U.S. Department of Transportation
Federal Railroad Administration

Record of Decision

California High-Speed Train Merced to Fresno Section

1.0 Introduction

This is the Record of Decision (ROD) of the Federal Railroad Administration (FRA), an operating administration of the U.S. Department of Transportation (DOT), and the lead Federal agency for the California High-Speed Train (HST) Merced to Fresno Section (Project) (Figure 1). The Project Proponent is the California High-Speed Rail Authority (Authority), the lead agency for state environmental reviews under the California Environmental Quality Act (CEQA) and joint lead agency with FRA for Federal environmental reviews under the National Environmental Policy Act (NEPA). The Authority proposes to construct and operate the Project subject to the approval of the appropriate Federal agencies. These agencies include FRA and the Federal cooperating agencies—the U.S. Army Corps of Engineers (USACE) and the Bureau of Reclamation. Other Federal agencies with specific review or permitting roles include the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS).

To comply with NEPA and CEQA, FRA and the Authority issued a joint Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Merced to Fresno Section of the California HST Project in August 2011 and a joint Final EIR/EIS in April 2012. Consistent with 40 Code of Federal Regulations (C.F.R.) 1506.2, the Final EIR/EIS is one document that covers both state and federal environmental requirements. Because this ROD contains only the decision of FRA, a Federal agency, based on the Draft and Final EIR/EIS, the documents will be referred to as the "Draft EIS" and the "Final EIS." In making its decision, FRA considered the information and analysis contained in the 2011 Draft EIS and 2012 Final EIS (collectively, "EIS Documents"). FRA also considered public and agency comments received during the public comment period for the Draft EIS and the waiting period following the Final EIS. Based on the analysis of the Project's potential environmental effects (both adverse and beneficial) in the EIS Documents and substantive agency and public comments, FRA selects the north-south Hybrid Alternative and the Downtown Merced Station and Downtown Fresno Mariposa Street Station alternatives, as described further in Section 4.0, Alternatives, below.

Figure 1
California HST System Initial Study Corridors

FRA has prepared the ROD in accordance with the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 C.F.R. Section 1505.2) and FRA's Procedures for Considering Environmental Impacts (64 Federal Register [FR] 28545, May 26, 1999) (FRA Environmental Procedures). Specifically, this ROD:

- Provides background on the NEPA process leading to the Final EIS, including a summary of public involvement and agency coordination.
- States and reaffirms the Project's purpose and need.
- Identifies the alternatives considered in the EIS Documents.
- Summarizes the alternatives previously considered in the alternatives analysis process and not carried forward for study in the Draft EIS.
- Identifies the Selected Alternative.
- Identifies the Environmentally Preferable Alternative.
- Summarizes environmental benefits and adverse effects.
- Summarizes the comments received on the Final EIS.
- Discusses the measures to avoid and minimize environmental harm and requires a monitoring and enforcement program for all mitigation measures.
- Presents the FRA Decision, determinations, and findings on the proposed Project and identifies and discusses the factors that were balanced by FRA in making its decision.

1.1 California HST System

The Authority is responsible for planning, designing, constructing, and operating the California HST System. Its state statutory mandate is to develop a high-speed rail system that coordinates with the state's existing transportation network, which includes intercity rail and bus lines, regional commuter rail lines, urban rail and bus transit lines, highways, and airports.

The California HST System will provide intercity, high-speed service on more than 800 miles of track throughout California, connecting the major population centers of Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego, as shown in Figure 1. The Authority and FRA prepared two programmatic (Tier 1) EIR/EIS documents to select preferred alignments and station locations to advance for project-level analysis in Tier 2 EIR/EISs. See Chapter 1 of the Merced to Fresno Section Final EIS for a more detailed description of the HST System, history of Tier 1 documents, and HST system phasing. Figure 1 shows the proposed California HST System that resulted from the Tier 1 EIR/EISs and Tier 1 decisions. The HST System will use state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, including contemporary safety, signaling, and automated train-control systems, with trains capable of operating up to 220 miles per hour (mph) over a fully grade-separated, dedicated guideway alignment.

