transportation, Naperville, IL
2. Higher Power Industries, Inc., Yonkers, NY
3. MotivePower, Inc., Boise, ID

An Evaluation Committee (Committee) composed of qualified staff from the Rail Transportation and Safety and Security departments, reviewed and scored the proposals in accordance with the following evaluation criteria set forth in the RFP:

- Approach to Scope of Services 50 points
- Qualifications and Experience of Management Team and Key Personnel 20 points
- Qualifications and Experience of Firm 20 points
- Cost Proposal 10 points

Following initial scoring, all three proposers were found to be in the competitive range and were invited to interview. The Committee determined Alstom to be the highest ranked proposer. Alstom possesses the requisite depth of experience and qualifications required to successfully perform the Services defined in the solicitation. Alstom has completed similar overhauls for Keolis Commuter Services, Amtrak, SFMTA, and BAE Systems Controls, Inc. Staff successfully negotiated contractual terms and conditions and price. Costs were determined to be fair and reasonable as compared to costs submitted by all proposers in response to the RFP and to those submitted in 2018 for the same Services. The six locomotives will continue to be in service after the first Electric Multiple Units are delivered.

Procurement Administrator II: Kevin Kelley 650.622.7892
Project Manager: Henry Flores, Deputy Director, Rail Vehicle Maintenance 408.793.5440

RESOLUTION NO. 2020-

BOARD OF DIRECTORS, PENINSULA CORRIDOR JOINT POWERS BOARD
STATE OF CALIFORNIA

*** * ***

AWARDING A CONTRACT TO ALSTOM TRANSPORTATION, INC., FOR PROVISION OF LOCOMOTIVE OVERHAUL SERVICES FOR A NOT-TO-EXCEED AMOUNT OF $13,941,902

WHEREAS, the Peninsula Corridor Joint Powers Board (JPB) issued a Request for Proposals (RFP) to provide mid-life overhaul services for six MP36PH-3C locomotives; and

WHEREAS, in response to the RFP, the JPB received a total of three proposals; and

WHEREAS, an Evaluation Committee (Committee) reviewed and ranked all of the proposals according to the evaluation criteria set forth in the RFP; and

WHEREAS, upon completion of reference checks, scoring of proposals, and interviews with the three firms, the Committee determined that Alstom Transportation, Inc., of Naperville, Illinois (Alstom), possesses the necessary qualifications and requisite experience to successfully perform the scope of services defined in the solicitation documents, and is capable of performing the specified services at fair and reasonable prices; and

WHEREAS, staff and legal counsel reviewed Alstom's proposal and determined that it complies with the requirements of the solicitation documents; and

WHEREAS, Staff Coordinating Council recommends, and the Executive Director concurs, that the JPB award a contract to Alstom for a not-to-exceed amount of $13,941,902.

NOW, THEREFORE, BE IT RESOLVED that the Peninsula Corridor Joint Powers Board hereby awards a contract for mid-life overhaul services for six MP36PH-3C locomotives to Alstom Transportation, Inc. for a not-to-exceed amount of $13,941,902; and

BE IT FURTHER RESOLVED the Executive Director, or his designee, is authorized to execute a contract in full conformity with the terms and conditions set forth in the RFP and negotiated agreement, and in a form approved by legal counsel.

Regularly passed and adopted this 2nd day of April, 2020 by the following vote:

AYES:

NOES:

ABSENT:

_____
Chair, Peninsula Corridor Joint Powers Board

ATTEST:

_____
JPB Secretary

BOARD OF DIRECTORS 2020

DAVE PINE, CHAIR
DEVORA "DEV" DAVIS, VICE CHAIR
JEANNIE BRUINS
CINDY CHAVEZ
RON COLLINS
STEVE HEMINGER
CHARLES STONE
SHAMANN WALTON
MONIQUE ZMUDA

JIM HARTNETT
EXECUTIVE DIRECTOR

Memorandum

Date: March 23, 2020

To: Board of Directors

From: Jim Hartnett, Executive Director

Subject: April 2, 2020 JPB Board Meeting Executive Director's Report

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- **On-time Performance –**
  - **Through March 22:** The preliminary March 2020 OTP was 96.2 percent compared to 94 percent for March 2019.
    - **Trespasser Strike –** There was one trespasser strike on March 1, resulting in a fatality.
  - **February:** The February 2020 OTP was 93.5 percent compared to 92.2 percent for February 2019.

- **Caltrain Reduced Weekday Service –** In response to a significant decline in ridership stemming from efforts to contain the spread of the coronavirus (COVID-19), Caltrain adjusted its weekday service, effective Tuesday, March 17, 2020.

  Morning and afternoon peak hour service no longer features Baby Bullet Service. Local and limited service continues to operate as scheduled, including midday, evening and weekend service. Caltrain will be constantly monitoring ridership during this time and may implement additional service changes, as needed.

  Caltrain is assessing the overall impact that reduced ridership will have on its ability to maintain operations in the coming months. As of March 13, 2020, one-way and day pass ticket sales have declined by approximately 75% from their levels two weeks prior. With no other dedicated source of

funding, Caltrain relies primarily on fares to cover the system's operating costs.

Caltrain continues to maintain daily onboard cleaning and sanitation protocols in compliance with Environmental Protection Agency (EPA) guidelines.

- **Caltrain Suspends Planned Clipper Fare Changes –** In light of economic challenges facing the Bay Area as a result of the coronavirus (COVID-19), Caltrain is suspending planned changes to Clipper fare products.

  Caltrain's original Board decision to raise the price of certain Clipper fare products was made in September 2019, long before the current public health crisis. Given recent developments, the agency has decided to halt these fare increases for the time being.

  As a result, Caltrain fares, including the existing Clipper Adult fare discounts and Adult Monthly Pass pricing, will not change.

  Caltrain will continue to assess the situation to inform future decisions about any fare changes. Caltrain is dedicated to providing safe, accessible, convenient transportation service during this difficult time.

- **SF Weekend Service Closure –** Caltrain's San Francisco tunnel construction work, which is needed for the electrification of Caltrain, requires six weekend service closures. Crews are installing the overhead contact system as part of the electrification project.

  Trains will terminate at Bayshore station. Caltrain will NOT operate service to 22nd Street or San Francisco stations on the following weekends:

  - Saturday, February 22 and Sunday, February 23
  - Saturday, February 29 and Sunday, March 1
  - Saturday, March 7 and Sunday, March 8
  - Saturday, March 14 and Sunday, March 15
  - Saturday, March 21 and Sunday, March 22
  - Saturday, March 28 and Sunday, March 29

  On these weekends, free SamTrans bus service replace train service between the Bayshore and San Francisco stations. Buses are ADA accessible and will have limited capacity for luggage and bikes onboard.

  To learn more, visit www.caltrain.com/SFWeekendClosure.

  During the Weekend SF Closures, Caltrain tracked passengers boarding and alighting at Bayshore Station on all trains. In comparing weekend

ridership to the 2018 Caltrain Annual Count weekend baseline ridership at Bayshore Station, the following results were observed:

- Saturday 2/22/20: -35.3% decrease
- Sunday 2/23/20: -31.1% decrease
- Saturday 2/29/20: -38.0% decrease
- Sunday 3/1/20: -38.1% decrease
- Saturday 3/7/20: -47.9% decrease
- Sunday 3/8/20: -61.1% decrease
- Saturday 3/14/20: -87.5% decrease
- Sunday 3/15/20: -85.0% decrease
- Saturday 3/21/20: -97.4% decrease
- Sunday 3/22/20: -96.9% decrease

The decrease in weekend ridership at Bayshore station significantly increased in March due to impacts from the coronavirus (COVID-19).

- **Caltrain 2020 Annual Passenger Count –** Due the coronavirus (COVID-19) impacts, the Caltrain 2020 Annual Passenger Count that was targeted to start in late March 2020 has been postponed.

- **CAC Meeting –** The Citizen Advisory Committee meeting scheduled for Wednesday, March 18 was cancelled. The next CAC meeting is scheduled for Wednesday, April 15, in San Carlos and online.

- **BAC Meeting –** The Bicycle Advisory Committee meeting scheduled for Thursday, March 19 was cancelled. The next BAC meeting is scheduled for Thursday, May 21, in San Carlos and online.

- **Special Event Train Service**

  Services Provided:

  - **Warriors Regular Season –** The Golden State Warriors hosted six games in February. One post-event special train operated for the February 8 and February 23 games. Total post-game additional riders, boarding at San Francisco station in February was 1,564. Year-to-date post-game additional riders, boarding at San Francisco station in was 14,752.

  - **San Jose Sharks Regular Season –** The Sharks hosted five games in February. Total post-game additional riders, boarding at San Jose Diridon station in February was 1,392. Total year-to-date post-game additional riders boarding at San Jose Diridon station was 7,762, which represents a four percent increase compared to the same number of games in the 2018/2019 season.

- **Giants Fanfest –** On Saturday, February 8, in coordination with the Giants, Caltrain provided one extra pre-event train with limited stops and one extra post-event Millbrae Express train for Giants fans for the event. Total additional riders, boarding and alighting at San Francisco station was 774.

Services Scheduled:

Caltrain is closely monitoring continued efforts by local, state and federal health organizations and governments to prevent the spread of the coronavirus (COVID-19) along with impacted cancelled or postponed major events at venues in San Francisco, San Mateo and Santa Clara counties as it relates to Caltrain Special Event service.

- **San Jose Sharks –** The Sharks was scheduled to host seven games in March. Caltrain tracks post-game ridership at SJ Diridon station for all home games. No extra special trains are planned. For weeknight and Saturday night games, the last northbound train departs SJ Diridon station at 10:30 p.m. or 15 minutes after the game ends but departs no later than 10:45 p.m.

  On March 10, 2020 the Santa Clara County implemented a ban on public mass gatherings of 1,000 or more people to prevent the spread of the coronavirus (COVID-19) effective on March 11, 2020 through the end of the month. On March 12, 2020, the National Hockey League announced the 2019-2020 season will be paused.

  Sharks post-event ridership for the four games that were played in March will be reported in May 2020.

- **Warriors Regular Season –** The Golden State Warriors was scheduled to host nine games in March. In coordination with Chase Center, Caltrain operates regular service for all home games and continues to monitor ridership as well as identify the need for additional or modified post-game service. Caltrain tracks post-game service ridership at SF Station for all home games.

  On March 11, 2020 the City and County of San Francisco implemented a ban on public mass gatherings of 1,000 or more people to prevent the spread of the coronavirus (COVID-19) effective on March 12, 2020. On the evening of March 11, 2020 the NBA suspended its season after a Utah Jazz player tested positive Wednesday for the coronavirus. The NBA will use this hiatus to determine next steps for moving forward in regard to the coronavirus pandemic.

  Warriors event ridership for the four games that were played in March will be reported in May 2020.

- **Giants Baseball –** On March 12, 2020 the Major League Baseball announced suspended spring training and delaying the start of the 2020 regular season at least two weeks due to the national emergency created by the coronavirus (COVID-19) pandemic.

  Due to Caltrain ridership impacts from the coronavirus and need to monitor and adjust Caltrain service, Caltrain baseball service will be updated on the Caltrain Special Event Service Webpage. There will be no printed Caltrain Giants Service Brochure for the 2020 season.

- **Capital Projects –**

The Capital Projects information is current as of March 13, 2020 and is subject to change between March 13 and April 2, 2020 (Board Meeting).

- **San Mateo 25th Avenue Grade Separation Project:** Raise the elevation of the alignment from Hillsdale Boulevard to south of the Highway 92 Overcrossing in the city of San Mateo. The project creates a grade separation at 25th Avenue, relocates the Hillsdale Station to the north, and creates two new east-west street grade-separated connections at 28th and 31st Avenues in San Mateo.

  Construction of the platform for the relocated Hillsdale station near 28th Avenue continued. Construction of the diaphragm of the 28th Avenue Bridge was in progress and expected to complete by the end of March. Retaining walls on the west side of 28th Avenue continued. Construction of the east sides of 28th & 31st Avenues cannot proceed until the track shift associated with the temporary Hillsdale station closure is in place.

  Trackwork installation continues from Highway 92 to 28th Avenue and began from 28th Avenue to south of 31st Avenue. Electrical work for a new signal house and intermediate signal is in progress. Construction continued for the pump station that will support drainage at the future depressed 31st Avenue roadway section.

  The temporary closure of the Hillsdale Station, to allow completion of the project, is now forecast to occur in the Spring of 2020 until Fall of 2020. During the temporary closure, enhanced bus and shuttle service to the Belmont Station will be provided to minimize the temporary passenger inconvenience.

  The original San Mateo Parking Track (i.e., Bay Meadows Set-Out track) was removed to support the construction of the grade separation. On February 18, 2020, the San Mateo City Council selected the location for the replacement parking track to be from 10th to 14th Avenues. An online survey was issued on March 5 to gather community preferences for various

types of enhancements and treatments in lieu of chain link fencing on the east side of Railroad Avenue. Community open houses are scheduled for April 7 and April 28 to show survey results, display visual renderings and obtain feedback on proposed enhancements for selection to proceed to final design

- **South San Francisco Station Improvements:** Replace the existing side platforms with a new centerboard platform, construction of a new connecting pedestrian underpass to the two new plazas in downtown South San Francisco to the west and the shuttle area to east. Upon completion, the hold-out rule at this station will be removed that currently impacts the overall system operational efficiency.

  In March, shoring that is required to structurally support the existing trackway and station continued and excavation has begun for the west plaza and ramps.

- **Marin and Napoleon Bridge Rehabilitation Project:** This state of good repair project will perform repairs at the Marin St. Bridge and replace the Napoleon St. Bridge. Both bridges are in the City of San Francisco located south of the 22nd Street Station. The repairs at Marin Street are primarily for concrete spalling and cracks, and deficient walkways and handrails. The Napoleon St. bridge concrete spans will be removed and replaced with elevated soil berm structures and the main steel span will be replaced with a new steel span. The span replacement at Napoleon Street will require a partial weekend service outage in which a bus bridge will be provided to shuttle patrons between Bayshore and 4th & King Stations during the outage. The project will install security fencing to deter encampments, and, also include track improvements in the vicinity of the bridges.

  The project has completed the design and IFB phase with revised plans to incorporate constructability issues such as working adjacent to an existing city storm drain culvert March 13, 2020 and bids are due on April 23, 2020. Construction is planned to occur from summer of 2020 to summer of 2021.

- **Ticket Vending Machine (TVM) Rehabilitation:** Upgrade the existing TVM Server and retrofit and refurbish two existing TVM machines to become prototypes for new TVM's so that the machines are capable of performing the functions planned for the current Clipper program. The new machines will be able to dispense new Clipper cards (excluding discount Clipper cards that require verification of eligibility) and have the ability of increasing the cash values of existing Clipper cards. The scope of the original contract was increased to include upgrades to the credit card reader and the database.

The upgrading to new credit card readers has been completed at stations at the south portion of the corridor and is in the process of being completed at all remaining stations throughout the system. This first phase of the project is expected to complete in April 2020. Full funding for the option for retrofitting 12 additional TVM's has now been secured and the option will be executed. There is an additional phase for the rehabilitation of 28 TVM's that was partially funded in the FY20 Capital Budget.

- **Mary and Evelyn Avenue Traffic Signal Preemption Project:** Perform upgrades to train approach warning systems at the Mary Avenue and Evelyn Avenue crossings in Sunnyvale. The project will improve vehicle safety at the at-grade crossings by increasing the traffic signal advance warning times for approaching trains in order to clear vehicles at the crossings. This project will mimic the previously completed traffic signal preemption project that was completed in 2014 in Redwood City, Palo Alto and Mountain View. This project is being funded through the State of California Public Utilities Commission Section 130 program to eliminate hazards at existing grade crossings.

  The 100% crossing design by the Electrification project is still not yet available for design coordination and a timeframe for its receipt is to be determined. The project is now proceeding to complete its own design without this information from the Electrification project. Completion of design is now planned by Spring 2020 and the construction to take place from late 2020 until mid-2021.

- **FY19/FY20 Grade Crossing Improvements:** This project is a continuation of the ongoing grade crossing program to improve the safety at grade crossings in accordance with Grade Crossing Hazards Analysis for the entire corridor. This analysis prioritized the crossings and we have proceeded with the work in phases based on funding availability. 10 crossings were improved in 2018 under the FY16 budget authorization. Due to budget constraints, the FY19/FY20 scope is limited to five (5) crossings to be improved. The five crossings selected to be improved in this phase are 1st, 2nd, and 3rd Avenues in San Mateo, and, Glenwood and Oak Grove Avenues in Menlo Park. Work items that are included are the installation of signals, fences, gates, curbs, lighting and signs.

  The 65% final design submittal was received at the end of December. Review comments have been received from the City of Menlo Park and is still pending review comments from the City of San Mateo. Public outreach with neighboring businesses and residents at the various crossings was conducted in March to obtain comments and feedback for the proposed improvements and treatments. Advertisement of the construction contract is planned for the Summer of 2020 with construction beginning in early 2021 and lasting until Fall of 2021.

- **Churchill Avenue Grade Crossing Improvements:** This project will make pedestrian and bicycle access improvements, and, safety improvements to the Churchill Avenue crossing in the city of Palo Alto. The project scope includes the widening of the sidewalks, associated relocation of pedestrian gates, and installing new vehicle pavement markings and markers.

  The project began in December 2019. The 35% design was received in March is in under review. The design phase will continue until the Fall of 2020. Advertisement for construction will follow and construction is scheduled to occur in 2021.

- **Broadband Wireless Communications for Railroad Operations:** This project is to provide wireless communications system to provide enhanced capabilities for the monitoring of the railroad operations and maintenance, and, provide Wi-Fi capability for passengers. This project is funded through a grant from the Transit and Intercity Rail Capital Program (TIRCP). Currently, the project is currently only approved for the planning/design phase.

  The project is currently continuing the planning/design phase that began in November 2019. The current schedule calls for the planning/design efforts to complete by the summer of 2020.

- **F-40 Locomotive Mid-Life Overhaul Project:** Perform mid-life overhaul of three F40PH2C locomotives. The mid-life overhaul of the locomotives includes the compete disassembly of the main diesel engine, overhauling by reconditioning re-usable main frame components and re-assembly with new engine components and replacement of the Separate Head-End Power (SEP-HEP) unit and all electrical components of the SEP-HEP compartment. All areas of the locomotive car body, trucks, wheels and electrical components shall be reconditioned to like-new condition or replaced with new material. The work will be completed off-site at contractor's (Motive Power) facility location at Boise, Idaho. The three locomotives are Locomotive #'s 920, 921 and 922.

  Locomotives #'s 920 and 921 were shipped to the vendor's facility in Idaho in February and March of 2018, and, #922 was shipped in April 2019. Locomotive 920 and 921 have been returned to service. Locomotive #922 is completing refurbishment at the vendor's facility and expected to be returned in March 2020.

- **MP-36 Locomotive Mid-Life Overhaul Project:** Perform mid-life overhaul of six MP-36-3C Locomotives. The mid-life overhaul of the locomotives includes the complete disassembly of the main diesel engine, overhauling by reconditioning re-usable main frame components and re-assembly with

new engine components and the replacement of the Separate Head-End Power (SEP-HEP) unit and all electrical components of the SEP-HEP compartment. All areas of the locomotive car body, trucks, wheels and electrical components shall be reconditioned to like-new condition or replaced with new material. The project work shall be completed off-site at the contractor's facility location.

The Request for Proposal (RFP) was advertised on November 11, 2019 and vendor's proposals were received on January 31, 2020. The review and negotiations of proposals has been completed. Board approval of award of the contract is planned for April 2020. The 6 locomotives to be overhauled are Locomotive #'s 923, 924, 925, 926, 927 & 928. In order to maintain daily service, only 1 to 2 of these locomotives will be released at a time for overhaul that is expected to take approximately 8 months per locomotive. Due to this restriction, the overall completion of this work is expected to take approximately 4 years.

AGENDA ITEM # 6b
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
Executive Director

FROM: John Funghi
Chief Officer, Caltrain Modernization Program

SUBJECT: **PENINSULA CORRIDOR ELECTRIFICATION PROJECT MONTHLY PROGRESS REPORT**

ACTION

Staff Coordinating Council recommends the Board receive the Peninsula Corridor Electrification Project (PCEP) Monthly Progress Report (MPR). The MPR is available online under "Reports and Presentations" at this webpage: http://www.caltrain.com/projectsplans/CaltrainModernization/CalMod_Document_Library.html. No action required.

SIGNIFICANCE

Staff prepares and submits a report covering the PCEP on a monthly basis.

BUDGET IMPACT

There is no impact on the budget.

BACKGROUND

The MPR is intended to provide funding partners, stakeholders, and the public a PCEP overview and an overall update on project progress. This document provides information on the scope, cost, funding, schedule, and project implementation.

Prepared by: Josh Averill, Program Management Administrator 650.508.6453

Modernization Program
Peninsula Corridor Electrification Project (PCEP)

February 2020
Monthly Progress Report

February 29, 2020

Funding Partners

Federal Transit Administration (FTA) Core Capacity

FTA Section 5307 (Environmental / Pre Development only)

FTA Section 5307 (Electric Multiple Unit (EMU) only)

Prop 1B (Public Transportation Modernization & Improvement Account)

Caltrain Low Carbon Transit Operations Cap and Trade

Proposition 1A

California High Speed Rail Authority (CHSRA) Cap and Trade

Carl Moyer Fund

Bridge Tolls (Funds Regional Measure (RM) 1/RM2)

San Francisco County Transportation Authority (SFCTA)/San Francisco Municipal Transportation Agency (SFMTA)

San Mateo County Transportation Authority (SMCTA) Contribution

SMCTA Measure A

Santa Clara Valley Transportation Authority (VTA) Measure A

VTA Contribution

City and County of San Francisco (CCSF) Contribution

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1.0 BACKGROUND

Over the last decade, Caltrain has experienced a substantial increase in ridership and anticipates further increases in ridership demand as the San Francisco Bay Area's population grows. The Caltrain Modernization (CalMod) Program, scheduled to be implemented by 2021, will electrify and upgrade the performance, operating efficiency, capacity, safety, and reliability of Caltrain's commuter rail service.

The PCEP is a key component of the CalMod Program and consists of converting Caltrain from diesel-hauled to Electric Multiple Unit (EMU) trains for service between the San Francisco Station (at the intersection of Fourth and King Streets in San Francisco) and the Tamien Station in San Jose. Caltrain will continue Gilroy service and support existing tenants.

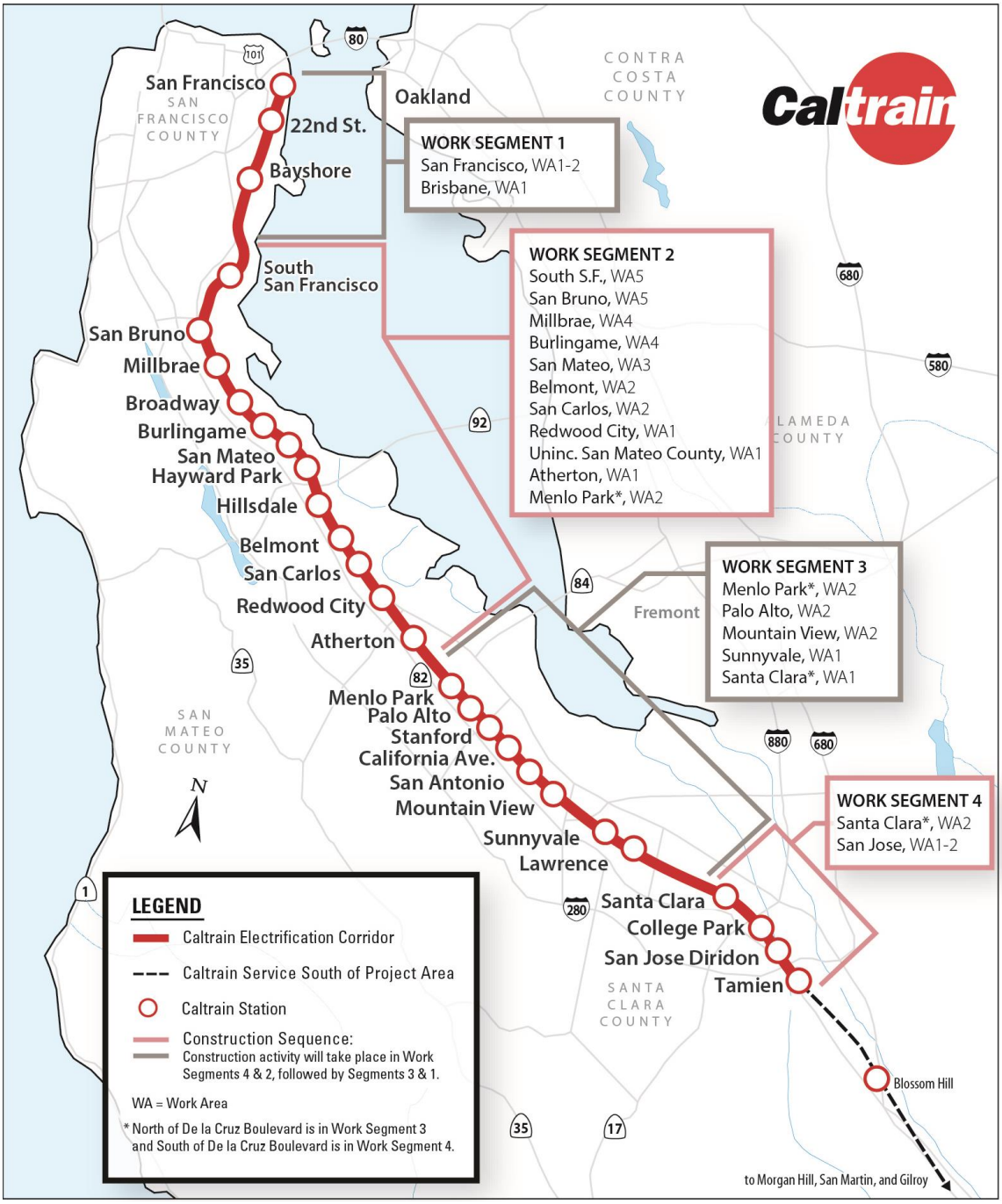
An electrified Caltrain will better address Peninsula commuters' vision of environmentally friendly, fast and reliable service. Electrification will modernize Caltrain and make it possible to increase service while offering several advantages in comparison with existing diesel power use, including:

- **Improved Train Performance, Increased Ridership Capacity and Increased Service:** Electrified trains can accelerate and decelerate more quickly than diesel-powered trains, allowing Caltrain to run more efficiently. In addition, because of their performance advantages, electrified trains will enable more frequent and/or faster train service to more riders.
- **Increased Revenue and Reduced Fuel Cost:** An electrified Caltrain will increase ridership and fare revenues while decreasing fuel costs.
- **Reduced Engine Noise Emanating from Trains:** Noise from electrified train engines is measurably less than noise from diesel train engines. Train horns will continue to be required at grade crossings, adhering to current safety regulations.
- **Improved Regional Air Quality and Reduced Greenhouse Gas Emissions:** Electrified trains will produce substantially less corridor air pollution compared with diesel trains even when the indirect emissions from electrical power generation are included. Increased ridership will reduce automobile usage, resulting in additional air quality benefits. In addition, the reduction of greenhouse gas emissions will improve our regional air quality, and will also help meet the state's emission reduction goals.

2.0 EXECUTIVE SUMMARY

The Monthly Progress Report is intended to provide an overview of the PCEP and provide funding partners, stakeholders, and the public an overall update on the progress of the project. This document provides information on the scope, cost, funding, schedule, and project implementation. Work along the Caltrain Electrification Corridor has been divided into four work segments and respective work areas (WA) as shown in Figure 2-1. PCEP activities are described and summarized by segments and work areas.

Figure 2-1 PCEP Work Segments



In February, signal design progressed with review of submittals with the design-build contractor, Balfour Beatty Infrastructure, Inc. (BBII). Preparations are underway for the upcoming first signal cutover. The 90% design package for Traction Power Substation (TPS) TPS-1 is under review. Other Traction Power Facilities work included progress of the TPS interconnection design for TPS-1 and TPS-2, and design of redundant fiber at TPS-2. JPB and BBII jointly developed a schedule that shows foundation installation will be completed by the end of the year.

The first weekend tunnel shutdown saw the successful completion of drop tube installation and installation of the portal termination structures at all tunnels. Static and feeder wire were installed, and masonry was completed.

EMU progress in February included debugging of software in preparation of upcoming formal testing, quality assurance audits, finalization of the bike car flip-up seats and barrier design, and the design of the high-level door plugs.

2.1. Monthly Dashboards

Dashboard progress charts are included below to summarize construction progress.

