

ES.0 Executive Summary

ES.1 SUPPLEMENTAL ALTERNATIVES ANALYSIS REPORT RESULTS

The June 2010 Los Angeles to Anaheim (LA-A) Supplemental Alternatives Analysis (AA) Report updates the Draft AA Report that the California High Speed Rail Authority (Authority) issued for the LA-A high-speed train (HST) section in April 2009. Modifications have been made to the alternatives and design options described in the Draft AA Report as coordination with local cities and agencies has progressed and additional engineering detail has become available. The Supplemental AA Report presents the changes from the earlier Draft AA Report, while referencing the previous material and text that has not changed.

ES.1.1 Alternatives Recommended to be Carried Forward in 2009 Draft AA Report

The April 2009 Draft AA Report recommended that the Dedicated HST Alternative be carried forward into the Draft Project EIR/EIS and Preliminary Engineering design. HST stations locations were selected at LAUS and ARTIC, with one optional intermediate HST station location to be studied at either Norwalk/Santa Fe Springs or Fullerton. Generally, the Dedicated HST Alternative would construct two tracks solely for HST service that would total five to six tracks in the LOSSAN corridor. A number of design options were recommended to be examined throughout the length of the alternative.

ES.1.2 Alternatives Recommended to be Carried Forward in 2010 Supplemental AA Report

Dedicated HST Alternative

This June 2010 Supplemental AA Report identifies several additional design options to be examined for the Dedicated HST Alternative in areas that include LAUS, the crossing of the Los Angeles River and I-710, the Norwalk/Santa Fe Springs and Fullerton HST stations, the Buena Park area, and approaching ARTIC. A summary of the subsection design options studied as part of this alternative is presented in Table ES.1-1 and shown in Figure ES.1-1, with the table listing whether they will or will not be carried forward for analysis in the Draft EIR/EIS.

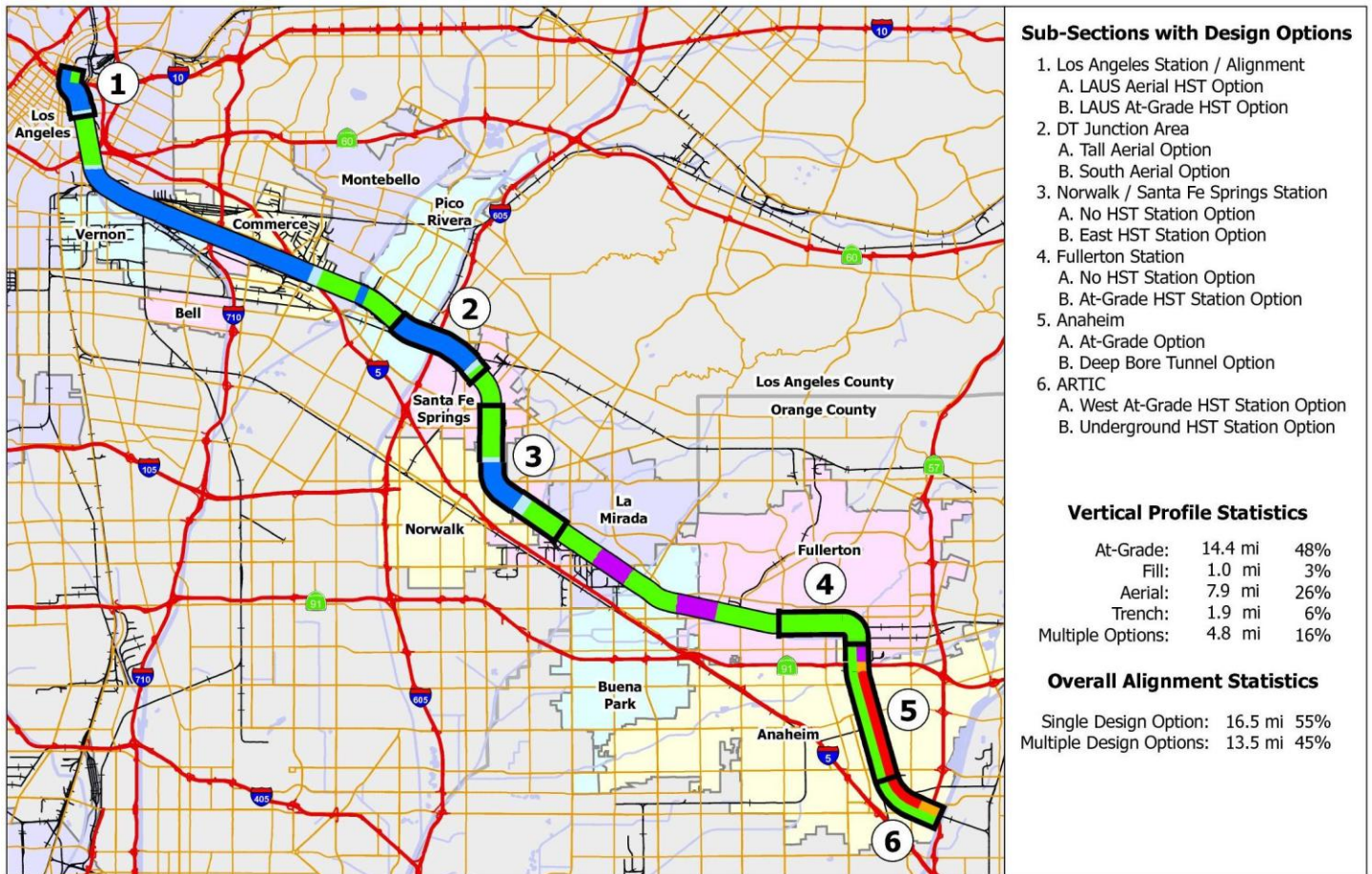
Table ES.1-1 Dedicated HST Alternative – Design Options Eliminated and Carried Forward