The Authority plans two phases: Phase 1 (to be constructed in stages dependent on funding availability) will connect San Francisco to Los Angeles/Anaheim via Pacheco Pass and the Central Valley through a combination of dedicated high-speed rail infrastructure blended with existing urban systems, with a state statute mandated express travel time from San Francisco to Los Angeles of 2 hours and 40 minutes or less. Phase 2 will extend the system from Los Angeles to San Diego and from Merced to Sacramento. The HST System could have more than 200 trains per day after full build-out of Phase 2. The California High-Speed Rail Program Revised 2012 Business Plan[1] describes in more detail how Phase 1 of the HST System will be implemented and recognizes current budgetary and funding realities, which will result in both Phase 1 and Phase 2 being constructed over a longer period of time than originally anticipated.

The California HST System as approved through Tier 1 decisions has been divided into nine individual sections for more detailed, second-tier analysis. The nine sections were identified by certain operating characteristics including the requirement that they terminate at or proximate to station locations in larger urban centers. The individual project sections tier from decisions made during the programmatic decision and are units of the whole system that can be combined together as necessary due to funding and constructability constraints.

The Merced to Fresno Section is one of the nine individual sections undergoing Tier 2 environmental review for Phases 1 and 2 of the California HST System. As described in the October 1, 2009, Notice of Intent (NOI) for the Merced to Fresno Section (74 FR 50869), FRA identified the Project termini as the station sites in downtown Fresno and Merced. This is consistent with the Tier 1 decisions and permits full analysis and consideration of the potential impacts of construction and operation of the Merced to Fresno Section of the California HST System.

1.2 Merced to Fresno Section

FRA and the Authority, as joint lead agencies for NEPA compliance, commenced the environmental review process for the Project in 2009. The Authority held scoping meetings for the Project in March 2009. The Draft EIS was issued in August 2011 and the 60-day public review period closed on October 13, 2011. The Draft EIS presented the purpose and need for the Project; the reasonable range of alternatives for rail alignment, station site, heavy maintenance facility (HMF), and a connection to the east-west running San Jose to Merced Section also known as “wye connections”; the existing environmental setting; potential effects (both beneficial and adverse) from construction and operation; and mitigation measures to reduce or eliminate potential adverse environmental effects.

The Draft EIS informed decision-makers, interested parties, and the public about the various alternatives and potential impacts. FRA and the Authority held public hearings

[1]. Authority. 2012. *California High-Speed Rail Program Revised 2012 Business Plan*. Sacramento, Calif. April 2012. Available at http://www.cahighspeedrail.ca.gov/Business_Plan_reports.aspx.

in Merced, Madera, and Fresno to provide opportunities for all of the public to comment on the Draft EIS verbally and in writing. FRA and the Authority received 895 comment submittals on the Draft EIS.

FRA and the Authority considered the information presented in and the comments received on the Draft EIS when preparing the Final EIS. During a hearing by the Authority Board of Directors in December 2011, the Authority designated the Hybrid as the Preferred Alternative. The Final EIS, published April 20, 2012, identified the Hybrid as the Preferred Alternative and included minor design modifications to proposed alternatives resulting from public and agency comments on the Draft EIS and an evaluation of the potential environmental effects of the Preferred Alternative.

Following the identification of the Preferred Alternative in the Final EIS, the USACE and EPA concurred (on March 26, 2012,[2] and March 23, 2012,[3] respectively)—based upon the analyses incorporated in the Draft EIS and the subsequent Final EIS, as well as documents submitted as part of the Section 404 permitting process, and the biological assessment of ecosystems impacts and cultural and community impacts—that the Hybrid Alternative is the least environmentally damaging practicable alternative (LEDPA), consistent with USACE's permit program (33 C.F.R. Part 320–331) and EPA's Section 404(b)(1) Guidelines (40 C.F.R. 230–233).[4]

Table 1 summarizes the major NEPA milestones of the Project.