Figure 2-2 Expenditure – Planned vs. Actual

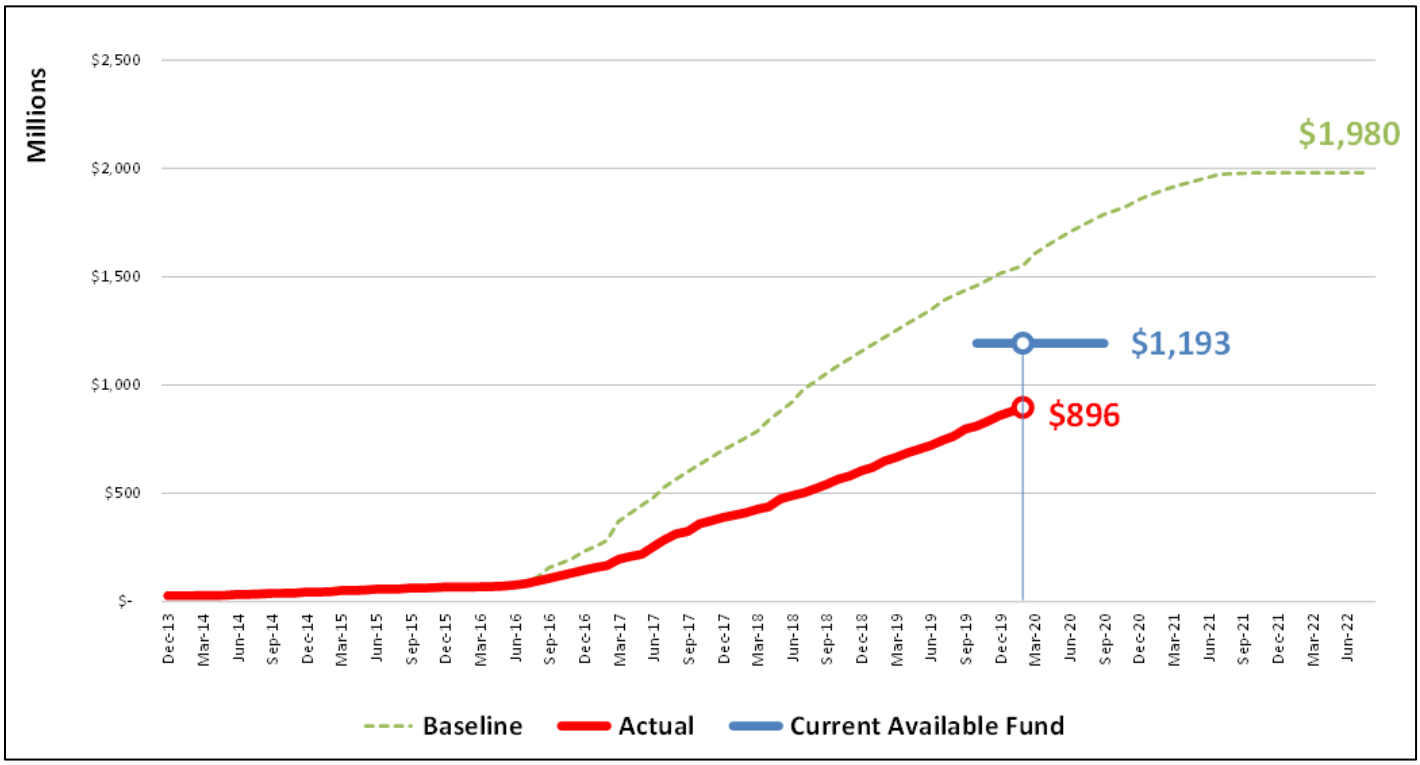


Figure 2-3 Spending Rate vs. Required

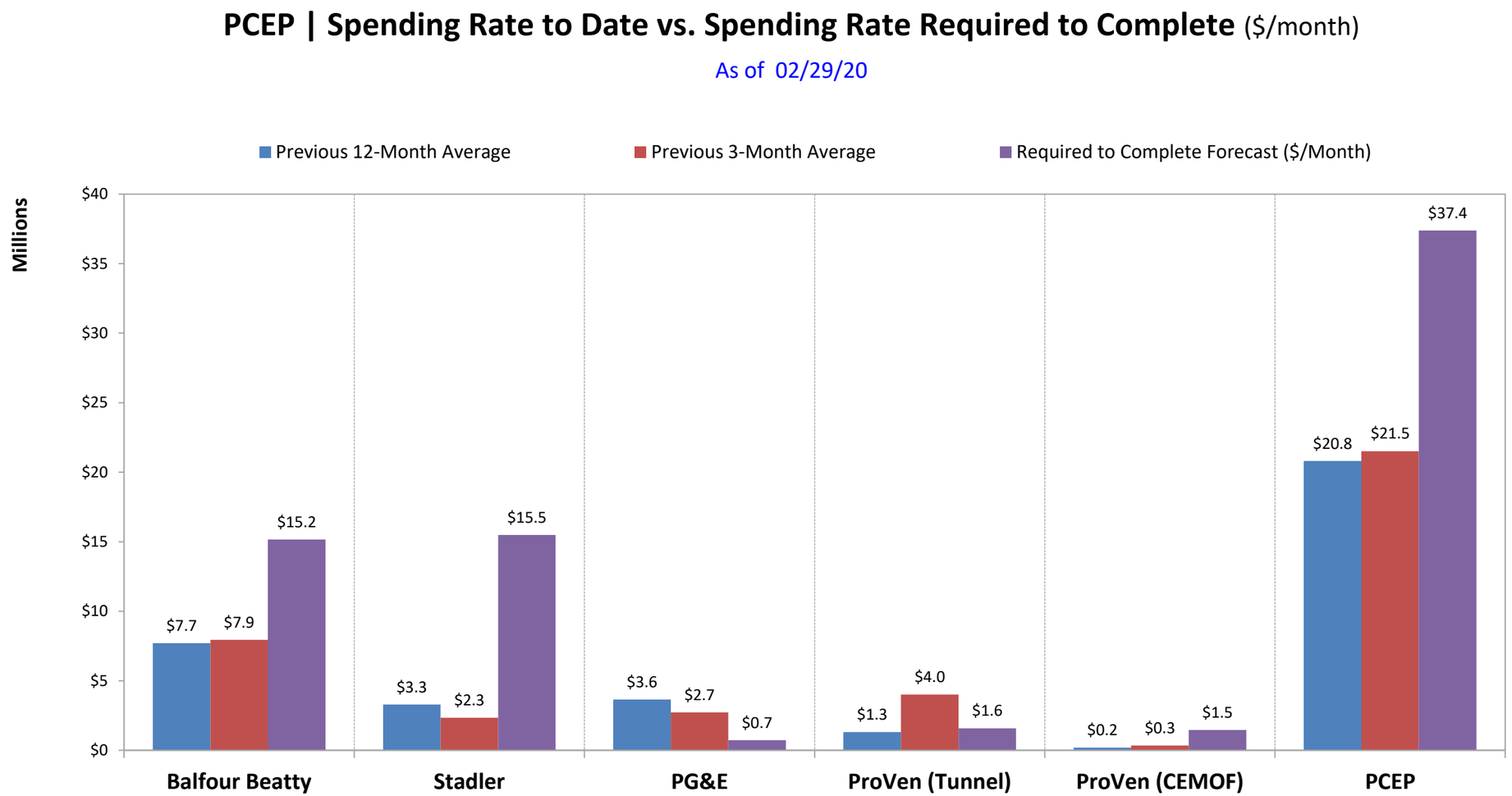
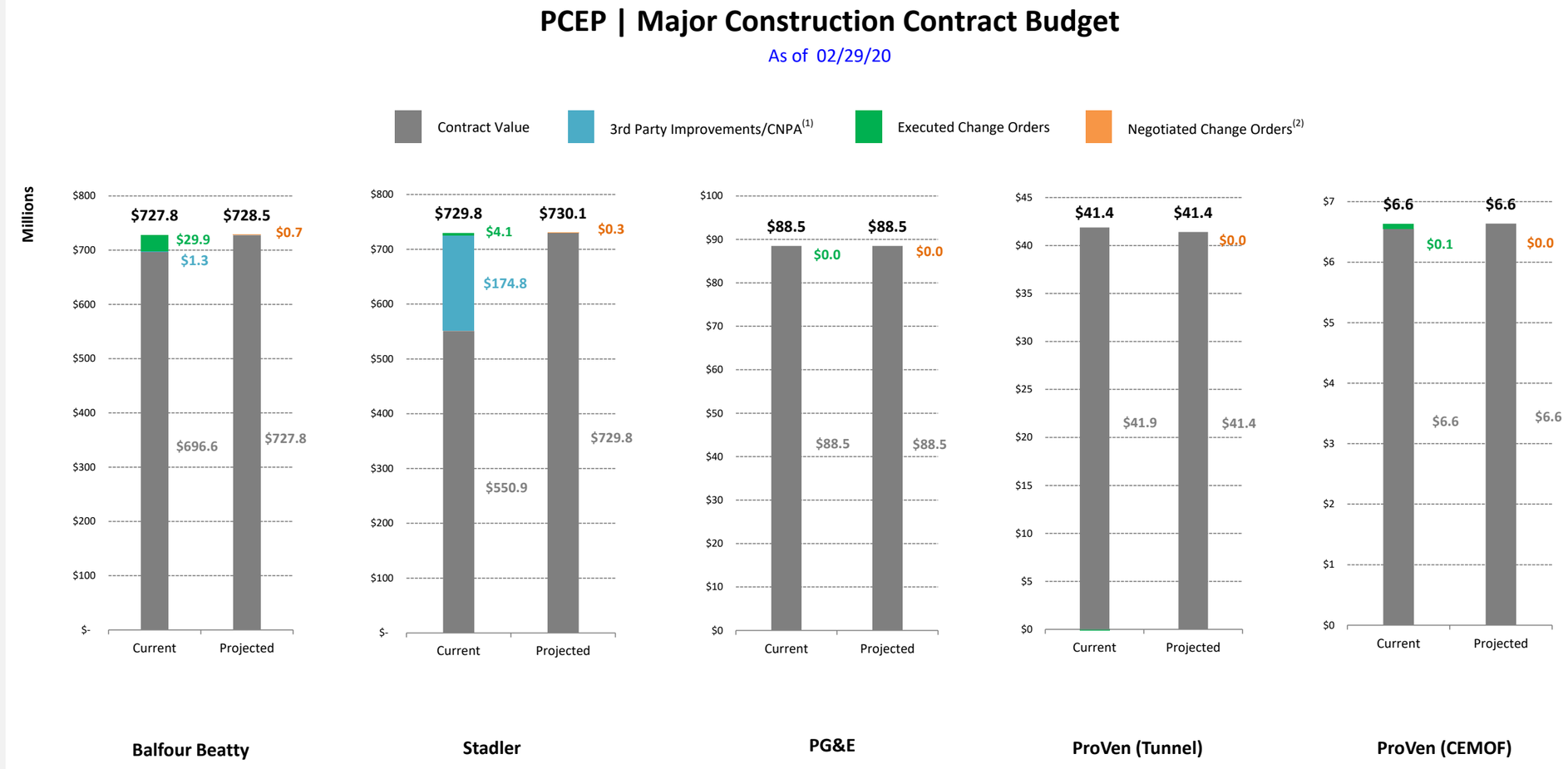


Figure 2-4 Construction Contract Budgets



Notes:

(1) 3rd Party Improvements/CNPA consists of the following "Below-the-Line" projects:

Balfour Beatty: ($1,266,000 Total):

- CHSRA Early Pole Relocation (Design Only): $625,000
- TPSS-2 VTA/BART Pole Relocation (Design Only): $110,000
- TPSS-2 VTA/PCEP Pole Height (Redesign): $31,000
- Relocation of PS-3 (Burlingame): $500,000

Stadler ($174,761,397 Total):

- EMU Options Cars: $172,800,047
- Add Flip-Up Seats into Bike Cars: $1,961,350

(2) Includes only negotiated change orders not yet executed

Figure 2-5 OCS Foundation Production

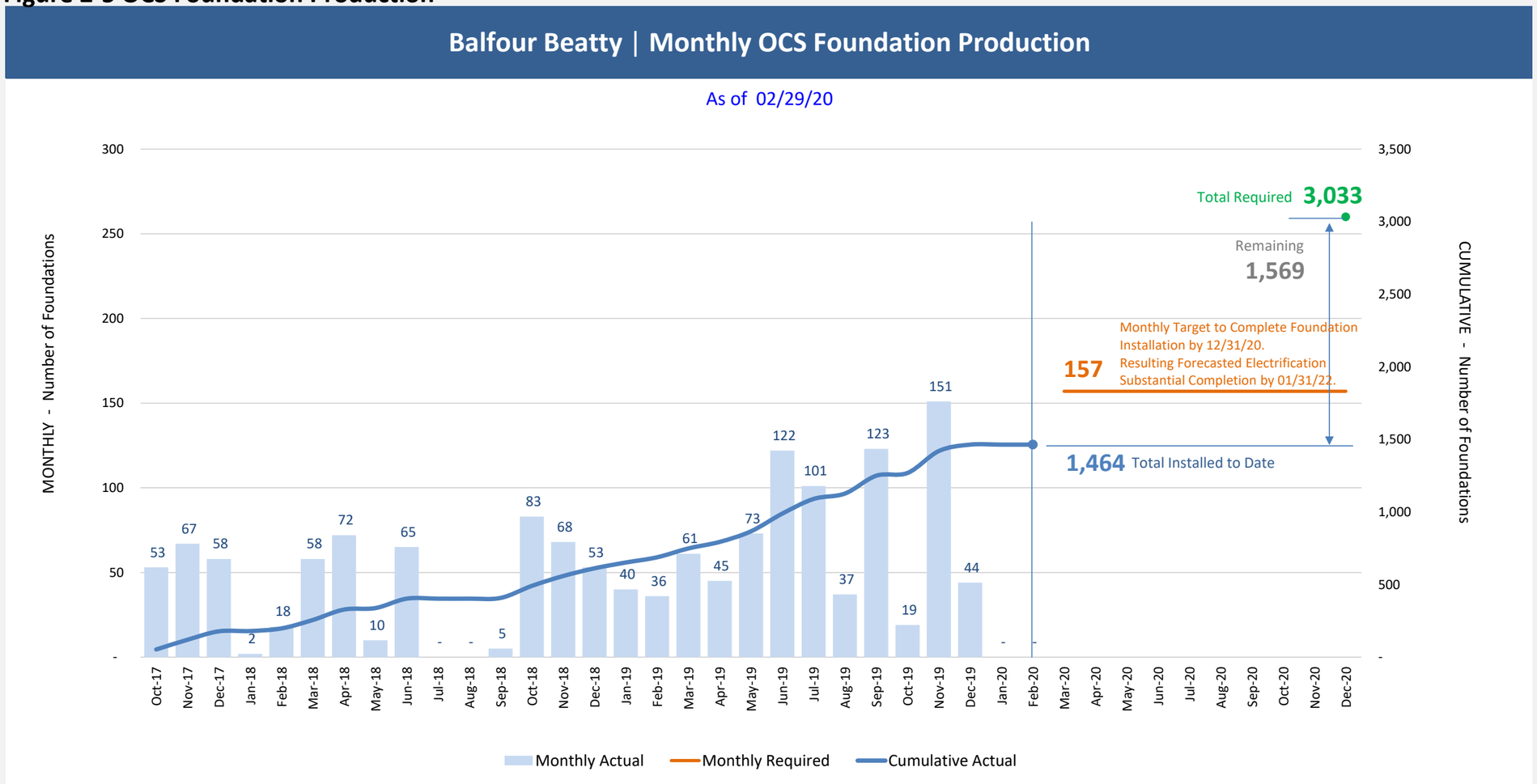
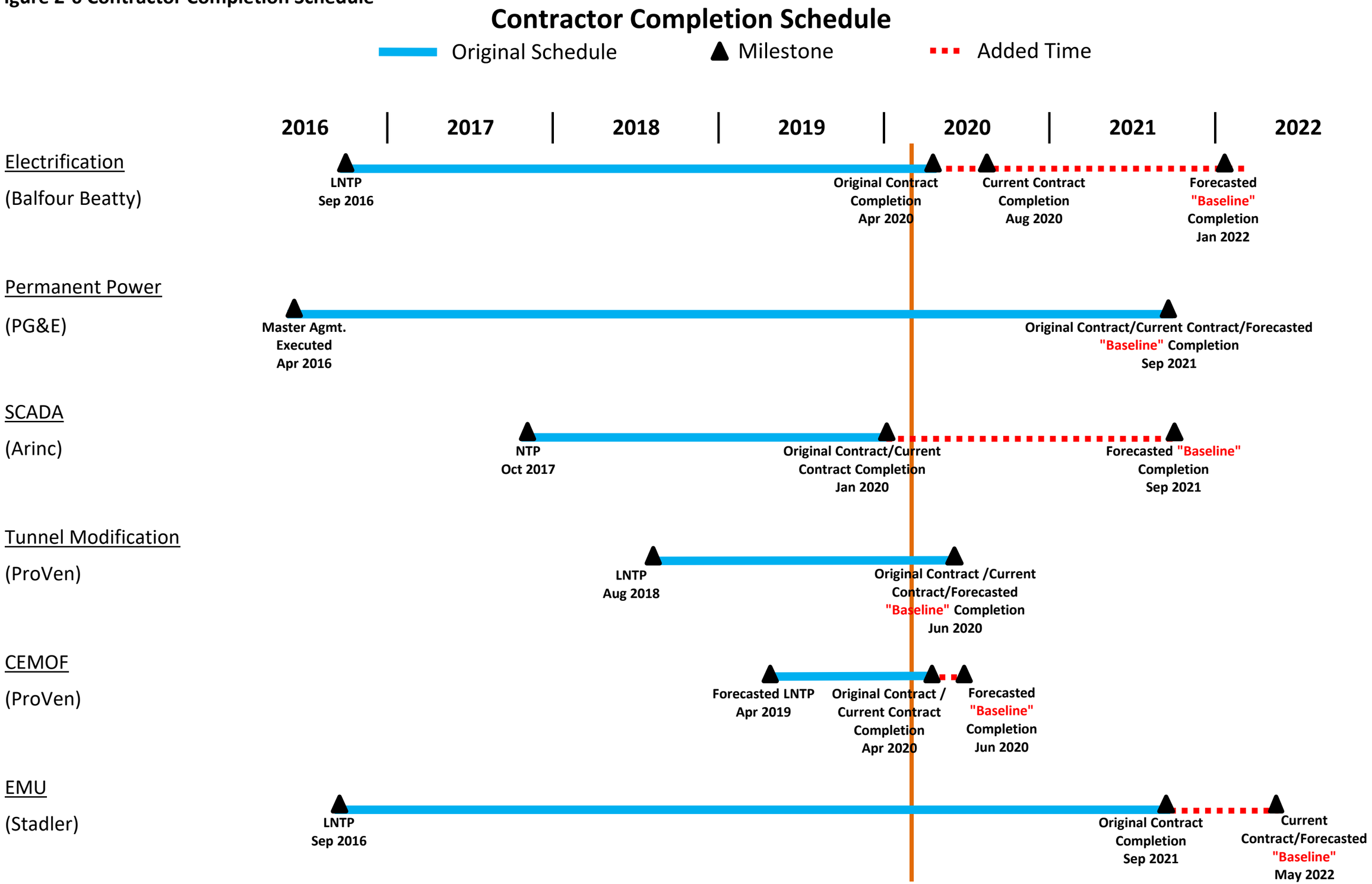


Figure 2-6 Contractor Completion Schedule



2.2. Funding Partners Participation in PCEP

The PCEP has a series of weekly, biweekly, monthly and quarterly meetings to coordinate all aspects of the program. The meetings are attended by project staff with participation by our funding partners in accordance with the Funding Partners Oversight Protocol. A summary of funding partner meetings and invitees can be found in Appendix B.

This section of the report provides a summary of the discussions and decisions made at the meetings and a list of funding partners who attended the meetings.

Electrification – Engineering Meeting – Weekly

Purpose: To discuss status, resolution and tracking of Balfour Beatty Infrastructure, Inc. (BBII) and electrification design-related issues, to discuss Supervisory Control and Data Acquisition (SCADA), the Tunnel Modification Project, and monitor the progress of utility relocation compared to schedule, and to discuss third-party coordination activities with Pacific Gas and Electric (PG&E), CHSRA, Union Pacific Rail Road (UPRR), Bay Area Rapid Transit, California State Department of Transportation (Caltrans), Positive Train Control (PTC) and others.

Activity this Month

Funding Partners: None

Continued discussions on resolution of outstanding issues for the Design-Build (DB) contract, such as:

- Future structure of this meeting and potential to split into separate topic meetings.
- Grade crossing designs, including progress of design and ongoing meetings with key stakeholders such as the Federal Railroad Administration (FRA), California Public Utilities Commission (CPUC) and local jurisdictions
- Overhead Catenary System (OCS) foundation design, potholing status, and foundation installation sequencing
- Key right of way (ROW) acquisition issues as related to construction activities
- Review of key actions from weekly BBII progress meetings, status of critical submittals or Requests for Information (RFI), open non-conformance reports, and open critical issues from the Design Build (DB) contract
- The progression of the PG&E interconnections design and material procurement status, including interface with VTA on the design of Traction Power Substation (TPS) TPS-2 interconnection into PG&E's FMC Substation
- The progression of the PG&E single phase study, which will be required for the energization of the system
- Open design and construction issues on Traction Power Facilities
- Key interface points (foundation installation, signal design, etc.) between the PCEP and other major Peninsula Corridor Joint Powers Board (JPB) projects such as South San Francisco Station Project, 25th Avenue Grade Separation Project, and Broadway Grade Separation Project

- The utility relocation status
- Status of the upcoming work for the Tunnel OCS
- Updates on DB and program schedule, including key foundation and traction power facility milestones, PG&E Infrastructure buildout and power quality study status
- Upcoming changes to the contract in preparation for the Change Management Board (CMB) and specific contract change orders that require technical review and input

PCEP Delivery Coordination Meeting – Bi-Weekly

Purpose: To facilitate high-level coordination and information sharing between cross-functional groups regarding the status of the work for which they are responsible.

Activity this Month

Funding Partners: SFCTA: Luis Zurinaga

The next Federal Transit Administration (FTA) Quarterly and Funding Partners Quarterly updates are both scheduled to occur on April 7. The first two-year option term for contract 14-PCJPB-P-006 (LTK) – EMU Rail Vehicle Support Services was executed on January 31 for an increase in contract value and extension of term. Per Federal Railroad Administration (FRA) request, employees were re-trained on the shunting procedure at the February BBII All Hands Safety Meeting. The EMU propulsion gearbox re-test has been scheduled for the week of March 10, and LTK will witness the post-test gearbox disassembly and inspection. The next design review with the FRA is scheduled for the week of April 20 in Salt Lake City, Utah. At the Centralized Equipment Maintenance and Operations Facility (CEMOF), the focus is on foundation work for the Parts Storage Warehouse and ongoing resolution of utility issues for the pit. There is continued planning of off-track foundations in S3WA2 with ongoing site preparations and the pending approval of permits. The SCADA Factory Acceptance Test (FAT) is expected to be conducted in April and ARINC is progressing the development of the database and the required test procedures. The OCS termination poles were completed for the Tunnel Modification Project on February 2 and the drop tube installation was completed on February 9. Archstone work will be performed during the first weekend shutdown on February 22 and is expected to be completed by February 29.

Systems Integration Meeting – Bi-Weekly

Purpose: To discuss and resolve issues with inter-system interfaces and to identify and assign Action Item Owners for interface points that have yet to be addressed.

Activity this Month

Funding Partners: None

Bi-weekly PCEP interface meetings are held to monitor and determine appropriate resolution for systems integration issues. The systems integration database is being reviewed. Data was recovered from a corrupted database. The recovered data is now in a spreadsheet and is being updated. The Action Items spreadsheet is the primary tracking method while review and System Integration matrix updates are in progress.

The electrification contractor now has a representative invited to attend the Bi-Weekly Systems Integration Meeting. The Systems Integration Lead also maintains contact with the EMU procurement team. The Traction Power SCADA team also holds bi-weekly status meetings. Coordination with the EMU procurement, PTC and Caltrain Capital Project managers responsible for delivery of the 25th Avenue Grade Separation Project, Marin Napoleon Bridge Rehabilitation Project, and the South San Francisco Station Project is ongoing. There is coordination with the Tunnel Modification Project and the CEMOF upgrades as well. Progress on activities including systems integration testing activities, FRA, FTA and safety certification are being tracked. Systems Integration is working with the JPB Rail Activation Committee.

Master Program Schedule (MPS) Meeting – Monthly

Purpose: To review the status of the MPS and discuss the status of major milestones, critical and near critical paths, upcoming Board review items, and progress with the contracts, among others.

Activity this Month

Funding Partners: CHSRA: Wai-On Su; VTA: Manolo Gonzalez-Estay, SFCTA: Luis Zurinaga

The overall schedule remains unchanged from last month. The forecasted Revenue Service Date (RSD) remains May 2022. The addition of approximately three and a half months of contingency yields an RSD of August 2022. The program critical path runs through the manufacturing and testing of EMU trainsets.

Risk Assessment Meeting – Monthly

Purpose: To identify risks and corresponding mitigation measures. For each risk on the risk register, mitigation measures have been identified and are being implemented. Progress in mitigating these risks is confirmed at the ongoing risk monitoring and monthly risk assessment meetings.

Activity this Month

Funding Partners: SFCTA: Luis Zurinaga; Metropolitan Transportation Commission (MTC): Trish Stoops

Two risks were retired, one risk regraded, and one risk added. .

Change Management Board (CMB) – Monthly

Purpose: To review, evaluate and authorize proposed changes to PCEP over $200,000.

Activity this Month

The CMB was held on January 22.

Funding Partners: CHSRA: Boris Lipkin and Simon Whitehorn; VTA: Edwin Castillo; SFCTA: Luis Zurinaga and Anna Harvey; SMCTA: Joe Hurley; MTC: Kenneth Folan and Trish Stoops

The CMB discusses major topics including potential changes to PCEP contracts, contingency usage, track access delays and Differing Site Conditions (DSC) field order updates.

Potential contract changes will follow the PCEP Change Order Procedure. Once approved changes are executed, they will be reported in the Change Management section (Section 9) of this report.

BBII Contract

One change was approved.

CEMOF Contract

No changes were identified for consideration.

Stadler Contract

One change was approved.

SCADA Contract

No changes were identified for consideration

Tunnel Modification Contract

One change was approved.

Amtrak Contract

No changes were identified for consideration.

Other

One change was approved.

2.3. Schedule

The overall schedule remains unchanged from last month. The forecasted Revenue Service Date (RSD) remains as May 2022. The program critical path runs through the manufacturing and testing of EMU trainsets.

BBII continues to report an overall delay to substantial completion. JPB is working with BBII on the issue and is urging BBII to accelerate resolution.

Table 2-1 indicates major milestone dates for the MPS.

Table 2-1 Schedule Status

Milestones	Program Plan	Progress Schedule (February 2020)[1]
Arrival of First Vehicle in Pueblo, CO	N/A	09/01/2020
Arrival of First Vehicle at JPB (after Pueblo Testing)	N/A	02/26/2021
Segment 4 Completion	11/21/2019	02/14/2021[2]
○ Interconnection from PG&E Substation to Traction Power Substation (TPS)	N/A	09/30/2020[2]
PG&E Provides Permanent Power	09/09/2021	09/09/2021
Electrification Substantial Completion	08/10/2020	01/31/2022[2]
Start Phased Revenue Service	N/A	02/01/2022[2]
RSD (w/o Risk Contingency)	12/09/2021	05/06/2022
FFGA RSD (w/ Risk Contingency)	08/22/2022	08/22/2022

Note:
1. Dates may shift slightly as the update of this month's Progress Schedule is still in process.
2. See "Notable Variances" in Section 7 for explanation on date shift.

2.4. Budget

A summary of the overall budget and expenditure status for the PCEP is provided in Table 2-2 below.

Table 2-2 Budget and Expenditure Status

Description of Work	Budget (A)	Current Budget (B)[1]	Cost This Month (C)[2]	Cost To Date (D)[3]	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
Electrification Subtotal	**$1,316,125,208**	**$1,316,125,208**	**$17,087,408**	**$696,445,055**	**$619,680,152**	**$1,316,125,208**
EMU Subtotal	**$664,127,325**	**$664,127,325**	**$1,247,834**	**$199,489,248**	**$464,638,077**	**$664,127,325**
PCEP TOTAL	**$1,980,252,533**	**$1,980,252,533**	**$18,335,242**	**$895,934,303**	**$1,084,318,229**	**$1,980,252,533**

Notes regarding tables above:
1. Column B "Current Budget" includes executed change orders and awarded contracts.
2. Column C "Cost This Month" represents the cost of work performed this month.
3. Column D "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.

2.5. Board Actions

- Amendment Number 2 to Supplemental Agreement Number 2 with Pacific Gas and Electric for construction of 115 kilovolt interconnections

Future anticipated board actions include:

- Shunt wire construction
- PG&E interconnect construction
- EMU Pantograph Inspection & Monitoring System contract

2.6. Government and Community Affairs

There were two outreach events this month.

3.0 ELECTRIFICATION – INFRASTRUCTURE

This section reports on the progress of the Electrification, SCADA, and Tunnel Modification components. A brief description on each of the components is provided below.

3.1. Electrification

The Electrification component of the PCEP includes installation of 138 miles of wire and overhead catenary system (OCS) for the distribution of electrical power to the EMUs. The OCS will be powered from a 25 kilovolt (kV), 60-Hertz, single phase, alternating current supply system consisting of two traction power substations (TPS), one switching station (SWS), and seven paralleling stations (PS). Electrification infrastructure will be constructed using a DB delivery method.

Activity This Month

- Continued to install OCS poles, down guys, assemblies, and balance weights in Segment 3.
- Conducted pole ground testing in all Segments.
- Potholed at proposed OCS locations and utility locations in all Segments in advance of foundation installation. BBII and PCEP also continued to resolve conflicts found during the potholing process, such as loose concrete, asphalt, and other debris, and continued designing solutions for those conflicts that cannot be avoided. The conflicts must be resolved before installation of foundations at those locations.
- Held meetings with BBII to update and review schedule of foundation installations, including design, potholing, and restart of foundation installation. The goal is to complete all foundations by the end of the year.
- Relocated signal cables and remove abandoned facilities found in conflict with planned OCS foundations as conflicts were identified.
- Continued to install formwork, rebar and high-voltage cable at TPS-2.
- Continued to install ductbank and manholes, drainage, and form and rebar work at TPS-1.
- Continued to install ductbank and manholes at PS-6.
- Continued grading work at PS-7.
- Continued to install ductbanks and manholes at SWS-1.
- Continued clearing and grubbing at PS-4.
- Continued to install signal ductbank and conduits in Segment 4.
- Performed case installation at CP Bird and signal equipment kit installation at CP Coast Remote.
- Continued drilling of rails for impedance bond connections in Segments 1, 2, 3 and 4 at various control points and crossings.
- Continued installation of insulated joints (IJs) corridor wide.

- Progressed the OCS design with BBII in all segments, which included submittal and review of Design Change Notices for revised foundation locations.
- Coordinated design review with local jurisdictions for the OCS, traction power facilities, and bridge attachments design, including responses to comments from jurisdictions.
- Continued to review and coordinate signal and communication design submittals with BBII.
- Continued discussions with FRA and CPUC on grade crossing design.
- Continued to progress the TPS interconnection design for TPS-1 and TPS-2. Continued design on redundant fiber at TPS-2 and reviewed TPS-1 90% design package.
- Worked with BBII through Site Specific Work Plans (SSWP) for upcoming field work.
- Continued to work with PG&E and Silicon Valley Power (SVP) for the finalization of single phase studies.
- PG&E continued work at East Grand and FMC substations.

A summary of the work progress by segment is provided in Table 3-1 below.

Table 3-1 Work Progress by Segment

Segment	Work Area	Foundations			Poles		
		Required[abc]	Completed this Month	Completed to Date	Required[ab]	Completed this Month	Completed to Date
1	Tunnels	32	0	32	32	32	32
	A	309	0	0	259	0	0
	B	237	0	0	177	0	0
2	5	244	0	184	209	0	160
	4	314	0	240	254	0	186
	3	174	0	63	141	0	36
	2	248	0	78	205	0	60
	1	208	0	79	154	0	33
3	2	512	0	192	443	40	40
	1	391	0	353	310	38	170
4	A	240	0	156	177	0	107
	B	133	0	87	123	0	70
	CEMOF	110	0	0	81	0	0
Total		**3,152**	**0**	**1,464**	**2,565**	**110**	**894**

Note:

a. Foundations required do not match poles required as guy foundations are needed in some locations for extra support.
b. The number of required poles and foundations fluctuate due to design changes.
c. 55 foundations in S2WA5 will be installed by South San Francisco and 64 foundations in S2WA3 will be installed by 25th Avenue.

Activity Next Month

- Restart installation of foundation and update foundation installation schedule with a target completion of the end of the year.
- Continue resolution of DSCs.

- Continue to install protective steel plates for protection of utilities during foundation installation.
- Continue to install OCS poles and assemblies in all Segments where available.
- Continue work with BBII on field investigation activities and designs, which will include the progression of the OCS, traction power, bonding and grounding, signal systems, and other civil infrastructure such as overhead bridge protections.
- Pothole and clear obstructions at proposed OCS locations. Potholing will concentrate in Segments 3 and 4, as well areas of potential ROW needs in Segments 1 and 2.
- Continue construction at TPS-1 and TPS-2.
- Continue construction at PS-7, PS-4, PS-6, and the Switching Station.
- Continue to install conduit and foundations for signal and wayside power cubicle (WPC) units in Segment 4.
- Continue to install impedance bond connections.
- Continue to install IJs.
- Continue to install bridge attachments.
- Continue to coordinate with stakeholders on the consistent warning time solution and advance location-specific design.
- Continue to progress location-specific design for grade crossing system.
- Continue planning process for signal cutovers.
- Review BBII work plans for upcoming construction activities.
- Progress TPS-2 and TPS-1 Interconnection Design to Issued for Construction.
- Coordinate with PG&E on final design and construction for PG&E infrastructure.
- Coordinate with local jurisdictions to review designs.
- Continue tree pruning and removals.

3.2. Supervisory Control and Data Acquisition

SCADA is a system that monitors and controls field devices for electrification, including traction power substations (TPS), wayside power cubicles (WPC), and the OCS. SCADA will be integrated with the base operating system for Caltrain Operations and Control, which is the Rail Operations Center System. A separate control console will be established for the Power Director.

