

SAN FRANCISCO TO SAN JOSE PROJECT SECTION

Board of Directors Meeting, Agenda Item #4
Tuesday, September 17, 2019
San Jose, CA



SAN FRANCISCO TO SAN JOSE PROJECT SECTION

Staff-Recommended Preferred Alternative, Board of Directors Meeting

TODAY'S PROPOSED BOARD ACTION

- Concur with the staff recommendation to identify Alternative A as the Preferred Alternative in the San Francisco to San Jose Project Section Draft EIR/EIS
 - » Identifying a preferred alternative aligns with federal law, including MAP-21 (2012) and FAST Act (2015), and with the CEQA requirement for a proposed project
 - » This process is consistent with the Authority's guidance
 - » Identifying a preferred alternative in the Draft EIR/EIS allows the public and agencies to focus their review
 - » All alternatives will be analyzed at an equal level of detail and described in the published Draft EIR/EIS.
 - » Identifying a Preferred Alternative does not constitute the adoption or approval of a preferred alternative



PREFERRED ALTERNATIVE PROCESS

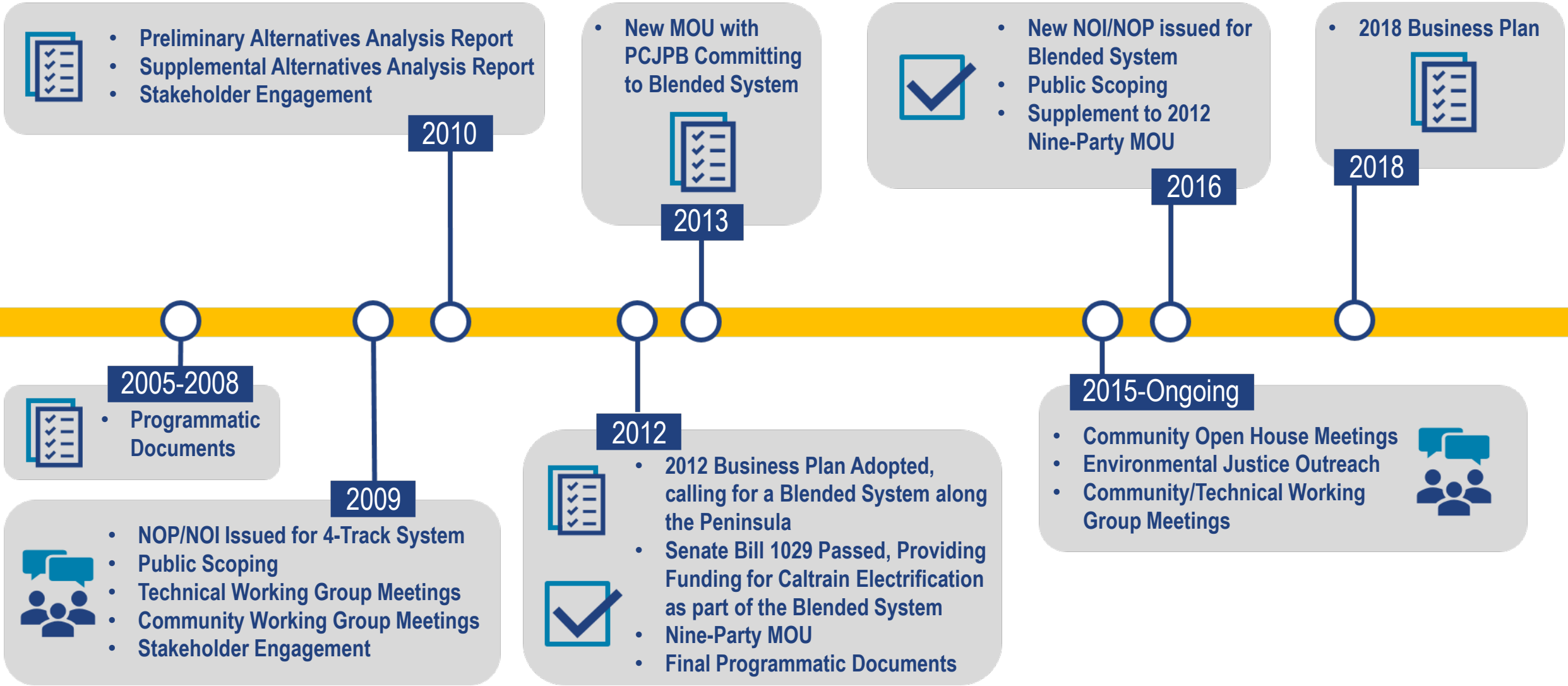


PREFERRED ALTERNATIVE

REFINING THE ALTERNATIVES

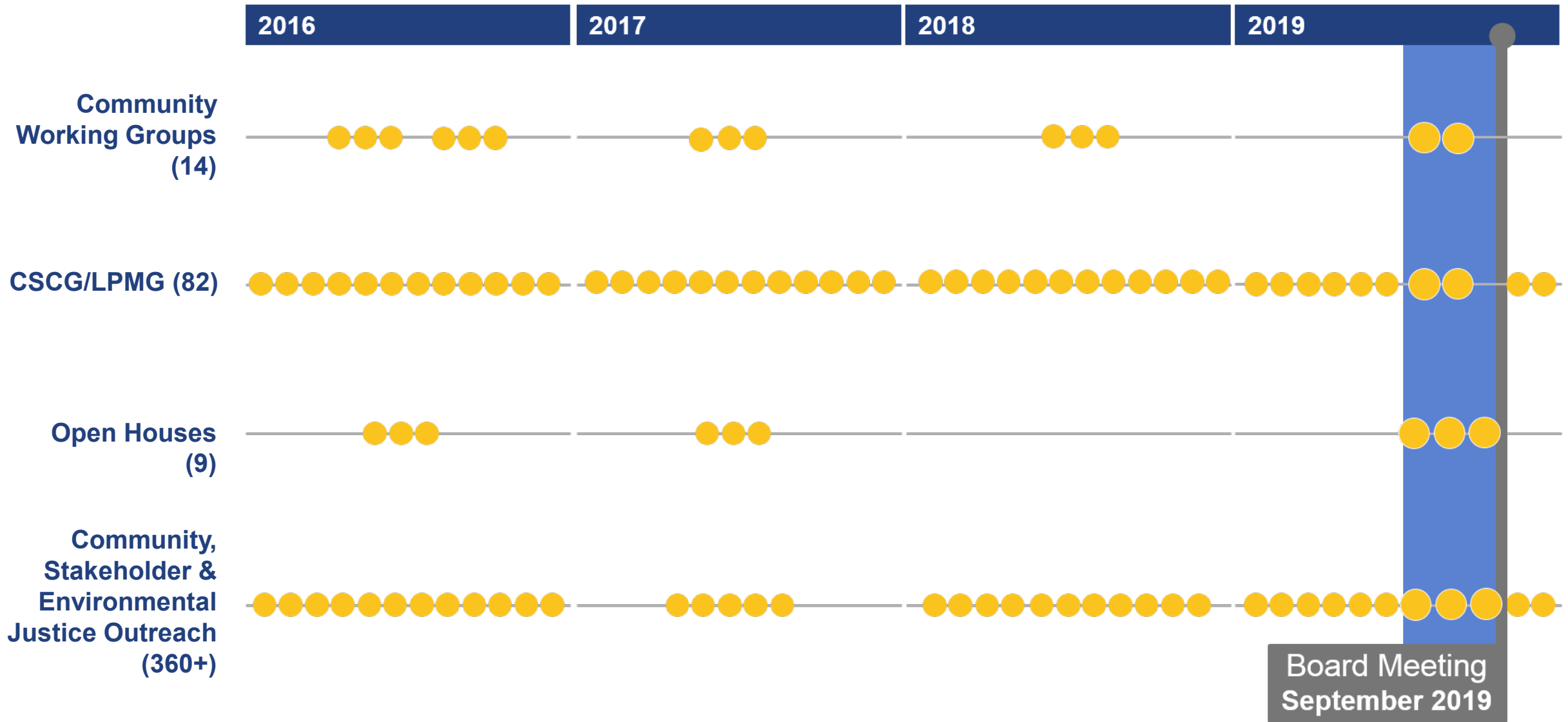


PROJECT ALTERNATIVES DEVELOPMENT PROCESS



SAN FRANCISCO TO SAN JOSE COMMUNITY OUTREACH

2016 – 2019



Board Meeting
September 2019



INTERFACING WITH NORTHERN CALIFORNIA AGENCIES

2018 - 2019

● = coordination with agency on topic

AGENCY	ALIGNMENTS	WATER MANAGEMENT	TRANSPORTATION/ ROADS	ENGINEERING/ DESIGN	LAND USE	JOINT OUTREACH	2018 BUSINESS PLAN
Bay Area Rapid Transit	●		●	●			●
California Strategic Growth Council	●			●	●		●
Caltrain	●			●		●	●
Caltrans District 4	●		●		●		●
City and County Staff (throughout corridor)	●	●	●	●		●	●
