Update on TIRCP Project: EMU Configuration & Bike Improvements at Stations

JPB Board
March 7, 2018
Agenda Item 10
Overview

- Additional vehicle option: Board approved December 2018
- $183M for 37 additional electric vehicles
- 7 car trains instead of 6 car trains
- Bike car security concerns from bike community
- $3.5M+ bike parking & micromobility improvements at stations

Process to move forward
Context
Ridership & Bikes Onboard

- 1992: Bikes allowed onboard
- Incremental growth over the years
- 2016: 3rd Bombardier bike car added
- 2018 Ridership: 65,095
On Board Bike Ridership

Source: Caltrain 2018 Annual Passenger Count
2015 Context

- Daily ridership: ~58,000
- Daily bike boardings: 6,207
- Trains per peak hour: 5
- On board bike spaces 80 or 48
- Metrolink cars on the way (provides additional bike capacity)
- Board resolution related to 6-car PCEP electric vehicle purchase: 1 bike space for every 8 seats
- Bike parking options at stations limited (mostly racks and keyed lockers)
- Bike share very limited, no scooters etc.
2018 Context

- Daily ridership: ~65,000 (up 12% from 2015)
- Daily bike boardings: 5,919
- Trains per peak hour: 5 (combination of 5 and 6-car trains)
- On board bike spaces 72-80 per trainset
- Caltrain Electrification in construction
- Significant number of trains with standees
- Variety of new first / last mile options
Today - Bikes on Train

- Caltrain carries more bikes onboard than any commuter rail in the country
  - A person bringing a bike onboard is taking up two spaces (bike and seat)
Today - Increased Crowding

Caltrain Ridership on the Rise: Report

By: Ansar Hasson
Published Mar 5, 2010 at 5:44 AM | Updated at 9:09 AM PST on Mar 5, 2010

An increased number of people appear to be hopping on Caltrain during their commutes, according to a report, Ansar Hasson reports.

In-depth: Caltrain riders say overcrowding has become an issue on trains

By: Vince Cestone
Posted: Feb 24, 2007 12:43 PM PST
Updated: Apr 24, 2007 3:08 PM PST

Caltrain overcrowding is a problem that continues to grow.

Overcrowded trains

Redwood City
Rider Survey (2017)

“Commuting everyday. It sucks that you may not actually get a seat after how much you pay to take Caltrain. Second to not having a seat, is how crowded it can get.”

“Many trains are too crowded. 50% of the time I don’t get a seat”

“Need more train cars → rush hour → no seats”

“My usual afternoon train that leaves at Cal Ave at 1630 is very crowded”

“You added a car and have a new train which gives more room, but I still have to stand because you have no seats.”
Social Media Customer Complaints

Crowded Trains

Caltrain is getting crowded

I snapped this photo yesterday evening as the train approached Palo Alto station for my commute home. It’s getting a little bit crowded on the train.

2,405 views 5 faves 12 comments

Tags

3 Retweets 1 Like

Replying to @Caltrain

What is the actual maximum number of cars you can configure & run a consort with? That’s what 323 needs. It’s nuts now, worse every week.
Reported Bike Bumps

Caltrain Bicycle Bump Trend (2012-2018)

Source: Caltrain 2018 Annual Passenger Count
# Morning Capacity – 2018

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Train Operations (Today)

- Bike boarding/deboarding a significant cause of delay
  - Bikes board first project aimed at reducing boarding time
- Conductor resources used to oversee bike cars
- Number of bike cars should be limited in order to limit excessive dwell times
Future Operations (2022)

- 7-car electric trains (max 667 seats)
  - Seating capacity equivalent to a 5-car diesel train
- Incremental commissioning/decommissioning trainsets requires electric trains to have at least the seating capacity of a 5-car train
- Remaining diesel Gilroy trains will continue to provide more seated capacity
- Future demand satisfied by combination of seating capacity and increased frequency (6 per hour, up from 5)
- Assess next increment through Business Plan
Financial Implications: Onboard Bikes