Activity This Month

- Submitted formal schedule for review and Monthly Progress Report.
- Worked on addressing comments to test procedures (ongoing).
- Demonstration conducted 2020 at Collins Aerospace facility.
- Returned comments to Collins Aerospace ARINC on five of the previously submitted test procedures.

- Returned Statement of No Objection status on one of the submitted test procedures.

Activity Next Month

- Prepare and deliver the Monthly Report and the Monthly Schedule Update.
- Attend project status meetings.
- Support ongoing discussions concerning RFIs.
- Continue working to complete the database and display to 100% for all locations.
- Continue development of Test Procedures and respond to comments received from JPB.

3.3. Tunnel Modification

Tunnel modifications will be required on the four tunnels located in San Francisco. This effort is needed to accommodate the required clearance for the OCS to support electrification of the corridor. Outside of the PCEP scope, Caltrain Engineering has requested the PCEP team to manage completion of design and construction for the Tunnel 1 and Tunnel 4 Drainage and Track Rehabilitation Project. The Tunnel Drainage and Track Rehabilitation Project is funded separately from PCEP.

Activity This Month

- Completed the installation of the drop tubes.
- Continued review of and prepared responses for submittals and RFIs.
- Completed installation of the Portal Termination Structures at all tunnels.
- Installed the static and feeder wire.
- Completed the masonry scope.

Activity Next Month

- Review and respond to submittals, RFIs, and SSWPs as needed.
- Terminate feeder wire.
- Install conductor rail.
- Install contact wire.
- Install fencing above tunnels.

4.0 ELECTRIC MULTIPLE UNITS

This section reports on the progress of the Electric Multiple Units (EMU) procurement and the Centralized Equipment Maintenance and Operations Facility (CEMOF) modifications.

4.1. Electric Multiple Units

The procurement of EMUs, or trainsets, from Stadler consists of a Base Order of 96 railcars, plus an Option Order of an additional 37 railcars, for a total of 133 railcars. The cars from these two orders will be combined and delivered as 19 seven-car Trainsets. The Base Order is funded from PCEP, and Option Order funded by a Transit and Intercity Rail Capital Program (TIRCP) grant. One more Option for additional cars is available.

Activity This Month

- FDRs remain to be completed for three systems. These software-based systems include 'Train Control,' 'Monitoring and Diagnostics,' and 'Car Control.' Completion is scheduled for early '2020 and must be performed before design conformance Type Testing commences in April 2020.
- FAIs continue to have their paperwork formalized and closed out.
- Trainset No. 1 train and system level control software is being loaded and checked. Sub suppliers are onsite in Salt Lake City downloading software and debugging in preparation of upcoming formal testing.
- Car production rate continued to improve as parts and resource shortages are addressed.
- 28 car shells have been shipped from Stadler - Switzerland and 25 are onsite in Stadler's Salt Lake City facility. No change from last report, but consistent with Project Schedule.
- Two waiver requests remain with the FRA for review and disposition. One pertains to train alternate crashworthiness design standards and the other for a passenger emergency door opening system that is safer for the Caltrain System. No change from last month.
- Quality Assurance Audit at USA-based sub-suppliers commenced with four of the eight scheduled audits conducted with mixed results. Stadler and suppliers are addressing findings.
- Bike car flip-up seat and barrier design finalized.
- High-level door plug design finalized.
- PCEP, Caltrain and Stadler Management representative met in Salt Lake City with favorable results.

Activity Next Month

- Continue to close out system level FDRs and FAIs.
- Continue Quality Assurance (QA) audits on critical USA-based sub-suppliers.
- Work with the FRA on closing out remaining waiver requests and open items.

- Re-baseline Stadler trainset delivery and testing schedule on Caltrain property.
- PCEP and Caltrain Management meeting in Salt Lake City.

4.2. Centralized Equipment Maintenance and Operations Facility Modifications

The CEMOF Modifications Project will provide work areas to perform maintenance on new EMUs.

Activity This Month

- Continued processing submittals, RFIs, and SSWPs.
- Installed conduit at the maintenance building near Track 5.
- Removed existing oil line.
- Added back fill for the fire suppression/water line.
- Conducted soil testing at Parts Storage Warehouse (PSW).

Activity Next Month

- Compact subgrade at PSW.
- Install baserock at PSW.
- Install sand and 10 millimeter membrane at PSW.
- Install rebar at PSW.
- Continue to install conduit at the maintenance building at Track 5

5.0 SAFETY

Safety and Security requirements and plans are necessary to comply with applicable laws and regulations related to safety, security, and emergency response activities. Safety staff coordinates with contractors to review and plan the implementation of contract program safety requirements. Safety project coordination meetings continue to be conducted on a monthly basis to promote a clear understanding of project safety requirements as defined in contract provisions and program safety documents.

Activity This Month

- Project staff provided input and continued its participation in the BBII contractor workforce safety meetings. Project incidents continue to be reviewed with project staff to reinforce the application of recommended safety mitigation measures.
- Continued to review 2019 employee injury incidents with BBII Safety in conjunction with its annual safety incentive submittal.
- Coordinated with VTA Safety Office on work to be performed adjacent to its tracks in Mountain View. Scheduled designated project staff and attended the VTA safety training class in advance of the work to be performed.
- Continued to provide input and oversight of the contractor SSWP safety provisions and ongoing safety construction oversight and inspections.
- Conducted the monthly project Safety and Security Certification and Fire/Life Safety Meetings.
- Participated with internal stakeholders in Rail Activation Committee meetings.
- Investigated project incident occurrences and worked with the contractor representatives to identify incident root causes and develop and implement safety and security mitigation measures.
- Conducted ongoing safety inspections of contractor field activities and performed pre-work site hazards assessment walks with BBII and subcontractor staff.
- Participated in weekly project coordination meetings with the contractor to review open issues and recommended action items.

Activity Next Month

- Monthly safety communication meetings continue to be scheduled for the Project Safety and Security Certification Committee, Fire/Life Safety Committee, Rail Activation Committee, and other project-related contractor and JPB safety meetings to discuss safety priorities.
- Continue focus on performing site safety inspections on the OCS foundations, pole installations, potholing, Tunnel, and CEMOF work to assess safety work practices and identify additional opportunities for improvement. Conduct contractor equipment inspections as needed.
- Continue to meet with the PCEP contractors, JPB safety, and TransitAmerica Services, Inc. (TASI) to identify opportunities to further improve project safety performance and continue to reinforce lessons learned safety mitigation recommendations resulting from prior project incidents.
- Provide safety and security updates to Project Management Oversight Contractor.
- Coordinate with JPB Safety with the application of mitigation measures in response to the evolving COVID-19 virus.

6.0 QUALITY ASSURANCE

The Quality Assurance (QA) staff performs technical reviews for planning, implementing, evaluating, and maintaining an effective program to verify that all equipment, structures, components, systems, and facilities are designed, procured, constructed, installed, and maintained in accordance with established criteria and applicable codes and standards throughout the design, construction, startup and commissioning of the PCEP.

Activity This Month

- Staff meetings with BBII QA/Quality Control (QC) management representatives continue weekly.
- Continued review of BBII-generated Nonconformance Reports (NCR) and Construction Discrepancy Reports for proper discrepancy condition, cause, disposition, corrective and preventive action and verification of closure.
- Continued review and approval of Design Variance Requests for BBII and PGH Wong for QA/QC and inspection issues/concerns.
- Continued review of BBII QC Inspectors Daily Reports, Construction QC Reports and Surveillance Reports for work scope, performance of required duties, adequacy, non-conformances, test/inspection results, follow-up on unresolved issues, and preciseness.
- Continued review of BBII Material Receipt Reports, Certificates of Conformance, Certified Tests Reports, and Certificates of Analysis to ensure delivered project materials conform to specifications, and that contractually required quality and test support documents are adequate and reflect concise conditions per the purchase order requirements.
- Continued regularly scheduled design reviews and surveillances on project design packages.
- Conducted an audit of BBII Field Activities Rail Welding on second shift. Audit still on-going.
- Conducted three design package audits of PGH Wong with no Findings.

Table 6-1 below provides details on the status of audits performed through the reporting period.

Table 6-1 Quality Assurance Audit Summary

Quality Assurance Activity	This Reporting Period	Total to Date
Audits Conducted	3	109
Audit Findings		
Audit Findings Issued	3	68
Audit Findings Open	3	3
Audit Findings Closed	0	65
Non-Conformances		
Non-Conformances Issued	0	10
Non-Conformances Open	0	1
Non-Conformances Closed	0	9

Activity Next Month

- Conduct audits of three PGH Wong design packages.
- Complete audit of rail welding activities.
- Submit FTA required review and report of the adequacy of the Quality Management Plan implementation.

7.0 SCHEDULE

The overall schedule remains unchanged from last month. The forecasted Revenue Service Date (RSD) remains as May 2022. The program critical path runs through the manufacturing and testing of EMU trainsets.

Shown below, Table 7-1 indicates major milestone dates for the MPS.

Table 7-1 Schedule Status

Milestones	Program Plan	Progress Schedule (February 2020)[1]
Arrival of First Vehicle in Pueblo, CO	N/A	05/29/2020
Arrival of First Vehicle at JPB (after Pueblo testing)	N/A	09/01/2021
Segment 4 Completion	11/21/2019	02/14/2021[2]
○ Interconnection from PG&E Substation to Traction Power Substation (TPS)	N/A	09/30/2020[2]
PG&E Provides Permanent Power	09/09/2021	09/09/2021
Electrification Substantial Completion	08/10/2020	01/31/2022[2]
Start Phased Revenue Service	N/A	02/01/2022[2]
RSD (w/o Risk Contingency)	12/09/2021	05/06/2022
FFGA RSD (w/ Risk Contingency)	08/22/2022	08/22/2022

Note:

1. Dates may shift slightly as the update of this month's Progress Schedule is still in process.
2. See "Notable Variances" for explanation on date shift.

Notable Variances

BBII continues to report an overall delay to substantial completion. JPB is working with BBII on the issue and is urging BBII to accelerate resolution.

Within the month of February, the variances relative to the BBII schedule are due to signal design progressing slower than baseline, and no OCS foundations installations completed. JPB and BBII have jointly developed a schedule that shows foundation installation will be completed by the end of the year.

Items listed in Table 7-2 reflect the critical path activities/milestones for the PCEP.

Table 7-2 Critical Path Summary

Activity	Start	Finish
Manufacturing, Testing & Acceptance of Trainsets 1 - 14	08/13/2018	05/06/2022
RSD w/out Risk Contingency	05/06/2022	05/06/2022
FFGA RSD w/ Risk Contingency	08/22/2022	08/22/2022

Schedule Hold Points

Schedule Hold Points (SHP) represent key milestones on or near a schedule's critical path that are used as measurement points with respect to contingency drawdown. Delays to these key milestones have the potential to require a program to utilize available contingency. Table 7-3 below reflects the SHPs for the PCEP program schedule. The dates indicated reflect the planned completion dates for each SHP.

Table 7-3 Schedule Hold Points

Schedule Hold Point (SHP)	Date
FTA/PMOC Risk Refresh	08/30/2016 (A)
Begin EMU Manufacturing	12/04/2017 (A)
Arrival of 1st Trainset in Salt Lake City	02/04/2019 (A)
Arrival of 1st Trainset in Pueblo, CO	09/01/2020
Arrival of 1st Trainset at JPB	02/26/2021
Segment 4 Completion	02/14/2021
Conditional Acceptance of 1st Trainset	04/09/2021
System Electrified	01/31/2022
Begin Phased Revenue Service	02/01/2022
Conditional Acceptance of 14th Trainset	05/06/2022
FFGA RSD w/ Risk Contingency	08/22/2022

Note: "(A)" denotes an actual completion

8.0 BUDGET AND EXPENDITURES

The summary of overall budget and expenditure status for the PCEP and Third Party Improvements is shown in the following tables. Table 8-1 reflects the Electrification budget, Table 8-2 the EMU budget, Table 8-3 the overall PCEP budget, and Table 8-4 Third Party Improvements budget. Table 8-5 summarizes the budget transfers of contingency completed this month.

Table 8-1 Electrification Budget & Expenditure Status

Description of Work	Budget (A)	Current Budget (B)[1]	Cost This Month (C)[2]	Cost To Date (D)[3]	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
ELECTRIFICATION						
Electrification [4]	$696,610,558	$726,521,565	$5,446,508	$377,694,447	$348,827,117	$726,521,565
SCADA	$0	$3,446,917	$0	$1,934,371	$1,512,546	$3,446,917
Tunnel Modifications	$11,029,649	$41,408,610	$4,585,206	$36,664,271	$4,744,339	$41,408,610
Real Estate	$28,503,369	$28,503,369	$127,061	$20,931,895	$7,571,474	$28,503,369
Private Utilities	$63,515,298	$92,451,380	$3,327,013	$79,333,471	$13,117,909	$92,451,380
Management Oversight [5]	$141,506,257	$144,957,684	$2,103,235	$133,586,247	$11,371,438	$144,957,684
Executive Management	$7,452,866	$9,214,226	$158,018	$7,979,972	$1,234,254	$9,214,226
Planning	$7,281,997	$6,281,997	$26,812	$5,793,711	$488,286	$6,281,997
Community Relations	$2,789,663	$1,789,663	$13,544	$1,558,888	$230,775	$1,789,663
Safety & Security	$2,421,783	$3,691,387	$95,021	$3,147,519	$543,867	$3,691,387
Project Management Services	$19,807,994	$16,807,994	$171,021	$12,489,366	$4,318,628	$16,807,994
Engineering & Construction	$11,805,793	$11,805,793	$254,072	$10,003,122	$1,802,672	$11,805,793
Electrification Eng & Mgmt	$50,461,707	$50,461,707	$638,550	$46,822,057	$3,639,651	$50,461,707
Construction Management	$0	$2,790,608	$427,787	$2,801,499	($10,891)	$2,790,608
IT Support	$312,080	$407,170	$0	$407,170	$0	$407,170
Operations Support	$1,445,867	$2,380,632	$126,937	$2,440,835	($60,203)	$2,380,632
General Support	$4,166,577	$5,566,577	$108,484	$5,406,876	$159,701	$5,566,577
Budget / Grants / Finance	$1,229,345	$1,429,345	$1,932	$1,351,750	$77,595	$1,429,345
Legal	$2,445,646	$2,445,646	$18,122	$4,497,454	($2,051,808)	$2,445,646
Other Direct Costs	$5,177,060	$5,177,060	$62,934	$4,178,148	$998,912	$5,177,060
Prior Costs 2002 - 2013	$24,707,878	$24,707,878	$0	$24,707,878	$0	$24,707,878
TASI Support	$55,275,084	$57,475,084	$1,498,385	$36,465,173	$21,009,911	$57,475,084
Insurance	$3,500,000	$4,543,588	$0	$4,543,588	$0	$4,543,588
Environmental Mitigations	$15,798,320	$14,972,644	$0	$691,777	$14,280,868	$14,972,644
Required Projects	$17,337,378	$14,253,335	$0	$833,272	$13,420,063	$14,253,335
Maintenance Training	$1,021,808	$1,021,808	$0	$0	$1,021,808	$1,021,808
Finance Charges	$5,056,838	$6,137,156	$0	$3,766,544	$2,370,612	$6,137,156
Contingency	$276,970,649	$180,432,067	N/A	N/A	$91,915,368	$91,915,368
Forecasted Costs and Changes	$0	$0	N/A	N/A	$88,516,699	$88,516,699
ELECTRIFICATION SUBTOTAL	**$1,316,125,208**	**$1,316,125,208**	**$17,087,408**	**$696,445,055**	**$619,680,152**	**$1,316,125,208**

Notes regarding tables above:

1. Column B “Current Budget” includes executed change orders and awarded contracts.
2. Column C "Cost This Month" represents the cost of work performed this month.
3. Column D "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.
4. Cost To Date for “Electrification” includes 5% for Contractor’s retention until authorization of retention release.
5. The agency labor is actual through January 2020 and accrued for February 2020.

Table 8-2 EMU Budget & Expenditure Status

Description of Work	Budget (A)	Current Budget (B)[1]	Cost This Month (C)[2]	Cost To Date (D)[3]	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
EMU						
EMU	$550,899,459	$555,034,909	$0	$152,219,402	$402,815,507	$555,034,909
CEMOF Modifications	$1,344,000	$6,639,132	$350,032	$2,268,157	$4,370,975	$6,639,132
Management Oversight [4]	$64,139,103	$63,113,984	$880,488	$42,006,212	$21,107,772	$63,113,984
Executive Management	$5,022,302	$6,263,136	$88,778	$4,952,748	$1,310,388	$6,263,136
Community Relations	$1,685,614	$985,614	$8,745	$642,811	$342,803	$985,614
Safety & Security	$556,067	$765,296	$9,743	$525,772	$239,525	$765,296
Project Mgmt Services	$13,275,280	$11,275,280	$104,819	$8,090,101	$3,185,180	$11,275,280
Eng & Construction	$89,113	$89,113	$0	$23,817	$65,296	$89,113
EMU Eng & Mgmt	$32,082,556	$30,581,014	$509,099	$19,332,867	$11,248,146	$30,581,014
Construction Management	$0	$1,501,543	$43,588	$489,947	$1,011,596	$1,501,543
IT Support	$1,027,272	$952,089	$13,752	$590,567	$361,523	$952,089
Operations Support	$1,878,589	$1,878,589	$11,967	$364,424	$1,514,165	$1,878,589
General Support	$2,599,547	$2,599,547	$47,457	$2,337,337	$262,210	$2,599,547
Budget / Grants / Finance	$712,123	$1,012,123	$488	$897,699	$114,424	$1,012,123
Legal	$1,207,500	$1,207,500	$2,199	$1,225,394	($17,894)	$1,207,500
Other Direct Costs	$4,003,139	$4,003,139	$39,852	$2,532,728	$1,470,411	$4,003,139
TASI Support	$2,740,000	$2,789,493	$17,315	$110,408	$2,679,086	$2,789,493
Insurance	$0	$38,263	$0	$38,263	$0	$38,263
Required Projects	$4,500,000	$3,927,821	$0	$538,280	$3,389,541	$3,927,821
Finance Charges	$1,941,800	$3,761,482	$0	$2,308,527	$1,452,955	$3,761,482
Contingency	$38,562,962	$28,822,241	N/A	N/A	$28,986,641	$28,986,641
Forecasted Costs and Changes	$0	$0	N/A	N/A	($164,400)	($164,400)
EMU SUBTOTAL	**$664,127,325**	**$664,127,325**	**$1,247,834**	**$199,489,248**	**$464,638,077**	**$664,127,325**

Notes regarding tables above:

1. Column B “Current Budget” includes executed change orders and awarded contracts.
2. Column C "Cost This Month" represents the cost of work performed this month.
3. Column D "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.
4. The agency labor is actual through January 2020 and accrued for February 2020.

Table 8-3 PCEP Budget & Expenditure Status

Description of Work	Budget (A)	Current Budget (B)[1]	Cost This Month (C)[2]	Cost To Date (D)[3]	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
Electrification Subtotal	**$1,316,125,208**	**$1,316,125,208**	**$17,087,408**	**$696,445,055**	**$619,680,152**	**$1,316,125,208**
EMU Subtotal	**$664,127,325**	**$664,127,325**	**$1,247,834**	**$199,489,248**	**$464,638,077**	**$664,127,325**
PCEP TOTAL	**$1,980,252,533**	**$1,980,252,533**	**$18,335,242**	**$895,934,303**	**$1,084,318,229**	**$1,980,252,533**

Notes regarding tables above:

1. Column B “Current Budget” includes executed change orders and awarded contracts.
2. Column C "Cost This Month" represents the cost of work performed this month.
3. Column D "Cost To Date" includes actuals (amount paid) and accruals (amount of work performed) to date.

Table 8-4 Third Party Improvements/CNPA Budget & Expenditure Status

Description of Work	Budget (A)	Current Budget (B)[1]	Cost This Month (C)[2]	Cost To Date (D)[3]	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
CHSRA Early Pole Relocation	$1,000,000	$1,000,000	$0	$740,332	$259,668	$1,000,000
PS-3 Relocation (Design)	$500,000	$500,000	$0	$150,000	$350,000	$500,000
TPSS-2 VTA/PCEP Pole Relocation (Design)	$110,000	$110,000	$0	$93,500	$16,500	$110,000
TPSS-2 VTA/PCEP Pole Height (Redesign)	$31,000	$31,000	$0	$0	$31,000	$31,000
EMU Option Cars	$172,800,047	$172,800,047	$0	$53,292,490	$119,507,557	$172,800,047
Add Flip-Up Seats into Bike Cars	$1,961,350	$1,961,350	$980,675	$980,675	$980,675	$1,961,350
CNPA TOTAL	**$176,402,397**	**$176,402,397**	**$980,675**	**$55,256,997**	**$121,145,400**	**$176,402,397**

Notes regarding tables above:

1. Column B “Current Budget” includes executed change orders and awarded contracts.
2. Column C "Cost This Month" represents the cost of work paid this month.
3. Column D "Cost To Date" includes actuals (amount paid) to date.

Table 8-4 shows improvements outside of the scope of PCEP that are funded with non-PCEP funds. These improvements are implemented through the PCEP contracts. In FTA terminology, these efforts are categorized as Concurrent Non-Project Activities (CNPA).

- CHSRA Early Pole Relocation: Relocation of 196 OCS poles as part of PCEP. Implementing these pole relocations minimizes future cost and construction impacts. This scope is funded by the CHSRA.
- PS-3 Relocation (Design): Relocate PS-3 (Burlingame) as part of PCEP to avoid a future conflict with the Broadway Grade Separation Project (BGSP). This scope is funded by the BGSP.
- TPSS-2 VTA/PCEP Pole Relocation and Height (Design): Design changes due to the relocation of VTA/BART Pole at TPSS-2 location and pole height redesign for live line clearances. This scope is funded by the VTA.
- EMU Option Cars: Exercise Stadler Contract Option for 37 additional EMUs. This scope is funded with a combination of TIRCP and matching local funds.
- Add Flip-Up Seats into Bike Cars: Stadler contract change order to add four additional flip-up seats in each of the two unpowered (bike) cars per trainset (eight total per trainset). This scope is funded by Caltrain outside of the PCEP.

Table 8-5 Budget Transfers of Contingency

Transfer	Description	Contingency[1]
ELECTRIFICATION		
BBI-CCO-023B	Insulated Rail Joints De-stressing	$890,600
	ELECTRIFICATION SUBTOTAL	**$890,600**
EMU		
PRO-CCO-010	Deletion of Plastic Bollards Around New Inspection Pit	($3,324)
PRO-CCO-011	Fixing Broken Conduit in Concrete Slab North of Maintenance Building	$4,286
PRO-CCO-012	Epoxy Dowels at New Stairwells	$3,526
PRO-CCO-013	Deletion of the Removal and Replacement of Pump Disconnect Switches	($7,007)
PRO-CCO-014	Recycled Base Rock for Backfill at Pressurized Water Line at Parts Storage Warehouse	$1,411
PRO-CCO-015	Cut and Cap Oil Line	$1,002
PRO-CCO-016	Installation of Homerun Conduit	$27,404
PRO-CCO-017	Potholing for Boosted Water Line	$18,476
PRO-CCO-018	Cap Compressed Air Line	$9,519
PRO-CCO-019	Acoustic Ceiling Removal at Component Test Room	$4,253
	EMU SUBTOTAL	**$59,546**
	PCEP TOTAL	**$950,146**

Notes regarding tables above:

1. Budget amount transferred from project contingency. A negative amount represents a credit to contingency.

Table 8-5 shows budget transfers of project contingency implemented during the current monthly reporting period. This table includes contingency transfers for both executed contract change orders as covered under Section 9.0 and uses of contingency for Program budget line items outside the five PCEP contracts.

Appendix D includes costs broken down by Standard Cost Code (SCC) format. This format is required for reporting of costs to the FTA. The overall project total in the SCC format is lower than the project costs in table 8-3. This is due to the exclusion of costs incurred prior to the project entering the Project Development phase.

9.0 CHANGE MANAGEMENT

The change management process establishes a formal administrative work process associated with the initiation, documentation, coordination, review, approval and implementation of changes that occur during the design, construction or manufacturing of the PCEP. The change management process accounts for impacts of the changes and ensures prudent use of contingency.

Currently the PCEP contracts are BBII, CEMOF, Stadler, SCADA, Tunnel Modifications, and Amtrak.

A log of all executed change orders can be found in Appendix E.

Executed Contract Change Orders (CCO) This Month

Electrification Contract

Change Order Authority (5% of BBII Contract) **5% x $696,610,558 = $34,830,528**

Date	Change Number	Description	CCO Amount
2/5/2020	BBI-053-CCO-023B	Insulated Rail Joints De-stressing	$890,600
		Total	**$890,600**

[1] (When indicated) Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.

EMU Contract

Change Order Authority (5% of Stadler Contract) **5% x $550,899,459 = $27,544,973**

Date	Change Number	Description	CCO Amount
	None		$0
		Total	**$0**

[1] (When indicated) Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.

SCADA Contract

Change Order Authority (15% of ARINC Contract) **15% x $3,446,917 = $517,038**

Date	Change Number	Description	CCO Amount
	None		$0
		Total	**$0**

[1] (When indicated) Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.

Tunnel Modification Contract

Change Order Authority (10% of ProVen Contract)[2] **10% x $38,477,777 = $3,847,778**

Date	Change Number	Description	CCO Amount
1/29/2020	PROV-070-CCO-026	HMAC Quantity Overrun (CNPA - Drainage $160,000.00)	$160,000
		Total	**$160,000**

[1] (When indicated) Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.
[2] Tunnel modification contract ($38,477,777) includes: Notching ($25,281,170) and Drainage ($13,196,607).
[3.] Third Party Improvements/CNPA Projects that are funded with non-PCEP funds.

CEMOF Contract

Change Order Authority (10% of ProVen Contract) **10% x $6,550,777 = $655,078**

Date	Change Number	Description	CCO Amount
2/13/2020	PROV-071-CCO-010	Deletion of Plastic Bollards Around New Inspection Pit	($3,324)
2/13/2020	PROV-071-CCO-011	Fixing Broken Conduit in Concrete Slab North of Maintenance Building	$4,286
2/13/2020	PROV-071-CCO-012	Epoxy Dowels at New Stairwells	$3,526
2/13/2020	PROV-071-CCO-013	Deletion of the Removal and Replacement of Pump Disconnect Switches	($7,007)
2/13/2020	PROV-071-CCO-014	Recycled Base Rock for Backfill at Pressurized Water Line at Parts Storage Warehouse	$1,411
2/20/2020	PROV-071-CCO-015	Cut and Cap Oil Line	$1,002
2/25/2020	PROV-071-CCO-016	Installation of Homerun Conduit	$27,404
2/25/2020	PROV-071-CCO-017	Potholing for Boosted Water Line	$18,476
2/28/2020	PROV-071-CCO-018	Cap Compressed Air Line	$9,519
2/28/2020	PROV-071-CCO-019	Acoustic Ceiling Removal at Component Test Room	$4,253
		Total	**$59.546**

[1] (When indicated) Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.

Amtrak AEM-7 Contract

Change Order Authority (Lump Sum) **Up to $150,000**

Date	Change Number	Description	CCO Amount
	None		$0
		Total	**$0**

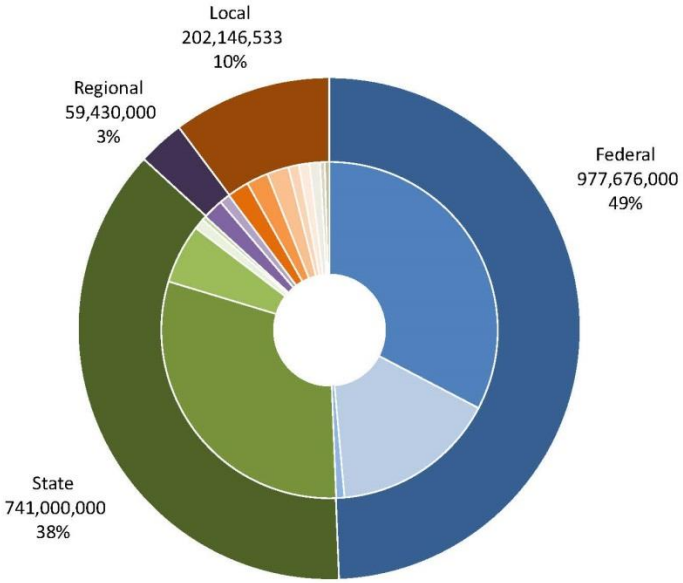
Notes:

1. When the threshold of 75% is reached, staff may return to the Board to request additional authority.

10.0 FUNDING

Figure 10-1 depicts a summary of the funding plan for the PCEP. It provides a breakdown of the funding partners as well as the allocated funds. As previously reported, FTA awarded amendments to include $67 million in Fiscal Year 2019 Section 5307 formula funds, and the next $100 million in Core Capacity funds, in the existing grants for the project.

Figure 10-1 Funding Plan



Fund Source	Amount	%
FTA Core Capacity	$647,000,000	32.67%
FTA Section 5307 (EMU only)*	$315,000,000	15.91%
FTA Section 5307 (Environmental / Pre Development only)	$15,676,000	0.79%
Prop 1A	$600,000,000	30.30%
High Speed Rail Cap and Trade	$113,000,000	5.71%
Transit & Intercity Rail Capital Program	$20,000,000	1.01%
Prop 1B (Public Transportation Modernization & Improvement Account)	$8,000,000	0.40%
Bridge Toll Funds (RM1/RM2)	$39,430,000	1.99%
Carl Moyer	$20,000,000	1.01%
SFCTA/SFMTA**	$41,382,178	2.09%
SMCTA Measure A	$41,382,178	2.09%
VTA Measure A	$41,382,177	2.09%
Santa Clara (VTA) 7-Party MOU Contribution	$20,000,000	1.01%
San Francisco 7-Party MOU Contribution	$20,000,000	1.01%
San Mateo (SMCTA) 7-Party MOU Contribution	$20,000,000	1.01%
Caltrain Low Carbon Transit Operations Cap and Trade	$9,000,000	0.45%
Prior Local Contribution	$9,000,000	0.45%
Total	**$1,980,252,533**	

Notes:

*Includes necessary fund transfer with SMCTA

**Includes $4M CMAQ Transfer considered part of SF local contribution

11.0 RISK MANAGEMENT

The risk management process is conducted in an iterative fashion throughout the life of the project. During this process, new risks are identified, other risks are resolved or managed, and potential impacts and severity modified based on the current situation. The Risk Management team's progress report includes a summary on the effectiveness of the Risk Management Plan, any unanticipated effects, and any correction needed to handle the risk appropriately.

The Risk Management team meets monthly to identify risks and corresponding mitigation measures. Each risk is graded based on the potential cost and schedule impacts they could have on the project. This collection of risks has the greatest potential to affect the outcome of the project and consequently is monitored most closely. For each of the noted risks, as well as for all risks on the risk register, mitigation measures have been identified and are being implemented. Progress in mitigating these risks is confirmed at monthly risk assessment meetings attended by project team management and through continuous monitoring of the Risk Management Lead.

The team has identified the following items as top risks for the project (see Appendix F for the complete Risk Table):

1. The contractor may not complete and install signal design including two-speed check modifications within budget and schedule.
2. Extent of differing site conditions and associated redesign efforts results in delays to the completion of the electrification contract and increases program costs.
3. Potential that modifications to the PTC database and signal software are not completed in time for cutover and testing.
4. Additional property acquisition is necessitated by changes in design.
5. Contractor generates hazardous materials that necessitate proper removal and disposal in excess of contract allowances and expectations.
6. Rejection of Design Variance Request (DVR) for Auto Transformer Feeder (ATF) and static wires results in cost and schedule impacts to PCEP.
7. Sub-optimal contractor sequencing when progressing design and clearing foundation locations may result in construction inefficiencies.
8. Changes to PTC implementation schedule could delay completion of the electrification work. Cost and schedule of BBII contract could increase as a result of change in PTC system.
9. Track access does not comply with contract-stipulated work windows.
10. TASI may not have sufficient number of signal maintainers for testing.