Floodplain Administrators and Managers	●	●		●			●
Metropolitan Transportation Commission	●				●		●
Mineta San Jose International Airport	●		●				●
San Francisco Bay Conservation and Development Commission	●				●		●
San Francisco International Airport	●			●	●		●
Santa Clara Valley Transportation Authority	●				●	●	●
Transbay Joint Powers Authority	●		●	●			●

PREFERRED ALTERNATIVE

CHARACTERISTICS OF ALTERNATIVES



SAN FRANCISCO – SAN JOSE PROJECT ALTERNATIVES A AND B



SAN FRANCISCO TO SAN JOSE

Common Project Elements – Alternatives A & B

High-Speed Rail stations^[1]

- » San Francisco 4th and King
- » Millbrae

Up to 110 mph speeds

- » Track modifications to support higher speeds

Peak operations

- » 4 High-Speed Rail trains and 6 Caltrain trains per hour/per direction

Figure: Blended service simulation



^[1] Salesforce Transit Center has been environmentally cleared by Transbay Joint Powers Authority and will not be part of the California High-Speed Rail Authority's environmental analysis. San Jose Diridon Station is being evaluated as part of the San Jose to Merced Project Section but will be included in both project sections' environmental analysis.

SAN FRANCISCO TO SAN JOSE

Common Project Elements – Alternatives A & B

- Remove holdout rule at Broadway and Atherton Caltrain Stations
- Safety modifications at Caltrain-only stations and at-grade crossings
- Corridor fencing
- Uses Caltrain electrification infrastructure and tracks
- Predominantly within the existing railroad right-of-way
- At-grade tracks with quad gates at each road crossing

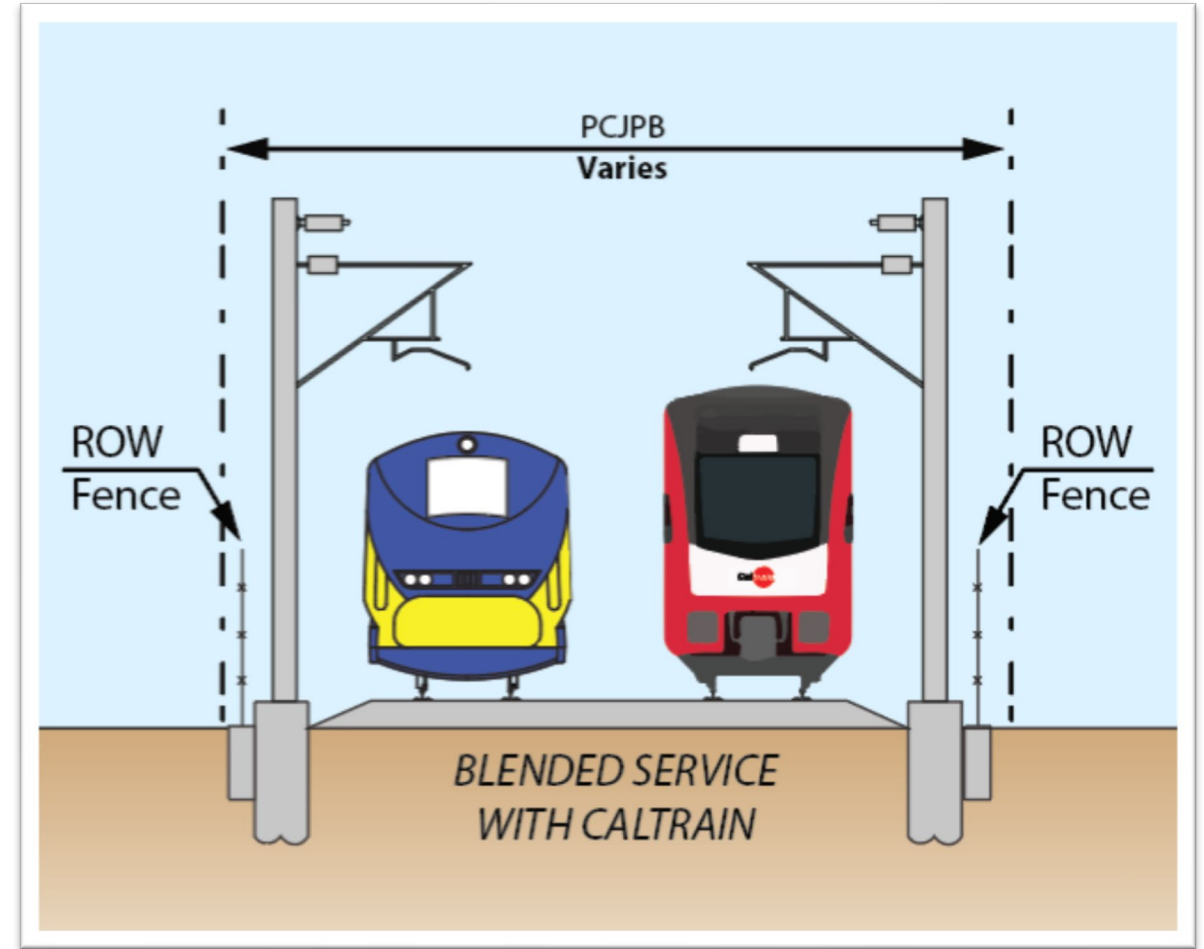
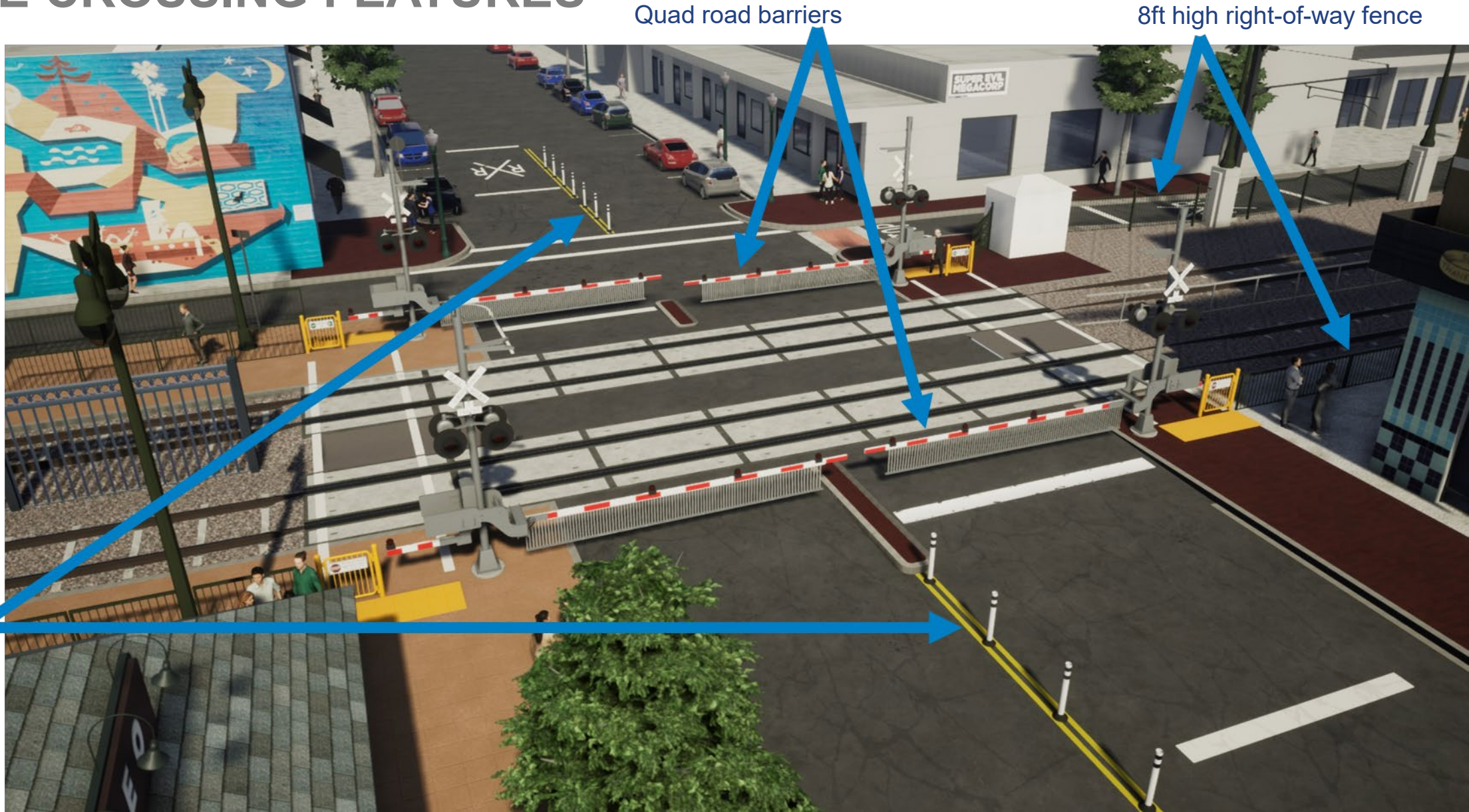