[2] Response to February 22, 2012 Checkpoint C Package, and the March 9, 2012 response for the proposed Merced to Fresno segment of the California HST Project. Letter from Michael S. Jewell, Chief, Regulatory Division to Mark McLoughlin, Authority. Sacramento, CA. March 26, 2012.

[3] Response to Checkpoint C – Request for Agreement on Preliminary Least Environmentally Damaging Practicable Alternative and Draft Mitigation Plan for California HST Project Merced to Fresno Section. Letter from Connell Dunning, Transportation Team Supervisor, Environmental Review Office, Communities and Ecosystems Division, to David Valenstein, FRA, and Tom Fellenz, Authority. San Francisco, CA. March 23, 2012.

[4] For more information about the integration of NEPA with Clean Water Act Section 404 permitting, please see Section 2.2. For more information about the identification of the LEDPA and the integration of USACE's 404 permit into the NEPA process, please see Section 4.4.

Table 1: Summary of Major NEPA Milestones

Milestone	Date
Notice of Intent (NOI)	February and October[5] 2009
Public Scoping Meetings	March 2009
Notice of Availability Published and Circulation of Draft EIS/Draft Section 4(f) Evaluation	August 2011
Public Hearings: Merced, Madera, and Fresno	September 2011
Notice of Availability and Publication of Final EIS and Final Section 4(f) Evaluation	April 2012

1.3 Initial Project Construction

The Authority identified the Central Valley as the highest construction priority, and FRA selected this Project for construction funding. Recognizing funding limitations, and to maximize potential interim use of the HST System in the Central Valley, the Authority will phase construction of the Project.

The Authority will use the design/build project delivery method to construct the HST System in the Central Valley. When using design/build, one contractor (or team of contractors) is selected to provide design and construction services under a single contract. Construction within the Merced to Fresno Section is anticipated to commence in 2013 after the Authority selects a design/build contractor(s) as part of an ongoing procurement process.

This ROD will allow the Authority to move forward with construction and related activities for the Selected Alternative within the Merced to Fresno Section, a portion of which (between Avenue 17 and Los Angeles Street) is funded for construction.

2.0 Federal Agency Actions

The specific roles and responsibilities of the Federal agencies involved in the Project, including lead, cooperating,[6] and permitting agencies, are further described below. Table 2 identifies permit and approvals anticipated for these agencies.

[5] The original NOI was filed for the Merced to Bakersfield Section in February 2009; it was amended in October 2009 for the Merced to Fresno Section.

[6] The Bureau of Reclamation is a cooperating agency but does not have jurisdiction over a permit or approval for this section.

Table 2: Federal Permits or Approvals Anticipated

Agency	Permit/Approval
FRA	• FRA funding approval • FRA regulations related to HST operation and safety • Section 4(f) of the U.S. Transportation Act of 1966 • National Historic Preservation Act Section 106 Consultation • Clean Air Act General Conformity Determination
USACE	• Clean Water Act Section 404 Permit for discharge of dredge or fill materials into waters of the United States, including wetlands • Rivers and Harbors Act Section 408 Permit for the use, including modifications or alterations, of any flood control facility built by the USACE • 33 C.F.R. 208.10 Permit for encroachment on a local flood control facility built by the USACE that does not include modifications to the facility
USFWS	• Endangered Species Act Section 7 Consultation and Biological Opinion
NMFS	• Endangered Species Act Section 7 Consultation and Biological Opinion

2.1 Federal Railroad Administration

Under 49 United States Code (U.S.C.) 20101 et seq., FRA has authority over the safety of railroads. FRA will exercise jurisdiction over railroad safety issues during design and operation of the Project. FRA also administers the High-Speed Intercity Passenger Rail grant program. Based on the evaluation of applications submitted to FRA and the two Tier 1 EIRs/EISs and subsequent RODs, FRA selected the Authority to receive grant funds for preliminary engineering and environmental reviews for Phase 1 of the California HST System, and final design and construction of the California HST System between Madera, a city located within the Merced to Fresno Section, and Bakersfield (Kern County) in the Fresno to Bakersfield Section.