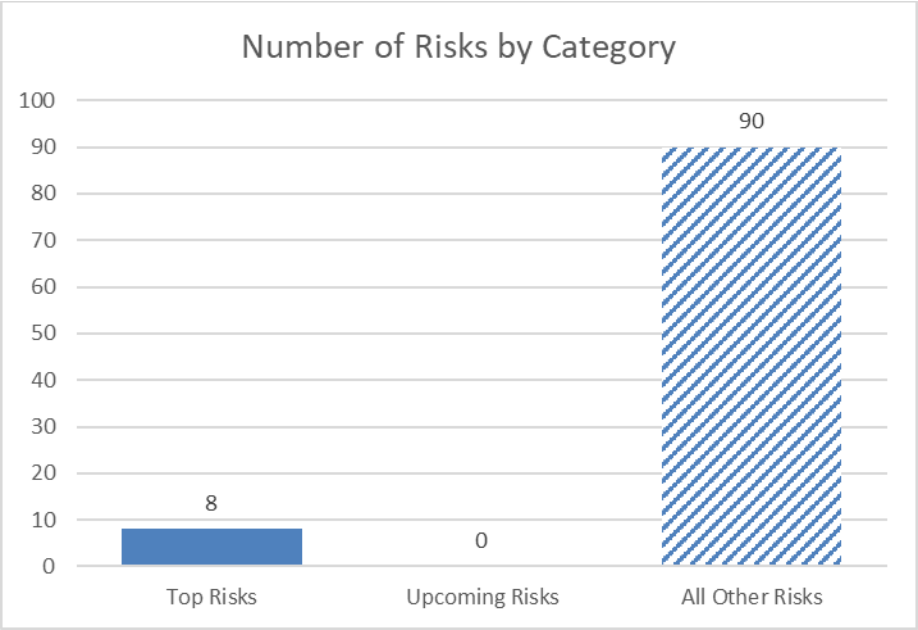
Activity This Month

- Updated risk descriptions, effects, and mitigations based upon weekly input from risk owners. Monthly cycle of risk updating was completed based on schedules established in the Risk Identification and Mitigation Plan.
- Updated risk retirement dates based upon revisions to the project schedule and input from risk owners.

- Continued weekly monitoring of risk mitigation actions and publishing of the risk register.
- The Risk Management team attended Project Delivery, Electrification, and Systems Integration meetings to monitor developments associated with risks and to identify new risks.

Figures 11-1 and 11-2 show the risks identified for the program. Risks are categorized as top risk, upcoming risk, and all other risks. The categories are based on a rating scale composed of schedule and cost factors. Top risks are considered to have a significantly higher than average risk grade. Upcoming risks are risks for which mitigating action must be taken within 60 days. All other risks are risks not falling into other categories.

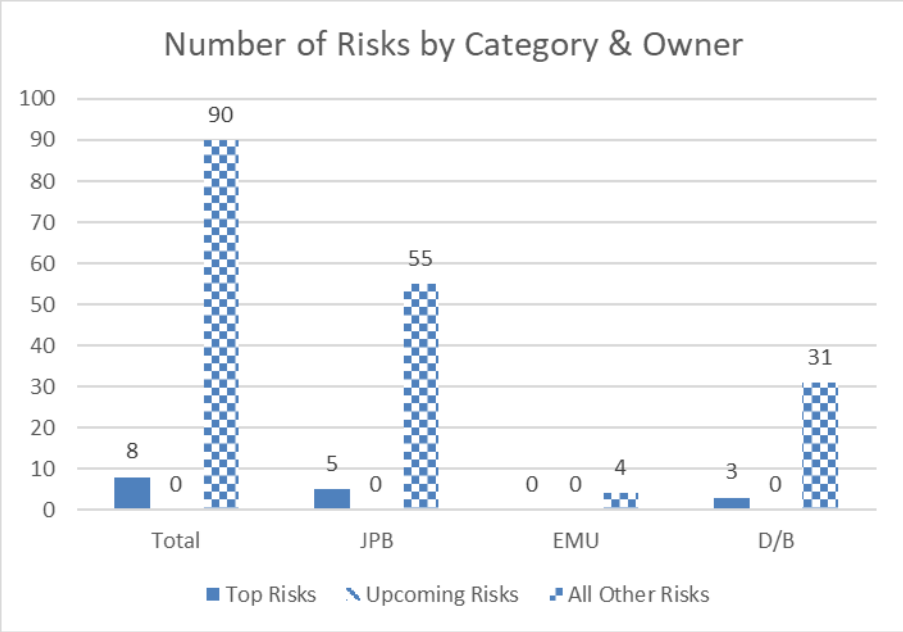
Figure 11-1 Monthly Status of Risks



Total Number of Active Risks = 98

Note: Updating of risk retirement dates resulted in no risks falling with the criteria for "Upcoming Risks," which is that the retirement date is within 60 days of the date that the update is conducted.

Figure 11-2 Risk Classification



Total Number of Active Risks = 98

Note: Updating of risk retirement dates resulted in no risks falling with the criteria for "Upcoming Risks," which is that the retirement date is within 60 days of the date that the update is conducted.

Activity Next Month

- Conduct weekly monitoring of risk mitigation actions and continue publishing risk register.
- Update risk descriptions, effects, mitigations and retirement dates based on weekly monitoring and attendance at key project meetings.
- Convene Risk Assessment Committee meeting.
- Prepare for risk refresh workshop.

12.0 ENVIRONMENTAL

12.1. Permits

The PCEP has obtained the required environmental permits from the following agencies/federal regulations: Section 106 of the National Historic Preservation Act of 1966 (NHPA), Section 7 of the Endangered Species Act (ESA), United States Army Corps of Engineers, San Francisco Bay Regional Water Quality Control Board (SFWQCB), the California Department of Fish and Wildlife, and the San Francisco Bay Conservation Development Commission.

Activity This Month

- None

Activity Next Month

- None

12.2. Mitigation Monitoring and Reporting Program (MMRP)

The California Environmental Quality Act (CEQA) requires that a Lead Agency establish a program to monitor and report on mitigation measures that it has adopted as part of the environmental review process. The PCEP team has prepared a MMRP to ensure that mitigation measures identified in the PCEP Environmental Impact Report are fully implemented during project implementation. PCEP will implement the mitigation measures through its own actions, those of the DB contractor and actions taken in cooperation with other agencies and entities. The status of each mitigation measure in the MMRP is included in Appendix G.

Activity This Month

- Environmental compliance monitors were present during project activities (OCS pole foundation installation, potholing for utility location, clear and grub, duct bank and manhole installation, tree trimming/removal, conduit installation, traction power station form work) occurring in areas that required environmental compliance monitoring. The monitoring was conducted in accordance with measures in the MMRP in an effort to minimize potential impacts on sensitive environmental resources.
- Noise and vibration monitoring also occurred during project activities, and non-hazardous soil was removed from the right of way (ROW).
- Environmentally Sensitive Area (ESA) delineation (staking and/or fencing) occurred to delineate jurisdictional waterways and other potentially sensitive areas that should be avoided during upcoming construction activities. Pre-construction nesting bird surveys during the nesting bird season were initiated (nesting bird season is defined as February 1 through September 15), and protocol-level surveys for a sensitive avian species continued at previously identified potential habitat locations. Wildlife exclusion fencing installation and monitoring occurred adjacent to portions of the alignment designated for wildlife exclusion fencing. Protocol-level surveys for a sensitive avian species were initiated at previously identified potential habitat locations.

- Best management practices (BMP) installation (e.g., silt fencing, straw wattles, soil covers) occurred at equipment staging areas and other work areas throughout the alignment in accordance with the project-specific Stormwater Pollution Prevention Plan (SWPPP). An assessment of two existing subsurface pipes by a certified Asbestos Consultant occurred during this reporting period, and a specification describing the methods for removal and disposal is currently in progress.
- An assessment of additional subsurface pipes by a certified Asbestos Consultant occurred during this reporting period, and a specification describing the methods for removal and disposal is currently in progress.

Activity Next Month

- Environmental compliance monitors will continue to monitor project activities (OCS pole foundation installation, pot holing for utility location, duct bank and manhole installation, tree trimming/removal, conduit installation, utility removal, traction power form work, etc.) occurring in areas that require environmental compliance monitoring in an effort to minimize potential impacts on sensitive environmental resources in accordance with the MMRP.
- Noise and vibration monitoring of project activities will continue to occur and non-hazardous soil will continue to be removed.
- Biological surveyors will continue to conduct pre-construction surveys for sensitive wildlife species ahead of project activities. Pre-construction nesting bird surveys during the nesting bird season will continue (nesting bird season is defined as February 1 through September 15), and protocol-level surveys for sensitive avian species will continue for the 2020 breeding season at previously identified potential habitat locations. BMPs.
- BMPs installation will continue in accordance with the project-specific SWPPP, and ESA staking and fencing will continue to occur, to delineate jurisdictional waterways, and other potentially sensitive areas, that should be avoided during upcoming project activities.
- Wildlife exclusion fencing will continue to be installed and maintained prior to upcoming construction activities adjacent to potentially suitable habitat for sensitive wildlife species.

13.0 UTILITY RELOCATION

Implementation of the PCEP requires relocation or rerouting of both public and private utility lines and/or facilities. Utility relocation will require coordination with many entities, including regulatory agencies, public safety agencies, federal, state, and local government agencies, private and public utilities, and other transportation agencies and companies. This section describes the progress specific to the utility relocation process.

Activity This Month

- Worked with all utilities on review of overhead utility line relocations based on the current design.
- Coordinated with individual utility companies on relocation plans and schedule for incorporation with Master Program Schedule.
- Coordinated work with communications utilities on review of relocation design.
- Continued to coordinate relocation work for SVP and Palo Alto Power facilities.
- Continued to coordinate relocation by communication cable owners such as AT&T and Comcast.
- Conducted utility coordination meeting to discuss overall status and areas of potential concern from the utilities.

Activity Next Month

- Coordinate with individual utility owners on the next steps of relocations, including support of any required design information.
- Update the relocation schedule as information becomes available from the utility owners.
- Continue to review relocation design SVP, Palo Alto Power, and communications companies and coordinate relocation field work.
- Continue communication relocations in all Segments.
- Continue SVP and Palo Alto Power relocations in Segment 3.

14.0 REAL ESTATE

The PCEP requires the acquisition of a limited amount of real estate. In general, Caltrain uses existing Right of Way (ROW) for the PCEP, but in certain locations, will need to acquire small portions of additional real estate to expand the ROW to accommodate installation of OCS supports (fee acquisitions or railroad easements) and associated Electrical Safety Zones (ESZ) (easements). There are two larger full acquisition areas required for wayside facilitates. The PCEP Real Estate team manages the acquisition of all property rights. Caltrain does not need to acquire real estate to complete the EMU procurement portion of the PCEP.

Of the parcels identified at the beginning of the project, there remain only five owners from whom the agency requires possession; of which two are in redesign.

The Real Estate team's current focus is working to identify new parcels and acquire them in conjunction with the project schedule.

- Staff has defined a process to ensure that BBII conveys new needs as soon as possible.
    - BBII must justify and JPB must approve all new parcels.
- Design needs to progress to enable BBII to identify exact acquisition areas.
- Staff is conducting pre-acquisition activities as appropriate.
- JPB has approved four new parcels to date.

Activity This Month

- Continued negotiations with Willowbend Apartment's legal counsel and ordered updated appraisal.
- Staff continues to review potential new pole locations and providing feedback to the design team.
- Staff engaged internal signal team and BBII signal team to determine potential Real Estate interests.
- Review of proposed ESZs from BBII.
- Preparation of First Written Offer package for KB Homes. Reviewed ESZ requirements for KB Homes to confirm acquisitions.
- Through the Real Estate weekly meetings and the BBII bi-weekly meetings, the need for additional acquisition on the Sonora Gray parcel were eliminated.
- Reviewing parcel acquisition options for Marchese parcel with Santa Clara Valley Water District.
- Potholing was completed at Diridon Hospitality site. Working with engineers to finalize design.
- Staff is actively working with PG&E and VTA to gain access to their properties for potholing. Submitted acquisition information package/plan to PG&E for their review and started appraisal of PG& E property based on revised design from BBII.
- Finalizing appraisal map for Britannia Gateway, which requires PG&E approval.

Activity Next Month

- Continue to negotiate for all open parcels.
- Continue review of ESZ needs submitted by BBII compared to direction from contract.
- Continue to meet with internal signal team and BBII signal team to determine potential Real Estate needs.
- Finalize appraisals for PG&E parcel, Google parcel, and South San Francisco parcel and make offers.
- Send updated Grant Deeds to Stephens reflecting the new legal descriptions.
- Meet with Intuitive Surgical to discuss the modified acquisitions on their property.
- Safety group to coordinate with VTA safety to comply with their permitting requirements.
- Finalize design for Diridon Hospitality and meet with their real estate and design team.
- Continue to work with Segment 3 and 4 owners for early access to pothole.
- Make offers on the parcel for which appraisals have been completed.
- Actively participate in Foundation/Pothole and Gannett Fleming weekly meetings.
- Continue to work with project team to identify and analyze new potential parcels.
- Map newly identified parcels.

15.0 THIRD PARTY AGREEMENTS

Third-party coordination is necessary for work impacting public infrastructure, utilities, ROW acquisitions, and others. Table 15-1 below outlines the status of necessary agreements for the PCEP.

Table 15-1 Third-Party Agreement Status

Type	Agreement	Third-Party	Status
Governmental Jurisdictions	Construction & Maintenance[1]	City & County of San Francisco	Executed
		City of Brisbane	Executed
		City of South San Francisco	Executed
		City of San Bruno	Executed
		City of Millbrae	Executed
		City of Burlingame	Executed
		City of San Mateo	Executed
		City of Belmont	Executed
		City of San Carlos	Executed
		City of Redwood City	Executed
		City of Atherton	In Process
		County of San Mateo	Executed
		City of Menlo Park	Executed
		City of Palo Alto	Executed
		City of Mountain View	Executed
		City of Sunnyvale	Executed
		City of Santa Clara	Executed
		County of Santa Clara	Executed
		City of San Jose	Executed
	Condemnation Authority	San Francisco	In Process
		San Mateo	Executed
		Santa Clara	Executed
Utilities	Infrastructure	PG&E	Executed
	Operating Rules	CPUC	Executed
Transportation & Railroad	Construction & Maintenance	Bay Area Rapid Transit	Executed[2]
	Construction & Maintenance	California Dept. of Transportation (Caltrans)	Not needed[3]
	Trackage Rights	UPRR	Executed[2]

Notes regarding table above:

1. Agreements memorialize the parties' consultation and cooperation, designate respective rights and obligations and ensure cooperation between the JPB and the 17 cities and three counties along the Caltrain ROW and within the PCEP limits in connection with the design and construction of the PCEP.
2. Utilizing existing agreements.
3. Caltrans Peer Process utilized. Formal agreement not needed.

16.0 GOVERNMENT AND COMMUNITY AFFAIRS

The Community Relations and Outreach team coordinates all issues with all jurisdictions, partner agencies, government organizations, businesses, labor organizations, local agencies, residents, community members, other interested parties, and the media. In addition, the team oversees the BBII's effectiveness in implementing its Public Involvement Program. The following PCEP-related external affairs meetings took place this month:

Presentations/Meetings

- Caltrain Citizen's Advisory Committee
- Joint Venture Silicon Valley – State of the Valley Event

Third Party/Stakeholder Actions

- Santa Clara Bridge Attachments – Design Change Notice Drawings

17.0 DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION AND LABOR STATISTICS

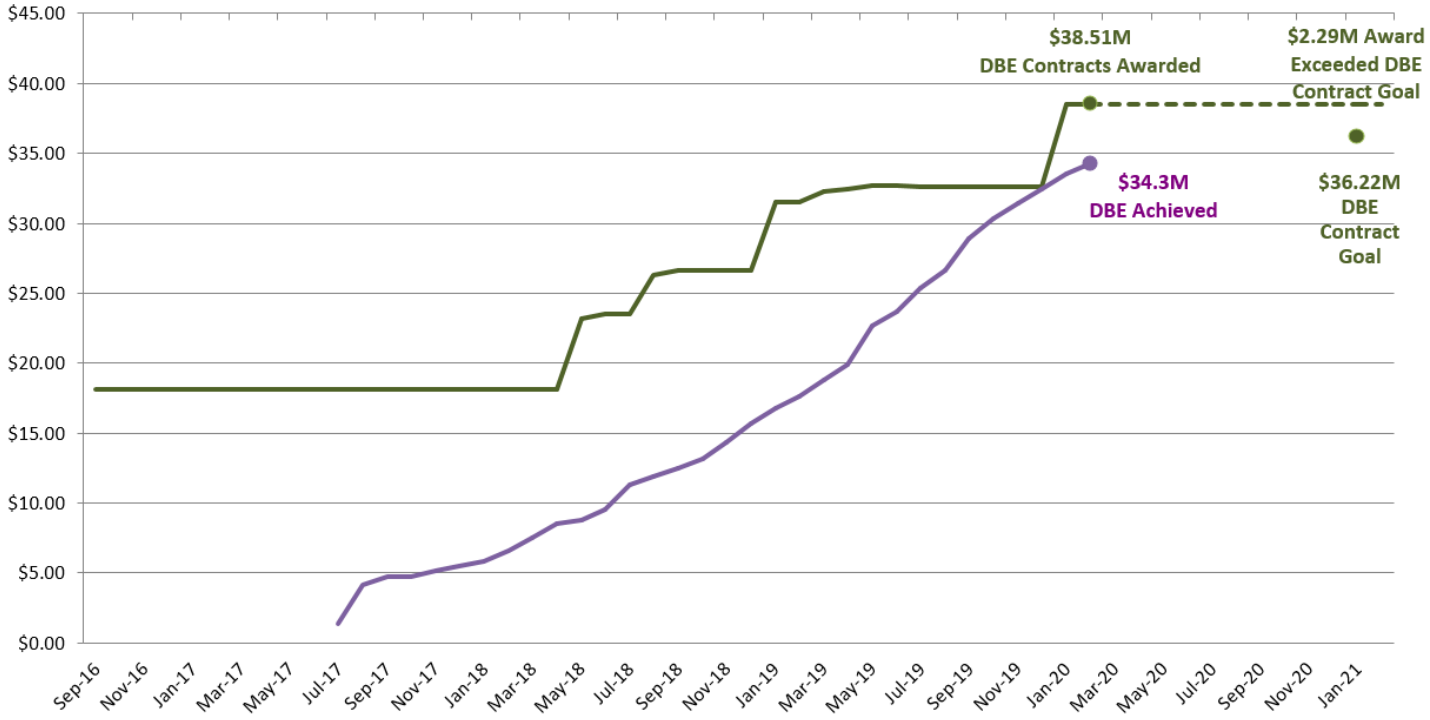
BBII proposed that 5.2% ($36,223,749) of the total DB base contract value ($696,610,558) would be subcontracted to DBEs.

Activity This Month

As expressed in Figure 17-1 below, to date:

- **$34,295,491** has been paid to DBE subcontractors.
- BBII reports that $38.51 million of DBE contracts have been awarded (to be verified).
- **4.9%** has been achieved.

Figure 17-1 DBE Participation



Activity Next Month

In order to reach the 5.2% DBE participation goal, BBII has proposed the following key actions:

"In the month of March, 2020, we continue to anticipate increasing our DBE commitments to firms who we are currently negotiating pricing on proposed work or Professional Services Agreements. We are optimistic about the prospect of making future awards to DBE firms. We also anticipate that the existing project work will increase resulting in expanded work for current DBE subcontractors."

18.0 PROCUREMENT

Invitation for Bids (IFB)/Request for Quotes (RFQ)/ Request for Proposals (RFP) Issued this Month:

- None

Bids, Quotes, Proposals in Response to IFB/RFQ/RFP Received this Month:

- None

Contract Awards this Month:

- None

Work Directive (WD)/Purchase Order (PO) Awards & Amendments this Month:

- Multiple WDs & POs issued to support the program needs

In Process IFB/RFQ/RFP/Contract Amendments:

- None

Upcoming Contract Awards/Contract Amendments:

- None

Upcoming IFB/RFQ/RFP to be Issued:

- RFQ – Scissor Lift Work Platform

Existing Contracts Amendments Issued:

- None

19.0 TIMELINE OF MAJOR PROJECT ACCOMPLISHMENTS

Below is a timeline showing major project accomplishments from 2001 to 2017:

Date	Milestone
2001	Began federal National Environmental Policy Act (NEPA) Environmental Assessment (EA) / state EIR clearance process
2002	Conceptual Design completed
2004	Draft NEPA EA/EIR
2008	35% design complete
2009	Final NEPA EA/EIR and Finding of No Significant Impact (FONSI)
2014	RFQ for electrification RFI for EMU
2015	JPB approves final CEQA EIR JPB approves issuance of RFP for electrification JPB approves issuance of RFP for EMU Receipt of proposal for electrification FTA approval of Core Capacity Project Development
2016	JPB approves EIR Addendum #1: PS-7 FTA re-evaluation of 2009 FONSI Receipt of electrification best and final offers Receipt of EMU proposal Application for entry to engineering to FTA Completed the EMU Buy America Pre-Award Audit and Certification Negotiations completed with Stadler for EMU vehicles Negotiations completed with BBII, the apparent best-value electrification firm JPB approves contract award (LNTP) to BBII JPB approves contract award (LNTP) to Stadler FTA approval of entry into engineering for the Core Capacity Program Application for FFGA
2017	FTA finalized the FFGA for $647 million in Core Capacity funding, met all regulatory requirements including end of Congressional Review Period (February) FTA FFGA executed, committing $647 million to the project (May) JPB approves $1.98 billion budget for PCEP (June) Issued NTP for EMUs to Stadler (June 1) Issued NTP for electrification contract to BBII (June 19) Construction began (August) EMU manufacturing began (October) Issued NTP for SCADA to Rockwell Collins (ARINC) (October) Issued NTP for CEMOF Facility Upgrades to HNTB (November)

Date	Milestone
2018	Completed all PG&E agreements
	JPB approves contract award to Mitsui for the purchase of electric locomotives and Amtrak for overhaul services, storage, acceptance testing, training, and shipment of locomotive to CEMOF
	JPB approves authorization for the Executive Director to negotiate final contract award to ProVen for tunnel modifications and track rehabilitation project
	JPB approves contract award (LNTP) to ProVen for tunnel modifications
	Issued NTP to ProVen for tunnel modifications (October)
	Amended contract with ProVen to include OCS in the tunnels (November)
2019	JPB approves contract award to ProVen for CEMOF modifications (February)
	JPB approves LNTP to ProVen for CEMOF modifications (April)
	JPB approves NTP to ProVen for CEMOF modifications (September)

APPENDICES

Appendix A – Acronyms

AIM	Advanced Information Management
ARINC	Aeronautical Radio, Inc.
BAAQMD	Bay Area Air Quality Management District
BBII	Balfour Beatty Infrastructure, Inc.
CAISO	California Independent System Operator
CalMod	Caltrain Modernization Program
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEMOF	Centralized Equipment Maintenance and Operations Facility
CEQA	California Environmental Quality Act (State)
CHSRA	California High-Speed Rail Authority
CIP	Capital Improvement Plan
CNPA	Concurrent Non-Project Activity
CPUC	California Public Utilities Commission
CTC	Centralized Traffic Control
DB	Design-Build
DBB	Design-Bid-Build
DBE	Disadvantaged Business Enterprise
DEMP	Design, Engineering, and Management Planning
EA	Environmental Assessment
EAC	Estimate at Completion
EIR	Environmental Impact Report
EOR	Engineer of Record
EMU	Electric Multiple Unit
ESA	Endangered Species Act
ESA	Environmental Site Assessments
FAI	First Article Inspection
FEIR	Final Environmental Impact Report
FNTP	Full Notice to Proceed
FFGA	Full Funding Grant Agreement
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GO	General Order
HSR	High Speed Rail
ICD	Interface Control Document
IFC	Issued for Construction
ITS	Intelligent Transportation System
JPB	Peninsula Corridor Joint Powers Board
LNTP	Limited Notice to Proceed

MMRP	Mitigation, Monitoring, and Reporting Program
MOU	Memorandum of Understanding
MPS	Master Program Schedule
NCR	Non Conformance Report
NEPA	National Environmental Policy Act (Federal)
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NTP	Notice to Proceed
OCS	Overhead Contact System
PCEP	Peninsula Corridor Electrification Project
PCJPB	Peninsula Corridor Joint Powers Board
PG&E	Pacific Gas and Electric
PHA	Preliminary Hazard Analysis
PMOC	Project Management Oversight Contractor
PS	Paralleling Station
PTC	Positive Train Control
QA	Quality Assurance
QC	Quality Control
QMP	Quality Management Plan
QMS	Quality Management System
RAMP	Real Estate Acquisition Management Plan
RE	Real Estate
RFI	Request for Information
RFP	Request for Proposals
RFQ	Request for Qualifications
ROCS	Rail Operations Center System
ROW	Right of Way
RRP	Railroad Protective Liability
RSD	Revenue Service Date
RWP	Roadway Worker Protection
SamTrans	San Mateo County Transit District
SCADA	Supervisory Control and Data Acquisition
SCC	Standard Cost Code
SPUR	San Francisco Bay Area Planning and Urban Research Association
SFBCDC	San Francisco Bay Conservation Development Commission
SFCTA	San Francisco County Transportation Authority
SFMTA	San Francisco Municipal Transportation Authority
SFRWQCB	San Francisco Regional Water Quality Control Board
SOGR	State of Good Repair
SSCP	Safety and Security Certification Plan
SSMP	Safety and Security Management Plan
SSWP	Site Specific Work Plan

SWS	**Switching Station**
TASI	**TransitAmerica Services Inc.**
TBD	**To Be Determined**
TPS	**Traction Power Substation**
TVA	**Threat and Vulnerability Assessment**
UPRR	**Union Pacific Railroad**
USACE	**United States Army Corp of Engineers**
USFWS	**U.S. Fish and Wildlife Service**
VTA	**Santa Clara Valley Transportation Authority**

Appendix B – Funding Partner Meetings

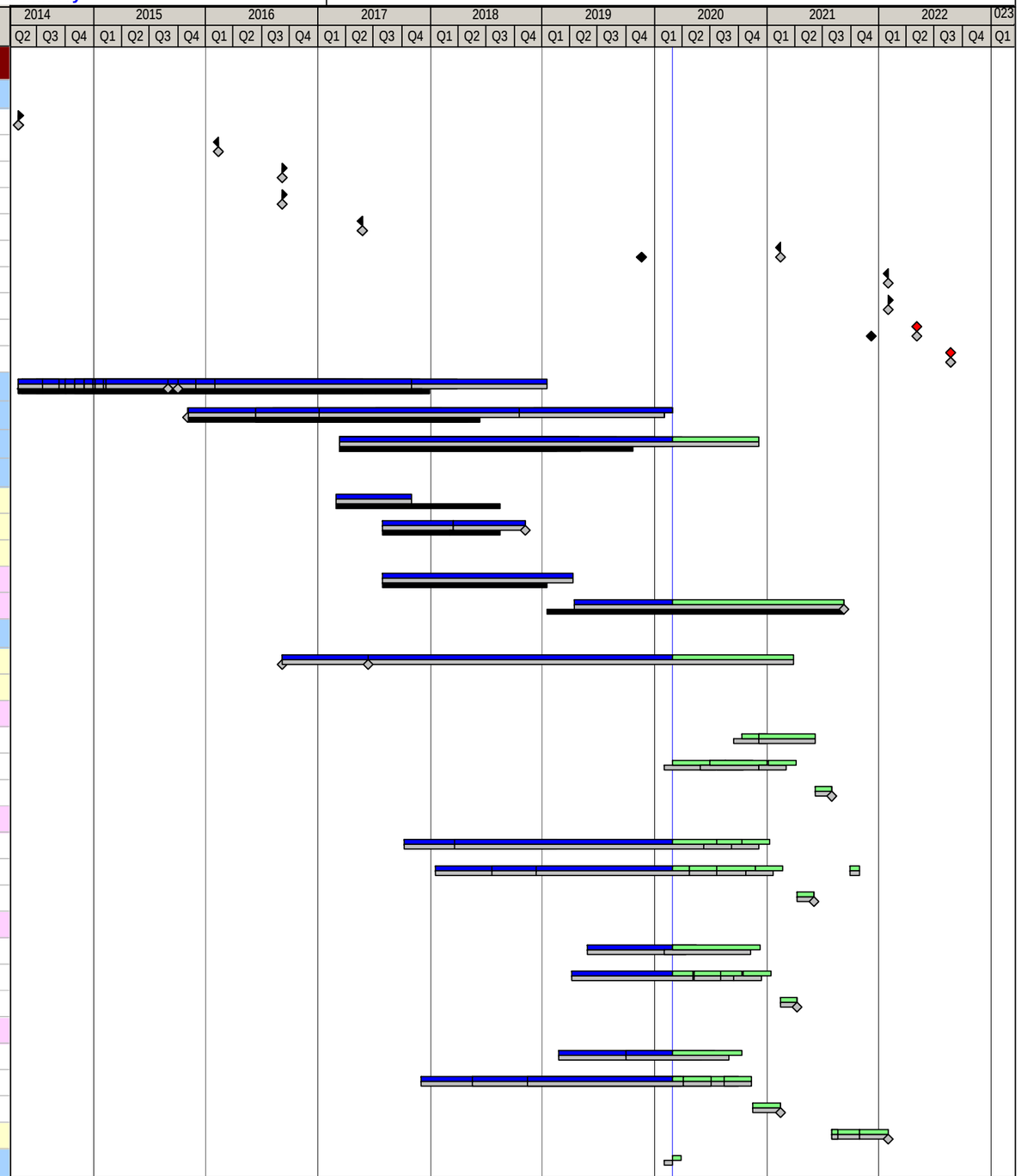
Funding Partner Meeting Representatives

Updated February 29, 2020

Agency	CHSRA	MTC	SFCTA/SFMTA/CCSF	SMCTA	VTA
FTA Quarterly Meeting	• Boris Lipkin • Simon Whitehorn • Wai Siu (info only)	• Anne Richman	• Luis Zurinaga	• April Chan • Peter Skinner	• Jim Lawson
Funding Partners Quarterly Meeting	• Boris Lipkin • Simon Whitehorn • John Popoff	• Trish Stoops	• Luis Zurinaga	• April Chan • Peter Skinner	• Krishna Davey
Funding Oversight (monthly)	• Kelly Doyle	• Anne Richman • Kenneth Folan	• Anna LaForte • Maria Lombardo • Luis Zurinaga • Monique Webster • Ariel Espiritu Santo	• April Chan • Peter Skinner	• Jim Lawson • Marcella Rensi • Michael Smith
Change Management Board (monthly)	• Bruce Armistead • Boris Lipkin • Simon Whitehorn	• Trish Stoops • Kenneth Folan	• Luis Zurinaga • Tilly Chang (info only)	• Joe Hurley	• Krishna Davey • Jim Lawson • Nuria Fernandez (info only)
Master Program Schedule Update (monthly)	• Wai Siu	• Trish Stoops	• Luis Zurinaga	• Joe Hurley	• Jim Lawson
Risk Assessment Committee (monthly)	• Wai Siu	• Trish Stoops	• Luis Zurinaga	• Joe Hurley	• Krishna Davey
PCEP Delivery Coordination Meeting (bi-weekly	• Wai Siu	• Trish Stoops	• Luis Zurinaga	• Joe Hurley	• Krishna Davey
Systems Integration Meeting (bi-weekly	• Wai Siu	• Trish Stoops	• Luis Zurinaga	• Joe Hurley	• Krishna Davey