Figure: Blended service illustration

GRADE CROSSING FEATURES

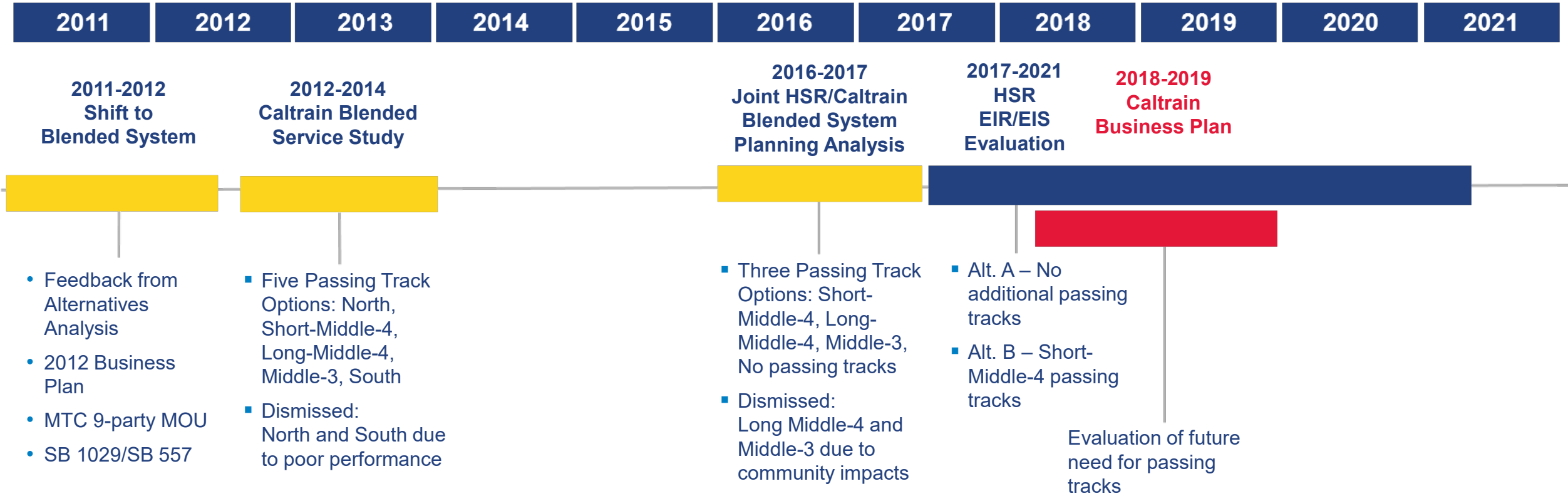


Quad road barriers

8ft high right-of-way fence

Channelization

PASSING TRACKS EVALUATION TIMELINE



PASSING TRACKS

Alternatives Carried Forward

- **Alternative A: No Additional Passing Track Option**
- **Alternative B: Short-Middle 4-Track Passing Track Option (6 miles)**
 - » San Mateo to Redwood City
 - » Adjacent to 1.8 miles of residential uses
 - » Relocates San Carlos Caltrain station

