Downtown Rail Extension (DTX) Ridership Forecasting & Benefits Analysis

Progress Update



San Francisco County Transportation Authority San Francisco Peninsula Rail Program Executive Steering Committee January 21, 2022

Presentation Outline

- Work Program Context
- DTX Ridership Forecasting:
 - Ridership Forecasting Tools & Approach
 - Range of Results to Date
 - Next Steps
- DTX Benefits Analysis
 - Benefits Case Framework
 - Headline Benefits
 - Next Steps







DTX Comprehensive Work Plan Tasks

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Task 3.3 (MOU Task 10B) DTX Demand Forecasts

Key Activities:

- Definition of scenarios and assumptions
- FTA "STOPS" model development and application
- Long-range forecasting to underpin benefits assessment

Task 3.2 (MOU Task 10A) DTX Benefits Assessment

Key Activities:

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- Planning analyses to estimate project benefits
- Input into development of FTA project evaluation/rating
- Input to re-branding and public outreach activities

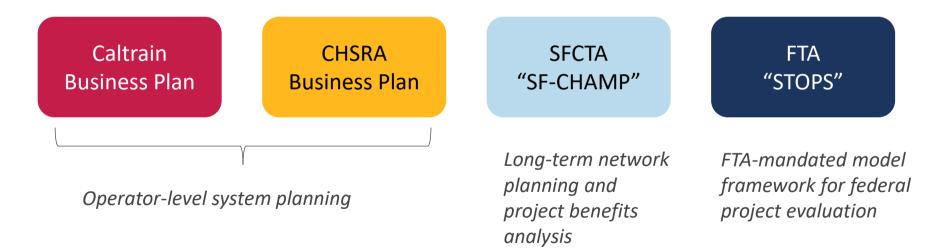
Ridership Forecasting

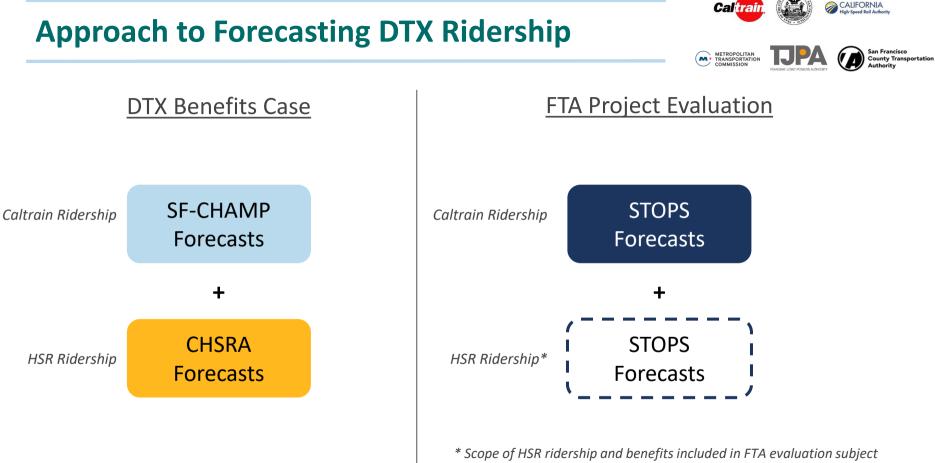


Ridership Forecasting Tools



Multiple tools to forecast DTX ridership, with different methods and purposes:





to New Starts requirements and FTA guidance

HSR Ridership Forecast



HSR ridership forecast from CHSRA:

- Year 2040 forecast, assuming completion of Phase 1 (SF to LA) with 4 trains/hour per direction (peak)
- 2040 forecast of approximately 36,000 daily HSR boardings + alightings in San Francisco:

| 2040 HSR Daily Ridership | All Trips | |
|--|-----------|--|
| Systemwide | 106,000 | |
| San Francisco – Salesforce Transit Center | 32,000 | |
| San Francisco – 4 th & Townsend | 4,000 | |

• HSR forecast subject to update through CHSRA Business Plan process

Updated forecasts of **DTX Caltrain ridership** being prepared using SF-CHAMP and STOPS tools:



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| Year | Scenario | Caltrain Service Level (peak tphpd*) | SF-CHAMP | STOPS | |
|------|---------------------|---|----------|-------|--|
| 2019 | Baseline | 5 | • | • | 2019 Analysis: Baseline and FTA-required "current land use" forecas |
| | "2019" No-Project | 6 | | • | |
| | "2019" With-Project | 6 | | • | |
| 2040 | No Project | 6 | • | • | 2040 Analysis: FTA future horizon year |
| | Project | 6 | • | • | |
| | No Project | 8 | • | • | |
| | Project | 8 | • | • | |
| 2050 | No Project | 6 | • | | 2050 Analysis: Long-term analysis to feed benefits case and align to RTP horizon |
| | No Project | 8 | • | | |
| | Project | 8 | • | | |
| | Project + Link21 | TBD | • | | |

SF-CHAMP: 2050 Key Assumptions



- Land Use regional land use consistent with adopted MTC Plan Bay Area 2050
- **Transportation Network** MTC Plan Bay Area 2050 baseline committed project list
- **Caltrain Service Plan / Service Pattern –** Caltrain Business Plan scenarios for 6 tph and 8 tph

Caltrain Ridership: Initial SF-CHAMP Results – Summary



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CALIFORNIA

| Metric | Preliminary Forecast Range (2040/2050)* |
|---|--|
| Caltrain Ridership @ Salesforce Transit Center (ons + offs) | ~50,000 - 75,000 / day |
| Caltrain Ridership @ 4 th & Townsend (ons + offs) | ~20,000 - 25,000 / day |
| Incremental Caltrain Ridership with DTX (system-wide boardings) | ~10,000 - 20,000 new Caltrain riders / day |
| Share of Caltrain System-wide Ridership using DTX (including 4 th & Townsend) | ~45-50% of Caltrain system-wide ridership |

* Preliminary Forecast Range reflects rounded range of SF-CHAMP results across 2040 & 2050 "With Project" scenarios, under differing service level assumptions.