Appendix C – Schedule

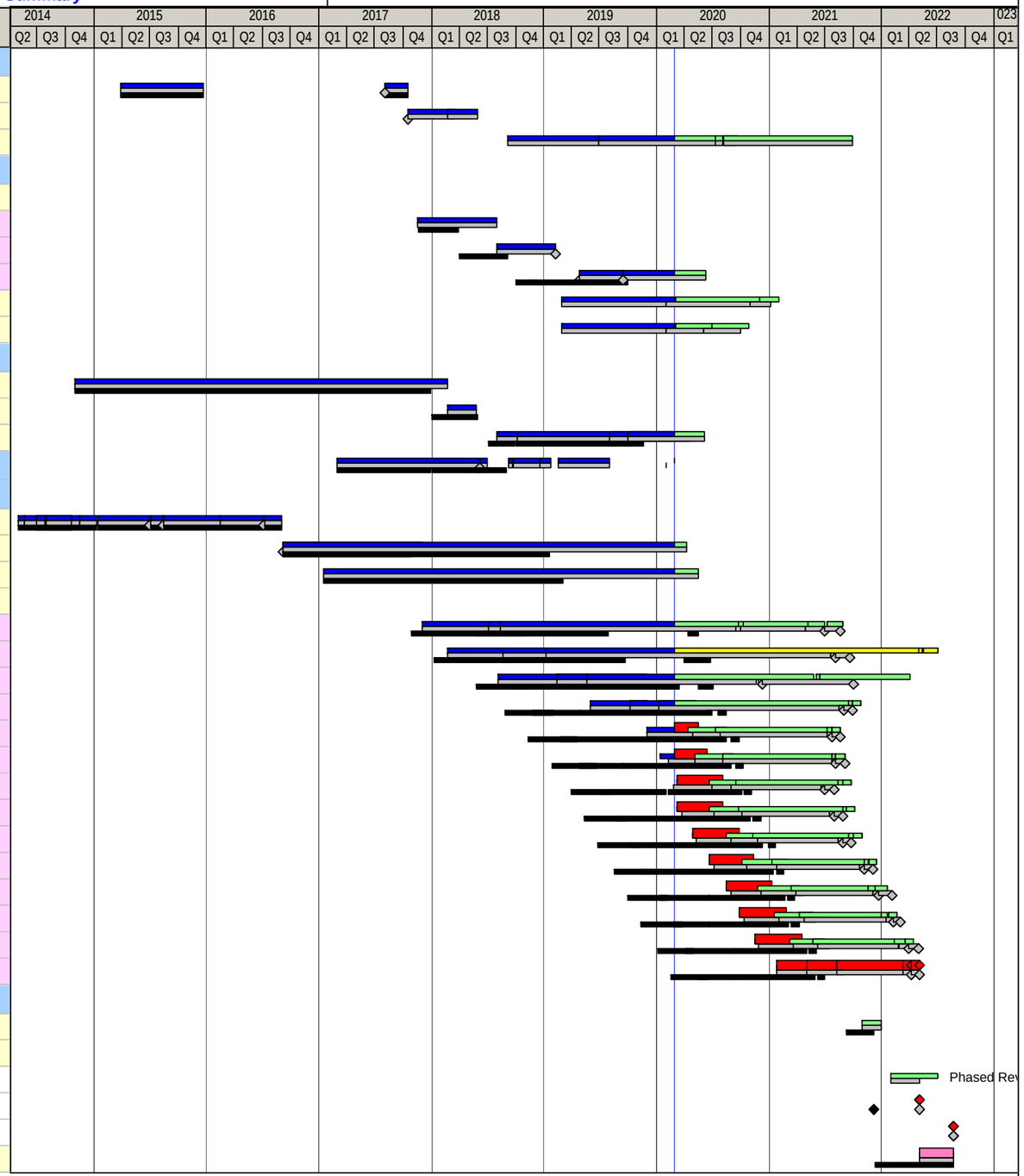
#	Activity Name	Duration	Start	Finish
1	***MASTER PROGRAM SCHEDULE C18.13***	2168d	05-01-14 A	08-22-22
2	**MILESTONES**	2168d	05-01-14 A	08-22-22
3	Start	0d	05-01-14 A	
4	NEPA Reevaluation Complete	0d		02-11-16 A
5	LNTP to Electrification Contractor	0d	09-06-16 A	
6	LNTP to Vehicle Manufacturer	0d	09-06-16 A	
7	FTA Issues FFGA	0d		05-23-17 A
8	Segment 4 (incl. Test Track) Complete	0d		02-14-21
9	Electrification Substantial Completion	0d		01-31-22
10	Start Phased Revenue Service	0d	02-01-22	
11	Revenue Service Date (RSD) w/out Risk Contingency	0d		05-06-22
12	Revenue Service Date (RSD) w/ Risk Contingency (FFGA RSD)	0d		08-22-22
13	**PLANNING / APPROVALS**	1230d	05-01-14 A	01-16-19 A
14	**REAL ESTATE ACQUISITION**	1096d	11-05-15 A	03-02-20
15	**OVERHEAD UTILITY RELOCATION (Various)**	949d	03-10-17 A	12-04-20
16	**PG&E INFRASTRUCTURE**	1151d	03-01-17 A	09-09-21
17	**INTERCONNECT (Feasibility Study)**	171d	03-01-17 A	10-31-17 A
18	**INTERIM POWER**	322d	08-01-17 A	11-05-18 A
19	**PERMANENT POWER**	1044d	08-01-17 A	09-09-21
20	***DESIGN & PERMITTING***	431d	08-01-17 A	04-12-19 A
21	***CONSTRUCTION***	612d	04-15-19 A	09-09-21
22	**ELECTRIFICATION (BBII)**	1410d	09-06-16 A	01-31-22
23	**DESIGN**	1192d	09-06-16 A	03-31-21
24	**CONSTRUCTION**	1484d	10-09-17 A	10-31-21
25	***Segment 1***	519d	03-01-20	08-01-21
26	**OCS**	239d	10-13-20	06-08-21
27	**Traction Power**	400d	03-01-20	04-04-21
28	**Segment Testing**	54d	06-09-21	08-01-21
29	***Segment 2***	1484d	10-09-17 A	10-31-21
30	**OCS**	1189d	10-09-17 A	01-09-21
31	**Traction Power**	1382d	01-19-18 A	10-31-21
32	**Segment Testing**	54d	04-09-21	06-02-21
33	***Segment 3***	732d	04-09-19 A	04-09-21
34	**OCS**	562d	05-28-19 A	12-09-20
35	**Traction Power**	645d	04-09-19 A	01-12-21
36	**Segment Testing**	54d	02-15-21	04-09-21
37	***Segment 4***	1172d	12-01-17 A	02-14-21
38	**OCS**	595d	02-25-19 A	10-11-20
39	**Traction Power**	1080d	12-01-17 A	11-14-20
40	**Segment Testing**	92d	11-15-20	02-14-21
41	**TESTING**	183d	08-01-21	01-31-22
42	**DRILL TRACK (TASI)**	20d	03-02-20	03-27-20



Prog Plan (C16.00) | Remaining | Start Milestone | Last Months Update
Last Months Update | Near Critical | Finish Milestone | Critical Milestone
Progress | Critical | Prog Plan (C16.00) | Risk Contingency

Filename: _C18.13 031920

#	Activity Name	Duration	Start	Finish
43	**SCADA (Arinc)**	1652d	03-30-15 A	09-28-21
44	**PREPARE SOLE SOURCE & AWARD**	649d	03-30-15 A	10-16-17 A
45	**DESIGN**	157d	10-16-17 A	05-31-18 A
46	**IMPLEMENTATION, TEST, INSTALL & CUTOVER**	780d	09-04-18 A	09-28-21
47	**CEMOF (Various)**	841d	11-16-17 A	02-04-21
48	**CEMOF MODIFICATIONS (ProVen)**	669d	11-16-17 A	06-09-20
49	***DESIGN***	178d	11-16-17 A	07-31-18 A
50	***BID & AWARD***	132d	08-01-18 A	02-07-19 A
51	***CONSTRUCTION***	292d	04-29-19 A	06-09-20
52	**PANTORGRAPH INSPECTION & MONITORING SYSTEM (Ctr TBD)**	491d	03-01-19 A	02-04-21
53	**SCISSOR LIFT WORK PLATFORM (Ctr TBD)**	424d	03-01-19 A	10-28-20
54	**TUNNEL MODIFICATION (ProVen)**	1460d	10-31-14 A	06-04-20
55	**DESIGN**	840d	10-31-14 A	02-22-18 A
56	**BID & AWARD**	66d	02-23-18 A	05-25-18 A
57	**CONSTRUCTION**	482d	08-01-18 A	06-04-20
58	**ELECTRIC LOCOMOTIVE (Amtrak / Mitsui)**	783d	03-01-17 A	03-02-20
59	**EMU (Stadler)**	2132d	05-01-14 A	07-01-22
60	**DEVELOP RFP, BID & AWARD**	612d	05-01-14 A	09-02-16 A
61	**DESIGN**	936d	09-06-16 A	04-07-20
62	**PROCUREMENT (Material)**	872d	01-16-17 A	05-19-20
63	**MANUFACTURING & TESTING**	1195d	12-04-17 A	07-01-22
64	***TRAINSET 1***	975d	12-04-17 A	08-27-21
65	***TRAINSET 2***	1137d	02-22-18 A	07-01-22
66	***TRAINSET 3***	957d	08-06-18 A	04-05-22
67	***TRAINSET 4***	628d	06-03-19 A	10-27-21
68	***TRAINSET 5***	450d	12-02-19 A	08-20-21
69	***TRAINSET 6***	430d	01-13-20 A	09-03-21
70	***TRAINSET 7***	404d	03-10-20	09-24-21
71	***TRAINSET 8***	414d	03-10-20	10-08-21
72	***TRAINSET 9***	395d	04-27-20	10-29-21
73	***TRAINSET 10***	390d	06-22-20	12-17-21
74	***TRAINSET 11***	375d	08-17-20	01-21-22
75	***TRAINSET 12***	365d	09-28-20	02-18-22
76	***TRAINSET 13***	370d	11-16-20	04-15-22
77	***TRAINSET 14***	335d	01-25-21	05-06-22
78	**TESTING & STARTUP (JPB)**	211d	10-31-21	08-22-22
79	**PRE-REVENUE TESTING**	61d	10-31-21	12-30-21
80	**REVENUE OPERATIONS**	144d	02-01-22	08-22-22
81	Phased Revenue Service	109d	02-01-22	07-01-22
82	Revenue Service Date (RSD) w/out Risk Contingency	0d		05-06-22
83	Revenue Service Date (RSD) w/ Risk Contingency (FFGA RSD)	0d		08-22-22
84	**RISK CONTINGENCY**	108d	05-07-22	08-22-22



Prog Plan (C16.00) | Remaining | Start Milestone | Last Months Update
Last Months Update | Near Critical | Finish Milestone | Critical Milestone
Progress | Critical | Prog Plan (C16.00) | Risk Contingency

Filename: _C18.13 031920

Appendix D – Standard Cost Codes

Description of Work	FFGA Baseline Budget (A)	Approved Budget (B)	Cost This Month (C)	Cost To Date (D)	Estimate To Complete (E)	Estimate At Completion (F) = (D) + (E)
10 - GUIDEWAY & TRACK ELEMENTS	**$14,256,739**	**$27,308,610**	**$555,064**	**$24,993,510**	**$2,838,595**	**$27,832,105**
10.02 Guideway: At-grade semi-exclusive (allows cross-traffic)	$2,500,000	$2,500,000	$0	$66,807	$2,433,193	$2,500,000
10.07 Guideway: Underground tunnel	$8,110,649	$24,808,610	$555,064	$24,926,703	$405,402	$25,332,105
10.07 Allocated Contingency	$3,646,090	$0	$0	$0	$0	$0
30 - SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS	**$2,265,200**	**$6,639,132**	**$350,032**	**$2,268,157**	**$4,400,519**	**$6,668,676**
30.03 Heavy Maintenance Facility	$1,344,000	$6,639,132	$350,032	$2,268,157	$4,400,519	$6,668,676
30.03 Allocated Contingency	$421,200	$0	$0	$0	$0	$0
30.05 Yard and Yard Track	$500,000	$0	$0	$0	$0	$0
40 - SITEWORK & SPECIAL CONDITIONS	**$255,072,402**	**$268,579,560**	**$5,009,189**	**$163,525,226**	**$108,964,122**	**$272,489,348**
40.01 Demolition, Clearing, Earthwork	$3,077,685	$3,077,685	$0	$4,076,000	($998,315)	$3,077,685
40.02 Site Utilities, Utility Relocation	$62,192,517	$93,328,599	$3,653,682	$78,683,916	$15,644,684	$94,328,599
40.02 Allocated Contingency	$25,862,000	($0)	$0	$0	($0)	($0)
40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	$2,200,000	$3,150,000	$0	$4,750,000	$264,172	$5,014,172
40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks	$32,579,208	$32,579,208	$54,000	$1,851,495	$31,102,713	$32,954,208
40.05 Site structures including retaining walls, sound walls	$568,188	$568,188	$0	$0	$568,188	$568,188
40.06 Pedestrian / bike access and accommodation, landscaping	$804,933	$764,933	$40,000	$40,000	$724,933	$764,933
40.07 Automobile, bus, van accessways including roads, parking lots	$284,094	$284,094	$0	$0	$284,094	$284,094
40.08 Temporary Facilities and other indirect costs during construction	$107,343,777	$114,216,852	$1,261,507	$74,123,816	$41,934,700	$116,058,516
40.08 Allocated Contingency	$20,160,000	$20,610,000	$0	$0	$19,438,953	$19,438,953
50 - SYSTEMS	**$504,445,419**	**$522,367,159**	**$8,859,132**	**$148,596,698**	**$389,781,057**	**$538,377,755**
50.01 Train control and signals	$97,589,149	$100,374,268	$1,958,270	$27,654,140	$74,302,842	$101,956,982
50.01 Allocated Contingency	$1,651,000	$0	$0	$0	$0	$0
50.02 Traffic signals and crossing protection	$23,879,905	$23,879,905	$0	$0	$23,879,905	$23,879,905
50.02 Allocated Contingency	$1,140,000	$1,140,000	$0	$0	$1,140,000	$1,140,000
50.03 Traction power supply: substations	$69,120,009	$72,744,787	$386,851	$32,121,622	$65,850,102	$97,971,724
50.03 Allocated Contingency	$31,755,013	$27,990,895	$0	$0	$2,763,958	$2,763,958
50.04 Traction power distribution: catenary and third rail	$253,683,045	$275,765,995	$6,514,012	$88,762,947	$214,338,941	$303,101,888
50.04 Allocated Contingency	$18,064,000	$12,908,011	$0	$0	($0)	($0)
50.05 Communications	$5,455,000	$5,455,000	$0	$57,989	$5,397,011	$5,455,000
50.07 Central Control	$2,090,298	$2,090,298	$0	$0	$2,090,298	$2,090,298
50.07 Allocated Contingency	$18,000	$18,000	$0	$0	$18,000	$18,000
60 - ROW, LAND, EXISTING IMPROVEMENTS	**$35,675,084**	**$35,675,084**	**$127,061**	**$18,772,560**	**$16,902,524**	**$35,675,084**
60.01 Purchase or lease of real estate	$25,927,074	$25,927,074	$127,061	$18,643,986	$7,283,089	$25,927,074
60.01 Allocated Contingency	$8,748,010	$8,748,010	$0	$0	$8,748,010	$8,748,010
60.02 Relocation of existing households and businesses	$1,000,000	$1,000,000	$0	$128,574	$871,426	$1,000,000
70 - VEHICLES (96)	**$625,544,147**	**$625,657,938**	**$846,697**	**$187,947,424**	**$435,878,866**	**$623,826,291**
70.03 Commuter Rail	$589,167,291	$592,327,115	$846,697	$187,409,145	$404,724,026	$592,133,171
70.03 Allocated Contingency	$9,472,924	$6,499,071	$0	$0	$4,861,368	$4,861,368
70.06 Non-revenue vehicles	$8,140,000	$8,067,821	$0	$538,280	$7,529,541	$8,067,821
70.07 Spare parts	$18,763,931	$18,763,931	$0	$0	$18,763,931	$18,763,931
80 - PROFESSIONAL SERVICES (applies to Cats. 10-50)	**$323,793,010**	**$330,261,209**	**$2,588,067**	**$294,174,059**	**$58,485,480**	**$352,659,539**
80.01 Project Development	$130,350	$130,350	$0	$280,180	($149,830)	$130,350
80.02 Engineering (not applicable to Small Starts)	$180,227,311	$187,284,094	$299,161	$195,443,293	($3,557,586)	$191,885,706
80.02 Allocated Contingency	$1,866,000	$5,045	$0	$0	$101,942	$101,942
80.03 Project Management for Design and Construction	$72,029,265	$74,332,188	$1,666,460	$73,052,189	$15,900,819	$88,953,008
80.03 Allocated Contingency	$9,388,080	$8,000,396	$0	$0	$8,000,396	$8,000,396
80.04 Construction Administration & Management	$23,677,949	$25,347,671	$604,324	$15,749,676	$15,507,387	$31,257,063
80.04 Allocated Contingency	$19,537,000	$17,867,277	$0	$0	$11,957,886	$11,957,886
80.05 Professional Liability and other Non-Construction Insurance	$3,500,000	$4,581,851	$0	$4,581,851	$0	$4,581,851
80.06 Legal; Permits; Review Fees by other agencies, cities, etc.	$7,167,275	$6,341,599	$18,122	$5,027,012	$4,949,588	$9,976,599
80.06 Allocated Contingency	$556,000	$556,000	$0	$0	$0	$0
80.07 Surveys, Testing, Investigation, Inspection	$3,287,824	$3,388,781	$0	$39,858	$3,348,923	$3,388,781
80.08 Start up	$1,797,957	$1,797,957	$0	$0	$1,797,957	$1,797,957
80.08 Allocated Contingency	$628,000	$628,000	$0	$0	$628,000	$628,000
Subtotal (10 - 80)	**$1,761,052,001**	**$1,816,488,692**	**$18,335,242**	**$840,277,634**	**$1,017,251,165**	**$1,857,528,799**
90 - UNALLOCATED CONTINGENCY	**$162,620,295**	**$104,283,604**	**$0**	**$0**	**$63,243,497**	**$63,243,497**
Subtotal (10 - 90)	**$1,923,672,296**	**$1,920,772,296**	**$18,335,242**	**$840,277,634**	**$1,080,494,662**	**$1,920,772,296**
100 - FINANCE CHARGES	**$6,998,638**	**$9,898,638**	**$0**	**$6,075,070**	**$3,823,568**	**$9,898,638**
Total Project Cost (10 - 100)	**$1,930,670,934**	**$1,930,670,934**	**$18,335,242**	**$846,352,704**	**$1,084,318,230**	**$1,930,670,934**

Appendix E – Change Order Logs

Change Order Logs

Electrification Contract

Change Order Authority (5% of BBII Contract) **5% x $696,610,558 = $34,830,528**

Date	Change Number	Description	CCO Amount	Change Order Authority Usage[1]	Remaining Authority
08/31/17	BBI-053-CCO-001	Track Access Delays Q4 2016	$85,472	0.25%	$34,745,056
02/28/18	BBI-053-CCO-003	Deletion of Signal Cable Meggering (Testing)	($800,000)	(2.30%)	$35,545,056
02/21/18	BBI-053-CCO-004	Field Order for Differing Site Condition Work Performed on 6/19/17	$59,965	0.17%	$35,485,091
03/12/18	BBI-053-CCO-006	Track Access Delays for Calendar Quarter 1 2017	$288,741	0.83%	$35,196,350
04/24/18	BBI-053-CCO-002	Time Impact 01 Associated with Delayed NTP	$9,702,667	0.00%[2]	-
04/24/18	BBI-053-CCO-008	2016 Incentives (Safety, Quality, and Public Outreach)	$750,000	0.00%[2]	-
05/31/18	BBI-053-CCO-009	16th St. Grade Crossing Work Removal from BBII Contract	($685,198)	(1.97%)	$35,881,548
05/31/18	BBI-053-CCO-012	2017 Incentives (Safety, Quality, and Public Outreach)	$1,025,000	0.00%[2]	-
06/25/18	BBI-053-CCO-010	Pothole Change Of Shift	$300,000	0.86%	$35,581,548
06/25/18	BBI-053-CCO-013	Field Order for Signal Cable Relocation (FO# 31)	$95,892	0.28%	$35,485,656
06/25/18	BBI-053-CCO-015	TASI Pilot Transportation 2017	$67,345	0.19%	$35,418,311
06/26/18	BBI-053-CCO-005	Field Orders for Signal Cable Relocation (FO#s 26, 30)	$191,836	0.55%	$35,226,475
06/28/18	BBI-053-CCO-014	Field Orders for Signal Cable Relocation (FO-36 & FO-38)	$145,694	0.42%	$35,080,781
06/29/18	BBI-053-CCO-007	Track Access Delays for Calendar Quarter 2 2017	$297,512	0.85%	$34,783,269
06/29/18	BBI-053-CCO-011	Field Orders for Differing Site Condition (FO#s Partial 07A , 08-14)	$181,013	0.52%	$34,602,256
06/29/18	BBI-053-CCO-017	Field Order for NorCal Utility Potholing (FO# 27)	$93,073	0.27%	$34,509,183
06/29/18	BBI-053-CCO-018	Field Order for NorCal Utility Potholing (FO# 29)	$76,197	0.22%	$34,432,986
06/29/18	BBI-053-CCO-020	Field Orders for Differing Site Condition (FO#s 15-19)	$118,364	0.34%	$34,314,622
7/19/2018	BBI-053-CCO-019	Field Order for NorCal Utility Potholing (FO-032)	$88,956	0.26 %	$34,225,666
7/19/2018	BBI-053-CCO-021	As In-Service (AIS) Drawings for Segment 2 and 4 Signal Design (CN-009)	$105,000	0.30 %	$34,120,666
7/25/2018	BBI-053-CCO-022	CEMOF Yard Traction Power Feed (CN-008)	$332,700	0.96 %	$33,787,966
7/31/2018	BBI-053-CCO-028	Sonic Echo Impulse Testing	$4,541	0.01 %	$33,783,425
7/31/2018	BBI-053-CCO-026	TASI Pilot Transportation 2018 (CNC-0022)	$50,409	0.14%	$33,733,016
7/31/2018	BBI-053-CCO-027	Signal Cable Relocation (FOs-040 & 051)	$196,114	0.56%	$33,536,902
9/27/2018	BBI-053-CCO-030	Delete Spare 115k Disconnect Switches	($19,000)	(0.05)%	$33,555,902
9/28/2018	BBI-053-CCO-031	Bldg A HVAC and FOB Card Reader Systems	$76,500	0.22 %	$33,479,402
9/28/2018	BBI-053-CCO-025A	Addition of Shunt Wire at Transverse Utility Crossing Locations - Design	$925,000	2.66 %	$32,554,402
9/28/2018	BBI-053-CCO-016A	UPRR MT-1 Pole Relocation - Design Changes	$903,000	0.00%[2]	-
9/28/2018	BBI-053-CCO-024A	PG&E Utility Feed Connection to TPS#1 and TPS#2 (Design Only)	$727,000	0.00%[2]	-
12/17/2018	BBI-053-CCO-032	PS-2 Site Relocation (Design Only)	$291,446	0.84%	$32,262,956
1/17/2019	BBI-053-CCO-023	Insulated Rail Joints	$2,694,519	0.00%[2]	-
1/17/2019	BBI-053-CCO-029	CHSRA Early Pole Relocation (Design Only)	$625,000	0.00%[2,3]	-
2/5/2019	BBI-053-CCO-040A	Increase in Potholing Quantity (unit price contract bid item by 25%)	$1,662,500	4.77 %	$30,600,456

Change Order Authority (5% of BBII Contract) **5% x $696,610,558 = $34,830,528**

Date	Change Number	Description	CCO Amount	Change Order Authority Usage[1]	Remaining Authority
3/5/2019	BBI-053-CCO-042A	TPSS-2 VTA/BART Pole Relocation (Design Only) (CNPA funded by VTA)	$110,000	0.32%[3]	$30,490,456
3/11/2019	BBI-053-CCO-036	Field Order for Signal Cable Relocation (FO-064)	$86,538	0.25%	$30,403,918
3/20/2019	BBI-053-CCO-035	Millbrae Avenue Existing Overhead Barrier	($40,000)	(0.11)%	$30,443,918
3/19/2019	BBI-053-CCO-046	Training in Design Software and Potholing	$136,611	0.39%	$30,307,307
4/8/2019	BBI-053-CCO-041	Grade Crossing Warning System (CN59) – 5 mph Speed Check	$446,982	1.28%	$29,860,325
5/30/2019	BBI-053-CCO-044	Additional Daytime Potholing (Increase Quantity by 500 in Segment 4)	$150,000	0.43 %	$29,710,325
6/6/2019	BBI-053-CCO-048	Power Metering Devices	$101,908	0.29 %	$29,608,417
6/13/2019	BBI-053-CCO-045	Incentive Payment for 2018	$1,025,000	0.00%[2]	-
6/13/2019	BBI-053-CCO-024B	PG&E Utility Feed Connection to TPS #1 and TPS#2 (Material On Hand)	$1,600,000	4.59 %	$28,008,417
6/24/2019	BBI-053-CCO-043	PS-5 Site Relocation (Design Only)	$348,000	1.00 %	$27,660,417
6/24/2019	BBI-053-CCO-054	Change Design Sequence for OCS Foundations	$37,500	0.11%	$27,622,917
7/1/2019	BBI-053-CCO-040B	Increase Quantity for Utilities Potholing (Bid Item #9)	$1,867,700	5.36 %	$25,755,217
7/10/2019	BBI-053-CCO-033A	Relocation of PS3 (Design) (CNPA funded by BGSP)	$500,000	1.44 %[3]	$25,255,217
8/15/2019	BBI-053-CCO-047	CEMOF Slot Drains (Design Only)	$69,000	0.20%	$25,186,217
8/16/2019	BBI-053-CCO-055	Sheriff's Deputy in Segment 4B	$4,644	0.01%	$25,181,573
9/3/2019	BBI-053-CCO-037	Field Orders for Signal Cable Relocation (FO-053 & FO-059)	$184,576	0.53%	$24,996,997
9/7/2019	BBI-053-CCO-057	Mediator with Technical Expertise	$0	0.00%	$24,996,997
9/27/2019	BBI-053-CCO-061	Interconnect Renaming of Circuit Numbers	$58,058	0.17%	$24,938,939
9/27/2019	BBI-053-CCO-063A	Track Access Delays - Quarter 1 2018 (Partial)	$343,496	0.99%	$24,595,443
10/21/2019	BBI-053-CCO-064	TPS-2 VTA Pole Height Redesign (CNPA funded by VTA)	$31,000	0.09%[3]	$24,564,443
11/15/2019	BBI-053-CCO-038	Field Order for Signal Cable Relocation (FO-079 & FO-085)	$187,764	0.54 %	$24,376,680
11/26/2019	BBI-053-CCO-025B	Addition of OCS Shunt Wires in Segments 2 & 4 - Wire Assembly Materials Only	$144,370	0.41 %	$24,232,310
12/11/2019	BBI-053-CCO-065A	Foundation Inefficiencies S2WA5	$401,501	1.15%	$23,830,809
12/17/2019	BBI-053-CCO-025C	Addition of OCS Shunt Wires in Segments 2 & 4 – Pole Assembly Materials Only	$884,500	2.54 %	$22,946,309
1/7/2020	BBI-053-CCO-066A	Increase Quantity for Contaminated Soils (Bid Unit Price Item #1)	$950,000	2.73 %	$21,996,309
2/5/2020	BBI-053-CCO-023B	Insulated Rail Joints De-stressing	$890,600	2.56 %	$21,105,709
		Total	**$31,177,005**	**39.40 %**	**$21,105,709**

Notes:

1. When the threshold of 75% is reached, staff may return to the Board to request additional authority.
2. Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.
3. Third party improvements/CNPA projects that are funded with non-PCEP funds.

EMU Contract

Change Order Authority (5% of Stadler Contract) **5% x $550,899,459 = $27,544,973**

Date	Change Number	Description	CCO Amount	Change Order Authority Usage[1]	Remaining Authority
09/22/2017	STA-056-CCO 001	Contract General Specification and Special Provision Clean-up	$0	0.00%	-

Change Order Authority (5% of Stadler Contract) **5% x $550,899,459 = $27,544,973**

Date	Change Number	Description	CCO Amount	Change Order Authority Usage[1]	Remaining Authority
10/27/2017	STA-056-CCO 002	Prototype Seats and Special Colors	$55,000	0.20%	$27,489,973
11/02/2017	STA-056-CCO 003	Car Level Water Tightness Test	$0	0.00%	-
12/05/2017	STA-056-CCO-004	Onboard Wheelchair Lift 800 Pound Capacity Provisions	$848,000	3.08%	$26,641,973
11/03/2017	STA-056-CCO 005	Design Progression (multiple)	$0	0.00%	-
12/12/2017	STA-056-CCO 006	Prototype Seats and Special Colors	($27,500)	(0.10%)	$26,669,473
01/17/2018	STA-056-CCO 007	Multi-Color Destination Signs	$130,760	0.47%	$26,538,713
02/09/2018	STA-056-CCO-008	Adjustment to Delivery and LDs due to delayed FNTP	$490,000	0.00%[2]	-
02/12/2018	STA-056-CCO-009	Ship Cab Mock-up to Caltrain	$53,400	0.19%	$26,485,313
04/17/2018	STA-056-CCO-010	Onboard Wheelchair Lift Locations	($1,885,050)	(6.84%)	$28,370,363
04/17/2018	STA-056-CCO-011	Multiple Change Group 3 and Scale Models	$0	0.00%	-
10/29/2018	STA-056-CCO-012	Multiple Change Group 4	$0	0.00%	-
10/29/2018	STA-056-CCO-013	Wheelchair Lift Installation Redesign	$228,400	0.83%	$28,141,963
12/14/2018	STA-056-CCO-014	PTC System Change	$0	0.00%	-
12/22/2018	STA-056-CCO-015	EMU Option Cars	$172,800,047	0.00%[2,3]	-
6/26/2019	STA-056-CCO-016	Testing at TTCI (Pueblo Facility) - First Trainset	$3,106,428	11.28 %	$25,035,535
8/27/2019	STA-056-CCO-017	Virtual Reality Experience	$400,000	1.45 %	$24,635,535
8/21/2019	STA-056-CCO-018	EMI Conducted Emissions Limits	$0	0.00%	$24,635,535
8/8/2019	STA-056-CCO-019	Option Car Payment Milestones	$0	0.00%	$24,635,535
8/21/2019	STA-056-CCO-020	Multiple No Cost No Schedule Impact Changes Group 5	$0	0.00%	$24,635,535
10/28/2019	STA-056-CCO-021	Plugging of High-Level Doorways	$736,013	2.67%	$23,899,523
11/13/2019	STA-056-CCO-022	Add Flip-Up Seats into Bike Cars (CNPA: $1.96M funded by Non-PCEP)	$1,961,350	7.12%[3]	$21,938,173
		Total	**$178,896,847**	**20.36 %**	**$21,938,173**

Notes:

1. When the threshold of 75% is reached, staff may return to the Board to request additional authority.
2. Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.
3. Third party improvements/CNPA projects that are funded with non-PCEP funds.