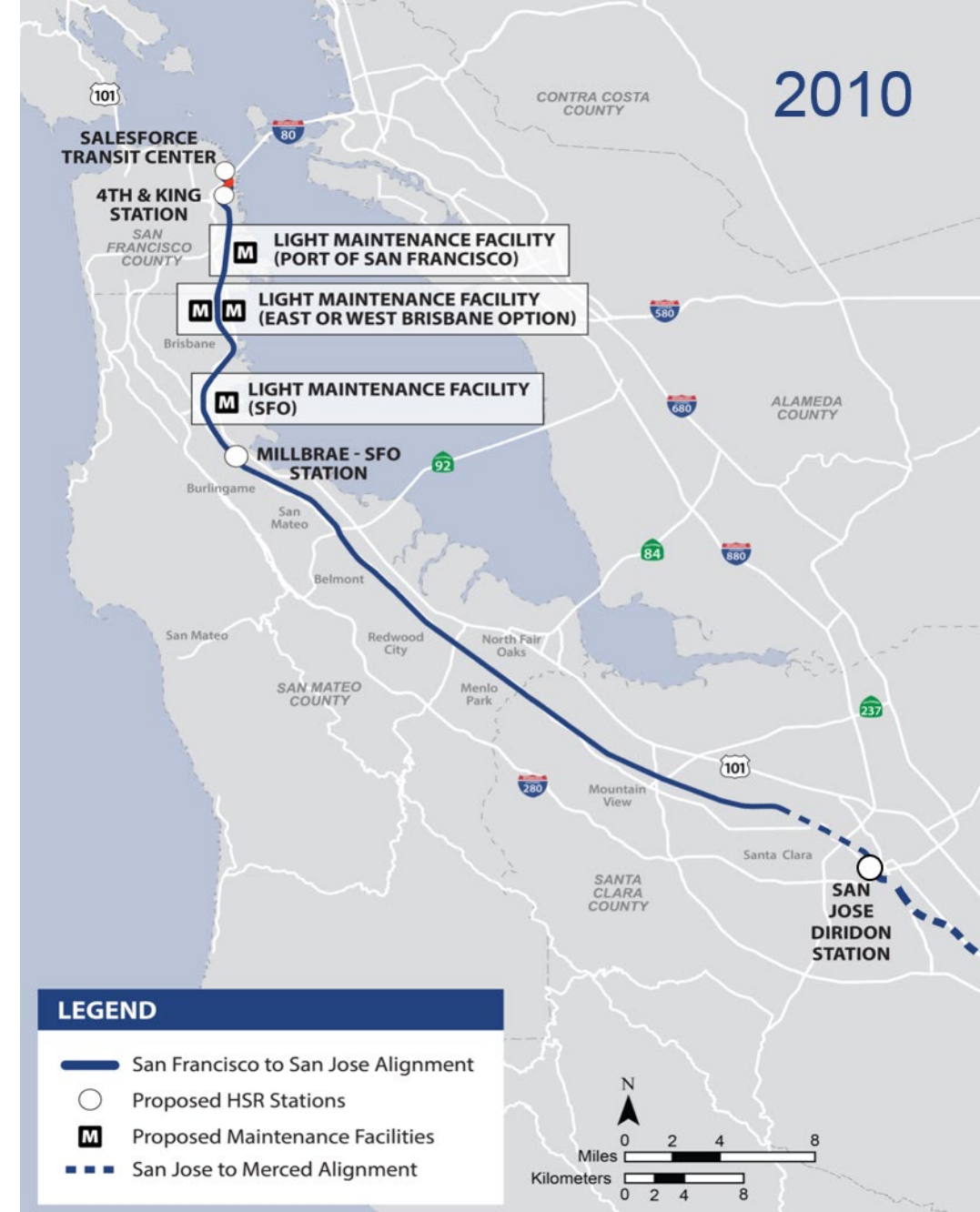


Note: “Middle” means middle of the corridor

LIGHT MAINTENANCE FACILITY

Alternatives Considered

- Port of San Francisco
- East Brisbane/West Brisbane
- San Francisco International Airport



LIGHT MAINTENANCE FACILITY

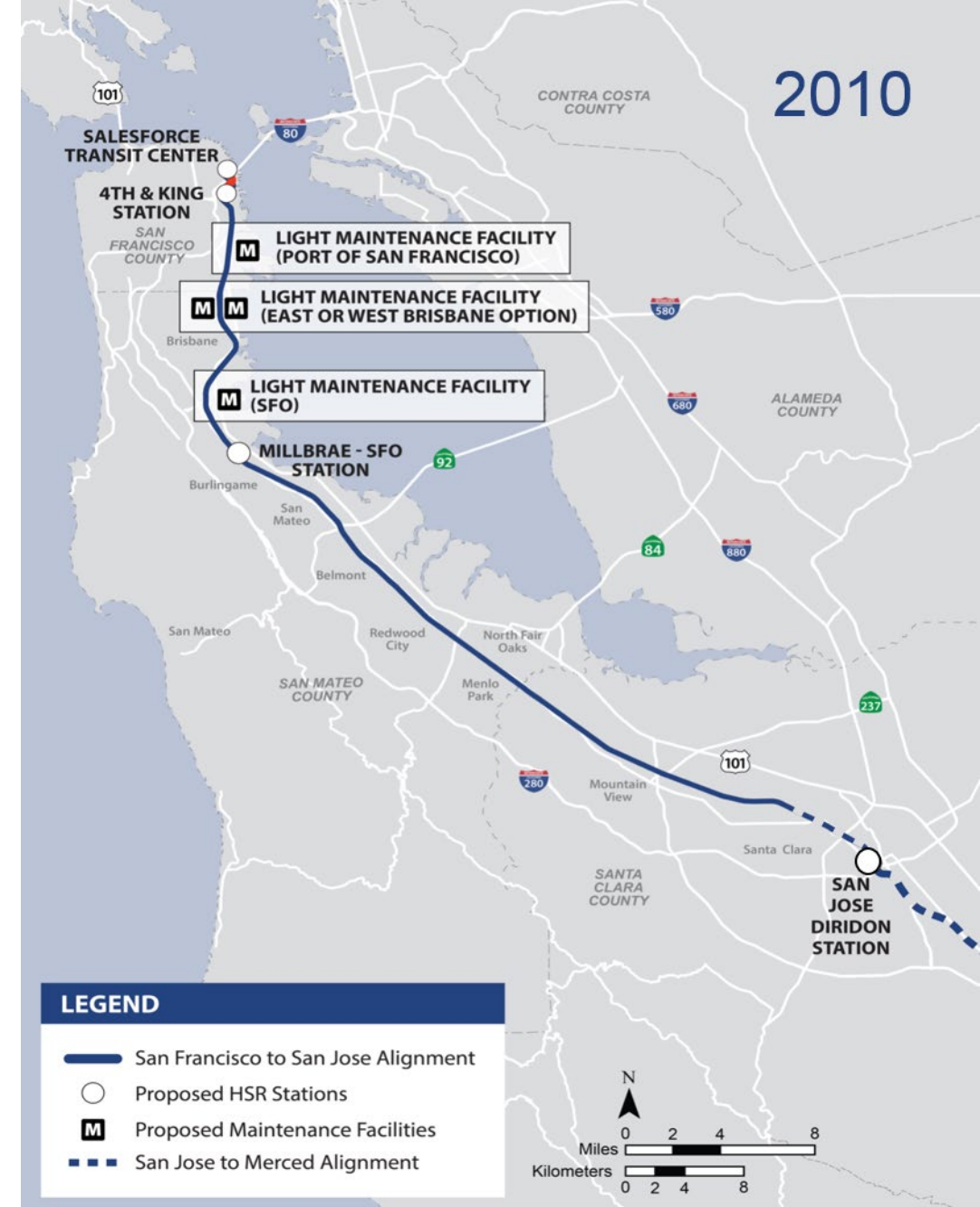
Alternatives Eliminated

- **Port of San Francisco**

- » Regionally and locally important infrastructure
- » Permanent disruption to major circulation elements
- » Displaces Marine Eco-Industrial Center planned uses
- » More wetland/water impacts than Brisbane East LMF
- » Substantially higher costs than Brisbane LMF options

