



# Caltrain Electrification Update

July 20, 2017



# PCEP Funding Update



# Funding Update

- All Local, Regional, State Funding Secured
- FTA Core Capacity Grant (\$647m) executed
  - \$73 approved previous years
  - \$100m approved FY 2017 Budget
  - \$100m recommended FY 2018 Budget
- Notices to Proceed issued to train and infrastructure builders



# Electric Train Design



# Outreach Tools

## Launch of Dedicated Electric Train Website

**CalMod**

**WHY HIGH-PERFORMANCE ELECTRIC TRAINS**

Caltrain plans to purchase new high-performance electric trains to replace the current diesel locomotive trains as part of the Peninsula Corridor Electrification Project. The electric trains would stop and start faster than diesel trains which means Caltrain could increase capacity with a more user-friendly, efficient schedule that would provide consistent, attractive service with more frequent stops without sacrificing speed.

Caltrain's new electric trains are a key component of the Caltrain Modernization (CalMod) program that will enhance the speed, capacity, safety, and comfort of Caltrain's commuter rail service.

Project status: This project is contingent on federal funding. For more information about the project status click [here](#).

**OVERVIEW** SEATS BIKES ENHANCEMENT

After design includes an option for wheelchair access. This will not be used when electric train is used.

**EXPLORE POTENTIAL NEW CALTRAIN ELECTRIC TRAIN**

If federal funding is secured, Caltrain plans to purchase new high-performance electric trains to replace the current diesel locomotive trains. This tour will highlight some of the exciting high-performance electric trains. Keep coming back to the website for updates and provide your feedback.

**TIMELINE**

2014 2015 2016 2017 2018

Environmental Clearance  
Capacity Studies  
Public Feedback  
Design Feedback

**SIGN UP FOR UPDATES**

If you are interested in receiving CalMod updates, make sure to

First Name\*  
Last Name\*  
Email\*  
City of residence\*

I'm not a robot

Submit

**OVERVIEW SEATS BIKES ENHANCEMENTS FEEDBACK**

**TYPICAL CAR LAYOUT**

**NEW PASSENGER CARS**

A typical passenger car layout would have two main levels with between 85 and 100 seats per car. There would be some flip seats, in addition to the regular fixed seats. Most seats would face one direction and if there are any seats facing each other, there would be a table in the middle. There would be one bathroom per train.

Previous Next

**BENEFITS**

**EFFICIENCY**  
and reduced travel time

**COMFORT**  
Amenities like destination signs and electrical plugs, more room, and reduced engine noise

**CAPACITY**  
capacity growth potential, grading service

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

**DELIVERY PLAN**

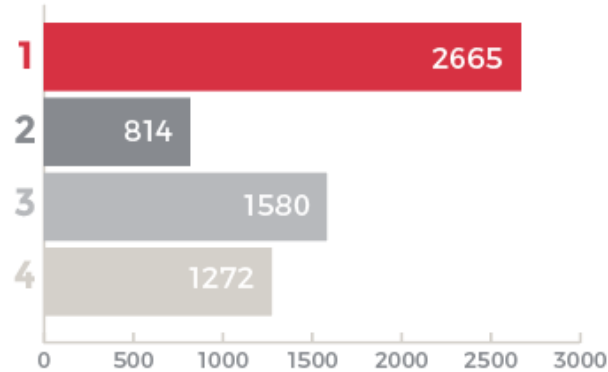
Initially, Caltrain plans to replace approximately 75 percent of the diesel fleet with new electric trains called Electric Multiple Units (EMUs), which would operate between San Francisco and San Jose. Full replacement of the fleet with EMUs would occur at a future time when funding is identified and the remaining diesel trains reach the end of their service life. Explore the timeline below to learn more about the schedule.

Project status: This project is contingent on federal funding. For more information about the project status click [here](#).

