Caltrain Business Plan

JANUARY 2019

Project Update
July 2018 through January 2019
Business Plan Overview

- A Vision for Growth
- Crafting Scenarios
- Looking Beyond the Tracks
- Outreach & Next Steps
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
Where Are We in the Process?

We Are Here

- 2018: Board Adoption of Scope
- 2019: Partnership with Stanford and Contracting with Technical Team
- 2019: Board Adoption of 2040 Service Vision
- 2020: Board Adoption of Final Business Plan

Timeline:

- Initial Scoping and Stakeholder Outreach
- Technical Approach Refinement, Partnering, and Contracting
- Part 1: Service Vision Development
- Part 2: Business Plan Completion
- Implementation
A Vision for Growth
200 Years on the Caltrain Corridor

Yesterday

1863
Passenger service begins on the corridor
200 Years on the Caltrain Corridor

Yesterday

1870
Southern Pacific
Railroad purchases
the corridor
200 Years on the Caltrain Corridor

Yesterday

1940s – 1970s
Passenger and freight traffic boom during WWII then begin steady decline
200 Years on the Caltrain Corridor

Today

1977
Caltrans subsidizes Southern Pacific commute service
200 Years on the Caltrain Corridor

Today

1987
Caltrain and Joint Powers Board are formed
200 Years on the Caltrain Corridor

Today

2004
Baby Bullet service is introduced
200 Years on the Caltrain Corridor

Tomorrow

2022
Corridor electrification is completed

200 Years on the Caltrain Corridor

Tomorrow

2027 and Beyond
Caltrain and High-Speed Rail operate using Blended System
Electrification is the Foundation for Growth with Plans for More
2040 Demand

The Caltrain corridor is growing
• By 2040 the corridor expected to add 1.2 million people and jobs within 2 miles of Caltrain (+40%)\(^1\)
• 80% of growth expected in San Francisco and Santa Clara Counties

Major transit investments are opening new travel markets to Caltrain
• Downtown Extension and Central Subway to provide more direct connections to downtown San Francisco
• Dumbarton Rail, BART to San Jose, and improvements to Capitol Corridor and ACE to strengthen connectivity with East Bay
• HSR and Salinas rail extensions to increase interregional travel demand

\(^1\)Based on Plan Bay Area forecasts and approved projects by individual cities
Indicates a station where substantial growth beyond Plan Bay Area forecasts is anticipated, but not yet approved.
Crafting Scenarios

Business Plan Overview
A Vision for Growth
Crafting Scenarios
Looking Beyond the Tracks
Outreach & Next Steps
Where do We Start?

The Caltrain corridor is not a blank slate

**Existing Policy Decisions**
- Commitment to a Blended System
- Primarily a 2-track corridor

**Planned Projects**
- Stations
- Connecting services
- Grade separations

**Community Acceptability**
- Tangible benefits
- Mitigated or acceptable impacts

**Market Responsiveness**
- Origins and destinations
- Capacity
- Travel times
- Coverage

**Fiscal Reality**
- Realistic scale
- Value for money
Service can be improved and expanded but tradeoffs and choices are required across all scenarios. There is no perfect answer.

1. **Service Differentiation**
   How can local, regional and high speed services be blended and balanced on the corridor to best serve multiple markets?

2. **Peak Service Volume**
   How much growth in peak train traffic volume can the corridor support and what kinds of growth may be required to meet long term demand?

3. **Service Investments**
   What types of investments into operations, systems and infrastructure will be required to achieve the desired types and volumes of service?
Baseline Growth

- 2018: Current Operations
- 2022: Start of Electrified Operations
- 2033: High Speed Rail Phase 1
- 2040: Service Vision

High Growth
Moderate Growth
Baseline Growth
2040 Baseline

The “Baseline” growth scenario includes service assumptions that meet the JPB’s existing policy commitments and reflect past and ongoing Blended System planning.

Operating Parameters
- Blended service with 10 trains per hour, per direction north of San Jose (6 Caltrain, 4 HSR)
- Blended operations with existing/committed levels of Caltrain service assumed south of San Jose (equivalent of 4 round trip Caltrain trains per day)

Service Pattern
- Historically, Caltrain has planned to operate a skip stop service after electrification
- Blended service planning with HSR has carried forward this concept
- There is some flexibility in service levels and stopping patterns at individual stations
## 2040 Baseline Scenario (6C+4HSR Trains)

### Service Type
- **Skip Stop**
- **High Speed Rail**

### Infrastructure
- Conceptual 4 Track Segment or Station

### Features
- Blended service with up to 10 TPH north of Tamien (6 Caltrain + 4 HSR) and up to 10 TPH south of Tamien (2 Caltrain + 8 HSR)
- Three skip stop patterns with 2 TPH – most stations are served by 2 or 4 TPH, with a few receiving 6 TPH
- Some origin-destination pairs are not served at all

### Passing Track Needs
- Less than 1 mile of new passing tracks at Millbrae associated with HSR station plus use of existing passing tracks at Bayshore and Lawrence