Subsection	Design Options Carried Forward	Design Options Eliminated from Further Consideration
Los Angeles Station	<ul style="list-style-type: none"> LAUS Aerial HST Station Option LAUS At-Grade HST Station Option 	<ul style="list-style-type: none"> LAUS Deep Tunnel HST Station Option Vignes Aerial HST Station Option West Bank Trench HST Station Option
Los Angeles River	<ul style="list-style-type: none"> At-Grade Option 	<ul style="list-style-type: none"> Tall Aerial Option
Vernon / Commerce Rail Yards	<ul style="list-style-type: none"> I-710 Tall Aerial Option 	<ul style="list-style-type: none"> I-710 At-Grade Option
Pico Rivera Rail Yard	<ul style="list-style-type: none"> Shifted Track Alignment Option 	<ul style="list-style-type: none"> Existing Track Alignment Option
DT Junction Area	<ul style="list-style-type: none"> Tall Aerial Option Aerial South Option 	<ul style="list-style-type: none"> At-Grade Option
Norwalk / Santa Fe Springs Station	<ul style="list-style-type: none"> No HST Station Option East HST Station Option 	<ul style="list-style-type: none"> North HST Station Option
La Mirada Rail Yards	<ul style="list-style-type: none"> At-Grade Option 	<ul style="list-style-type: none"> Aerial Option
Buena Park / Fullerton Airport	<ul style="list-style-type: none"> Underpass Option 	<ul style="list-style-type: none"> Flyover Option

Subsection	Design Options Carried Forward	Design Options Eliminated from Further Consideration
Fullerton Station	<ul style="list-style-type: none"> No HST Station Option At-Grade HST Station Option 	
Anaheim	<ul style="list-style-type: none"> At-Grade Option Deep Bore Tunnel Option 	<ul style="list-style-type: none"> Aerial Option Cut-and-Cover Tunnel Option
ARTIC	<ul style="list-style-type: none"> West At-Grade HST Station Option Underground HST Station Option 	<ul style="list-style-type: none"> East At-Grade Station Option
Vehicle Maintenance Facility	<ul style="list-style-type: none"> Anaheim West Option Los Angeles 8th Street Option* 	<ul style="list-style-type: none"> Los Angeles Golden Pig Option Anaheim East Option

*Note: Additional evaluation needed for Los Angeles 8th Street Option.