# EMU Exterior Design Public Poll

EXTERIOR  
DESIGN POLL  
RESULTS

6331 TOTAL VOTES



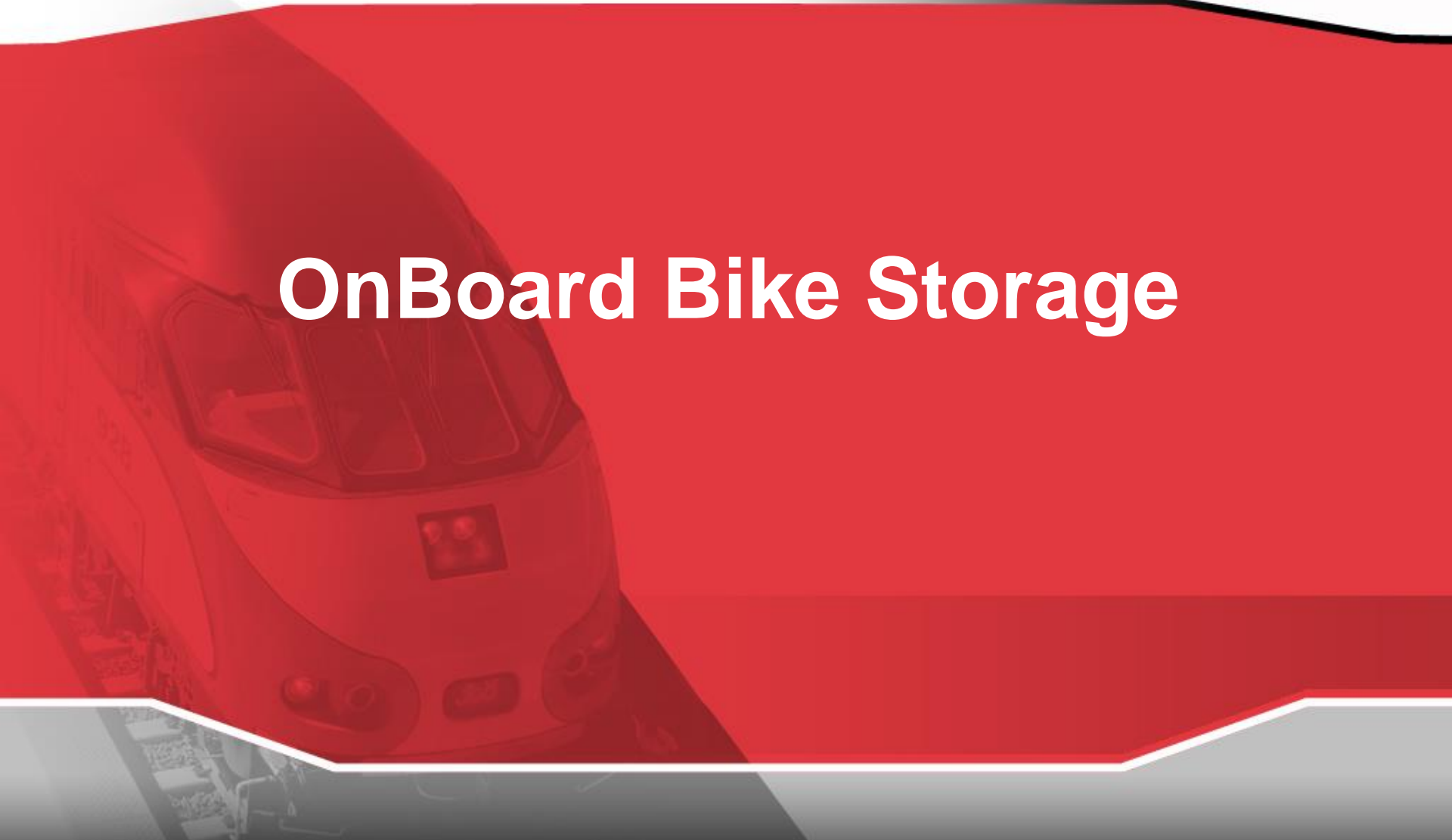
# EMU Exterior Design Winning Design

WINNING DESIGN: **OPTION 1**





# OnBoard Bike Storage





# Review of Recommended Storage Options

Option	Configuration	Bike Capacity	Add'l Hooks	Total Capacity Per Car	Ratio
1	Stacking (current)	32	4	36	1 : 7.9
2	Hybrid: Stacking + Stand	30	4	34	1 : 8.4