- **San Francisco International Airport**

- » Regionally important facility
- » Displaces airport operational land uses
- » Airport constrained from expansion by San Francisco Resolution 69.08
- » More wetland/water impacts than Brisbane East LMF
- » Substantially higher costs than Brisbane LMF options



LIGHT MAINTENANCE FACILITY

Alternatives Carried Forward

Brisbane



Alternative A

M East



Alternative B

M West

Figure: Maps of the proposed footprint for the Brisbane LMF, Alternative A (left) and Alternative B (right)



PREFERRED ALTERNATIVE

IDENTIFYING A PREFERRED ALTERNATIVE



ENVIRONMENTAL AND COMMUNITY RESOURCES AND ISSUES IN DRAFT EIR/EIS

- Aesthetics and Visual Quality
- Air Quality and Global Climate Change
- Biological and Aquatic Resources
- Cultural Resources
- Displacements
- Electromagnetic Fields and Electromagnetic Interference
- Emergency Vehicle Access/Response Time
- Environmental Justice
- Geology, Soils, Seismicity, and Paleontological Resources
- Hazardous Materials and Waste
- Hydrology and Water Resources
- Land Use and Development
- Noise and Vibration
- Parks, Recreation, and Open Space
- Public Utilities and Energy
- Regional Growth
- Transportation

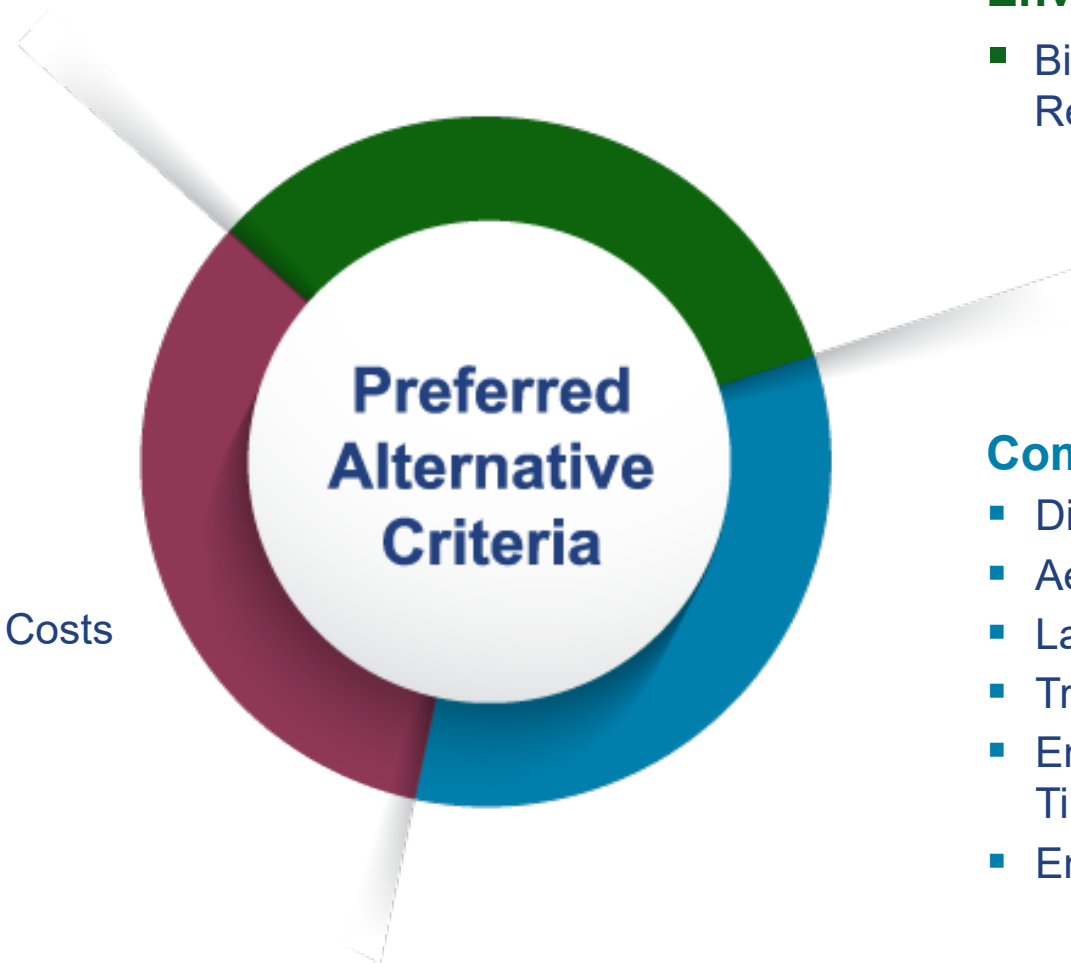
ENVIRONMENTAL AND COMMUNITY DIFFERENTIATORS

- Aesthetics and Visual Quality
- Biological and Aquatic Resources
- Displacements
- Emergency Vehicle Access/Response Time
- Environmental Justice
- Land Use and Development
- Transportation

PREFERRED ALTERNATIVE CRITERIA

System Performance, Operations, & Costs

- Alignment Length
- Operational Speed
- Travel Time
- Capital Costs
- Operations & Maintenance Costs
- Caltrain Travel Time



Environmental Factors

- Biological and Aquatic Resources

Community Factors

- Displacements
- Aesthetics and Visual Quality
- Land Use and Development
- Transportation
- Emergency Vehicle Access/Response Time
- Environmental Justice

BOARD MEMO – TECHNICAL ANALYSIS

Exhibit 2 – Alternative B

The map shows the proposed high-speed rail alignments from San Francisco to San Jose. Key stations include the Salesforce Transit Center, 4th & King Station, Millbrae-SFO Station, and San Bruno to San Mateo. It also shows the San Jose to Merced alignments. A legend identifies the San Francisco to San Jose alignments, subsection boundaries, HSR stations, maintenance facilities, and San Jose to Merced alignments.

770 L Street, Suite 620, Sacramento
For further information, visit the California High-Speed Rail Authority website at <http://www.hsr.ca.gov>

770 L Street, Suite 620, Sacramento, CA 95814 • T: (916) 324-1541 • F: (916) 322-0827
For further information, visit the California High-Speed Rail Authority website at <http://www.hsr.ca.gov>

Comparative tables for system performance, community, and environmental factors are included in the detailed staff report attached to this memorandum. Following is a high-level summary of the community and environmental factors affected by the project elements that differentiate the two alternatives. The differences between the two project alternatives are associated with development of the LMF on the east or west side of the tracks in Brisbane and from development of the six-mile long passing track under Alternative B.

System Performance, Operations, and Capital Costs

System performance differences between the alternatives are driven by the passing track infrastructure proposed in Alternative B. By adding the passing tracks, peak-hour average representative travel time between San Francisco and San Jose decreases by approximately two minutes while Caltrain peak hour representative travel time increases by about two minutes. This is based on analysis of service plans for the blended system that are largely consistent based on previously-approved service plans for Caltrain after electrification and the baseline scenario from Caltrain's ongoing business plan efforts.

The capital cost difference between the alternatives is approximately \$900 million and are shown in the table below. They were developed by utilizing recent bid data from large transportation projects in the western United States and used bottom-up unit pricing to reflect common high-speed rail elements and construction methods with an adjustment for Bay Area labor and material costs. All material quantities for the project alternatives are based on a preliminary 15 percent design. The capital costs reflect a conservative scope and sufficient project footprint to accommodate project refinements through final design for construction documents. This allows the Authority to evaluate maximum impacts in the EIR/EIS and reduces the risk that environmental clearance does not cover all potential impacts. Further, the Authority has not yet applied value engineering and other organizational measures to reduce these costs, including the Early Train Operator benchmarking review, footprint refinement and constructability mitigations.