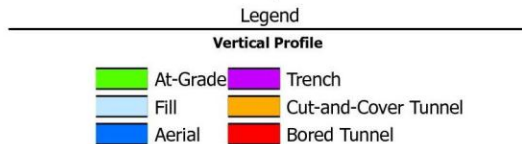
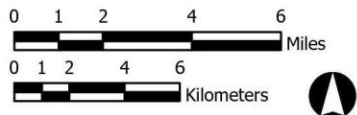
Figure ES.1-1 Dedicated HST Alternative – Vertical Profile and Design Options



Source: STV Incorporated, AE LLC

June 29, 2010

California High-Speed Train Alternatives Analysis Report



Los Angeles to Anaheim Section - Vertical Profile and Design Options
Dedicated HST Alternative

Consolidated Shared Track Alternative

The Supplemental AA Report also recommends that a new Consolidated Shared-Track Alternative be carried forward for evaluation in the Los Angeles to Anaheim Section Draft EIR/EIS. This alternative, which was developed after extensive coordination with corridor cities and agencies and the public, reduces the number of tracks required in the LOSSAN corridor to five in most sections by consolidating HST service with other passenger operators in the corridor. The proposed shared-track alternative envisions a dedicated passenger alignment composed of two mainline tracks largely within the existing BNSF right-of-way, along the San Bernardino Subdivision between Fullerton Junction and the Hobart Yard vicinity and two at-grade shared-use (passenger and freight) tracks within the existing Orange County Transportation Authority (OCTA) right-of-way from Fullerton Junction to the ARTIC terminal in Anaheim. In the Fullerton-Anaheim segment, freight trains will be temporally separated from high-speed trains.

Operational studies confirm the feasibility of operating future rationalized passenger service on two shared (passenger-only) tracks between just north of Hobart Yard and ARTIC terminal. The Consolidated Shared-Track Alternative would limit the capacity of the route for high-speed trains to three trains per hour, compared to the projected five trains per hour described in the operational model for the Business Plan.

The top speed of all passenger trains operating on the two passenger-only mainline tracks between LAUS and ARTIC would be 90 miles per hour (mph) to minimize potential train conflicts (overtakes). Only two intermediate stations at Fullerton and Norwalk/Santa Fe Springs would be served along the two passenger-only mainline tracks, further reducing the potential for overtakes.

This shared-use alternative is intended to significantly reduce impacts upon the LOSSAN corridor communities between Los Angeles and Anaheim and limit property acquisition needs. The capital cost of the shared-track alternative is expected to be less than the other HST alternative currently being evaluated (Dedicated HST Alternative), primarily because of lower ROW acquisition and tunneling requirements.

In Anaheim, in conjunction with this shared-track alternative, a proposed new at-grade ARTIC terminal configuration has been developed, providing two station tracks and a single low-height island platform for use by Metrolink and Amtrak trains and two dedicated HST station tracks serving two high-level side platforms.

South of the LA 8th Street Yard location, the Shared Alternative includes a new Redondo flyover just north of the existing flyover across the LA River to accommodate the Metrolink (91 Line) and Amtrak *Superchief* trains, freeing up the existing flyover for use by high-speed trains, Orange County and San Diego Metrolink trains, and Amtrak *Surfliner* trains.

BNSF would be relocated out of 1st St. yard using that space for two dedicated high-speed tracks from Redondo Jct. and LAUS, and three 400-meter train-length storage tracks, as well as making provision for a possible future LA-San Diego connection to a potential I-10 corridor alternative alignment. Replacement freight yard tracks would be built further south at La Mirada or possibly in Santa Fe Springs.

Independent of the Shared-Track Alternative, a new at-grade LAUS concept proposed by Metrolink has been evaluated and further developed by the Authority that would provide eight tracks and four low-height island platforms for use by Metrolink and Amtrak trains and six dedicated HST tracks serving three high-level island platforms to support high-speed train service between Northern California and Anaheim and future San Diego service. Four of the proposed Amtrak/Metrolink tracks could run through; and four would be stub-ended at the south end of the platforms (as they are today).

A summary of the subsection design options studied as part of this alternative is presented in Table ES.1-2 and shown in Figure ES.2-1. The table lists whether the options will or will not be carried forward for analysis in the Draft EIR/EIS.