# Review of Option 1: Stacking

## Recommended



Ratio 1:7.9  
72 bikes per train

# Review of Option 2: Hybrid Stacking + Stand Recommended



Ratio 1:8.4

68 bikes per train

Stand: new concept, not currently in use

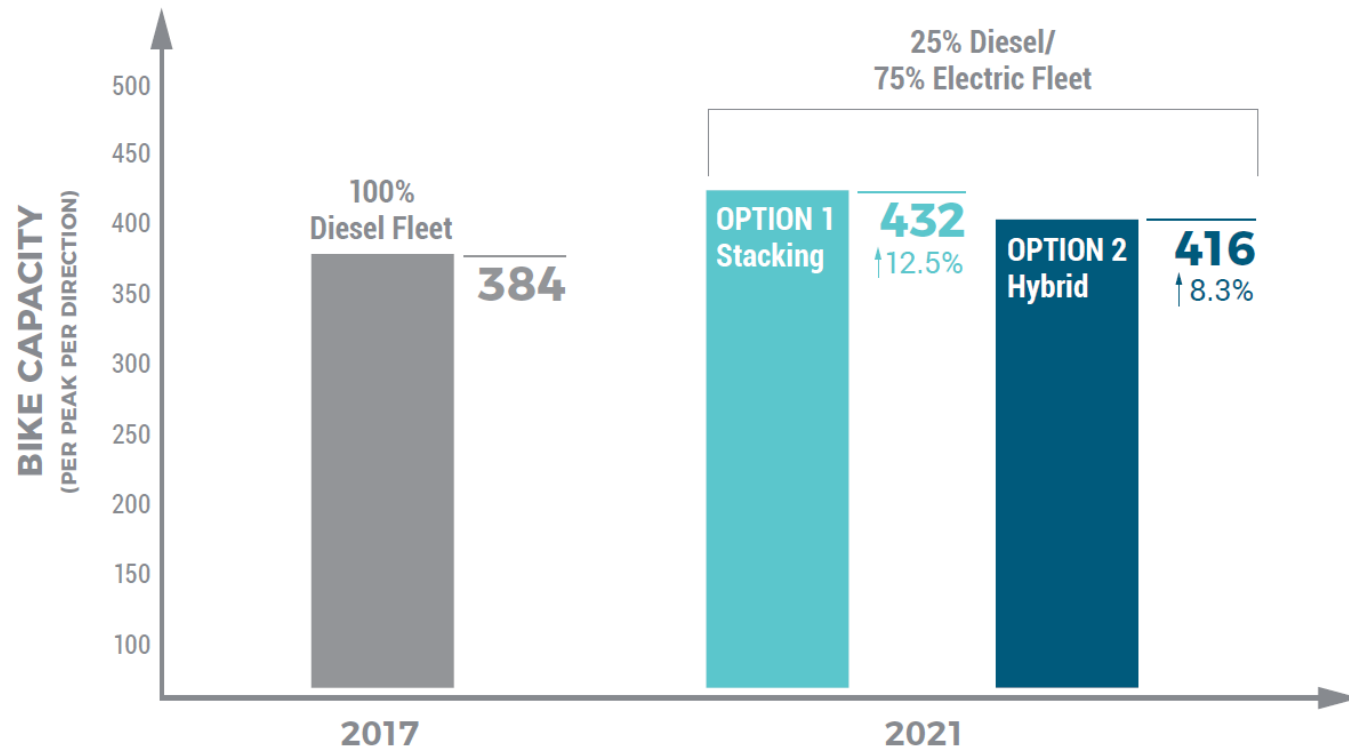
# Hooks

- Signage will be posted
- Hooks offer alternative storage option
- Some riders may prefer hooks
- Users encouraged to stay near bike

