CALIFORNIA High-Speed Rail Authority

California High-Speed Rail
BRIEFING: September 17, 2019 BOARD MEETING AGENDA ITEM #4

TO: Chair Mendonca and Board Members

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

DATE: September 17, 2019

RE: Staff Recommended Preferred Alternative (CEQA and NEPA) for the San Francisco to San Jose Project Section Draft Environmental Impact Report/Environmental Impact Statement

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Summary

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[2] 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 conducted and 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 an implementation 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 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

[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.

[2] A "preferred alternative" is the NEPA equivalent to what CEQA calls the "proposed project"; CEQA requires that a draft EIR identify the "proposed project." For simplicity, this memorandum and supporting documents use "preferred alternative" collectively to mean both the NEPA preferred alternative and the CEQA proposed project.

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 to Central Valley High-Speed Train Revised Final Program EIR and the 2012 Bay Area to Central Valley High-Speed Train Partially Revised Final Program EIR (Authority 2012a).

The Authority issued a State Notice of Preparation (NOP) on January 8, 2009 and the FRA published a Notice of Intent (NOI) in the Federal Register on December 29, 2008 to begin the Tier 2 project-level environmental review process. The proposed project was a fully grade-separated four-track system between San Francisco and San Jose with high-speed rail trains sharing the corridor with Caltrain commuter trains. Scoping meetings were held in 2009 and approximately 950 comments were received during the scoping period.

Activities conducted during this period included:

- Scoping for the San Francisco to San Jose Project Section in 2009;
- Preparation of the Preliminary Alternatives Analysis in April 2010;
- Preparation of a Supplementary Alternatives Analysis in August 2010.

Through this process the Authority identified three basic design options for evaluation in the Draft EIR/EIS. Design Option A relied predominantly on at-grade and aerial structure solutions to travel the length of the San Francisco to San Jose corridor. Design Option B and B1 relied on at-grade, aerial, trench and tunnel design solutions. All three design options included a new two-track covered trench or tunnel in San Francisco parallel to the existing Caltrain track. Stations were in downtown San Francisco and Millbrae, along with a potential mid-Peninsula station in either Redwood City, Palo Alto, or Mountain View. Two sites in the Brisbane Baylands area east or west of the Caltrain corridor were identified for a Light Maintenance Facility.

The four-track system proposal generated concerns from communities along the highly urbanized Caltrain rail corridor about the magnitude of impacts related to the corridor's proximity to sensitive residential land uses and the additional right-of-way acquisitions along the corridor. In response to these concerns, the Authority studied other service options in the corridor, resulting in a proposal for blended system operations between San Francisco and San Jose. The blended system framework established the project as a predominantly two-track blended system utilizing existing Caltrain tracks and remaining substantially within the existing Caltrain right-of-way.

The framework for blended operations was memorialized in 2012 through four separate, but related actions:

- Authority adoption of the *California High-Speed Rail Program Revised 2012 Business Plan*, which proposed a blended system for the Peninsula that would be shared by Caltrain and high-speed rail and concluded that the high-speed rail project to be studied in the EIR/EIS would be the blended system.
- Authority approval of the *Metropolitan Transportation Commission Resolution No. 4056 Memorandum of Understanding*, which set out an early investment strategy to upgrade existing commuter rail service and prepare for the corridor for future high-speed rail use.
- Passage of Senate Bill 1029, which mandated that any Proposition 1A bond funds appropriated for projects in the San Francisco to San Jose corridor would not be used to expand the blended system to a dedicated four-track system.
- Passage of Senate Bill 557, which further restricted the ability to implement any system in the corridor other than the two-track blended system.

After adoption of the blended system in concept, the Authority worked with Caltrain to further evaluate and refine the needed infrastructure for joint operation of high-speed rail and commuter rail trains. While that work progressed, Caltrain moved forward with environmental clearance of the Caltrain Modernization Program (electrification of the corridor), which is now under construction.

On May 9, 2016, the Authority and FRA published an updated NOP and NOI, which rescinded the 2009 NOP and 2008 NOI and presented the blended system option for the Project Section. Three scoping meetings and approximately 30 meetings with business and community groups, early agency coordination, and elected official briefings were conducted between May 9, 2016, and July 20, 2016.

Operating high-speed rail within the existing Caltrain right-of-way in combination with the constraints of integrating with the existing passenger and freight service also operating in the same right-of-way limited development of alignment alternatives for the Project Section. Based upon community feedback, two project alternatives were advanced for detailed analysis in the Draft EIR/EIS—Alternative A and Alternative B (depicted on Exhibits 1 and 2, respectively).[3] Both alternatives operate predominantly within the existing right-of-way and use existing infrastructure and improvements under development by Caltrain for its Caltrain Modernization Program, including the electrification of the Caltrain corridor between San Francisco and San Jose and upgrades to the existing signal system to meet Positive Train Control requirements.