SCADA Contract

Change Order Authority (15% of ARINC Contract) **15% x $3,446,917 = $517,038**

Date	Change Number	Description	CCO Amount	Change Order Authority Usage[1]	Remaining Authority
	None to date				
		Total	**$0**	**0.00%**	**$517,038**

Notes:

1. When the threshold of 75% is reached, staff may return to the Board to request additional authority.
2. Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.

Tunnel Modifications Contract

Change Order Authority (10% of ProVen Contract[1]) **10% x $55,077,777 = $5,507,778**

Date	Change Number	Description	CCO Amount	Change Order Authority Usage[2]	Remaining Authority
3/27/2019	PROV-070-CCO-003	Track Access Delay	$25,350	0.46 %	$5,482,428
3/27/2019	PROV-070-CCO-004	Additional OCS Potholing Due to Conflict with Existing Utilities	$70,935	1.29 %	$5,411,493
3/27/2019	PROV-070-CCO-005	Install Tie Backs and Piles in Boulders at Tunnel 4	$29,478	0.54 %	$5,382,015
3/28/2019	PROV-070-CCO-001	Partnering Meetings (50% PCEP)	$14,443	0.26 %[4]	$5,367,572
4/25/2019	PROV-070-CCO-002	Furnish Galvanized E-clips	$37,239	0.68 %	$5,330,333
4/30/2019	PROV-070-CCO-006	Additional Rock Bolts and Testing	$22,549	0.41 %	$5,307,784
5/23/2019	PROV-070-CCO-013	Late Removal of Leaky Feeder Tunnel 4 (T-4)	$21,225	0.39 %	$5,286,559
5/28/2019	PROV-070-CCO-014	OCS Piles Utility Conflict at Tunnel-1 South (T-1S)	$16,275	0.30 %	$5,270,284
5/29/2019	PROV-070-CCO-012	OCS Piles Utility Conflict at T-4S	$6,871	0.12 %	$5,263,413
5/31/2019	PROV-070-CCO-016A	Portal Structure Detailing Changes	$84,331	1.53 %	$5,179,082
6/18/2019	PROV-070-CCO-009	Creosote Ties Covering (CNPA - Drainage $3,116.00)	$3,116	0.06 %[4]	$5,175,966
6/28/2019	PROV-070-CCO-008	Micropiles at South Tunnel-2 South (T-2S)	$41,322	0.75 %	$5,134,644
6/28/2019	PROV-070-CCO-010	Salvage Transition Panels (CNPA - Drainage $6,144.00)	$6,144	0.11 %[4]	$5,128,500
6/28/2019	PROV-070-CCO-011	Demo PVC and Plug Tunnel-1 South (T-1S) (CNPA - Drainage $4,035.00)	$4,035	0.07 %[4]	$5,124,465
6/28/2019	PROV-070-CCO-020	Unidentified SD Conflict with Junction Inlet (CNPA - Drainage $1,976.00)	$1,976	0.04 %[4]	$5,122,489
9/26/2019	PROV-070-CCO-007	Canopy Tube Drilling	$89,787	1.63%	$5,032,702
9/26/2019	PROV-070-CCO-023	Over-excavate Trapezoidal Ditch at T-1N (CNPA - Drainage $46,914.00)	$46,914	0.85%[4]	$4,985,788
10/4/2019	PROV-070-CCO-029	Additional DryFix Pins	$105,000	1.91%	$4,880,788
10/4/2019	PROV-070-CCO-021	Out of Sequence Piles	$185,857	3.37 %	$4,694,931
10/30/2019	PROV-070-CCO-017	Hard Piping in T-4 (CNPA - Drainage $2,200.00)	$2,200	0.04 %[4]	$4,692,731
1/25/2020	PROV-070-CCO-027	Grout Quantity Underrun	($1,216,000)	(22.08)%	$5,908,731
1/29/2020	PROV-070-CCO-026	HMAC Quantity Overrun (CNPA - Drainage $160,000.00)	$160,000	2.9 %	$5,748,731
		Total	**($240,953)**	**(4.37)%**	**$5,748,731**

Notes:

1. Tunnel modifications contract ($55,077,777) includes: Notching ($25,281,170), Drainage ($13,196,607) and OCS Installation ($16,600,000).
2. When the threshold of 75% is reached, staff may return to the Board to request additional authority.
3. Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.
4. Third Party Improvements/CNPA Projects that are funded with non-PCEP funds.

CEMOF Modifications Contract

Change Order Authority (10% of ProVen Contract) **10% x $6,550,777 = $655,078**

Date	Change Number	Description	CCO Amount	Change Order Authority Usage[1]	Remaining Authority
1/16/2020	PROV-071-CCO-001	Change Casing Size of Siphon Line to Schedule 80 PVC Pipe	$3,849	0.59 %	$651,229
1/13/2020	PROV-071-CCO-002	Leakage test for IW line	$1,339	0.20 %	$649,890
1/15/2020	PROV-071-CCO-003	Roughen surface of existing concrete	$3,159	0.48 %	$646,731
1/9/2020	PROV-071-CCO-004	Change Catch Basin Size from 24"X24" to 36" Round	$14,415	2.20 %	$632,316
1/15/2020	PROV-071-CCO-005	Hand Dig around Communication Lines	$906	0.14 %	$631,410
1/17/2020	PROV-071-CCO-008	Change Storm Drain Line A Material from 12-inch RCP Pipe to 12-inch PVC Pipe	$3,583	0.55 %	$627,827
1/16/2020	PROV-071-CCO-009	Demolition of Existing Exterior Light	$1,558	0.24 %	$626,269
2/13/2020	PROV-071-CCO-010	Deletion of Plastic Bollards Around New Inspection Pit	($3,324)	(0.51)%	$629,593
2/13/2020	PROV-071-CCO-011	Fixing Broken Conduit in Concrete Slab North of Maintenance Building	$4,286	0.65 %	$625,307
2/13/2020	PROV-071-CCO-012	Epoxy Dowels at New Stairwells	$3,526	0.54 %	$621,781
2/13/2020	PROV-071-CCO-013	Deletion of the Removal and Replacement of Pump Disconnect Switches	($7,007)	(1.07)%	$628,788
2/13/2020	PROV-071-CCO-014	Recycled Base Rock for Backfill at Pressurized Water Line at Parts Storage Warehouse	$1,411	0.22 %	$627,377
2/20/2020	PROV-071-CCO-015	Cut and Cap Oil Line	$1,002	0.15 %	$626,375
2/25/2020	PROV-071-CCO-016	Installation of Homerun Conduit	$27,404	4.18 %	$598,971
2/25/2020	PROV-071-CCO-017	Potholing for Boosted Water Line	$18,476	2.82 %	$580,495
2/28/2020	PROV-071-CCO-018	Cap Compressed Air Line	$9,519	1.45 %	$570,976
2/28/2020	PROV-071-CCO-019	Acoustic Ceiling Removal at Component Test Room	$4,253	0.65 %	$566,723
		Total	**$88,355**	**13.49 %**	**$566,723**

Notes:

1. When the threshold of 75% is reached, staff may return to the Board to request additional authority.
2. Change approved by the Board of Directors – not counted against the Executive Director's Change Order Authority.

AMTRAK AEM-7 Contract

Change Order Authority (Lump Sum) **Up to $150,000**

Date	Change Number	Description	CCO Amount	Change Order Authority Usage[1]	Remaining Authority
10/25/2019	AMTK-066-CCO-001	Change to Amtrak Contract for Test Locomotives	(72,179)	(48.12%)	222,179
		Total	**(72,179)**	**(48.12%)**	**$222,179**

Notes:

1. When the threshold of 75% is reached, staff may return to the Board to request additional authority.

Appendix F – Risk Table

Listing of PCEP Risks and Effects in Order of Severity

ID	RISK DESCRIPTION	EFFECT(S)
314	The contractor may not complete and install signal design including Two-speed check (2SC) modifications within budget and schedule.	Delay and additional cost for rework.
303	Extent of differing site conditions and associated redesign efforts results in delays to the completion of the electrification contract and increases program costs.	Extends construction of design-build contract with associated increase in project costs • DSC design cost • Inefficiencies • Construction costs related to DSCs (i.e., larger foundations) • Additional potholing
257	Potential that modifications to the PTC database and signal software are not completed in time for cutover and testing.	Failure to follow the Configuration Management process will result in delays to completing PCEP signal cutovers. This could delay milestone completion as well as project substantial completion.
267	Additional property acquisition is necessitated by change in design.	New project costs and delays to schedule.
273	Contractor generates hazardous materials, that necessitates proper removal and disposal in excess of contract allowances and expectations.	Delay to construction while removing and disposing of hazardous materials resulting in schedule delay, increased construction costs, and schedule delay costs.
308	Rejection of DVR for ATF and static wires results in cost and schedule impacts to PCEP.	Delay and delay claims
313	Sub-optimal contractor sequencing, when progressing design and clearing foundation locations may result in construction inefficiencies	Contractor claims for increase in construction and design costs, and reduced production rates extending construction duration
298	Changes to PTC implementation schedule could delay completion of the electrification work. Cost and schedule of BBII contract could increase as a result of change in PTC system	1. Changes in datafiles could affect what Balfour provides; could delay timing for testing; could change books that FRA had to review. 2. Full integrated testing between EMU and wayside cannot be conducted without PTC in place. 3. Delays to completion of signal system could result in conflicts with PTC testing and PCEP construction and integrated testing. 4. Potential for track access impacts due to PTC testing.

ID	RISK DESCRIPTION	EFFECT(S)
242	Track access does not comply with contract-stipulated work windows.	Contractor claims for delays, schedule delays and associated costs to owner's representative staff.
209	TASI may not have sufficient number of signal maintainers for testing.	• Delays to construction/testing. • Delays to completion of infrastructure may delay acceptance of vehicles
223	Major program elements may not be successfully integrated with existing operations and infrastructure in advance of revenue service.	Proposed changes resulting from electrification may not be fully and properly integrated into existing system. Rework resulting in cost increases and schedule delays
240	Property not acquired in time for contractor to do work. Property Acquisition not complete per contractor availability date <>Fee <>Easement <>Contract stipulates that if parcels are not available by contract date, there is only a delay if parcels are not available by the time contractor completes the Segment	• Potential delays in construction schedule
263	Collaboration across multiple disciplines to develop a customized rail activation program may fail to comprehensively address the full scope of issues required to operate and maintain an electrified railroad and decommission the current diesel fleet.	Delay in testing of EMUs. Delay in Revenue Service Date. Additional costs for Stadler and BBII due to overall schedule delays.
010	Potential for Stadler's sub-suppliers to fall behind schedule or delays in parts supply chain result in late completion of vehicles.	• Delay in obtaining parts / components. • Cost increases. (See Owner for allocation of costs) • Schedule increase - 3 months (See Owner for allocation of damages associated with this Risk)
244	Delays to completion of Segment 4 and then the entire alignment would create storage issues and impede the ability to exercise (power up and move) EMUs and delay testing of the delivered EMUs.	Delay claims from the EMU contractor (Stadler) and expiration of the EMU 2 year warranty before putting significant mileage on the EMUs.
312	Project executed the OCS Option; increase in procurement durations for necessary OCS Parts (Conductor Rail) has led to an associated increase in costs and schedule duration for the overall project	Additional cost to project, primarily from additional bus bridges.

ID	RISK DESCRIPTION	EFFECT(S)
067	Relocation of overhead utilities must precede installation of catenary wire and connections to TPSs. Relocation work will be performed by others and may not be completed to meet BBII's construction schedule.	Delay in progress of catenary installation resulting in claims and schedule delay
115	Other capital improvement program projects compete with PCEP for track access allocation and requires design coordination (design, coordination, integration).	Schedule delay as resources are allocated elsewhere, won't get track time, sequencing requirements may delay PCEP construction, track access requirements must be coordinated.
136	UP reviews of BBI design may extend project duration.	Delays to completion of design and claims for delay.
261	EMU electromechanical emissions and track circuit susceptibility are incompatible.	Changes on the EMU and/or signal system require additional design and installation time and expense.
277	Inadequate D-B labor to support multiple work segments	Additional cost and time
281	BBI's ability to complete base scope for signal/pole adjustments may be required to remedy sight distance impediments arising from modifications to original design.	Add repeater signals, design duct bank would result in increased design and construction costs.
285	Potential for inflation, (except with respect to Maintenance Option) to increase contractor costs.	Higher cost
286	Potential for wage escalation, (except for Maintenance Option) to increase contractor costs.	Higher cost
287	Design changes may necessitate additional implementation of environmental mitigations not previously budgeted.	Increased cost for environmental measures and delays to construct and overall delay in construction schedule
296	BBII needs to complete interconnection and traction power substations be sufficiently complete to accept interim power	Delay in testing and increased costs
309	Potential that vehicles will not receive timely notification from FRA of compliance with acceptable alternate crash management standards	Delays to completion of construction and additional cost to changes in design.
319	Failure of BBI to order cages in advance results in delays to foundation installation	Delays in installation of catenary system and additional cost for track protection and oversight.

ID	RISK DESCRIPTION	EFFECT(S)
013	Vehicle manufacturer could default.	Prolonged delay to resolve issues (up to 12 months) Increase in legal expenses Potential price increase to resolve contract issue
012	Potential for electromagnetic interference (EMI) to private facilities with sensitive electronic equipment caused by vehicles.	• Increased cost due to mitigation • Potential delay due to public protests or environmental challenge.
056	Lack of operations personnel for testing.	• Testing delayed. • Change order for extended vehicle acceptance.
088	Construction safety program fails to sufficiently maintain safe performance.	Work stoppages due to safety incidents resulting in schedule delay and additional labor costs.
161	Unanticipated costs to provide alternate service (bus bridges, etc.) during rail service disruptions.	Cost increase.
183	Installation and design of new duct bank takes longer because of UP coordination	Schedule - Delay. May need to use condemnation authority to acquire easement. Cost - Additional cost for PG&E to make connections increasing project costs
247	Timely resolution of 3rd party design review comments to achieve timely approvals	Delay to completion of design and associated additional labor costs.
270	OCS poles or structures as designed by Contractor fall outside of JPB row	Additional ROW Take, additional cost and time
294	UP does not accept catenary pole offsets from centerline of track necessitating further negotiation or relocation of poles	Delay to construction and additional costs for redesign and ROW acquisition.
302	May not have a 110-mph electrified section of track that will be ready for testing for final acceptance of vehicle.	Contract with Stadler implies readiness of Electrification Project and track upgrades for EMU testing Delays in testing may increase Caltrain costs.
304	Solution to FRA concerns over bike storage impeding path to emergency exit windows path results in increased costs and potential rework.	Protracted negotiations with FRA to achieve original design
318	Change of vehicle suppliers results in additional first article inspections at cost to JPB	PCEP incurs additional cost to validate supplier and product, including repeat FAIs as needed

ID	RISK DESCRIPTION	EFFECT(S)
082	Unexpected restrictions could affect construction progress: <> night work <> noise <> local roads <> local ordinances	• Reduced production rates. • Delay
241	Segment 4 substantially complete (Segment 4, TPS-2, Interconnect) may not be installed prior to scheduled exercising of EMUs	Inability to exercise EMUs
253	Risk that existing conditions of Caltrans-owned bridges will not support bridge barriers. The existing bridge conditions and structural systems are unknown and may not support mounting new work Design will need to prove new barriers will not impact existing capacity of the bridges prior to Caltrans's approval for construction. Without approval of design and issuance of permit, there is risk to the schedule for the work and also budget if during design existing bridge will require some upgrades due to the introduction of new attachments.	Delays to issuance of permit for construction while negotiating and executing an operation and maintenance agreement for equipment installed on bridges; existing bridge deficiencies could result in additional costs to PCEP.
011	Risks in achieving acceptable vehicle operations performance: <> software problems <> electrical system problems <> mechanical problems <> systems integration problems Increased issues lately with vehicles regarding system integration and compatibility.	Cost increase. Delays vehicle acceptance Potential spill-over to other program elements
014	Contractor's proposal on stakeholder requested changes to the vehicles (e.g., High Level Doors in lieu of windows as emergency exits) may significantly exceed JPB authorized amount.	Schedule delay. Cost increase.
031	New cars possibly not reliable enough to be put into service as scheduled	Operating plan negatively impacted
078	Need for unanticipated, additional ROW for new signal enclosures.	Delay while procuring ROW and additional ROW costs.
171	Electrification facilities could be damaged during testing.	Delay in commencing electrified operations.

ID	RISK DESCRIPTION	EFFECT(S)
190	Track roughness and cant could present problems for European vehicles which are accustomed to a higher class of track bed maintenance. Becomes problematic with concept of specifying "off-the-shelf" design.	Vehicle cost increase. Vehicle delivery delay.
251	Subcontractor and supplier performance to meet aggressive schedule <>Potential issue meeting Buy America requirements	Delay to production schedule resulting in increased soft costs and overall project schedule delay.
271	Need for additional construction easements beyond that which has been provided for Contractor proposed access and staging	Additional cost and time
272	Final design based upon actual Geotech conditions	Could require changes
289	Coordination and delivery of permanent power for power drops for everything except traction power substations along alignment	Can't test resulting in delays to schedule and associated additional project costs.
291	Order/manufacture of long lead items prior to 100% IFC design document that proves to be incorrect	Design change and/or delays
292	Potential that UPS will not fit in the spaces allotted to communications work within the buildings.	Requisite backup capacity units under design criteria could result in the need for larger unit than originally planned resulting in design and fabrication changes and associated schedule delays and costs.
311	Although project recordable injuries remain below the industry average, there have been numerous small impact incidents occurring that could potentially lead to a more serious event occurring.	The occurrence of a high impact safety event could result in project rework, construction delays, and increased project costs.
317	JPB may not make timely acquisition of resources to staff rail activation plan with key personnel.	Delay in operating electrified railroad - delay of RSD.
320	Balfour may not complete O&M Manuals and testing and commissioning plan and schedule in time for start-up of Segment 4.	Delay to energization of Segment 4 and therefore testing of EMUs
019	Potential for vehicle delivery to be hampered by international conflict; market disruption; labor strikes at production facility.	Delay in production of vehicle with associated cost implications.

ID	RISK DESCRIPTION	EFFECT(S)
021	EMU production delay. Possible that there are quality issues, failed factory tests, poor integration / control of suppliers.	Schedule Increase - up to 6 months (6 months float already built into 36 month schedule)
027	Vehicle power consumption may not meet requirements. <>System impact study and load flow show no issues	Issue with PG&E. Can't run full acceleration.
042	Full complement of EMUs not available upon initiation of electrified revenue service	Late delivery impacts revenue service date.
055	Failure to pass Qualification Testing.	Cost Increase - minimal Schedule delay
061	Latent defects in EMU vehicles.	Unbudgeted costs incurred from legal actions. Repairs take trains out-of-service.
101	PG&E may not be able to deliver permanent power for the project within the existing budget and in accordance with the project schedule	Additional project costs; potential delay to revenue service date
150	Number of OCS pole installation is significant. Any breakdown in sequencing of operations or coordination of multiple crews will have a substantial effect on the project.	Delay.
245	Failure of BBI to submit quality design and technical submittals in accordance with contract requirements • $3-$5M/month burn rate for Owner's team during peak	Delays to project schedule and additional costs for preparation and review of submittals.
252	Failure of BBI to order/manufacture long lead items prior to 100% IFC design document approval by JPB	Delays to project schedule and additional cost for contractor and JPB staff time.
306	Possible legal challenge and injunction to any changes in PCEP requiring subsequent CEQA or NEPA environmental clearance documentation/actions.	Worst case: a judge issues an injunction, which would prohibit any work ONLY on the project scope of the environmental document. Impact to the project from cost and schedule impact depends on if work is on the critical or becomes on the critical path.
008	Requests for change orders after vehicles are in production	Delays to manufacturing of vehicles and additional design and manufacturing costs.

ID	RISK DESCRIPTION	EFFECT(S)
016	Inter-operability issues with diesel equipment.	Cost increase.
023	Manufacturer cannot control vehicle weight to meet specifications.	Increased operating cost.
025	Potential that vehicles cannot meet requirements for "Mean Time to Repair" (MTTR).	Increased maintenance cost.
032	Failure to come up to speed on stakeholder safety requirements: <> FTA <> FRA <> CPUC	Takes longer than expected to gain FRA/FTA concurrence on waiver and/or level boarding requirements.
051	Damage during delivery of first six EMUs.	Schedule delay
053	Failure to meet Buy America requirements. (Contractor definition of component v. sub-component may not be accepted by Caltrain / FTA.)	Potential need for negotiations that might lead to delay of project award. (BA is not negotiable)
054	Infrastructure not ready for vehicles (OCS, TPS, Commissioning site / facility).	Increases cost if done off property
069	Potential need for additional construction easements. Especially for access and laydown areas. Contractor could claim project is not constructible and needs more easements after award.	Increased cost Delay
087	Unanticipated HazMat or contaminated hot spots encountered during foundation excavations for poles, TPSS, work at the yards.	Increased cost for clean-up and handling of materials and delay to schedule due to HazMat procedures.

ID	RISK DESCRIPTION	EFFECT(S)
106	Potential that DB contractor will have insufficient field resources (personnel or equipment) to maintain aggressive schedule. Multiple segments will need to be under design simultaneously. Labor pool issue. 32 qualified linemen will be needed. Potential there is not enough available. Big storm damage anywhere in US will draw from the pool to make line repairs. Possible shortages with other specialty crafts as well.	Delay.
151	Public could raise negative concerns regarding wheel/rail noise.	Increased cost to mitigate: <> grind rails <> reprofile wheels <> sound walls
182	Compliance with Buy America requirements for 3rd party utility relocations. <>Utility relocations covered under existing Caltrain agreements that require utilities to move that will not have effect on project cost - will not be Buy America <>Installation of new equipment inside PG&E substations that will provide all PG&E customers, about 1/6 of that provides power to our system - is upgrade that benefits all customers subject to Buy America requirements, is it 1/6th, or 100% <>Risk is substation not relocations <>Substation equipment is available domestically, has 6 month longer lead time and increased cost of 20%	• Increased cost • Delay
192	Environmental compliance during construction. - Potential impact to advancing construction within the vicinity of any cultural finds that are excavated. - Failure to meet the commitments contained within the PCEP EA, FEIR and permit conditions	• Delay • Cost increase

ID	RISK DESCRIPTION	EFFECT(S)
195	Introduction of electrified train service will require training of first responders in working in and around the rail corridor. The new vehicles will be considerably quieter than the existing fleet and the presence of high voltage power lines will require new procedures for emergency response. A new training program will need to be developed and disseminated for: • Fire, police, and first responders • Local communities • Schools	Safety hazards resulting in incidents that delay construction and increase labor cost. Delays in RSD until training is completed as requirement of safety certification process.
237	JPB needs an agreement with each city in which catenary will be strung over an existing grade crossing (17 in all) under GO 88 (grade crossings). These agreements must be executed subsequent to installing overhead catenary. JPB is preparing a response to CPUC while working with the cities. Delays in reaching agreement could have impacts on schedule and budget.	Not completing the grade crossing diagnostics and getting agreement from the cities on the results can result in delays to necessary approvals for the project and revenue service.
248	3rd party coordination <>Jurisdictions, Utilities, UP, Contractors <>D/B needs to provide timely information to facilitate 3rd party coordination <>Risk is for construction	Delays in approvals resulting in project schedule delays and associated costs.
250	Potential for municipalities to request betterments as part of the electrification project.	Delay to project schedule in negotiating betterments as part of the construction within municipalities and associated increased cost to the project as no betterments were included in the project budget.
254	Potential that bridge clearance data are inaccurate and that clearances are not sufficient for installation of catenary.	Results in additional design and construction to create sufficient clearance.
259	Work on 25th Avenue Grade Separation Project could delay Balfour construction schedule.	• Increased cost for BBI as catenary construction in this section was anticipated to be constructed under the 25th Avenue Grade Separation Project. • Potential delays in construction schedule • Risk is delay to BBI
266	Verizon poles in conflict with OCS may not be removed in advance of OCS installation.	Delay in progress of catenary installation resulting in claims and schedule delay

ID	RISK DESCRIPTION	EFFECT(S)
274	JPB as-built drawings and existing infrastructure to be used as basis of final design and construction is not correct	Additional cleanup of as-builts after PCEP construction
275	DB fails to verify as-built drawings and existing infrastructure	Additional cleanup of as-builts after PCEP construction
278	Failure of D/B contractor and subcontractors and suppliers to meet Buy America requirements	Delays while acceptable materials are procured and additional costs for delays and purchase of duplicative equipment.
282	Failure to maintain dynamic envelope and existing track clearances consistent with requirements.	Redesign entailing cost and schedule impacts.
284	Compliance with project labor agreement could result in inefficiencies in staffing of construction.	Increase in labor costs and less efficient construction resulting in schedule delays.
290	Delays in agreement and acceptance of initial VVSC requirements database.	Delay to design acceptance
293	Readiness of 115kV interconnect for temporary power to support testing	Delay in testing
297	Cost and schedule of Stadler contract could increase as a result of this change in PTC system Delay of PTC may delay acceptance of EMUs.	1) Full integrated testing between EMU and wayside cannot be conducted without PTC in place. 2) Delay in EMU final design for PTC and potential PTC interfaces. Need to finalize braking system sequence priority.

Appendix G – MMRP Status Log

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
AES-2a: Minimize OCS construction activity on residential and park areas outside the Caltrain ROW.	**X**	**X**			Ongoing	The OCS proposed construction schedule has been provided to the JPB. OCS construction began the week of October 2, 2017. The D-B has utilized the potholing process to assist in locating conflicts in the 35% design and attempting to relocate OCS pole locations within the ROW.
AES-2b: Aesthetic treatments for OCS poles, TPFs in sensitive visual locations, and Overbridge Protection Barriers.	**X**				Ongoing	The design requirements indicated in the measure have been implemented as described, and coordination with the specific jurisdictions regarding pole colors and design is ongoing. Coordination with the JPB & local jurisdiction regarding Overbridge Protection Barriers and TPFs is ongoing.
AES-4a: Minimize spillover light during nighttime construction.		**X**			Ongoing	OCS construction began the week of October 2, 2017; and the BBI community relations lead has notified nearby residents of upcoming construction. During construction, lighting is faced inward, towards the railroad tracks, and any complaints will be documented and addressed by the BBI community relations lead.
AES-4b: Minimize light spillover at TPFs.	**X**				Upcoming	The design requirements indicated in the measure are being utilized in the design and construction process.
AQ-2a: Implement BAAQMD basic and additional construction mitigation measures to reduce construction-related dust.	**X**	**X**			Ongoing	The Dust Mitigation Plan was submitted to the JPB and approved. The requirements in the Dust Mitigation Plan will be implemented throughout the construction period and documented in daily reports.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
AQ-2b: Implement BAAQMD basic and additional construction mitigation measures to control construction-related ROG and NOX emissions.	**X**	**X**			Ongoing	The Equipment Emissions Control Plan was submitted to the JPB and approved. The requirements in the Equipment Emissions Control Plan will be implemented throughout the construction period and documented in daily reports.
AQ-2c: Utilize clean diesel-powered equipment during construction to control construction-related ROG and NOX emissions.	**X**	**X**			Ongoing	The Equipment Emissions Control Plan was submitted to the JPB and approved. The requirements in the Equipment Emissions Control Plan will be implemented throughout the construction period and documented in daily reports.
BIO-1a: Implement general biological impact avoidance measures.	**X**	**X**			Ongoing	Worker Environmental Awareness Training is provided to all project-related personnel before they work on the project. All measures as described will be implemented throughout the construction period and documented in daily reports.
BIO-1b: Implement special-status plant species avoidance and revegetation measures.	**X**	**X**	**X**		Complete	Not applicable. Subsequent habitat assessment and avoidance of Communication Hill eliminated any potential to affect special-status plant species. The measure is not needed.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
BIO-1c: Implement California red-legged frog and San Francisco garter snake avoidance measures.	**X**	**X**			Ongoing	Pre-construction surveys are occurring no more than 7 days prior to the initiation of construction activities nearby/adjacent to potential habitat for CRLF and SFGS. The Wildlife Exclusion Fencing Plans for Segments 1 and 4 were submitted and approved by the wildlife agencies, and installation and monitoring of wildlife exclusion fencing is ongoing. No CRLF / SFGS or sign of each species has been observed to date on the Project.
BIO-1d: Implement western pond turtle avoidance measures.	**X**	**X**			Ongoing	Pre-construction surveys are occurring no more than 7 days prior to the initiation of construction activities nearby/adjacent to potential habitat for WPT. No WPT or WPT sign have been observed to date on the Project.
BIO-1e: Implement Townsend's big-eared bat, pallid bat, hoary bat, and fringed myotis avoidance measures.	**X**	**X**			Ongoing	Pre-construction surveys are occurring no more than 7 days prior to the initiation of construction activities with the potential to disturb bats or their habitat. No special-status bats or sign have been observed to date on the Project.
BIO-1f: Implement western burrowing owl avoidance measures.	**X**	**X**			Ongoing	Protocol surveys for Western Burrowing Owl have been conducted from April–July, in 2017, 2018, and 2019, at previously identified potentially suitable habitat locations. Note that all of these locations are in Construction Segment 4 (southern Santa Clara and San Jose). No Burrowing Owls have been observed during the surveys conducted to date. Survey reports for the 2017, 2018, and 2019 surveys have been submitted to the JPB for the project