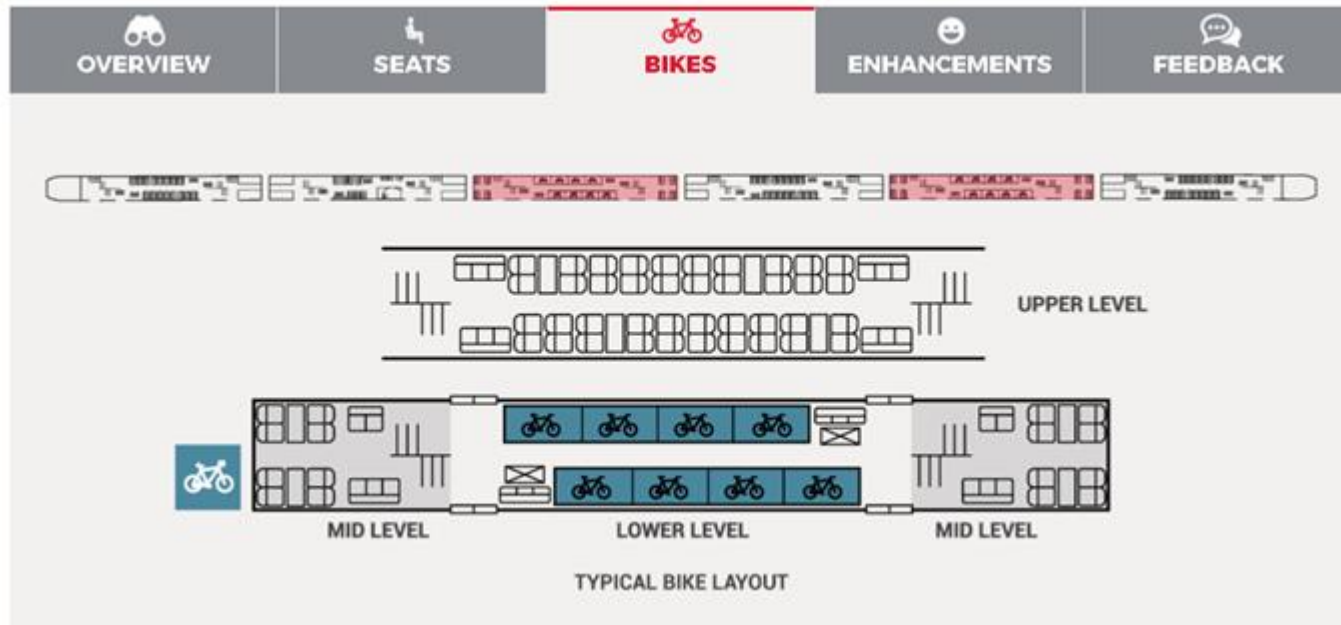
# Security

- Security cameras in each car
- Possible closed loop security camera to upper level monitors
- Staff to conduct research/mock-up of closed loop possibility for both security and operational flow (de-boarding process)
- Staff exploring monitor capabilities

# BIKE CAPACITY



# Bike Car Configuration



# Why Two Bike Cars v. Three?

## Capacity

- Current trains at or above capacity (at peak hour)
- 3 bike cars = loss of seat capacity
- 3 bike cars = loss of standing capacity
- Project funding tied to capacity increase