Project elements required for both project alternatives, that are in addition to the Caltrain Modernization Program, include track modifications to support higher speeds; station and platform modifications to accommodate high-speed rail trains using the 4th and King Station and Millbrae Stations; safety and security improvements for at-grade roadway crossings, at existing Caltrain stations that high-speed trains will pass through, and along the right-of-way; and addition of communication radio towers located at approximately 2.5-mile intervals. Differentiating factors for the alternatives include the location of the light maintenance facility (LMF) either on the east (in Alternative A) or west (in Alternative B) side of the tracks in Brisbane, and the inclusion of a 6-mile passing track section between San Mateo and Redwood City under Alternative B (no passing tracks between San Mateo and Redwood City are proposed in Alternative A). A more detailed project description is included in the attached staff report, which also reviews the evolution of alternatives development between 2009 and 2019 that led to the present two alternatives.

Community Outreach and Feedback Received

Over the course of developing these alternatives, the Authority has proactively sought to initiate meaningful dialogue with stakeholders, resource agencies, municipalities, landowners, community leaders, and interested members of the public, to secure the broadest possible participation in the development of the project. In the last three years, over 450 meetings with key stakeholders and community organizations have been held throughout the Project Section.

Authority staff has engaged with the public in a variety of ways, including hosting regular community working group meetings, conducting public open houses, participating in monthly Local Policymaker Group and City/County Staff Coordinating Group meetings[4], small group meetings, participation in local events, presentations at community meetings, and responding to public inquiries and questions. Most recently, the Authority conducted outreach in July and August 2019 concerning the staff-recommended Preferred Alternative with stakeholders and members of the public to receive their feedback for the Board of Directors to consider when identifying the Preferred Alternative.

These activities included:

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[3] For purposes of identifying preferred alternatives, the evaluation conducted for the San Francisco to San Jose project section considered the infrastructure from 4th and King Station in San Francisco to Scott Boulevard in Santa Clara (which is the northern limit of the San Jose to Merced Project Section). The Diridon approach area from Scott Boulevard to Alma Avenue in San Jose was considered as part of the identification of the preferred alternative in the San Jose to Merced project section but will be included in the Draft EIR/EIS for both project sections.

[4] The Local Policymaker Group and City/County Staff Coordinating Group are made up of one elected official and relevant staff members, respectively, from each of the cities along the Caltrain Corridor. Caltrain convenes the group on a monthly basis and the Authority has a standing agenda item each month.

July 2019

- San Mateo County Board of Supervisors
  July 9, 2019
- City/County Staff Coordination Group
  July 17, 2019
- Brisbane City Council
  July 18, 2019
- San Francisco Community Working Group
  July 22, 2019
- San Francisco County Transportation Authority Board of Directors
  July 23, 2019
- Millbrae City Council
  July 23, 2019
- San Mateo County Community Working Group
  July 24, 2019
- Local Policy Maker Working Group
  July 25, 2019

August 2019

- Santa Clara Open House
  August 6, 2019
- Transbay Joint Powers Authority
  August 8, 2019
- San Francisco Open House
  August 12, 2019
- Redwood City Open House
  August 19, 2019

September 2019

- Santa Clara City Council
  September 4, 2019
- Santa Clara County Board of Supervisors
  September 10, 2019

More than 200 community members, stakeholders, and agency officials attended briefings and meetings throughout the corridor during the outreach period in July and August 2019. The communities along the route expressed a variety of views on the location of the light maintenance facility (LMF) and the passing track options, which are the elements that differentiate the two alternatives. While there was generally concurrence on the choice of the East Brisbane LMF to avoid impacts to planned housing development and natural habitats on the west side, there were some stakeholders, including the City of Brisbane, who wanted the Authority to explore other location options for the LMF altogether. On the choice of passing tracks, the feedback ranged from those communities who would be impacted by them being supportive of Alternative A (no passing tracks) to those who wanted to see more robust rail infrastructure across the corridor urging the Authority to consider Alternative B and potentially even more additional passing tracks to allow for higher levels of service for both Caltrain and high-speed rail. There was also substantial interest in the operations of high-speed rail stations, the impacts on at-grade crossings due to increased gate down time, travel time and service plans for both high-speed rail and Caltrain, and the continued coordination between the two agencies as plans move forward. Caltrain, as the owner of the corridor, concurred with the staff recommendations. A more comprehensive summary of the feedback received during the outreach is provided in the *San Francisco to San Jose Project Section Preferred Alternative Outreach Summary Report*.