### Options & Considerations
- Service approach is consistent with PCEP and HSR EIRs
- Opportunity to consider alternative service approaches later in Business Plan process

### PEAK PERIOD, EACH DIRECTION

| Service Level (Trains per Hour) | San Francisco 22nd St | Bayshore | South San Francisco | San Bruno | Millbrae | Broadway | Burlingame | San Mateo | Hayward Park | Hillsdale | Belmont | San Carlos | San Bruno | Redwood City | Atherton | Menlo Park | Palo Alto | California Ave | San Antonio | Mountain View | Santa Clara | College Park | San Jose | Diridon | Capitol | Blossom Hill | Morgan Hill | San Martin | Gilroy |
|---------------------------------|-----------------------|----------|---------------------|-----------|----------|----------|-----------|----------|-------------|----------|----------|-----------|----------|--------------|----------|-------------|----------|----------------|-----------|-------------|--------|----------------|--------|------------|--------|--------|--------|----------|
| 2 Trains / Hour                 | 0                     | 0        | 0                   | 0         | 0        | 0        | 0         | 0        | 0           | 0        | 0        | 0         | 0        | 0             | 0        | 0           | 0        | 0                | 0        | 0           | 0        | 0      | 0      | 0          | 0        | 0           | 0       |
| 2 Trains / Hour                 | 0                     | 0        | 0                   | 0         | 0        | 0        | 0         | 0        | 0           | 0        | 0        | 0         | 0        | 0             | 0        | 0           | 0        | 0                | 0        | 0           | 0        | 0      | 0      | 0          | 0        | 0           | 0       |
| 2 Trains / Hour                 | 0                     | 0        | 0                   | 0         | 0        | 0        | 0         | 0        | 0           | 0        | 0        | 0         | 0        | 0             | 0        | 0           | 0        | 0                | 0        | 0           | 0        | 0      | 0      | 0          | 0        | 0           | 0       |
| 4 Trains / Hour                 | 0                     | 0        | 0                   | 0         | 0        | 0        | 0         | 0        | 0           | 0        | 0        | 0         | 0        | 0             | 0        | 0           | 0        | 0                | 0        | 0           | 0        | 0      | 0      | 0          | 0        | 0           | 0       |

### Diagram
- **Service Level**
- **Infrastructure**
- **Passed Stop Patterns**
- **High Speed Rail**

---

23
Higher Growth Scenarios

Amount of Investment/Number of Trains

- **2018**: Current Operations
- **2022**: Start of Electrified Operations
- **2033**: High Speed Rail Phase 1
- **2040 Service Vision**: Baseline Growth
- **High Growth**: Moderate Growth

Design Year
Using Plan Bay Area numbers for projected growth in jobs and housing, an unconstrained model run of high frequency, all-day BART-like service in the Caltrain corridor suggests that by 2040 there could be underlying demand for approximately 240,000 daily trips on the system.
Throughput Demand vs. Capacity

To comfortably serve the full potential market for rail in 2040, Caltrain would need to operate 8 trains per hour, per direction (TPHPD) with 10 car trains or 12 TPHPD with 8 or 10 car trains.
Service Goals

1. Maximize Ridership
   With fast and frequent service between major markets

2. Improve Coverage and Connectivity
   By ensuring that most stations are connected with frequent service

3. Enhance Capacity and Convenience
   With service that is comfortable and easy to understand

4. “Right Size” New Infrastructure
   By investing strategically to provide corridor-wide benefits
Assumes standardized HSR service; the 2018 HSR Business Plan expects 2 trains per hour, per direction at Millbrae.

TBD through further analysis.
Expanding Concepts South of San Jose

North of San Jose
• Corridor between San Francisco and Tamien owned by Caltrain
• Electrification under construction
• Caltrain will share corridor with HSR

South of San Jose
• Union Pacific owns existing corridor between Tamien and Gilroy
• HSR and State of California negotiating with UP
• 2018 HSR Business Plan contemplates building two electrified tracks alongside non-electrified freight track
• Creates an opportunity to extend electrified Caltrain service south to Gilroy
Moderate Growth Scenario (8C + 4HSR Trains)

Features
- A majority of stations served by 4 TPH local stop line, but Mid-Peninsula stations are serviced with 2 TPH skip stop pattern
- Express line serving major markets – some stations receive 8 TPH
- Timed local/express transfer at Redwood City

Passing Track Needs
- Up to 4 miles of new 4-track segments and stations: Hayward Park to Hillsdale, at Redwood City, and a 4-track station in northern Santa Clara county (Palo Alto, California Ave, San Antonio or Mountain View. California Ave Shown)

Options & Considerations
- To minimize passing track requirements, each local pattern can only stop twice between San Bruno and Hillsdale - in particular, San Mateo is underserved and lacks direct connection to Millbrae
- Each local pattern can only stop once between Hillsdale and Redwood City
- Atherton, College Park, and San Martin served on an hourly or exception basis
### High Growth Scenarios (12C +4HSR Trains)