# Why Two Bike Cars v. Three?

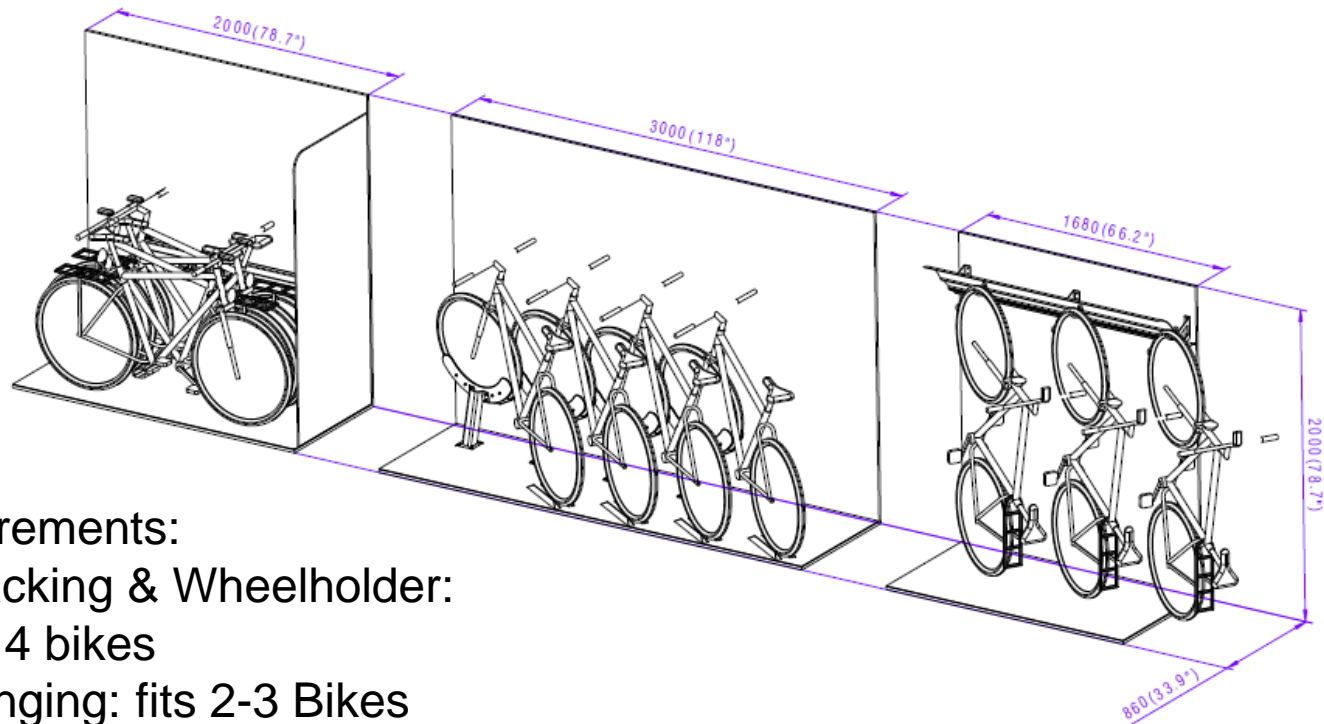
## Continued

- Operations
  - 2 cars more efficient
  - Increased dwell time if 3 bike cars
- Conductor service
  - Limited resources
  - 2 conductors maintains service. 3 bike cars difficult on resources

# Timeline Overview

- **Samples Arrive: early August 2017**
- **Outreach Events & Poll: August 2017**
- **BAC August special meeting OR combine with Sept. meeting**
- **Determination: September 2017**

# Draft Samples



## Requirements:

- Stacking & Wheelholder: fits 4 bikes
- Hanging: fits 2-3 Bikes
- Breakdown & Set-up Easily
- Fit/transport through Door

# Outreach Events

Tentative based on samples

Date	Time	Event
August 8	9:00 a.m. – 6:00 p.m.	Silicon Valley Bike Summit Mt. View
August 9	4:30 p.m. – 7:00 p.m.	4 <sup>th</sup> & King Station outreach
August 14	4:30 p.m. – 6:30 p.m.	Redwood City Station outreach
August 15	4:30 p.m. – 7:00 p.m.	Palo Alto Station outreach
August 16	5:30 p.m. – 8:00 p.m.	Menlo Park Block Party
August 17	TBD	Final Installation Outreach Office
August 24 OR Sept. 7	5:45 p.m.	BAC Special Meeting or Combined Sept. Meeting

# Poll: Tentative Dates

- **Samples Arrive: early August 2017**
- **Outreach Events & Poll: August 2017**
- **BAC August special meeting OR combine with Sept. meeting**
- **Determination: September 2017**

# Outreach Discussion