Section 4(f) of the DOT Act of 1966 (49 U.S.C. 303) prohibits DOT and its modal administrations, including FRA, from undertaking a transportation project or providing Federal funding or discretionary approvals for a project that results in the use (unless the use has *de minimis* impacts) of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites, unless there is no feasible and prudent alternative to the use of the resource and the action includes all possible planning to minimize harm to the property resulting from use. Section 4(f) also protects historic sites of national, state, or local significance located on public or private

land. FRA's Environmental Procedures contains FRA processes and protocols for analyzing the potential use of Section 4(f) protected properties. FRA's Section 4(f) Determination is included as Section 9.2 of this ROD.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) (16 U.S.C. 470f), requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the ACHP that are available at 36 C.F.R. Part 800. Under the NHPA, significant cultural resources, referred to as historic properties, include any prehistoric or historic district, site, building, structure, object, or landscape included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). A Programmatic Agreement (PA) among FRA, ACHP, the California State Historic Preservation Officer (SHPO), and the Authority regarding compliance with Section 106 of the NHPA for the HST System was executed on July 22, 2011.[7] In accordance with the PA, a Memorandum of Agreement (MOA) for the treatment of adverse effects on historic properties in the Merced to Fresno Section of the HST System was executed on August 31, 2012 (see Appendix A). The City of Madera, the City of Fresno, and Fresno County, as well as the following Federally-recognized Native American tribes: Cold Springs Rancheria of Mono Indians, Santa Rosa Rancheria Tachi Tribe, the North Fork Rancheria of Mono Indians, and the California Valley Miwok Tribe; and the following non-Federally recognized Native American tribes: North Fork Mono Tribe, and the Chowchilla Tribe of Yokuts, have accepted the Authority and FRA's invitation(s) to be consulting parties to the MOA and treatment plan(s). [8]

Pursuant to the Clean Air Act (CAA) Section 176(c) requirements, EPA promulgated 40 C.F.R. 51 Subpart W and 40 C.F.R. Part 93, Subpart B, "Determining Conformity of General Federal Actions to State or Federal Implementation Plans" (58 FR 63214, November 30, 1993, as amended, 75 FR 17253, April 5, 2010). These regulations, commonly referred to as the General Conformity Rule, apply to all Federal actions, including those by FRA, except for those Federal actions that are excluded from review (e.g., stationary source emissions) or related to transportation plans, programs, and projects under Title 23 or the Federal Transit Act, which are subject to the Transportation Conformity Rule.

A conformity determination under the General Conformity Rule is required if the Federal agency determines the following: the action will occur in a nonattainment or maintenance area; that one or more specific exemptions do not apply to the action; the action is not included in the Federal agency's "presumed to conform" list; the emissions from the proposed action are not within the approved emissions budget for an applicable

[7] Authority and FRA. 2012. *Programmatic Agreement.* Appendix 3.17-A of the *California HST Merced to Fresno Section Final Project EIR/EIS. Volume II: Technical Appendices.* Sacramento, CA, and Washington, D.C. April 2012.

[8] Signatures of potentially concurring parties are currently being sought.

facility; and the total direct and indirect emissions of a pollutant (or its precursors), are at or above the *de minimis* levels established in the General Conformity regulations. The proposed Project is subject to review under the General Conformity Rule; therefore, FRA prepared a Conformity Determination consistent with the applicable regulatory requirements. The final General Conformity Determination was issued on September 18, 2012.

2.2 U.S. Army Corps of Engineers

USACE is responsible for issuing permits under the Clean Water Act (CWA) Section 404 (33 U.S.C. 1344) (Section 404) and the Rivers and Harbors Act Section 14 (33 U.S.C. 408) (Section 408).[9] USACE is required to comply with NEPA and issue its own Record of Decision before it can issue a permit under Section 404 or Section 408.