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
						record. In addition, pre-construction surveys of the potential BUOW habitat areas in Segment 4 are ongoing, as needed, and if required, they occur no more than 7 days prior to the onset of construction activities. Surveys for the 2020 breeding season will commence in March 2020.
BIO-1g: Implement northern harrier, white-tailed kite, American peregrine falcon, saltmarsh common yellowthroat, purple martin, and other nesting bird avoidance measures.	**X**	**X**			Ongoing	Nesting Bird and raptor surveys were conducted from February 1 through September 15, in 2017, 2018 and 2019, prior to project-related activities with the potential to impact nesting birds. Nesting Bird Surveys recommenced this reporting period for the 2020 nesting season (February 1, 2020). As of the end of the reporting period, there are no active nests observed on the Project.
BIO-1h: Conduct biological resource survey of future contractor-determined staging areas.	**X**	**X**			Ongoing	The agency-approved Qualified Biologist has conducted surveys of the staging areas currently being used for construction activities. No special-status species or other potentially sensitive biological resources were observed. The agency-approved Qualified Biologist will continue to survey ahead of the initiation of activities at planned staging areas as the Project moves into new construction areas.
BIO-1i: Minimize impacts on Monarch butterfly overwintering sites.	**X**	**X**			Ongoing	The agency-approved Qualified Biologist has periodically monitored the project limits to evaluate the presence of Monarch butterfly overwintering sites. No Monarch butterfly overwintering sites have been observed on the Project to date.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
BIO-1j: Avoid nesting birds and bats during vegetation maintenance.				**X**	Upcoming	To be completed during Project operation.
BIO-2: Implement serpentine bunchgrass avoidance and revegetation measures.	**X**	**X**	**X**		Complete	Not applicable. Subsequent habitat assessment and avoidance of Communication Hill eliminated any potential to affect serpentine bunchgrass. This measure is no longer needed.
BIO-3: Avoid or compensate for impacts on wetlands and waters.	**X**	**X**	**X**		Complete	The JPB has compensated for unavoidable wetland impacts by purchasing adequate credits from a wetlands mitigation bank approved by USACE and SFRWQCB.
BIO-5: Implement Tree Avoidance, Minimization, and Replacement Plan.	**X**	**X**	**X**		Ongoing	Tree removal and pruning activities were initiated in August 2017, and are ongoing, under the guidance of the BBI Arborist, and in accordance with the Tree Avoidance, Minimization, and Replacement Plan. Tree Removal and Pruning status is provided to the JPB on a regular basis.
BIO-6: Pay *Santa Clara Valley Habitat Plan* land cover fee (if necessary).	**X**				Complete	Not applicable. The SCVHP does not apply to the Project because TPS2, Option 1 was not selected and OCS does not extend to Communication Hill. This measure is not needed.
CUL-1a: Evaluate and minimize impacts on structural integrity of historic tunnels.	**X**				Upcoming	To be implemented prior to construction in tunnels.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
CUL-1b: Minimize impacts on historic decorative tunnel material.	X				Upcoming	To be implemented prior to construction in tunnels. Historic American Engineering Record (HAER) documentation was completed in October 2018, pursuant to this measure.
CUL-1c: Install project facilities in a way that minimizes impacts on historic tunnel interiors.	X				Upcoming	To be implemented prior to construction in tunnels.
CUL-1d: Implement design commitments at historic railroad stations	X				Complete	The Qualified Architectural Historian completed and submitted the HABS Level III documents to the JPB for all seven of the historic stations. Pole placement has been designed to minimize the visual impact to historic stations and all design changes are reviewed by the Environmental Compliance Lead to ensure the mitigation measure is being implemented as the design of the project progresses.
CUL-1e: Implement specific tree mitigation considerations at two potentially historic properties and landscape recordation, as necessary.	X	X			Complete	It was determined that the project is not acquiring any ROW at either of the subject properties so all tree effects would be within the JPB ROW. Therefore, the APE does not include these two historic properties. This measure is no longer needed.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
CUL-1f: Implement historic bridge and underpass design requirements.	X				Ongoing	This measure is being implemented as described during the design process and will be incorporated into the final design. The four bridges that are included in the MMRP are rail bridges crossing over another feature. Design of the OCS system is taking into account that there are requirements that restrict the design. Thus far, the designs for Construction Segments 2 & 4 are in process and designs are not yet complete. The D-B will forward to the Architectural Historian once complete.
CUL-2a: Conduct an archaeological resource survey and/or monitoring of the removal of pavement or other obstructions to determine if historical resources under CEQA or unique archaeological resources under PRC 21083.2 are present.	X				Ongoing	Periodic inspections of ground surface areas along the alignment, in conjunction with cultural monitoring as-needed of project activities in culturally sensitive areas are ongoing. The Archaeological Final Report will be provided at the conclusion of construction activities.
CUL-2b: Conduct exploratory trenching or coring of areas where subsurface project disturbance is planned in those areas with "high" or "very high" potential for buried site.	X				Ongoing	Exploratory trenching and subsurface testing of all potentially culturally sensitive areas occurred prior to the initiation of construction activities in those areas. The results will be included in the Archaeological Final Report. No cultural resources requiring the development of a treatment plan were observed. A Native American monitor has been present for all exploratory trenching and subsurface testing work.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
CUL-2c: Conduct limited subsurface testing before performing ground-disturbing work within 50 meters of a known archaeological site.	**X**				Ongoing	Exploratory trenching and subsurface testing of all potentially culturally sensitive areas occurred prior to the initiation of construction activities in those areas. The results will be included in the Archaeological Final Report. No cultural resources requiring the development of a treatment plan were observed. A Native American monitor has been present for all exploratory trenching and subsurface testing work.
CUL-2d: Conduct exploratory trenching or coring of areas within the three zones of special sensitivity where subsurface project disturbance is planned.	**X**				Ongoing	Exploratory trenching and subsurface testing of all potentially culturally sensitive areas occurred prior to the initiation of construction activities in those areas. The results will be included in the Archaeological Final Report. No cultural resources requiring the development of a treatment plan were observed. A Native American monitor has been present for all exploratory trenching and subsurface testing work.
CUL-2e: Stop work if cultural resources are encountered during ground-disturbing activities.	**X**	**X**			Ongoing	No prehistoric or historic-period cultural materials have been observed during cultural monitoring.
CUL-2f: Conduct archaeological monitoring of ground-disturbing activities in areas as determined by JPB and SHPO.		**X**			Ongoing	Cultural monitoring as-needed of project activities in culturally sensitive areas is ongoing. The Archaeological Final Report will be provided at the conclusion of construction activities.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
CUL-3: Comply with state and county procedures for the treatment of human remains discoveries.		X			Ongoing	No human remains have been observed to date on the Project.
EMF-2: Minimize EMI effects during final design, Monitor EMI effects during testing, commission and operations, and Remediate Substantial Disruption of Sensitive Electrical Equipment.	X	X	X		Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. Designs are submitted and reviewed/commented on by JPB. Monitoring EMI effects will occur post construction.
GEO-1: Perform a site-specific geotechnical study for traction power facilities.	X				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. Geotechnical studies are being conducted by Parikh under subcontract with PGH Wong. Studies and results are submitted to JPB as completed.
GEO-4a: Identification of expansive soils.	X				Ongoing	The design requirements indicated in the measure are being implemented through the final design by the D-B as described. Geotechnical studies are being conducted by Parikh under subcontract with PGH Wong. Studies and results are submitted to JPB as completed.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
GEO-4b: Mitigation of expansive soils.	**X**				Ongoing	The design requirements indicated in the measure are being implemented through the final design by the D-B as described. Geotechnical studies are being conducted by Parikh under subcontract with PGH Wong. Studies and results are submitted to JPB as completed.
HAZ-2a: Conduct a Phase II Environmental Site Assessment prior to construction.	**X**				Complete	A Phase II Environmental Assessment was completed prior to construction by the JPB consultant, and the results were provided to BBI, and the required mitigation is being implemented prior to the initiation of construction activities.
HAZ-2b: Implement engineering controls and best management practices during construction.	**X**	**X**			Ongoing	D-B field activities are being monitored daily for significant color changes or odors which may indicate contamination. In addition, an additional assessment of an existing subsurface pipe by a certified Asbestos Consultant occurred during this reporting period, and a specification describing the methods for removal and disposal is currently in progress.
HYD-1: Implement construction dewatering treatment, if necessary.	**X**	**X**			Ongoing	Facilities & BMPs are in place to deal with this requirement should it arise in the OCS foundations.
HYD-4: Minimize floodplain impacts by minimizing new impervious areas for TPFs or relocating these facilities.	**X**				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. The TPFs in Construction Segments 2 & 4 are currently in final design and design for TPFs in Construction Segments 1 & 3 has begun. The design minimizes

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
						hardscape only to required structure foundations; yard areas are to receive a pervious material.
HYD-5: Provide for electrical safety at TPFs subject to periodic or potential flooding.	**X**			**X**	Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. The TPFs in Construction Segments 2 & 4 are currently in final design and design for TPFs in Construction Segments 1 & 3 has begun. The design plan currently raises the TPFs above the floodplain.
HYD-7: Implement sea level rise vulnerability assessment and adaptation plan.				**X**	Ongoing	The JPB has initiated this measure and preparation of the sea level rise vulnerability assessment and adaptation plan is underway.
NOI-1a: Implement Construction Noise Control Plan.	**X**	**X**			Ongoing	The Noise and Vibration Control Plan has been submitted and is being implemented. Field activity is monitored per the Plan. If allowable noise levels are near or exceed allowable noise levels, mitigation such as blankets are used from that point forward.
NOI-1b: Conduct site-specific acoustical analysis of ancillary facilities based on the final mechanical equipment and site design and implement noise control treatments where required.	**X**				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. PGH Wong has completed analysis and design and issued for JPB review.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
NOI-2a: Implement Construction Vibration Control Plan.	**X**	**X**			Ongoing	The Noise and Vibration Control Plan has been submitted and is being implemented. Field activity is monitored per the Plan.
PSU-8a: Provide continuous coordination with all utility providers.	**X**	**X**			Ongoing	The design requirements indicated in the measure will be implemented through the final design as described. Coordination with utility providers is ongoing and there have not been any service interruptions thus far.
PSU-8b: Adjust OCS pole foundation locations.	**X**				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described.
PSU-8c: Schedule and notify users about potential service interruptions.	**X**	**X**			Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. There have not been any service interruptions thus far.
PSU-9: Require application of relevant construction mitigation measures to utility relocation and transmission line construction by others.	**X**	**X**			Ongoing	JPB has initiated coordination with PG&E regarding transmission line construction. PG&E is currently raising overcrossing lines in Segment 2.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
TRA-1a: Implement Construction Road Traffic Control Plan.	**X**	**X**			Ongoing	The D-B has begun traffic control design and permit applications with the City of Millbrae, Burlingame and San Mateo. Other communities will follow. Designs have been completed for all cross-over bridges in Segments 2 & 4 and submitted.
TRA-1c: Implement signal optimization and roadway geometry improvements at impacted intersections for the 2020 Project Condition.	**X**	**X**			Upcoming	This measure has not started
TRA-2a: Implement construction railway disruption control plan.	**X**	**X**			Ongoing	Minimization of railway disruption is being coordinated by the Site Specific Work Plan. A Construction Railway Disruption Control Plan was prepared to document the measures that are being implemented.
TRA-3b: In cooperation with the City and County of San Francisco, implement surface pedestrian facility improvements to address the Proposed Project's additional pedestrian movements at and immediately adjacent to the San Francisco 4th and King Station.	**X**	**X**	**X**		Upcoming	This measure has not started.
TRA-4b: Continue to improve bicycle facilities at Caltrain stations and partner with bike share programs where available following guidance in				**X**	Ongoing	The JPB adopted the Caltrain Bicycle Parking Management Plan in November 2017, and staff have been working to implement the Plan's recommendations to improve wayside bike parking facilities along

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
Caltrain's Bicycle Access and Parking Plan.						the corridor. Staff have also been coordinating with local jurisdictions that have launched bikeshare pilot programs to safely site bicycles near Caltrain stations.
NOI-CUMUL-1: Implement a phased program to reduce cumulative train noise along the Caltrain corridor as necessary to address future cumulative noise increases over FTA thresholds				**X**	Upcoming	This measure will be implemented during project operation.
NOI-CUMUL-2: Conduct project-level vibration analysis for Blended System operations and implement vibration reduction measures as necessary and appropriate for the Caltrain corridor				**X**	In Progress	CHSRA is conducting this analysis as part of the EIR/EIS for the San Francisco to San Jose section.
TRA-CUMUL-1: Implement a phased program to provide traffic improvements to reduce traffic delays near at-grade crossings and Caltrain stations				**X**	Upcoming	This measure will be implemented during project operation.
TRA-CUMUL-2: Implement technical solution to allow electric trolley bus transit across 16th Street without OCS conflicts in cooperation with SFMTA.	**X**				Complete	Not applicable. SFMTA has elected to not electrify the 16th Street crossing. This measure no longer applies.
Mitigation Measure TRA-CUMUL-3: As warranted, Caltrain and freight operators will partner to provide Plate H clearance				**X**	Upcoming	This measure will be implemented during project operation.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
as feasible between San Jose and Bayshore.						
AES-2a: Minimize OCS construction activity on residential and park areas outside the Caltrain ROW.	**X**	**X**			Ongoing	The OCS proposed construction schedule has been provided to the JPB. OCS construction began the week of October 2, 2017. The D-B has used the potholing process to assist in locating conflicts in the 35% design and attempting to relocate OCS pole locations within the ROW, thereby avoiding parks and residential areas.
AES-2b: Aesthetic treatments for OCS poles, TPFs in sensitive visual locations, and Overbridge Protection Barriers.	**X**				Ongoing	The design requirements indicated in the measure have been implemented as described, and coordination with the specific jurisdictions regarding pole colors and design, TPFs, and Overbridge Protection Barriers, is ongoing.
AES-4a: Minimize spillover light during nighttime construction.		**X**			Ongoing	OCS construction began the week of October 2, 2017. The BBI community relations lead has notified nearby residents of upcoming construction. During construction, lighting is faced inward, towards the railroad tracks, and any complaints will be documented and addressed by the BBI community relations lead.
AES-4b: Minimize light spillover at TPFs.	**X**				Upcoming	The design requirements indicated in the measure are being used in the design process of the TPFs.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
AQ-2a: Implement BAAQMD basic and additional construction mitigation measures to reduce construction-related dust.	**X**	**X**			Ongoing	The Dust Mitigation Plan was submitted to the JPB. The requirements in the Dust Mitigation Plan will be implemented throughout the construction period and documented in daily reports.
AQ-2b: Implement BAAQMD basic and additional construction mitigation measures to control construction-related ROG and NOX emissions.	**X**	**X**			Ongoing	The Equipment Emissions Control Plan was submitted to the JPB. The requirements in the Equipment Emissions Control Plan will be implemented throughout the construction period and documented in daily reports.
AQ-2c: Utilize clean diesel-powered equipment during construction to control construction-related ROG and NOX emissions.	**X**	**X**			Ongoing	The Equipment Emissions Control Plan was submitted to the JPB. The requirements in the Equipment Emissions Control Plan will be implemented throughout the construction period and documented in daily reports.
BIO-1a: Implement general biological impact avoidance measures.	**X**	**X**			Ongoing	Worker Environmental Awareness Training is provided to all project-related personnel before they work on the project. All measures as described will be implemented throughout the construction period and documented in daily reports.
BIO-1b: Implement special-status plant species avoidance and revegetation measures.	**X**	**X**	**X**		Complete	Not applicable. Subsequent habitat assessment and avoidance of Communication Hill eliminated any potential to affect special-status plant species. The measure is not needed.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
BIO-1c: Implement California red-legged frog and San Francisco garter snake avoidance measures.	**X**	**X**			Ongoing	Pre-construction surveys are occurring no more than 7 days prior to the initiation of construction activities nearby/adjacent to potential habitat for CRLF and SFGS. The Wildlife Exclusion Fencing Plan for Segments 2 and 4 was submitted and approved by the wildlife agencies, and installation and monitoring of wildlife exclusion fencing is ongoing. No CRLF / SFGS or sign of each species has been observed to date on the Project. A separate Wildlife Exclusion Fencing Plan will be submitted for Segments 1 and 3, prior to initiation of construction activities in those segments.
BIO-1d: Implement western pond turtle avoidance measures.	**X**	**X**			Ongoing	Pre-construction surveys are occurring no more than 7 days prior to the initiation of construction activities nearby/adjacent to potential habitat for WPT. No WPT or WPT sign have been observed to date on the Project.
BIO-1e: Implement Townsend's big-eared bat, pallid bat, hoary bat, and fringed myotis avoidance measures.	**X**	**X**			Ongoing	Pre-construction surveys are occurring no more than 7 days prior to the initiation of construction activities with the potential to disturb bats or their habitat. No special-status bats or sign have been observed to date on the Project.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
BIO-1f: Implement western burrowing owl avoidance measures.	**X**	**X**			Ongoing	Protocol surveys for Western Burrowing Owl were conducted from April 2017 through July 2017 at previously identified potentially suitable habitat locations. Note that all of these locations are in Construction Segment 4 (southern Santa Clara and San Jose). No Burrowing Owls were observed during the surveys. Construction in Segment 4 is anticipated to occur in 2018. Prior to construction activities in Segment 4, pre-construction surveys of the potential habitat areas will occur no more than 7 days prior to the onset of construction activities. In addition, protocol surveys were initiated in March 2018, and were completed in June 2018, at the previously identified potentially suitable habitat locations, which will allow work to occur during the 2019 breeding season, if necessary. No Burrowing Owls were observed during the 2018 surveys.
BIO-1g: Implement northern harrier, white-tailed kite, American peregrine falcon, saltmarsh common yellowthroat, purple martin, and other nesting bird avoidance measures.	**X**	**X**			Ongoing	Nesting Bird surveys were conducted from February 1 through September 15, 2017 prior to project-related activities with the potential to impact nesting birds. No active nests were observed during this reporting period. Nesting Bird surveys were initiated on February 1, 2018 and continued throughout the reporting period. Active nests were observed during this reporting period, and no-disturbance buffers were implemented to avoid any impacts to active nests, and all project activities which occurred nearby active nests

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
						were monitored by agency-approved biological monitors.
BIO-1h: Conduct biological resource survey of future contractor-determined staging areas.	**X**	**X**			Ongoing	The agency-approved Qualified Biologist has conducted surveys of the staging areas currently being used for construction activities. No special-status species or other potentially sensitive biological resources were observed. The agency-approved Qualified Biologist will continue to survey ahead of the initiation of activities at planned staging areas as the Project moves into new construction areas.
BIO-1i: Minimize impacts on Monarch butterfly overwintering sites.	**X**	**X**			Ongoing	The agency-approved Qualified Biologist has periodically monitored the project limits to evaluate the presence of Monarch butterfly overwintering sites. No Monarch butterfly overwintering sites have been observed on the Project to date.
BIO-1j: Avoid nesting birds and bats during vegetation maintenance.				**X**	Upcoming	To be completed during Project operation.
BIO-2: Implement serpentine bunchgrass avoidance and revegetation measures.	**X**	**X**	**X**		Complete	Not applicable. Subsequent habitat assessment and avoidance of Communication Hill eliminated any potential to affect serpentine bunchgrass. This measure is no longer needed.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
BIO-3: Avoid or compensate for impacts on wetlands and waters.	**X**	**X**	**X**		Complete	The JPB has compensated for unavoidable wetland impacts by purchasing adequate credits from a wetlands mitigation bank approved by USACE and SFRWQCB.
BIO-5: Implement Tree Avoidance, Minimization, and Replacement Plan.	**X**	**X**	**X**		Ongoing	Tree removal and pruning activities were initiated in August 2017, and are ongoing, under the guidance of the BBI Arborist, and in accordance with the Tree Avoidance, Minimization, and Replacement Plan. Tree Removal and Pruning status is provided to the JPB on a weekly basis.
BIO-6: Pay *Santa Clara Valley Habitat Plan* land cover fee (if necessary).	**X**				Complete	Not applicable. The SCVHP does not apply to the Project because TPS2, Option 1 was not selected and OCS does not extend to Communication Hill. This measure is not needed.
CUL-1a: Evaluate and minimize impacts on structural integrity of historic tunnels.	**X**				Upcoming	To be implemented prior to construction in tunnels.
CUL-1b: Minimize impacts on historic decorative tunnel material.	**X**				Upcoming	To be implemented prior to construction in tunnels.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
CUL-1c: Install project facilities in a way that minimizes impacts on historic tunnel interiors.	**X**				Upcoming	To be implemented prior to construction in tunnels.
CUL-1d: Implement design commitments at historic railroad stations	**X**				Complete	The Qualified Architectural Historian completed and submitted the HABS Level III documents to the JPB for all seven of the historic stations. Pole placement has been designed to minimize the visual impact to historic stations and all design changes are reviewed by the Environmental Compliance Lead to ensure the mitigation measure is being implemented as the design of the project progresses.
CUL-1e: Implement specific tree mitigation considerations at two potentially historic properties and landscape recordation, as necessary.	**X**	**X**			Complete	It was determined that the project is not acquiring any ROW at either of the subject properties so all tree effects would be within the JPB ROW. Therefore, the APE does not include these two historic properties. This measure is no longer needed.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
CUL-1f: Implement historic bridge and underpass design requirements.	**X**				Ongoing	This measure is being implemented as described during the design process and will be incorporated into the final design. The four bridges that are included in the MMRP are rail bridges crossing over another feature. Design of the OCS system is taking into account that there are requirements that restrict the design. Thus far, the designs for Construction Segments 2 & 4 are in process and designs are not yet complete. The D-B will forward to the Architectural Historian once complete.
CUL-2a: Conduct an archaeological resource survey and/or monitoring of the removal of pavement or other obstructions to determine if historical resources under CEQA or unique archaeological resources under PRC 21083.2 are present.	**X**				Ongoing	Periodic inspections of ground surface areas along the alignment, in conjunction with cultural monitoring as-needed of project activities in culturally sensitive areas are ongoing. The Archaeological Final Report will be provided at the conclusion of construction activities.
CUL-2b: Conduct exploratory trenching or coring of areas where subsurface project disturbance is planned in those areas with "high" or "very high" potential for buried site.	**X**				Ongoing	Exploratory trenching and subsurface testing of all potentially culturally sensitive areas occurred prior to the initiation of construction activities in those areas. The results will be included in the Archaeological Final Report. No cultural resources requiring the development of a treatment plan were observed. A Native American monitor has been present for all exploratory trenching and subsurface testing work.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
CUL-2c: Conduct limited subsurface testing before performing ground-disturbing work within 50 meters of a known archaeological site.	**X**				Ongoing	Exploratory trenching and subsurface testing of all potentially culturally sensitive areas occurred prior to the initiation of construction activities in those areas. The results will be included in the Archaeological Final Report. No cultural resources requiring the development of a treatment plan were observed. A Native American monitor has been present for all exploratory trenching and subsurface testing work.
CUL-2d: Conduct exploratory trenching or coring of areas within the three zones of special sensitivity where subsurface project disturbance is planned.	**X**				Ongoing	Exploratory trenching and subsurface testing of all potentially culturally sensitive areas occurred prior to the initiation of construction activities in those areas. The results will be included in the Archaeological Final Report. No cultural resources requiring the development of a treatment plan were observed. A Native American monitor has been present for all exploratory trenching and subsurface testing work.
CUL-2e: Stop work if cultural resources are encountered during ground-disturbing activities.	**X**	**X**			Ongoing	No prehistoric or historic-period cultural materials have been observed during cultural monitoring.
CUL-2f: Conduct archaeological monitoring of ground-disturbing activities in areas as determined by JPB and SHPO.		**X**			Ongoing	Cultural monitoring as-needed of project activities in culturally sensitive areas is ongoing. The Archaeological Final Report will be provided at the conclusion of construction activities.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
CUL-3: Comply with state and county procedures for the treatment of human remains discoveries.		X			Ongoing	No human remains have been observed to date on the Project.
EMF-2: Minimize EMI effects during final design, Monitor EMI effects during testing, commission and operations, and Remediate Substantial Disruption of Sensitive Electrical Equipment.	X	X	X		Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. Designs are submitted and reviewed/commented on by JPB. Monitoring EMI effects will occur post construction.
GEO-1: Perform a site-specific geotechnical study for traction power facilities.	X				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. Geotechnical studies and results are submitted to JPB as completed.
GEO-4a: Identification of expansive soils.	X				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. Geotechnical studies and results are submitted to JPB as completed.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
GEO-4b: Mitigation of expansive soils.	**X**				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. Geotechnical studies and results are submitted to JPB as completed.
HAZ-2a: Conduct a Phase II Environmental Site Assessment prior to construction.	**X**				Complete	A Phase II Environmental Assessment was completed prior to construction by the JPB consultant, and the results were provided to BBI, and the required mitigation is being implemented prior to the initiation of construction activities.
HAZ-2b: Implement engineering controls and best management practices during construction.	**X**	**X**			Ongoing	Field activities are being monitored daily for significant color changes or odors which may indicate contamination. In addition, an assessment of two existing subsurface pipes by a certified Asbestos Consultant occurred during this reporting period, and a specification describing the methods for removal and disposal is currently in progress.
HYD-1: Implement construction dewatering treatment, if necessary.	**X**	**X**			Ongoing	Facilities & BMPs are in place to deal with this requirement should it arise in the OCS foundations.
HYD-4: Minimize floodplain impacts by minimizing new impervious areas for TPFs or relocating these facilities.	**X**				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. The TPFs in Construction Segments 2 & 4 are currently in final design and design for TPFs in Construction Segments 1 & 3 has begun. The design minimizes

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
						hardscape only to required structure foundations; yard areas are to receive a pervious material.
HYD-5: Provide for electrical safety at TPFs subject to periodic or potential flooding.	**X**			**X**	Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. The TPFs in Construction Segments 2 & 4 are currently in final design and design for TPFs in Construction Segments 1 & 3 has begun. The design plan currently raises the TPFs above the floodplain.
HYD-7: Implement sea level rise vulnerability assessment and adaptation plan.				**X**	Ongoing	The JPB has initiated this measure and preparation of the sea level rise vulnerability assessment and adaptation plan is underway.
NOI-1a: Implement Construction Noise Control Plan.	**X**	**X**			Ongoing	The Noise and Vibration Control Plan has been submitted and is being implemented. Field activity is monitored per the Plan. If allowable noise levels are near or exceed allowable noise levels, mitigation such as blankets are used from that point forward.
NOI-1b: Conduct site-specific acoustical analysis of ancillary facilities based on the final mechanical equipment and site design and implement noise control treatments where required.	**X**				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. Design is still in process and a noise study is currently being performed.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
NOI-2a: Implement Construction Vibration Control Plan.	**X**	**X**			Ongoing	The Noise and Vibration Control Plan has been submitted and is being implemented. Field activity is monitored per the Plan.
PSU-8a: Provide continuous coordination with all utility providers.	**X**	**X**			Ongoing	The design requirements indicated in the measure will be implemented through the final design as described. Coordination with utility providers is ongoing and there have not been any service interruptions thus far.
PSU-8b: Adjust OCS pole foundation locations.	**X**				Ongoing	The design requirements indicated in the measure are being implemented through the final design as described.
PSU-8c: Schedule and notify users about potential service interruptions.	**X**	**X**			Ongoing	The design requirements indicated in the measure are being implemented through the final design as described. There have not been any service interruptions thus far.
PSU-9: Require application of relevant construction mitigation measures to utility relocation and transmission line construction by others.	**X**	**X**			Ongoing	JPB has initiated coordination with PG&E regarding transmission line construction. PG&E is currently raising overcrossing lines in Segment 2.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
TRA-1a: Implement Construction Road Traffic Control Plan.	**X**	**X**			Ongoing	The D-B has begun traffic control design and permit applications with cities in Segments 2 and 4. Designs have been completed and approved for all cross-over bridges in Segments 2 and 4.
TRA-1c: Implement signal optimization and roadway geometry improvements at impacted intersections for the 2020 Project Condition.	**X**	**X**			Upcoming	This measure has not started
TRA-2a: Implement construction railway disruption control plan.	**X**	**X**			Ongoing	Minimization of railway disruption is being coordinated by the Site Specific Work Plan. A Construction Railway Disruption Control Plan was prepared to document the measures that are being implemented.
TRA-3b: In cooperation with the City and County of San Francisco, implement surface pedestrian facility improvements to address the Proposed Project's additional pedestrian movements at and immediately adjacent to the San Francisco 4th and King Station.	**X**	**X**	**X**		Upcoming	This measure has not started.
TRA-4b: Continue to improve bicycle facilities at Caltrain stations and partner with bike share programs where available following guidance in				**X**	Ongoing	The JPB adopted the Caltrain Bicycle Parking Management Plan in November 2017, and staff have been working to implement the Plan's recommendations to improve wayside bike parking facilities along

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
Caltrain's Bicycle Access and Parking Plan.						the corridor. Staff have also been coordinating with local jurisdictions that have launched bikeshare pilot programs to safely site bicycles near Caltrain stations.
NOI-CUMUL-1: Implement a phased program to reduce cumulative train noise along the Caltrain corridor as necessary to address future cumulative noise increases over FTA thresholds				**X**	Upcoming	This measure will be implemented during project operation.
NOI-CUMUL-2: Conduct project-level vibration analysis for Blended System operations and implement vibration reduction measures as necessary and appropriate for the Caltrain corridor				**X**	In Progress	CHSRA is conducting this analysis as part of the EIR/EIS for the San Francisco to San Jose section.
TRA-CUMUL-1: Implement a phased program to provide traffic improvements to reduce traffic delays near at-grade crossings and Caltrain stations				**X**	Upcoming	This measure will be implemented during project operation.
TRA-CUMUL-2: Implement technical solution to allow electric trolley bus transit across 16th Street without OCS conflicts in cooperation with SFMTA.	**X**				Complete	Not applicable. SFMTA has elected to not electrify the 16th Street crossing. This measure no longer applies.
Mitigation Measure TRA-CUMUL-3: As warranted, Caltrain and freight operators will partner to provide Plate H clearance				**X**	Upcoming	This measure will be implemented during project operation.

Mitigation Monitoring and Reporting

Mitigation Measure	Mitigation Timing				Status	Status Notes
	Pre-Construction	Construction	Post-Construction	Operation		
as feasible between San Jose and Bayshore.						

AGENDA ITEM# 6c
April 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
Executive Director

FROM: Michelle Bouchard
Chief Operating Officer, Rail

SUBJECT: **CALTRAIN POSITIVE TRAIN CONTROL PROJECT UPDATE – March 2020**

ACTION

Staff Coordinating Council recommends that the Board receive the Positive Train Control (PTC) report for March 2020.

SIGNIFICANCE

Staff will provide monthly updates covering PTC related activities during the previous month and provide a preview of activities anticipated to take place during the current month.

BUDGET IMPACT

There is no budget impact.

MONTHLY UPDATE

1. Project Schedule - Major Milestones for Caltrain PTC Implementation:

Key Project Activity	Expected Completion	Progress as of 03/19/20	Progress On Track?	Mitigation Required or Approvals Needed
Approval of Designated Revenue Service Demonstration (RSD) Test Request	May 31st	Completed	Completed	Formal conditional approval received on September 10. Team incorporating FRA conditions in test plan to ensure compliance to approval.
Approval of revised project PTC Implementation Plan (PTCIP) and Request for Amendment (RFA)	May 31st	Completed	Completed	Formal approval received on May 16, 2019 for PTCIP and RFA Rev. 10.
Pilot Installations (4) Completed	June 20th	Completed	Completed	All pilots completed
Submit Designated RSD Application	Oct 15th	Completed	Completed	RSD Application submitted and in review by FRA.
Submit Full Track RSD Application	June 7th	Completed	Completed	Formal RSD request for full track was submitted to the FRA on June 14, 2019
Complete Critical Feature Verification & Validation (V&V) for Designated Track RSD	Oct 30th	Completed	Completed	
Complete Designated RSD Training	Nov 14th	Completed	Completed	Training for designated RSD personnel completed
Complete Required Vehicle Installations	Dec 3rd	Completed	Completed	(44) Installs required for RSD completed, punch list items being addressed by Wabtec.
Meet FRA Statutory Requirements and Substitute Criteria	Dec 31	Completed	Completed	Met FRA December 31, 2018 deadline
Obtain Alternative Schedule approval from FRA	Mar 15th 2019	Completed	Completed	Received FRA's approval on February 6, 2019.
Completion of Remaining Vehicle Installation (all 67 units)	April 30, 2019	Completed (65 Units)	Completed (65 Units)	Except one F40PH 3C Rehab vehicle, that is going through overhaul and one wrecked vehicle.
Full RSD - Complete Remaining Critical Feature V&V	Jan 2019	Completed	Completed	
Full RSD – Complete Wayside Interface Unit (WIU) V&V	March 15, 2019	Completed	Completed	Completed on March 15, 2019

Key Project Activity	Expected Completion	Progress as of 03/19/20	Progress On Track?	Mitigation Required or Approvals Needed
Full RSD – Complete Lab Integrated End to End Testing (LIEE)	June 30, 2019	Completed	Completed	LIEE Cycle 3 was completed ahead of schedule on June 12, 2019
Full RSD – Complete Field Integrated Testing (FIT)	August 2019	Completed	Completed	Full track FIT has completed on June 30, 2019
Full RSD – Complete Field Qualification Testing (FQT)	September 2019	Completed	Completed	Full track FQT has completed on July 14, 2019
*Commence Full RSD – Caltrain ROW	October 2019	Completed	Completed	Caltrain has successfully entered RSD on September 07, 2019.
Complete Lab Integrated End to End Testing for Interoperability with UPRR (LIEE-I)	October 2019	Completed	Completed	LIEE-I with UPRR was completed on October 15.
*Complete Interoperability Testing with UPRR - Both ROW	December 2019	Completed	Completed	Interoperable Test with UPRR on both territories were completed on Nov 5th, 2019
*Complete Interoperability Testing with Tenant Railroads - ACE	April 30 2020	Completed	Completed	Interoperable Test with ACE was completed on Nov 17, 2019.
*Complete Interoperability Testing with Tenant Railroads - AMTRAK	April 30 2020	Completed	Completed	Interoperable field testing was concluded on Feb 8,2020
Achieve Interoperability with UPRR	Dec 31, 2019	Completed	Completed	Accomplished on December 9, 2019
Achieve Interoperability with other Tenants	April 30, 2020	Completed	Completed	Accomplished Interoperable with ACE on December 9, 2019. Interoperable Operation with Amtrak was achieved on Feb 26, 2020.
Submit Caltrain PTC Safety Plan to the FRA	June 01, 2020	Plan	Yes	
Complete Caltrain PTC Implementation	December 2020	Plan	Yes	

*****Key project milestones for 2019/2020 have incentive payments as part of a contract negotiation concluded on May 7, 2020.*

1. Major Wabtec activities for March 2020:

- Caltrain commenced Revenue Service Demonstration (RSD) since September 7, 2019. As of Feb 26, 2020 Caltrain has achieved interoperability requirements and is interoperable with all tenants (UPRR, ACE, Amtrak/Capitol Corridor).
- Continued to provide technical support for RSD trouble shooting and addressed defect items with support from WABTEC PTC help-desk.
- Completed MP1500 Brake Testing and submitted test result for Caltrain approval.
- Completed MP1500 FIT testing and submitted FIT test results for Caltrain approval.
- Continued Federation 8-Tunnel configuration effort with remaining railroads including third party railroads as part of interoperable Operation with UPPR. As of March 2020, we have federated with all railroads except for CSX.
- Continued BCCF/CCF Cutover planning effort and finalization of cutover plan and procedure.
- Completed Lab Regression Testing for new on-board software 6.3.19.0
- Completed core switches reconfiguration effort.
- Completed the removal of unnecessary WSMs as result of Relay Gap Analysis.
- Submitted PTC Track data changes design document in support of Caltrain 25th Ave. Capital Improvement Project.
- Update PTC subdiv file for non-comm area and UP MT1 speed changes.
- Continued PTC Virtualization Design effort with Caltrain team.
- Commenced coordination and planning effort for LIEE-I and field testing with UPRR third party railroads (6 total).
- Continued development of PTC Safety Plan (PTCSP) and associated risk assessment effort in support of Caltrain PTC safety certification.

