Context
Capacity and Access Challenges

• Between 11% and 19% of customers make “bike-based” trips to and/or from system
• Majority (~90%) involve taking a bike on-board the train
• Peak load trains often over capacity for bikes and people
• Bike riders sometimes “bumped” or denied boarding due to capacity limits
Caltrain Electrification

- Increase in service levels, capacity and performance
- 6 peak hour trains
- 8:1 seats to bike ratio on new trains (vs existing 9:1)
- Future blended system with CAHSR and service to Transbay Terminal
Growing bike-based trips on Caltrain

- Caltrain ridership projected to double by 2040
- Caltrain wants to grow both the number and share of bike-based trips to the system
- Expansion of on-board bike capacity included in electrification but must be balanced against overall capacity needs
- Long term growth in the number of bike-based trips to the system will also require increased utilization of wayside facilities (bike parking and bike share)
Potential Change in the Distribution of Bike Access Modes

Today
- 97% Carried the bike on board
- 6% Parked at a Station
- 1% Used bike share

Future
- 60% Carried the bike on board
- 37% Parked at a Station
- 3% Used bike share
Key Questions

• What is the market for bike parking at Caltrain?
  – What will the future demand for bike-based trips to Caltrain be?
  – What mix of bike parking will best serve Caltrain customers?
  – Which customers will always choose to bring their bike on board vs. which ones might choose to park a bike if better facilities were available?
Key Questions Continued

• How can Caltrain deliver high-quality bike parking?
  – What goals and standards should apply to our bike parking system?
  – What is the best model for managing and operating a bike parking system? What resources may be needed?
  – How should we focus and phase investments in the bike parking system?
Scope & Schedule
General Schedule

• Data Collection and Customer Research:
  – Start: Now
  – Duration: 5 months

• Performance Goals and Targets:
  – Start: August 2016
  – Duration: 5 months

• Management & Implementation Recommendations:
  – Start: December 2016
  – Duration: 4 months
Data Collection and Customer Research and Outreach
Key Activities

• Data Collection
  – Analysis of MTC Survey Data
  – Parking occupancy and turnover data collection

• Customer Research
  – Intercept Survey of “Bikes on Board” users (Summer 2016)
  – Web-based Open Survey (Summer 2016)
  – Keyed Locker User Survey (Summer 2016)
  – Focus Groups (Fall 2016)

• Outreach
  – Caltrain BAC and CAC
  – Study Technical Advisory Committee
  – Project Website/Comment Form
  – Additional Public meetings as requested by stakeholders
# Existing Bike Parking System

<table>
<thead>
<tr>
<th>Parking Type</th>
<th>~Quantity</th>
<th>~ Occupancy Levels</th>
<th>Ownership / Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racks</td>
<td>660</td>
<td>Varies widely by station</td>
<td>Generally Caltrain, but variable by station</td>
</tr>
<tr>
<td>Mechanical</td>
<td>1025</td>
<td>80% system wide</td>
<td>Caltrain</td>
</tr>
<tr>
<td>Electronic Lockers</td>
<td>60</td>
<td>TBD – but generally well utilized</td>
<td>Cities, other Transit operators</td>
</tr>
<tr>
<td>Bike stations / shared facilities</td>
<td>380</td>
<td>TBD – but generally well utilized</td>
<td>Varies</td>
</tr>
</tbody>
</table>
MTC Data

- Survey period: October/November/December 2014
- Sample size: 5,704 trips on Caltrain, including 1,094 bike-based trips
- Data types: Trip Type (Home to Work, Home to College/University, etc), Trip Origin, Access Mode, Origin Station, Access Mode, Egress Mode, Exit Station, Trip Destination, Socioeconomic Information
- Detailed information about bicycle access, including type of bike parking used at the entrance station and whether bike was brought on board
South San Francisco to Redwood City
Redwood City to San Jose
San Jose
Bike Access Mode Share by Station

What percentage of Caltrain riders used a bike to access their origin station?*

*Data from 2015 On-board survey
Bike Boarding/Alighting Volumes

Where do most people who bring bikes with them get on and off the train?**

**Data from 2015 annual passenger count data
Egress mode split for bicycle parkers

For people who parked their bike at their origin station, how did they get to their final destination?*

- Walked
- Transit
- Drive alone
- Get picked up by someone
- Taxi
- Drive or ride with others / carpool

*Data from 2015 On-board survey
Additional Data Collection

- Observe midday bike rack usage at top stations
- Collect data on usage of keyed, eLocker and shared bike facilities
- Observe “efficiency” of keyed locker usage at top stations
Intercept Survey

- Collect 320+ completed surveys by interviewing passengers in the bike cars during July
- Focus will be customers who currently bring their bike on board
- Intercept methodology used to insure representative sample
- Questions explore trip patterns observed in the MTC data and examine customers’ interest / ability to store bike at a Caltrain station rather than take it on board
Questionnaire – Keyed Locker Users

• Collect 20+ completed surveys from the users of keyed lockers though an email / mailback questionnaire

• Questions will aim to explain observed usage of these lockers and identify positives and shortcomings of current parking system
Web-Based Survey

- Open to everyone
- Will occur after onboard survey
- Will provide more general format for input
- Questions related to trip patterns, bike parking needs and options
- Not a representative sample
Focus Groups

• Three focus group meetings planned for early fall
• Will be held along the Caltrain corridor, likely in the afternoon / evening commute period
• Focus group participants will be selected through respondents to the intercept survey who provide their contact information
• Focus groups will be used to explore ideas and concepts for bike parking improvements
Imagining A Better Bike Parking System
Corrals / large-scale rack installations

San Francisco

UC Davis
Electronic Bike Lockers

San Francisco

UK
Civic Center BART
Berkeley BART
Washington, DC
Dorchester, MA
Amsterdam
Czech Republic