Criteria	Alternative A	Alternative B
Alignment length (miles)	42.9	
Maximum operating speed (mph)	Up to 110	
HSR Peak Hour Average Representative Travel Time between San Francisco and San Jose (minutes)	47	45
Proposition 1A Service Travel Time Compliance	Yes	Yes
Estimated Capital Costs (2017\$)	\$2.6 billion	\$3.5 billion
Estimated Annual Operations and Maintenance Costs (2017\$)	\$78 million	
Caltrain Peak Hour Average Representative Travel Time between San Francisco and San Jose (minutes)	63	65

BRIEFING: September 17, 2019 BOARD MEETING

TO: Chairman Mendonca and Board Members

FROM: Boris Lipkin, Northern California Regional Director
Mark McLoughlin, Director of Environmental Services

DATE: September 17, 2019

RE: Consider Concurring with the Staff Recommended Preferred Alternative for the San Francisco to San Jose Project Section for Identification in the Draft Environmental Impact Report/Environmental Impact Statement

Summary of Recommended Action

California High-Speed Rail Authority (Authority) staff recommends that the Board of Directors (Board), acting in its capacity as the state lead agency under the California Environmental Quality Act (CEQA) and the federal lead agency under the National Environmental Policy Act (NEPA) pursuant to NEPA assignment,¹ identify Alternative A as the Preferred Alternative in the San Francisco to San Jose Project Section Draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS). Staff's recommendation is based on the preliminary engineering, environmental impact analysis, and extensive public, stakeholder, and agency input received to date.

Upon receiving the Board's concurrence, Alternative A will be identified as the Preferred Alternative in the Draft EIR/EIS. Identification of the Preferred Alternative and Board concurrence is neither an approval or a final decision. The Authority may change the preferred alternative depending on the comments received during public and agency review of the Draft EIR/EIS, which the Authority anticipates releasing in Spring 2020 for public and agency review and comment. Staff will take those comments into consideration while developing the Final EIR/EIS and, subsequently, Staff will return to the Board to request final project approval of an alternative once the Final EIR/EIS has been prepared.

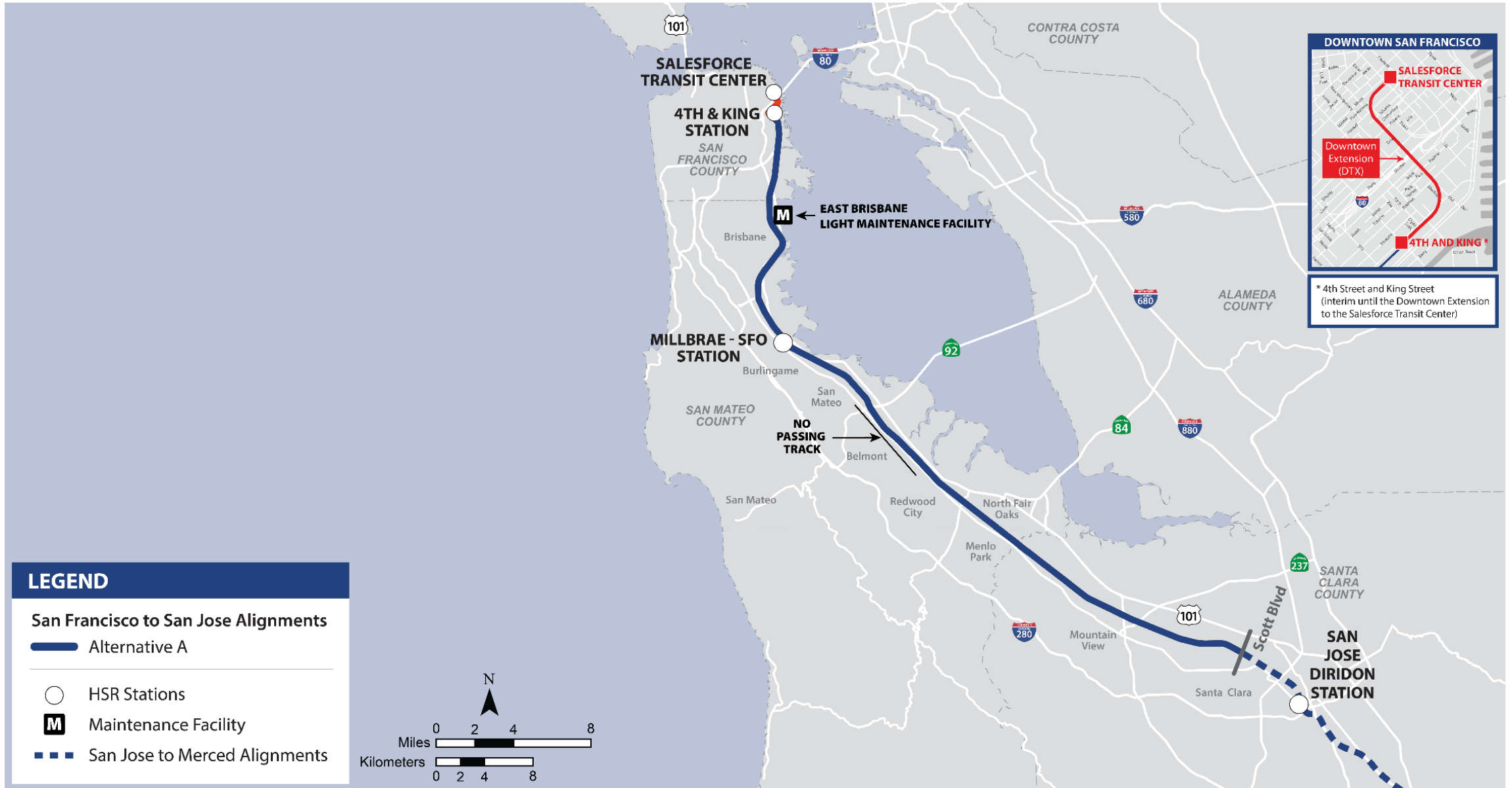
Background

The 2005 Tier 1 California High-Speed Train Final Program EIR/EIS deferred selection of a corridor between the San Francisco Bay Area and Central Valley until completion of a second, more focused Program EIR/EIS. The 2008 Bay Area to Central Valley Program EIR/EIS evaluated two network alternatives for linking the Bay Area and Central Valley—the Pacheco Pass and the Altamont Pass—and four alignment alternatives between San Francisco and San Jose—Interstate (I-) 280, U.S. Highway (US) 101, and the Caltrain corridor (exclusive or shared guideway). The Authority and Federal Railroad Administration (FRA) selected the Pacheco Pass network alternative and advanced the shared use Caltrain corridor between San Francisco and San Jose for further study in a Tier 2 project-level EIR/EIS. These decisions were reconfirmed, following litigation, by the 2010 Bay Area

¹ Effective July 23, 2019, the FRA assigned its NEPA federal lead agency responsibilities for the high-speed rail project to the State of California, acting through the State Transportation Agency and the Authority, pursuant to 23 U.S.C. 327 and a Memorandum of Understanding effective July 23, 2019.