- Initial electric vehicle purchase: $551M for 16 six-car trainsets ($34.4M per train)
- Six-car trainset = 567 seats + 72 bike spaces
  - 72 seats removed to install bike spaces
- Per seat replacement cost = $53.8k
- Per trainset seat replacement cost = $3.88M
- $62M investment in additional rolling stock needed to provide equivalent seat replacement
- Legislation precludes charging for bikes onboard
By 2040 there could be underlying demand for approximately 240,000 daily trips on the system.
Caltrain Business Plan Continued

- While Caltrain is able to expand its Electric train consists to seven car trains, adding further capacity will be challenging.
- In addition to purchasing additional vehicles, other investments, such as platform extensions, will be required.
- The Caltrain Business Plan is exploring what options are available to further lengthen trains (beyond 7 cars to 8- or 10-car consists) as well as what may be required to run additional trains.
- This is a holistic analysis that will illustrate both the opportunities as well as the limits to adding capacity to the Caltrain system as a whole.
Bike Parking & Micromobility at Stations
Options at Stations Improving

- Limited options today
- Working to offer more:
  - Electronic lockers
  - Shared access bike rooms
  - Better management
  - Bike and scooter share
- Untapped potential - much more space at stations than onboard trains
Bike & Scooter Share Today

- Much learned since original Bay Area Bike Share pilot, w/ Lyft & Uber owning & operating more integrated systems
- San Francisco 4th & King is the busiest bike share station in the Bay Area
Bike & Scooter Share Today

- Scooter share is a quickly evolving first and last mile option not available in 2015
- Multiple scooter share companies started in 2017 and now claim over 10 billion rides
- Caltrain currently developing micromobility policy to make options work well for all riders
Best Practices Around the World

As ridership increases, we must look to places around the world with higher bike ridership

Rotterdam

Tokyo
Recent Efforts to Improve Caltrain Bike Options

- Bike Parking Management Plan approved (November 2017)
- Bike Security Task Force (began January 2018)
- New station access planner hired (August 2018)
- Bike access & parking survey (Fall 2018)
- Funding for bike improvements at stations: $3.5M (TIRCP grant 2018)
Caltrain Ongoing Bike Parking Efforts

• Develop station specific plans with bike parking amenities
• Work with bike share companies, locker manufacturers & station area projects to make things easy to understand and inexpensive for users
• Develop a strategic plan for corridor-wide bike share
• Prioritize spending
• Coordinate with cities on bike plan updates
Caltrain Priorities (near / future)

- Capital plan for first 10 stations: Spring 2019
- Rework keyed locker management: 1-2 stations/month (ongoing)
- 4th & King/Townsend bike parking expansion: Winter 2019 / 2020
- Capitol Corridor eLockers: June 2019
- San Carlos Station Improvements: Fall 2019
- Sheds managed by 3rd party: Late 2019 - early 2020
- E-lockers system wide: 2022
- Bike rooms: Include with any TODs
Caltrain Bike Security Efforts

- Interdepartmental effort started Spring 2018
- Reporting/protocol improved
- Updated bike webpages
- Underway
  - Theft prevention app - pursuing partnership
  - Lost & Found - new 24 hour recovery policy
  - Updating onboard decals and materials
Electric Train Configuration
Next Steps
Bikes Security on Electric Trains

- Bike community desires seats next to bikes
- Caltrain can review possible configuration options
  - Additional community input/feedback
  - Joint CAC/BAC workshop
    - Hands-on interaction with configuration possibilities
    - Small groups
    - Board participation
Funding

- Reconfiguration not part of current budget
- Funding sources not yet identified
Next Steps

• Identify strategies for configuration of existing bike cars and seventh car to address bike security concerns
  • Maximize seated capacity
  • Minimize impact on cost, bike capacity
  • Not constrained by 1:8 bike to seat ratio
• Make bike parking and micromobility at stations more viable solutions
# Outreach Process

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<th>Item</th>
<th>Audience</th>
<th>Date</th>
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<tr>
<td>Outreach Process Update</td>
<td>CAC, BAC Subcommittee, Bike Coalitions</td>
<td>February</td>
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<td>Outreach Process Input / Process</td>
<td>Board</td>
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<td>Joint Workshop: Electric Train &amp; Bikes</td>
<td>CAC and BAC</td>
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<td>Onboard Configuration</td>
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