Table ES.1-2 Consolidated Shared-Track Alternative – Design Options Eliminated and Carried Forward

LA-A HST Subsection	Design Options Carried Forward	Design Options Eliminated from Further Consideration
Los Angeles Station	<ul style="list-style-type: none"> • LAUS Aerial HST Station Option • LAUS At-Grade HST Station Option 	
Los Angeles River Adjacent	<ul style="list-style-type: none"> • At-Grade / Cut and Cover Option 	
Los Angeles River Crossing	<ul style="list-style-type: none"> • Existing Redondo Junction Flyover 	
Montebello / Pico Rivera	<ul style="list-style-type: none"> • Aerial Option • At-Grade Option 	
Norwalk / Santa Fe Springs Station	<ul style="list-style-type: none"> • No HST Station Option • East HST Station Option 	
La Mirada Rail Yards	<ul style="list-style-type: none"> • At-Grade Option 	
Buena Park / Fullerton Airport	<ul style="list-style-type: none"> • Underpass Option 	
Fullerton	<ul style="list-style-type: none"> • At-Grade Option 	
Fullerton Station	<ul style="list-style-type: none"> • No HST Station Option • At-Grade HST Station Option 	
Anaheim	<ul style="list-style-type: none"> • At-Grade Option 	
Anaheim (ARTIC) Station	<ul style="list-style-type: none"> • East At-Grade HST Station Option 	
Vehicle Maintenance Facility	<ul style="list-style-type: none"> • Anaheim West Option • Los Angeles 8th Street Option* 	<ul style="list-style-type: none"> • Los Angeles Golden Pig Option • Anaheim East Option

*Note: Additional evaluation needed for Los Angeles 8th Street Option.

ES.2 ALTERNATIVES ANALYSIS EVALUATION MEASURES

The alignment alternatives, station location and design options carried forward into the detailed alternatives analysis were assessed for each of the project objectives and evaluation measures. This information was then used to determine which alternatives are feasible and practicable and should be carried forward into preliminary engineering design and environmental review as part of the EIR/EIS. The primary evaluation measures are listed below.

- ♦ Design objectives (including measures such as travel time and cost)
- ♦ Land use (including measures such as consistency with land use and general plans)
- ♦ Constructability (including measures such as track type construction and access to the corridor)
- ♦ Community impacts (including measures such as amount of land acquisition)
- ♦ Natural resources (including measures such as impacts to wetlands, potential threatened and endangered species habitat, and important farmlands)
- ♦ Environmental quality (including measures such as number of sensitive noise receptors)
- ♦ Additional considerations (including measures such as ability to meet project purpose and support by public and agencies)

Figure ES.2-1 Consolidated Shared-Track Alternative - Vertical Profile and Design Options



Sub-Sections with Design Options

- 1. Los Angeles Union Station
 - A. LAUS Aerial HST Option
 - B. LAUS At-Grade HST Option
- 2. Montebello / Pico Rivera
 - A. At-Grade
 - B. Aerial
- 3. Norwalk / Santa Fe Springs Station
 - A. No HST Station Option
 - B. East HST Station Option
- 4. Fullerton Station
 - A. No HST Station Option
 - B. Aerial HST Station Option

Vertical Profile Statistics

At-Grade:	14.9 mi	49%
Aerial:	10.9 mi	35%
Trench:	1.4 mi	5%
Cut & Cover:	.9 mi	3%
Multiple Options:	2.4 mi	8%

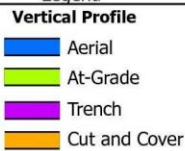
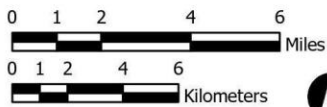
Overall Alignment Statistics

Single Design Option:	25.7 mi	84%
Multiple Design Options:	4.8 mi	16%

Source: STV Incorporated, AE LLC

July 6, 2010
Legend

California High-Speed Train Alternatives Analysis Report



Los Angeles to Anaheim Section - Vertical Profile and Design Options Consolidated Shared-Track