ALTERNATIVE A – STAFF-RECOMMENDED PREFERRED ALTERNATIVE



SUMMARY OF ALTERNATIVES EVALUATION – SYSTEM PERFORMANCE, OPERATIONS, AND COST FACTORS^[1]

- Best-performing alternative

CRITERIA	ALT A	ALT B
Alignment Length	No Difference	
Maximum Operating Speed	No Difference	
HSR Peak Hour Average Representative Travel Time San Francisco to San Jose (minutes)		●
Proposition 1A Service Travel Time Compliance	✓	✓
Estimated Capital Costs (2017\$)	●	
Estimated Annual Operations and Maintenance Costs (2017\$)	No Difference	
Caltrain Peak Hour Average Representative Travel Time	●	

^[1] Operational service time includes station stops, schedule pad, and other operating parameters

SUMMARY OF ALTERNATIVES EVALUATION – COMMUNITY FACTORS

- Best-performing alternative (fewest/least community impacts)

CRITERIA	ALT A	ALT B
Residential displacements	●	
Commercial and industrial displacements	●	
Community and public facilities displacement	●	
Number of key viewpoints with decreased visual quality	●	
Temporary interference with local vehicle circulation	●	
Pedestrian Access from Downtown San Carlos to Caltrain Station	●	
Temporarily increases emergency response time in south San Mateo, Belmont, San Carlos, and northern Redwood City due to short-term road closures	●	
Construction-related disruption to Caltrain Service	●	
Permanent Effect on Planned Mixed-Use Development (residential uses allowed) in Brisbane	●	

SUMMARY OF ALTERNATIVES EVALUATION – ENVIRONMENTAL FACTORS

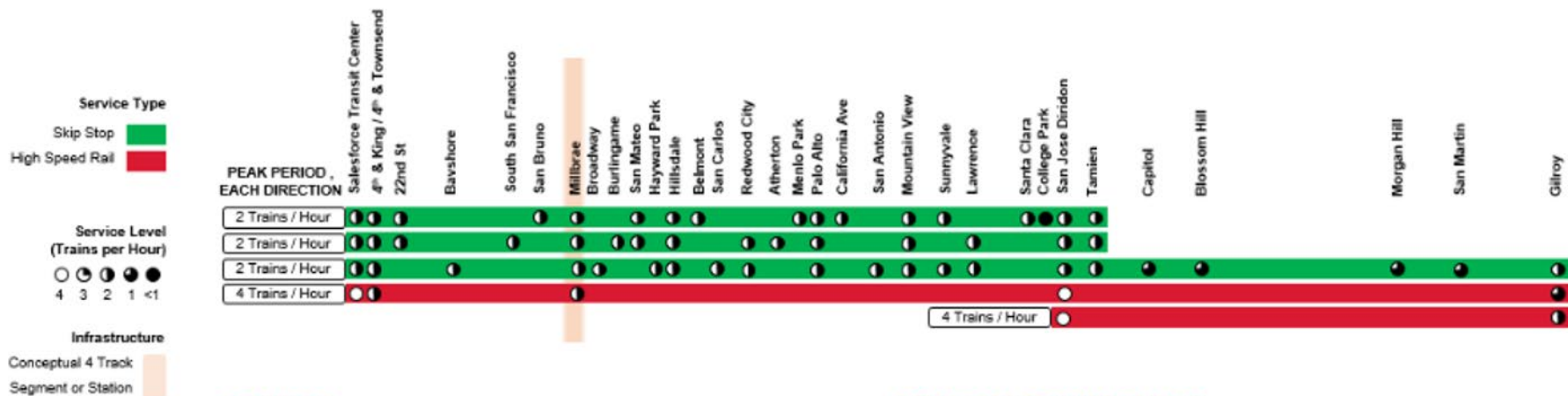
- Best-performing alternative (fewest environmental impacts)

CRITERIA	ALT A	ALT B
Total permanent impacts on wetlands and other waters of the U.S.	●	
Permanent impacts on endangered callippe silverspot butterfly habitat	●	