As a first step in Project permitting, the Authority, FRA, USACE, and EPA executed a Memorandum of Understanding (MOU or NEPA/404/408 MOU) in November 2010. The MOU outlines a process to integrate the requirements of NEPA with the requirements of Section 404 and Section 408. The purpose of the MOU is to ensure the analysis underlying the EIS Documents for each HST section is sufficient to support USACE's Preliminary LEDPA determination and for USACE to issue a NEPA decision document.

Consistent with the MOU, FRA and the Authority initiated the CWA Section 404 permitting process with USACE on August 3, 2011. As part of the CWA Section 404 permitting process, FRA and the Authority prepared a Wetland Delineation Report (2011) and submitted it to USACE for issuance of a preliminary jurisdictional determination, which USACE issued on November 3, 2011. Jurisdictional determinations and issuance of a permit for the discharge of fill material into waters of the United States associated with construction and operation of the Project will be part of the CWA Section 404 permit process administered by USACE.[10]

Pursuant to NEPA, Section 404, and Section 408, USACE and EPA issued letters identifying the Hybrid Alternative as the preliminary LEDPA on March 26, 2012, and March 23, 2012, respectively. The Section 404 process continues with submittal of a permit application to USACE and development of a mitigation plan. The Section 408

[9] CWA Section 404 sets forth a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. USACE may only issue a Section 404 permit for a project alternative that USACE determines is the Least Environmentally Damaging Practicable Alternative (LEDPA). Section 408 permit decisions will be made for alteration/modification of completed Federal flood risk management facilities and any associated operation and maintenance, and real estate permissions or instruments (as applicable).

[10] For CWA section 404(b)(1) compliance, USACE must take into consideration the context of the geographic area of the proposed action and the type of project being proposed. USACE has determined that the overall project purpose (as stated above) allows for a reasonable range of practicable alternatives to be analyzed and is acceptable as the basis for the USACE 404(b)(1) alternatives analysis.

process continues with USACE's evaluation of potential Project impacts on flood protection facilities. USACE will issue a NEPA decision after a preliminary review of impacts on facilities under its jurisdiction. Subsequently, the Authority will submit permit applications for facilities under Section 408 jurisdiction to USACE.

2.3 U.S. Fish and Wildlife Service

Concurrently with the NEPA process, FRA initiated the Endangered Species Act (ESA) Section 7 (16 U.S.C. 1536) consultation process, pursuant to 50 C.F.R. Part 402. Section 7 of the Federal ESA requires Federal agencies to consult with USFWS and/or NMFS, depending on the type of species or habitat affected, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered fish, wildlife, or plant species or result in the destruction or adverse modification of designated critical habitat for any such species. Impacts associated with threatened and endangered species, including critical habitat, occupied habitat, and suitable habitat for special-status species, is addressed through a coordination process that is outlined under Section 7 of the Federal ESA. If a project may have an impact on a resource under Section 7, a study that describes the impacts, known as a Biological Assessment (BA), is required to be submitted to the appropriate agency with jurisdiction over the resource (USFWS, and/or NMFS). After the appropriate agency has accepted the BA, the agency will render a Biological Opinion (BO). A BO is the agency's opinion as to whether a project is likely to jeopardize the continued existence of an ESA-listed species or result in the destruction or adverse modification of a species' critical habitat.

Because the Project is likely to have an impact under Section 7, FRA prepared a BA for the Project and consulted with USFWS, as required. FRA's informal and formal Section 7 consultation with USFWS has been ongoing and was instrumental in scoping the biological resource analysis for the EIS Documents, as well as for the BA. FRA developed and submitted the Draft BA to USFWS in October 2011, which evaluated direct, indirect, and cumulative effects of the Project on Federally listed, threatened, endangered, or proposed listed species and their designated habitat.