#### Features
- Nearly complete local stop service – almost all stations receiving at least 4 TPH
- Two express lines serving major markets – many stations receive 8 or 12 TPH

#### Passing Track Needs
- Requires up to 15 miles of new 4 track segments: South San Francisco to Millbrae, Hayward Park to Redwood City, and northern Santa Clara County between Palo Alto and Mountain View stations (shown: California Avenue to north of Mountain View)

#### Options & Considerations
- SSF-Millbrae passing track enables second express line; this line cannot stop north of Burlingame
- Tradeoff between infrastructure and service along Mid-Peninsula - some flexibility in length of passing tracks versus number and location of stops
- Flexible 5 mile passing track segment somewhere between Palo Alto and Mountain View
- Atherton, College Park, and San Martin served on an hourly or exception basis
Developing All Day Service Plans

Off-peak and weekend service provides unique opportunities and challenges for Caltrain

- The Caltrain corridor has very high all-day travel demand, 7 days a week
- Demand for off-peak service may increase overtime along with corridor development and densities
- Early morning, midday, evening, and weekend periods all present different challenges and opportunities related to operating costs and work windows for construction and maintenance
Choosing a long range “Service Vision” is not just about picking which service pattern looks the best—it requires evaluating which package of service and investments will deliver the best value to the corridor and the region.

During the spring of 2019 the Business Plan team will develop a detailed “Business Case” analysis for each of the different growth scenarios. The Business Case will quantify the financial implications and wider costs and benefits of each growth scenario.
Planning to Deliver
How will the Caltrain Organization Support the Service Vision?

Key Concept - Service Delivery

- How Caltrain operates and manages service (both on and off the corridor)
- Includes activities like train operations, maintenance, capital project delivery, joint development, planning, and budgeting

Key Concept - Governance

- The manner in which Caltrain is overseen by the Board
- Focus on the agency’s decision making process and the Board’s oversight of the Caltrain organization

Analysis and Outcomes

- Interviews with stakeholders, organizational “mapping” and analysis of current Caltrain structure
- Comparison with national and international peer railroads
- Understand the range of potential organizational structures for both service delivery and governance and evaluate at a high level
- Work with JPB and JPA members to determine strategy and next steps
- Identify near term priorities related to Business Plan implementation
Looking Beyond the Tracks

- Business Plan Overview
- A Vision for Growth
- Crafting Scenarios
- Outreach and Looking Beyond the Tracks
Direct Engagement with Local Jurisdictions is Central to this Effort
Key Themes From Discussions with City Staff

Service Levels & Schedules
Travel demand and mode split goals in relation to existing and anticipated roadway congestion

Physical Corridor
Grade crossings, grade separations, and the stretches of fencing, walls, and vegetation in between

Land Development
Placemaking, jobs-housing balance, transit-oriented development, and zoning changes

Station Connectivity & Access
Local first/last mile solutions, multi-modal access, and equitable incentive programs
Grade Separations are Critical

All of the scenarios being considered involve significant increases in the number of trains per hour operating in the corridor.

The Business Plan will consider the costs and challenges associated with grade separations and improvements to at-grade crossings as part of the overall plan.
Business Plan Website is Up!

- Project timeline
- Project summary
- Corridor-wide factsheet
- Jurisdiction-specific factsheets
- Monthly presentations
- Glossary of key terms
- FAQs

www.caltrain2040.org
Outreach Activities to Date
July – December Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Policy Maker Group</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>City/County Staff Coordinating Group</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Project Partner Committee</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Community Interface Meetings (One Per Jurisdiction)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Stakeholder Advisory Group</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner General Manager</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Website &amp; Survey Launch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Community Meetings (One Per County)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Sister Agency Presentations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
# Outreach Activities to Date

*July – December by the Numbers*

## Stakeholders Engaged

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdictions</td>
<td>21</td>
</tr>
<tr>
<td>Public Agencies</td>
<td>26</td>
</tr>
<tr>
<td>Stakeholder Group Meetings</td>
<td>39</td>
</tr>
<tr>
<td>Organizations in Stakeholder Advisory Group</td>
<td>93</td>
</tr>
</tbody>
</table>

## Public Outreach

<table>
<thead>
<tr>
<th>Activity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Meetings and Presentations</td>
<td>18</td>
</tr>
<tr>
<td>Survey Responses</td>
<td>700+</td>
</tr>
<tr>
<td>Website Hits</td>
<td>2,600</td>
</tr>
<tr>
<td>Social Media Engagements</td>
<td>27,000</td>
</tr>
</tbody>
</table>
Next Steps

We Are Here

2018
- Board Adoption of Scope
- Technical Approach Refinement, Partnering, and Contracting

2019
- Partnership with Stanford and Contracting with Technical Team
- Part 1: Service Vision Development
- Board Adoption of 2040 Service Vision

2020
- Board Adoption of Final Business Plan
- Implementation
FOR MORE INFORMATION
WWW.CALTRAIN.COM