2. Vehicle Installation:

Wabtec completed installation of (44) I-ETMS modules on the Caltrain locomotives and cab cars as required in Caltrain's Implementation Plan and statutory criteria requirements in early November of 2018. Wabtec has completed installations on the remaining Caltrain fleet (23 additional locomotives and cab cars) except one F40, which is scheduled to be available for installation in April of 2020 and one damaged cab car. Table below provides the overall status of 67-vehicle installation as of March 19, 2020.

I-ETMS On-Board Installation Progress (As of 3/19/20)			
Equipment	**Completed**	**In Progress**	**Pending**
F40	22	0	1
MP36	6	0	0
Bombardier Cab	9	0	0
NS Gallery Cab	26	0	1
MP1500	2	0	0
Total	**65**	**0**	**2**
%	**97%**	**0%**	**3%**

3. Other Key Activities for March of 2020:

This section reports on PTC project general progress and issues being performed and tracked in addition to the Wabtec contract during the current reporting month.

- Caltrain has received approval from the FRA to enter extended Revenue Service Demonstration (RSD) on January 7, 2020 after initial RSD commenced on September 7, 2019. Caltrain is currently running all revenue trains with PTC.
- Caltrain commenced Interoperable Operations with UPRR and ACE on December 9, 2019.
- Caltrain commenced Interoperable Operations with Amtrak/Capitol Corridor since February 26, 2020. Caltrain is interoperable with all tenants.
- Herzog Technology Incorporated (HTI) Data collection team and PTC project team are producing PTC weekly and monthly reporting to the FRA per the RSD conditional approval requirements for the extended RSD.
- PTC helpdesk continues to support PTC operation since commencement of RSD with support from Tier 1 and Tier 2 support staff for PTC Operations. Post RSD bi-weekly meetings and defect-tracking meetings are held to continue monitoring PTC system roll out and address any critical anomalies and defects by system engineering (Tier 2) and WABTEC/ARINC as needed. TASI now provides 24/7 helpdesk coverage.
- Caltrain is meeting with UPRR and other tenants on the weekly basis to address any technical and operational issues related to PTC interoperable operations.
- Continued managing ARINC under newly established long-term maintenance and support service agreement for Rail Operations Control System (ROCS), Passenger Predictive Train Arrival/Departure System (PADS) and Voice Radio Dispatching System (RDS), the three major systems residing in the CCF and BCCF that support Rail Operations.
- Continued Work Directive Proposals effort with ARINC on BCCF/CCF Cutover and ROCS Software modification.
- The PTC project continues its coordination efforts with the Electrification and EMU programs via regularly scheduled status meetings. Ad hoc meetings to discuss topics requiring in-depth or immediate decisions are held as needed. Data sharing of fiber audit results and testing schedules (sharing of track and time) is ongoing to ensure both teams coordinate needs.

- Caltrain Configuration Control Board (CCB) continued review and approval of configuration changes that impact Rail Operations systems and infrastructure by following Caltrain Configuration Management Plan and Process.
- The PTC team is actively coordinating with CCB members and 25th Grade Separation capital project team to support upcoming cutover effort.
- Caltrain Systems team actively involved in PTC Interoperable Change Management process through Interoperable Change Approval Board (ICAB) chaired by AAR.

4. Change Order Log:

The additional scope items negotiated with Wabtec totaling $1.42 M are needed to support the new milestone schedule approved by FRA in December. They relate to interoperability and the communications system. The funds for this scope were taken from potential change budget as part of original board approved $89.41 project budget. This is the only change order for this contract. This change order was reviewed and approved by the Change Management Board in May. The contract amendment one (1) that reflects this change order is executed. There are no new change orders in February of 2020.

5. Risk Management:

Caltrain and Wabtec have agreed to share the management of an identified list of risk items that were identified during the contract negotiations. The total cost allocated to these risks is $1.9M to be shared amongst both parties. Unrealized risks will result in cost savings to Caltrain.

Caltrain and Wabtec jointly review the shared risk register as the project progresses. Caltrain will provide update for any realized risks that are identified and agreed upon by both parties.

There are also risks to be monitored outside the Wabtec specific contract that the project team monitors and mitigates as necessary. The following table captures the top risks both external (outside the Wabtec contract) and internal (specific to the Wabtec contract):

Risk Item	Type	Mitigation Action
FRA process changes	External	Maintain close and open relationship with key FRA contacts to ensure all submittals are done correctly and within required time frame to achieve approvals required to achieve full system certification.
Interoperability delays	External	Caltrain is working with UPRR and tenants to ensure agreed to interoperability schedule dates are maintained – Risks are mitigated, Interoperability with UPRR and ACE were achieved and Amtrak is scheduled in February 2020.
Track access delays	Internal	Ensure field test schedule is maintained by coordinating all fieldwork in combination with other capital project's needs, particularly the PCEP project.
Back Office Server (BOS) documentation scope creep	Internal	Ensure standard documentation supplied by Wabtec meets requirements of Caltrain specification criteria
Key Exchange Server Solution	Internal	Implementation of Caltrain Key Exchange Server timely to support Interoperability Testing with UPRR. KES production test was completed in October 2019. The

Risk Item	Type	Mitigation Action
		Long-term communication MPLS solution has been finalized and installation is scheduled in April 2020.
Maintenance of existing Assets Data Communications, Wayside Infrastructure and on-board equipment	Internal	Coordinated with Operations and TASI to ensure all assets transfer including all documentation were done and handed off to Operations/TASI. PTC infrastructure are maintained by TASI and Project team continue to provide support as Tier 2/Tier 3 to ensure PTC is reliable for PTC Revenue Service Operations.

6. FRA Coordination Status:

- Continued weekly calls with FRA review team
- Continued RSD Weekly and Monthly Reports to the Test Monitor
- Submitted on-board software regression test plan for FRA approval
- Submitted MP1500 Brake test and FIT Test Results

7. Caltrain Roadmap to Full RSD and Interoperability:

- Caltrain is currently in Extended Revenue Service Demonstration and is fully interoperable with all tenants.
- Completing and submitting the PTC Safety Plan to the FRA is the next big milestone in order to achieve overall system certification.
  1. Alternative Schedule was approved on February 6, 2019.
  2. Caltrain completed all field validation by the 1st quarter of 2019.
  3. Caltrain completed Laboratory Integrated Testing for full track in April of 2019.
  4. Caltrain submitted the full track RSD application in June 2019 and received conditional approval of RSD in July 2019.
  5. Caltrain completed Field Integrated Testing (FIT) and Field Qualification Testing (FQT) for full track and has commenced RSD on September 7, 2019.
  6. Caltrain completed training TASI personnel to support full track RSD and PTC operations.
  7. Caltrain continues to roll out PTC trains; all 92 trains per weekday are under PTC as of the end of 2019.
  8. Caltrain completed Interoperability Laboratory Testing with UPRR on August 12, 2019 for cycle one and subsequently cycle two on October 15, 2019.
  9. Caltrain has received Interoperability Test Request Conditional Approval from the FRA.
  10. Caltrain completed Interoperability Field Testing with UPRR on November 5 2019 and has achieved Interoperability with UPRR on December 9, 2019.
  11. Caltrain has completed Interoperability Testing with ACE and started PTC Operations on December 9, 2019. Caltrain commenced Interoperability Operations with Amtrak on February 26, 2020. Caltrain achieved interoperability requirements with all tenants.
  12. Caltrain will complete submission of the final PTC Safety Plan (PTCSP) by June 2020 and receive full system certification by December 2020.

8. Cost – Spend vs Budget with Actuals and Accruals through February 2020

	(A)	(B)	(C)	(D)	(E)	(F) = (C - E)	(G) = (D / E)
Project Cost Analysis	Original Budget (US$MM)	Approved Changes (Contractor) (US$MM)	Project Current Budget (US$MM)	Expended and Accruals To-Date (US$MM)	Estimated at Completion (EAC) (US$MM)	Variance at Completion (US$MM)	% Expended of EAC
CBOSS PTC Project (Jan 2008 - Feb 2018)	$ 231.00		$ 239.88	$ 202.26	$ 202.26		
Caltain PTC Project (March 1, 2018 - June 30,2020):							
Integrator WABTEC Contract	$ 43.01	$ 1.42	$ 44.44	$ 34.56	$ 44.44	$ -	77.77%
Other Contractors	$ 6.00	$ -	$ 6.00	$ 1.78	$ 6.00	$ -	29.60%
Potential Changes	$ 2.00	$ (1.42)	$ 0.58		$ 0.58	$ -	
Potential Incentive - WABTEC	$ 2.00	$ -	$ 2.00	$ 2.00	$ 2.00	$ -	100.00%
Other Program Costs	$ 30.34	$ -	$ 30.34	$ 16.50	$ 26.75	$ 3.59	61.69%
Project Contingency	$ 6.06	$ -	$ 6.06		$ 6.06	$ -	
Total PTC Project	$ 89.41	$ -	$ 89.41	$ 54.84	$ 85.82	$ 3.59	63.90%

Note:

1). Expended and Accruals To-Date is through February 29, 2020;

2). Integrator Wabtec Contract Value includes Shared Risk with Not to Exceed Total of $1.91MM;

3). Other Contractors amount includes ROCS Modification and potential fiber fixes;

4). Potential Changes amount is set for future project change orders as result of WABTEC assessment and survey for the communications and office subsystems;

5). Potential incentive amount reflects what is in the WABTEC conformed agreement;

6). Other Program Costs includes JPB project oversight costs, TASI support and Other Direct Cost for PTC project delivery;

7). Project contingency includes a) contingencies for WABTEC contract per Board Staff Report; b) JPB project team cost contingency;

8). CBOSS PTC project budget and actual cost are highlighted to reflect prior March 1st, 2018 CBOSS project financial data.

9). Negotiated additional scope items are included in WABTEC's contract amendment 1. There is no budget impact since project has budgeted adequate potential change for the amount of $2MM (note no. 4 above) for added scope items. Current Project budget for WABTEC contract is updated to reflect added scope items.

9. Upcoming Key Activities in April 2020:

- Continue ITCM 8 tunnel Test and production Federation effort with CSX which is one of UPRR foreign railroads.
- Continue to support PTC RSD with Operations and TASI.
- Continue BCCF/CCF cutover technical coordination with all parties.
- Continue Data Collection and PTC log analysis for PTC RSD weekly report to the FRA following RSD conditional approval requirements.
- Continue to provide Tier 2 PTC System Engineering support for tracking anomalies and addressing defect resolutions with Tier 3.
- Continue Interoperability Operational coordination with all tenants via weekly calls.
- Continue coordination and planning effort for LIEE-I and field testing with UPRR third party railroads (6 total).
- Continue PTC Virtualization and ATCS work.
- Perform lab regression testing for new on-board software once Caltrain confirms which version is suitable for Caltrain.
- Resume KES long term MPLS/Cell Installation effort once travel restriction is removed due to COVID-19.
- Continue development of PTCSP.
- Continue I-ETMS long-term maintenance service scope and agreement effort.

Prepared By: Matt Scanlon, Deputy Director, Systems - 650.622.7819

AGENDA ITEM #7a
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
Executive Director

FROM: Michelle Bouchard
Chief Operating Officer, Rail

SUBJECT: **UPDATE ON CONSTRUCTION OF 25th AVENUE GRADE SEPARATION**

ACTION

Staff will present the Board an update on the 25th Avenue Grade Separation project. No action is required.

SIGNIFICANCE

Construction of the 25th Avenue Grade Separation project has been ongoing since October 2017. On May 16, 2020 the existing Hillsdale Caltrain Station will be temporarily closed, to allow for construction of the new Hillsdale Caltrain Station in November 2020. Enhanced rail service will be provided at Belmont during the closure, and bus transport between Hillsdale and Belmont will be available along El Camino Real.

BUDGET IMPACT

There is no impact on the budget.

BACKGROUND

The 25th Avenue Grade Separation project is a safety improvement project which will raise the tracks from State Route (SR) 92 to Hillsdale Boulevard, slightly lower the road at E. 25th Avenue, complete east-west street connections at 28th and 31st Avenues, and construct a new elevated Hillsdale Station located at E. 28th Avenue with new parking lots East of the new station between 25th Avenue and 31st Avenue.

The Construction Contract was awarded to Shimmick Disney, a JV, in July 2017 for $82,890,000. The total board approved budget for the project is $180,000,000. Construction has been ongoing since October 2017, and is currently scheduled to be complete in May 2021. The project is funded by a combination of San Mateo County Transportation Authority, City of San Mateo, California High Speed Rail and California Public Utilities Commission funds.

Prepared by: Rafael Bolon, Project Manager 650.622.7805

25th Avenue Grade Separation

JPB Board April 2, 2020

Agenda

I. The Project

II. Progress Update

III. Financial Status

IV. Update on Temporary Station Closure

The Project

The Project

- Grade Separation of Three Road Crossings and One Pedestrian/Bike Underpass
- New Relocated Hillsdale Station
- Parking Track

Future Grade Separation

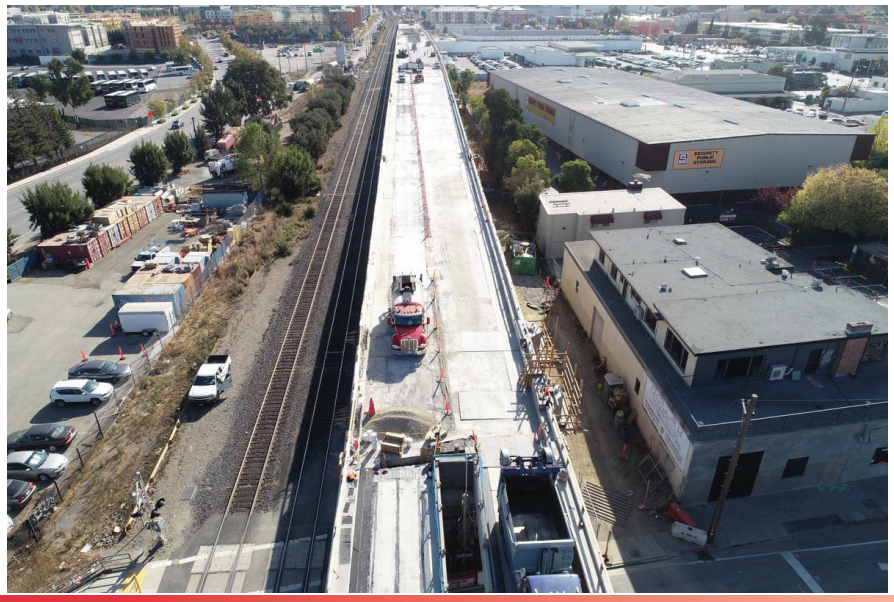
Project Location

Progress Update

Since Last Update…

- Completed retaining walls
- Installed all bridges
- Constructed skeleton track
- Constructed 28th/31st Avenue West Side
- Began Station

Completed Walls and Bridges



New Track

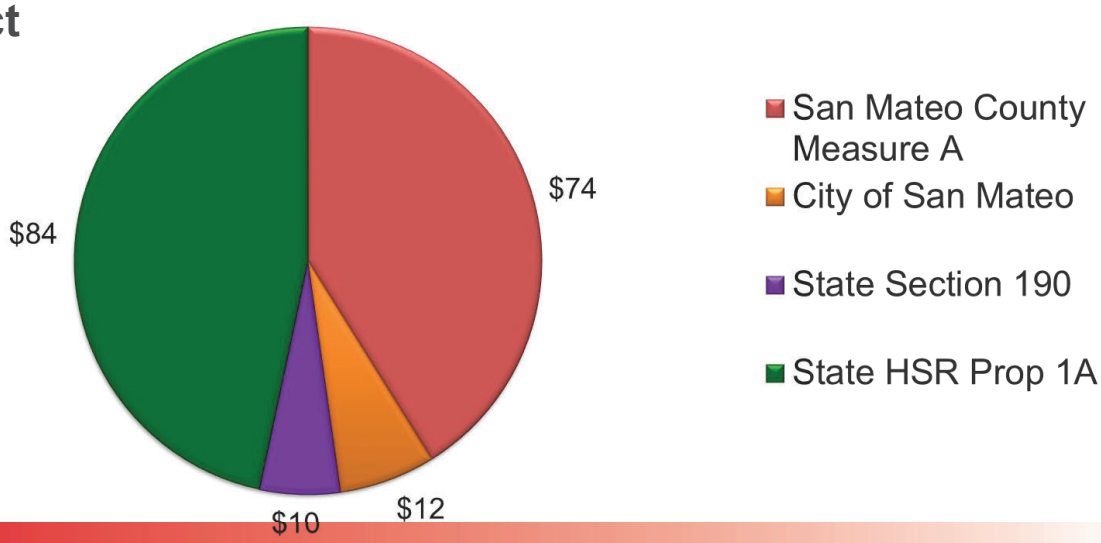
New Roads – West Side

New Station Under Construction

Project Funding

Project Funding, in Millions

$ 180 Project



Update on Temporary Station Closure

Temporary Station Closure

- **Existing Hillsdale Station to Close May 16, 2020**
- New Station to open 6 months later
- Closure is required to allow for construction of new Station

During Closure

- Belmont will receive Caltrain Service
- If you drove (or drop off) drive or drop off to Belmont
- Otherwise ECR Samtrans bus + Shuttle service

Proposed Shuttle Service

- **ECR Service – Free connection from select stations**
  -- Every 15 minutes peak schedule
- **Caltrain Belmont/Hillsdale shuttle service to run during closure**
  – Current shuttle headways: ~15-40 min
- Private and Commute.org shuttles will move service to Belmont Station

Hillsdale Station – Bus and Shuttle Stops

● PROPOSED SAMTRANS STOPS (1 NB, 2 SB)

● SHUTTLE STOP (EFFECTIVE 1/27/20) BOTH SIDES OF PACIFIC BLVD

Belmont Station – Bus and Shuttle Stops

● PROPOSED SAMTRANS STOPS (NB & SB)

● PROPOSED SHUTTLE STOPS (IN PARKING LOT, ALONG EL CAMINO

Stations Modifications

- **Belmont Station**
  - Shuttle Boarding Curbside
  - Revised Parking Lot Striping for Shuttle Pick-up & Drop-Off
  - Added Shuttle Pick-up & Drop-Off Signage

Customer Communication

- At Stations (1.5 months before Closure)
  - Signage Installation
  - Visual Electronic Signs on platforms
  - A-frames, Info Boards, and Banner at Hillsdale Station
  - Windshield drops in Hillsdale Station parking lots
  - Ambassadors leading up to closure and during start of closure
- On the Train
  - Seat drops (1 Month Before & 1 Week before Closure)
  - Conductor announcements (1 Month Before Closure)

Closure Information: In the Community

- Dedicated webpage at www.caltrain.com/HillsdaleTempClosure
- ✦ Regular communication to electeds and organizations (ongoing)
- ✦ Community meeting (in-person and online): 1.5 mo. prior to closure
- ✦ Notices: Weekly Construction, Mailers before key milestones
- ✦ Hillsdale closure distribution list
- ✦ Social Media
- ✦ Belmont & Hillsdale Station webpage alerts

Questions?

AGENDA ITEM #8
APRIL 2, 2020

PENINSULA CORRIDOR JOINT POWERS BOARD
STAFF REPORT

TO: Joint Powers Board

THROUGH: Jim Hartnett
General Manager/CEO

FROM: Derek Hansel
Chief Financial Officer

SUBJECT: **REPLACE FUEL HEDGING POLICY WITH NEW DIESEL FUEL HEDGING PROGRAM AND STATEMENT OF POLICY AND STRATEGY TO MAINTAIN A FUTURES ACCOUNT TO ACQUIRE, HOLD AND DISPOSE OF DIESEL FUTURES CONTRACTS AND AUTHORIZE EXECUTING COMMODITY FUTURES ACCOUNTS**

ACTION

Staff recommends that the Board:

1. Repeal the existing Fuel Hedging Policy most recently amended via Resolution 2015-22;

2. Adopt a new Diesel Fuel Hedging Program and associated Statement of Policy and Strategy to maintain a futures account with a Futures Commission Merchant by which the Peninsula Corridor Joint Powers Board (JPB), through the management and direction of an advisor, will acquire, hold and dispose of diesel futures contracts;

3. Authorize the Executive Director to select one or more brokers to buy, sell and trade in commodity futures and options on the JPB's behalf; and

4. Authorize the Executive Director to execute commodity futures accounts on behalf of the JPB to buy, sell and trade in commodity futures and options on commodity futures for present or future delivery.

SIGNIFICANCE

In March 2010, the Board adopted a fuel hedging policy (the "Fuel Hedging Policy") in connection with implementing a fuel hedging program to reduce volatility in the fuel budget. The approach taken in the existing Fuel Hedging Policy no longer reflects market conditions.

Staff recommends the JPB adopt a Diesel Fuel Hedging Program (Program) and related "Statement of Policy and Strategy" to replace the JPB's 2015 Fuel Hedging Policy. The new Program will allow the JPB to maintain a futures account with a Futures Commission Merchant by which the JPB, through the management and direction of an advisor, will acquire, hold and dispose of diesel futures contracts.

Linwood Capital, LLC, a fuel hedging advisory and consulting firm, will provide this account management and direction, and will advise the JPB on an as-needed basis regarding the Program.

An agreement with Linwood Capital, LLC is within the Executive Director's authority and does not require approval by the JPB's Board of Directors. The JPB will continue to use its existing fuel supply contracts to obtain fuel under the new Program, and staff, working with its advisor, will identify appropriate brokers to facilitate purchases, sales and trades on the JPB's behalf.

The primary goal for the Program is to decrease the volatility of diesel fuel cost and increase the likelihood that actual net diesel cost will remain below the budgeted cost. In general, the JPB's volume of fuel consumption is highly predictable and without significant variability over time.

BUDGET IMPACT

Linwood Capital, LLC will provide services to both the JPB and the San Mateo County Transit District (District). The total cost of Linwood Capital, LLC's services will not exceed $79,200 and are to be allocated to the JPB and the District based upon proportional shares. Execution of trades under the hedging Program will be intended to provide greater certainty as to the actual cost of fuel relative to amounts in the adopted operating budget. Staff will return to the Board periodically with a report on trades executed under the Program and the efficacy of the Program in managing volatility associated with fuel purchases.

BACKGROUND

The JPB's prior Fuel Hedging Policy operated as a commodity price cap. It was revised in May 2012, April 2013, April 2014 and May 2015 (1) to reflect changes in (a) the market and (b) the regulatory environment, including changes resulting from legislation and related regulations commonly referred to as "Dodd-Frank," affecting providers of commodity fuel caps (counterparties), and (2) to enable selection of a counterparty through either a competitive bidding process or bilateral negotiations.

Prepared By:	Shayna van Hoften	415.995.5880
	Connie Mobley-Ritter, Director-Treasury	650.508.7765

Peninsula Corridor Joint Powers Board

Diesel Fuel Hedging Program
Statement of Policy & Strategy

1. **Mission Statement**:

   The Peninsula Corridor Joint Powers Board (JPB) will establish and maintain a Diesel Fuel Hedging Program (Program) that will:

   - seek to decrease the volatility of diesel fuel cost;
   - seek to increase the likelihood that actual net diesel fuel cost will remain below the budgeted cost;
   - seek to increase the certainty of future diesel fuel cost;
   - seek to attain a lower overall cost of diesel fuel in the long-term;
   - seek to manage year-over-year changes in diesel fuel cost.

   The purpose of this Program is not to make or lose money but to manage risk. This Program is not an investment and should not be construed as such. Realized gains or losses will be considered as an element of fuel cost.

2. **Program Infrastructure**:

   a. **Instruments** – The JPB will maintain a futures account with a Futures Commission Merchant (Broker). The JPB, through the management and direction of an advisor (Advisor), will acquire, hold, and dispose of diesel fuel futures contracts in the operation of its Program. The high correlation between the movement of the price that JPB pays for its fuel and the movement of the value of the futures contracts produces the Program's effectiveness as a hedge. The volume of each futures contract is 42,000 gallons.

   b. **Maximum Hedge Ratio** – The JPB's volume of fuel consumption is highly predictable and without significant variability over time. Given this, the maximum hedge ratio will be limited to 100% of forecasted after sales tax consumption.

   c. **Maximum Hedge Maturity** – To allow the establishment of cost certainty in current and future budget periods, the maximum maturity of the futures contracts taken in conjunction with the Program is 36 months forward from the acquisition date.

   d. **Exiting Market Positions** – The Advisor will exit the futures contracts evenly though time to coincide with the fuel supply contract pricing mechanism. This even liquidation of futures hedges through time and the even purchase of fuel via JPB's fuel supply process assures the effectiveness of the hedging process. Based on the difference between the hedge price (entry price) and the settlement price (exit price), there will be a realized

gain/loss associated with the hedge that will appear in the futures account. Futures contracts will be held to maturity (exited when the corresponding fuel is purchased) and, in the normal operation of the Program, there will be no interim trading or early exit allowed. Exceptions to this include situations where the volume of forecasted fuel consumption decreases in which case the hedge position may be adjusted to comply with this Statement of Policy & Strategy.

3. **Physical Supply**:

   The physical supply of fuel will continue according to the current JPB process. The physical supply will be priced according to a floating price determined by the fuel supply contract.

4. **Strategy**:

   The Strategy is how the Program's objectives are achieved. The strategy will utilize a process:

   - That addresses market opportunities and market risks;
   - That examines fundamental and technical market factors in the hedge decision-making process;
   - That holds the risk of exceeding budget at or below an acceptable level;
   - That uses historical pricing ranges as pricing parameters;
   - That is continuously applied through time;
   - That will take advantage of the inherent "dollar cost averaging" properties of a continuous hedging program;
   - That mitigates transaction timing risk by making more numerous smaller volume transactions.

   These criteria will be met by the Advisor executing the appropriate transactions at the appropriate times to create the desired effect within the constraints of this Statement of Policy & Strategy.

5. **Execution, Monitoring & Reporting**:

   a. The Advisor will be responsible for the day-to-day execution of the Program including the execution of transactions, generating reports on the Program's status and results, and monitoring the Program and the energy markets.
   b. The Advisor will generate periodic updates on the status and results of the Program.
   c. Oversight of the Program will be primarily the responsibility of a JPB committee or panel.
   d. Reporting to/communicating with the JPB's committee/panel on the performance and status of the Program will occur periodically as the committee/panel deems appropriate. This reporting and communication may

include weekly and monthly reporting and periodic conference calls/meetings according to the JPB's needs and wishes.

RESOLUTION NO. 2020-

BOARD OF DIRECTORS, PENINSULA CORRIDOR JOINT POWERS BOARD
STATE OF CALIFORNIA

*** * ***

REPEALING THE FUEL HEDGING POLICY AND ADOPTING A NEW DIESEL FUEL HEDGING PROGRAM AND ASSOCIATED STATEMENT OF POLICY AND STRATEGY TO MAINTAIN A FUTURES ACCOUNT TO ACQUIRE, HOLD AND DISPOSE OF DIESEL FUTURES CONTRACTS AND AUTHORIZING EXECUTION OF COMMODITY FUTURES ACCOUNTS

WHEREAS, the Peninsula Corridor Joint Powers Board (JPB) purchases approximately four million gallons of diesel fuel each year to conduct train operations; and

WHEREAS, the Board of Directors (Board) adopted a fuel hedging policy in March 2010, and subsequently revised the policy in May 2012, April 2013, April 2014 and May 2015 (pursuant to Resolution No. 2015-22); and

WHEREAS, the existing fuel hedging policy no longer reflects market conditions and the JPB now requires a new Diesel Fuel Hedging Program to maintain a futures account with a Futures Commission Merchant by which the JPB will acquire, hold and dispose of diesel futures contracts; and

WHEREAS, the JPB requires execution of commodity futures accounts to buy, sell and trade in commodity futures and options on commodity futures for present or future delivery; and

WHEREAS, the Executive Director recommends that the JPB adopt a new Diesel Fuel Hedging Program to replace the fuel hedging policy; adopt and implement a

Statement of Policy and Strategy for the new Diesel Fuel Hedging Program; authorize the Executive Director to select one or more brokers to buy, sell and trade in commodity futures and options on the JPB's behalf; and authorize the Executive Director to execute commodity futures accounts on behalf of the JPB to buy, sell and trade in commodity futures and options on commodity futures for present or future delivery.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Peninsula Corridor Joint Powers Board hereby:

1. repeals the fuel hedging policy most recently amended via Resolution No. 2015-22;
2. adopts a new Diesel Fuel Hedging Program and associated Statement of Policy and Strategy, attached, which, among other things, will allow the JPB to maintain a futures account with a Futures Commission Merchant by which the JPB will acquire, hold and dispose of diesel futures contracts;
3. authorizes the Executive Director to select one or more brokers to buy, sell and trade in commodity futures and options on the JPB's behalf;
4. authorizes the Executive Director to execute commodity futures accounts on behalf of the JPB to buy, sell and trade in commodity futures and options on commodity futures for present or future delivery.

Regularly passed and adopted this 2nd day of April, 2020 by the following vote:

AYES:

NOES:

ABSENT:

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Chair, Peninsula Corridor Joint Powers Board

ATTEST:

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JPB Secretary