CALTRAIN BUSINESS PLAN

2040 Baseline Growth Scenario

2040 Baseline Growth Scenario (6 Caltrain + 4 HSR)



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 Bavshore and Lawrence

Options & Considerations

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



DRAFT



ALTERNATIVE A – Staff-Recommended Preferred Alternative

Conclusions of Technical Analysis



Fewest major visual impacts



Fewest impacts on natural resources



Fewest displacements



Lowest capital cost



Fewest road closures



Slower HSR, faster Caltrain peak hour travel time



Fewest impacts on wetlands and habitats



Policy-level alignment with the Caltrain Business Plan

PREFERRED ALTERNATIVE

COMMUNITY FEEDBACK

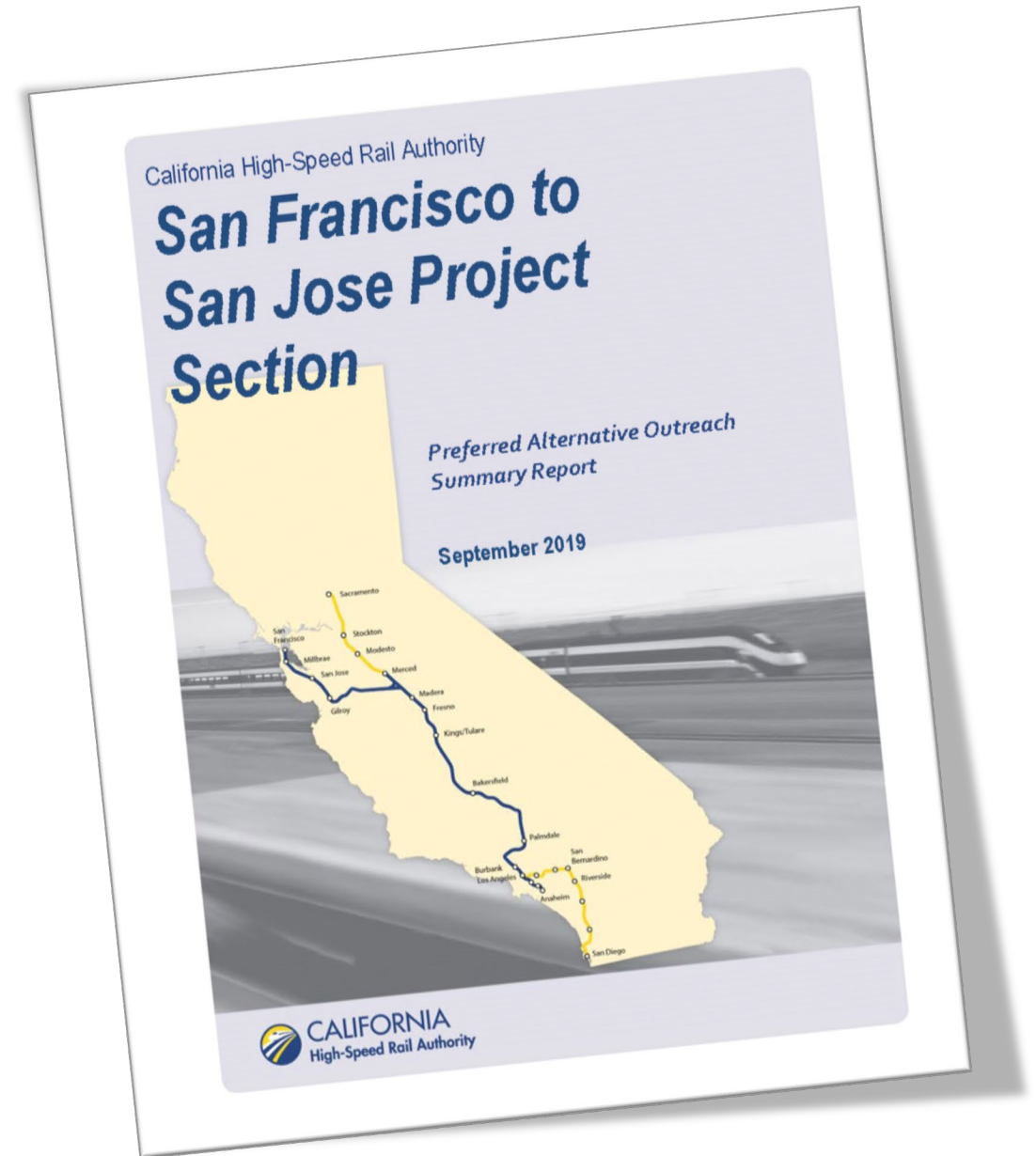


PREFERRED ALTERNATIVE OUTREACH (2019)

- July 9 – San Mateo County Board of Supervisors
- July 17 – City/County Staff Coordinating Group
- July 18 – City of Brisbane
- July 22 – San Francisco CWG
- July 23 – San Francisco County Transportation Authority
- July 23 – City of Millbrae
- July 24 – San Mateo County CWG
- July 25 – Local Policy Maker Group
- August 6 – Santa Clara Open House
- August 8 – Transbay Joint Powers Authority
- August 12 – San Francisco Open House
- August 19 – Redwood City Open House
- September 4 – City of Santa Clara
- September 10 – Santa Clara County Board of Supervisors

KEY THEMES

- Passing tracks
 - » Support for minimal impacts (Alt. A)
 - » Support higher service levels and infrastructure investment
 - » Improve high-speed rail and Caltrain speeds
 - » Accommodate future Caltrain plans
 - » Construction costs lower now than in future
- Concerns from City and property owner about LMF impacts on proposed development in Brisbane
- Coordination with plans for future Caltrain service and other concurrent projects (e.g., Downtown Extension in SF)
- Interest in grade separations to reduce noise, traffic, and safety issues.
- Workforce development opportunities with the LMF and system construction



COMMUNITY WORKING GROUPS

Most important differentiating factors:

- Caltrain travel time
- Residential displacements
- HSR travel time
- Capital costs
- Commercial/industrial displacements
- Community/public facility displacements



Interest in

- » Passing tracks for future growth of Caltrain service



Appreciation for

- » Focus of Alternative A on fewest community impacts



Questions about

- » Capital costs of infrastructure improvements
- » Level of coordination with Caltrain
- » Future commercial and population growth
- » Workforce development at the LMF to prioritize EJ populations



Concerns about

- » Size of and potential impact on development from the LMF in Brisbane
- » System constraints with a lack of passing tracks

OPEN HOUSES

72% support Alternative A fully or with some concerns

Most important differentiating factors:

- HSR travel time
- Capital costs
- Caltrain travel time
- Residential displacements
- Alignment with Caltrain Business Plan



Interest in

- » Planning for future operational requirements for both Caltrain and HSR
- » Faster implementation of HSR service



Appreciation for

- » Improved transportation and mobility statewide
- » Valley-to-Valley link
- » Fewer environmental and property impacts of Alt. A



Questions about

- » Construction-related traffic impacts
- » Improvements to at-grade crossings
- » Job opportunities during construction



Concerns about

- » Compatibility with Caltrain Business Plan and potential service expansion
- » Traffic congestion at at-grade crossings
- » Noise

CITIES, COUNTIES, AND OTHER PARTNERS



Interest in

- » Coordination of planning efforts with partners in San Francisco, Millbrae
- » Quiet zones
- » Mitigations to address disruptions during construction



Questions about

- » Collaboration with Caltrain
- » Air quality and visual impacts
- » Availability of funding to complete the statewide system
- » Opportunities to move LMF to another city



Appreciation for

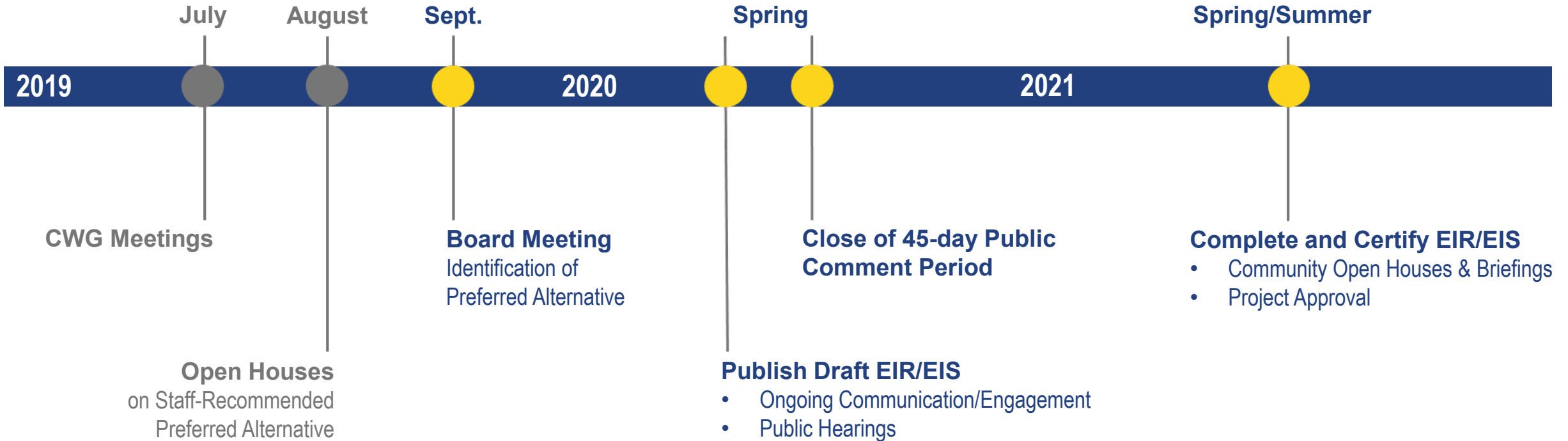
- » The reduced footprint of Alternative A
- » Collaboration with Caltrain on blended system planning



Concerns about

- » Feasibility/cost of remediating the LMF location
- » Noise impacts
- » Gate down times
- » Impact to proposed development in Millbrae and Brisbane

SAN FRANCISCO TO SAN JOSE TIMELINE



TODAY'S REQUESTED BOARD ACTION

CALIFORNIA HIGH-SPEED RAIL

Concur with the staff recommendation to identify Alternative A as the Preferred Alternative in the San Francisco to San Jose Project Section Draft EIR/EIS

- *NOTE: Identifying the Preferred Alternative does not constitute the adoption or approval of a Preferred Alternative*





Headquarters

California High-Speed Rail Authority
770 L Street, Suite 620
Sacramento, CA 95814

www.hsr.ca.gov



Northern California Regional Office

California High-Speed Rail Authority
100 Paseo De San Antonio, Suite 300
San Jose, CA 95113