Caltrain Ridership: Initial SF-CHAMP Results – Scenario Detail



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SF-CHAMP and Caltrain Business Plan forecasts are in a comparable range for overall system and DTX ridership:

| Source | Scenario | Daily Caltrain Boardings | STC + 4th & King/Townsend Ridership |
|------------------------|----------------------|-----------------------------|---|
| Caltrain Business Plan | 2030 8 tph, with DTX | 142,000 | 78,000 |
| Caltrain Business Plan | 2040 8 tph, with DTX | 185,000 | 101,000 |
| SFCTA SF-CHAMP | 2040 8 tph, with DTX | 168,000 | 82,000 |
| SFCTA SF-CHAMP | 2050 8 tph, with DTX | 209,000 | 102,000 |

Ridership Forecasting – Next Steps

California California High-speed Rail Authority

FTA STOPS and Project Evaluation:

- Continue to develop and apply STOPS model, in consultation with FTA
- Determine approach to representation of HSR in STOPS analysis, subject to FTA guidance and in context of project financial plan
- Finalize service plan assumptions for No-Project and With-Project scenarios
- Prepare final ridership forecasts to support FTA submittals

SF-CHAMP and Benefits Case

- Additional 2050 SF-CHAMP forecasting, including Link21 scenario
- Coordination and inputs to benefits analysis

DTX Benefits Case Framework



Purpose of the DTX Benefits Case

Purpose: To analyze, organize, and communicate the most significant benefits of the DTX Project

Objectives:

- Communicate project benefits to stakeholders, decision-makers, and the public
- Inform project re-positioning/re-branding
 - -Position DTX as a project of regional, statewide, and national significance
- Support efforts to secure funding
- Guide further technical planning work

Headline Benefits

The Benefits Case will be structured around key project benefit categories:



Mobility: DTX will make traveling throughout the Bay Area and California faster, more reliable, and more connected.

Economy: DTX will support economic competitiveness and improve access to jobs.

Community: DTX will support climate and equity goals for the Bay Area and California.

Future-Forward: DTX is a foundational step in the next generation of rail expansion for the Bay Area, Northern California, and the State.

Mobility: DTX will make traveling throughout the Bay Area and California faster, more reliable, and more connected.

- Reduces travel time for transit trips to/from San Francisco and the Peninsula.
- Improves the passenger experience by eliminating transfers and reducing wait times.
- Increases regional travel capacity and relieves pressure on congested highway corridors by encouraging rail trips along the Peninsula rail corridor.

- Provides a one-seat ride between the South Bay, the Peninsula, and downtown San Francisco.
- Enables seamless transfers at Salesforce Transit Center to destinations throughout the region.
- Offers a competitive alternative to driving.

Economy: DTX will support economic competitiveness and improve access to jobs.

- Supports innovation and knowledge sharing by connecting workers, employers, academic institutions, and major industries.
- Improves access to jobs and key destinations.
- Addresses the jobs-housing imbalance by linking core housing and major employment centers.

- Supports job growth along the rail corridor.
- Supports regional housing and sustainable development goals.
- Improves regional economic productivity by reducing travel time for commuters.
- Boosts the economy through construction jobs.

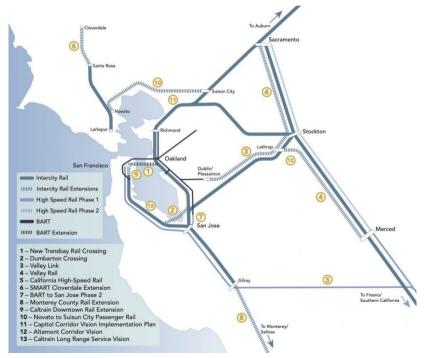
Community: DTX will support climate and equity goals for the Bay Area and California.

- Supports transit-oriented land use and sustainable growth in housing and employment.
- Improves access to jobs and opportunities for disadvantaged communities.
- Improves travel choices for low- and no-vehicle households.

- Reduces greenhouse gas emissions.
- Supports healthy communities by improving regional air quality and encouraging active transportation.
- Supports regional and state climate and equity goals.

Future-Forward: DTX is a foundational step in the next generation of rail expansion for the Bay Area, Northern California, and the state.

- Provides statewide connectivity by bringing California High-Speed Rail into downtown San Francisco.
- Enhances connectivity for the 21-county megaregion by providing a foundational investment for the Link21 program.
- Positions rail as a mode of choice for trips between San Francisco, the Peninsula, and San Jose/South Bay.
- Increases the benefits of two major regional transit investments: Caltrain Electrification and the Salesforce Transit Center.







- Quantitative and qualitative analysis, based on ridership forecasting and other technical inputs
- Preparation of initial benefits case document and summary materials
- Coordination with project re-branding task

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