Prior Board Action

- On April 8, 2010, Authority staff presented the 2010 San Francisco to San Jose Preliminary Alternatives Analysis (PAA). The Board concurred with the staff recommendation.
- On August 5, 2010, Authority staff presented the 2010 San Francisco to San Jose Supplemental Alternatives Analysis (SAA). The Board concurred with the staff recommendation.
- On April 12, 2012, the Board adopted Resolution #HSRA 12-11, which approved the Metropolitan Transportation Commission Memorandum of Understanding and authorized the acting Chief Executive Officer to sign the Memorandum of Understanding on behalf of the California High Speed Rail Authority and directed Authority staff to continue working with the other parties to implement the principles outlined in the Memorandum of Understanding.
- On April 12, 2012, the Board adopted Resolution #HSRA 12-13, which adopted the *California High-Speed Rail Program Revised 2012 Business Plan*.
- On August 4, 2015, the Board adopted Resolution #HSRA 15-15, which authorized staff to issue a Request for Qualifications to procure a contract for Environmental and Engineering service for the San Francisco to San Jose and San Jose to Merced Project Sections.
- On November 17, 2015, the Board adopted Resolution #HSRA 15-18, which authorized staff to enter into a contract with HNTB Corporation for E&E Services for the San Francisco to San Jose and San Jose to Merced project sections.
- On September 19, 2017, the Board adopted Resolution #HSRA 17-17, which authorized staff to execute an amendment to the Environmental and Engineering contract with HNTB.
- On May 15, 2018, the Board adopted Resolution #HSRA 18-08, which adopted the *California High-Speed Rail Final 2018 Business Plan.*

Discussion

When comparing Alternatives A and B, Authority staff established a range of criteria to evaluate the alternatives to find the best balance between various differentiating factors. These criteria included differentiating characteristics across three broad sets of factors:

- System Performance, Operations, and Capital Costs;
- Community Factors; and
- Environmental Factors.

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

Systems 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 for high-speed rail trains 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	42.9
Maximum operating speed (mph)	Up to 110	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	$78 million
Caltrain Peak Hour Average Representative Travel Time between San Francisco and San Jose (minutes)	63	65

Community Factors

Across all the community factors analyzed, Alternative A had lower impacts than Alternative B. While both alternatives would impact the planned development at the Baylands site in Brisbane, the East LMF in Alternative A reduces the impact on planned mixed use and residential development and places the LMF farther away from more sensitive proposed land uses on the west side of the tracks. By not needing to build the passing tracks proposed in Alternative B, Alternative A would result in fewer residential and/or commercial displacements, fewer effects on visual quality at key viewpoints, less construction-related impact to emergency vehicle response times, no impact to pedestrian access at San Carlos Station (which would be relocated about 2,000 feet south in Alternative B), and less disruption to Caltrain service during construction.

Environmental Factors

The key differentiating environmental factors are both driven by the location of the LMF in Brisbane. Alternative A would result in lower overall permanent impacts on wetlands and aquatic resources than Alternative B. Additionally, Alternative A would have fewer impacts on special status species than Alternative B. Alternative A would not impact endangered species habitat, while Alternative B would remove Icehouse Hill, which is habitat for the endangered Callippe silverspot butterfly.

Additional Policy Considerations

Beyond the three groups of factors described above, staff has been evaluating different service plan and passing track options collaboratively with Caltrain. The Authority and Caltrain evaluated a range of passing track options (as well as service plans without passing tracks) to develop the range of alternatives under study as Alternatives A and B. At the same time, Caltrain has undertaken a business planning process to set out a long-range service vision. Through that process, Caltrain has developed baseline, medium growth, and high growth scenarios that increase the proposed levels of service for the corridor and each require incrementally more infrastructure to operate. The infrastructure in Alternative A is consistent with the baseline scenario identified in Caltrain's business plan. Alternative B passing track placement does not align with the scenarios that Caltrain has laid out in their future plans for the corridor.

Legal Approval

The legal office has confirmed that the Board may take the concurrence action being requested by staff.

Budget and Fiscal Impact

Budget review here

REVIEWER INFORMATION	SIGNATURE
Reviewer Name and Title: Thomas Fellenz Chief Legal Counsel	Signature verifying budget analysis: Original Signed by Thomas Fellenz September 9, 2019
Reviewer Name and Title: Brian Annis Chief Financial Officer	Signature verifying legal analysis: Original Signed by Brian Annis September 9, 2019

Recommendation

Based on the criteria outlined above and the outreach conducted, staff recommends that the Board identify Alternative A as the Preferred Alternative (under CEQA and NEPA) for preparing the San Francisco to San Jose Project Section Draft Environmental Impact Report/Environmental Impact Statement.

The Board is not approving an alternative at this point. Staff will return to the Board in the future for approval of an alternative with the Final EIR/EIS.

Attachments

- Draft CEQA Resolution #HSRA 19-07
- Draft NEPA Resolution #HSRA-19-08
- Exhibit 1, Alternative A
- Exhibit 2, Alternative B
- Preferred Alternative Staff Report for the San Francisco to San Jose Project Section
- Preferred Alternative Outreach Summary Report

Exhibit 1 – Alternative A

Exhibit 2 – Alternative B