ES.3 LOS ANGELES TO ANAHEIM SECTION HST PROJECT BACKGROUND

The release of the Draft AA in June 2009, and the announcement of ARRA funding for High Speed Rail nationwide in April 2009, resulted in local Outreach efforts being initiated to discuss the project with each corridor city and affected agencies. OCTA was actively engaged and represented Buena Park, Fullerton, Anaheim, Orange and the ARTIC project. Los Angeles County Metropolitan Transportation Authority (Metro) devoted resources to understanding the three HSR alignments running through Los Angeles County and has acted in the role of liaison between the Authority and local cities and agencies. A Memorandum of Understanding was executed with the Gateway Cities COG to represent the interests of the corridor cities from Vernon through Buena Park. The City of Los Angeles created a TWG that worked to understand and develop more alternatives for LAUS. With increased participation from all of these interested parties, clear understanding of the Dedicated HST Alternative revealed there were potentially large impacts to communities. Requests to investigate design options that would reduce these community impacts were proposed and evaluated. Design options were developed in areas that included LAUS, the crossing of the Los Angeles River and I-710, the Norwalk/Santa Fe Springs and Fullerton HST stations, the La Mirada and Buena Park area, and new designs for approaching ARTIC and how HST would serve ARTIC.

In November 2009, the Federal Railroad Administration (FRA) released a High Speed Rail Safety Strategy that allows for consideration mixed-use passenger train service on selected corridors. OCTA and Metro initiated a request to investigate the applicability of this Safety Strategy on the LOSSAN corridor in combination with a review of the current passenger operations for all operators. The overall objectives were to consolidate/rationalize all passenger service in the LOSSAN corridor, reduce right-of-way impacts, retain BNSF access to industrial customers and reduce construction costs.

At the Board's direction in April 2010, staff commenced evaluation of a proposed shared-track alternative for future rationalized high-speed rail, commuter rail, and conventional intercity passenger service between Los Angeles Union Station (LAUS) and Anaheim (ARTIC). The FRA's decision announced May 27, 2010 to allow mixed-use passenger train service on the SF Peninsula as long as certain conditions are met (e.g., installation of Positive Train Control, grade crossing improvements, use of train equipment meeting FRA crashworthiness requirements, and temporal separation of freight) may presage FRA waivers for other similar shared-track operations like LA-Anaheim.

ES.4 PUBLIC AND AGENCY OUTREACH EFFORTS

The Authority and FRA began a project-level environmental review for the LA-A HST section in early 2007. Three public scoping meetings were held in April 2007 to introduce agencies and the public to the project and to solicit input on the alternatives, project purpose, environmental issues, and evaluation criteria that should be used for the Project EIR/EIS.

Ongoing coordination meetings have been held with a number of agency and public groups in the corridor. This includes over 400 briefings to outside agencies and groups, a number of interagency coordination meetings, a stakeholder working group, and technical working groups focusing on the LAUS area, the Gateway Cities of southern Los Angeles County, and the affected cities in northern Orange County. Corridor city workshops and council briefings have also been held with each city along the corridor affected by the project. In addition, regular workshops with partner agencies such as the FRA, Amtrak, Metrolink, Metro, and OCTA have been used to define the operation of the LOSSAN corridor as a whole. Input received at these outreach activities has been considered in the planning, engineering and environmental processes, leading to design modifications to minimize impacts and maximize benefits.

Several workshops have recently been held in Anaheim and Fullerton to update the public on the progress of the project and solicit input, and additional workshops are planned in the summer and fall of 2010 in support of the release of the Supplemental AA Report.

ES.5 NEXT STEPS

The 2009 Draft AA Report and 2010 Supplemental AA Report will inform the Project Description for the Project EIR/EIS. They will also set parameters for the next level of design (15 percent) and environmental analysis. This ongoing work will provide the Authority, FRA and the communities in the LOSSAN corridor a fuller picture of the design options in each subsection and a comprehensive vision of project's benefits and impacts.

As the engineering and environmental work continues, the Authority will continue to meet and engage communities along the Los Angeles to Anaheim HST section in a discussion about the different alternatives. These activities will inform preparation of the Draft Project EIR/EIS, which is currently scheduled to be released for public comment in 2011.