Following USFWS review and additional consultation and coordination, USFWS issued a BO for the Project on September 14, 2012. In the BO, USFWS concluded that the Project, as proposed, is not likely to jeopardize the continued existence of the listed wildlife and plant species potentially occurring in the Project action area. Consistent with Section 7 requirements, the BO stipulates several reasonable and prudent conservation measures to avoid or reduce potential impacts. The BO is included as Appendix B. This BO also includes an incidental take statement authorizing activities associated with the first phase of construction in the Central Valley, as described in Section 1.3.

2.4 National Marine Fisheries Service

Because the Project might impact protected aquatic species under NMFS jurisdiction, in addition to the Section 7 consultation with USFWS described above, FRA is required to consult with NMFS.

FRA submitted a Draft BA to NMFS in October 2011. In addition to the BO issued by USFWS, NMFS issued a BO for the Project on April 17, 2012. NMFS concluded in its BO that the Project would not likely jeopardize the continued existence of the listed species. NMFS anticipates that the Project would result in the incidental take of California Central Valley steelhead and Central Valley spring-run Chinook salmon.[11] Consistent with Section 7 requirements, the BO stipulates several reasonable and prudent conservation measures to avoid or reduce potential impacts. This BO is included as Appendix B. The BO also includes an incidental take statement authorizing activity associated with construction and operation of the Project.

3.0 Purpose and Need

As established in the Final Program EIS, the purpose of the California HST System is to provide a reliable high-speed electric-powered train system that links the major metropolitan areas of California, delivering predictable and consistent travel times. A further objective is to provide an interface with commercial airports, mass transit, and the highway network and to relieve capacity constraints of the existing transportation system as increases in intercity travel demand in California occur, in a manner sensitive to and protective of California's unique natural resources.[12]

The purpose of this Project is to implement the Merced to Fresno Section of the California HST System to provide the public with electric-powered high-speed rail service that provides predictable and consistent travel times between major urban centers and connectivity to airports, mass transit systems, and the highway network in the south San Joaquin Valley and to connect the northern and southern portions of the system.

The capacity of California's intercity transportation system, including the central part of the San Joaquin Valley region, is insufficient to meet existing and future travel demands. The current and projected future system congestion will continue to result in deteriorating air quality, reduced reliability, and increased travel times. The current transportation system has not kept pace with the increase in population, economic activity, and tourism within the state, including in the central part of the San Joaquin Valley region. The interstate highway system, commercial airports, and conventional passenger rail system serving the intercity travel market are operating at or near capacity

[11] Within the Project action area, these species potentially occur only in the San Joaquin River.

[12] Authority and FRA. 2005. *Final Program EIR/ EIS for the Proposed California HST System*. Sacramento, CA, and Washington, DC. August 2005.

and will require large public investments for maintenance and expansion to meet existing demand and future growth over the next 25 years and beyond. Moreover, the feasibility of expanding many major highways and key airports is uncertain; some needed expansions might be impractical or are constrained by physical, political, and other factors. The need for improvements to intercity travel in California, including intercity travel between the central part of the San Joaquin Valley, the San Francisco Bay Area, Sacramento, and Southern California, relates to the following issues:

- Future growth in demand for intercity travel, including the growth in demand within the central part of the San Joaquin Valley region.
- Capacity constraints that will increase congestion and travel delays, including those in the central part of the San Joaquin Valley region.
- Unreliability of travel stemming from congestion and delays, weather conditions, accidents, and other factors that affect the quality of life and economic wellbeing of residents, businesses, and tourism in California, including the central part of the San Joaquin Valley region.
- Reduced mobility as a result of increasing demand on limited modal connections between major airports, transit systems, and passenger rail in the state, including the central part of the San Joaquin Valley region.
- Poor and deteriorating air quality and pressure on natural resources and agricultural lands as a result of expanded highways and airports and urban development pressures, including those within the central part of the San Joaquin Valley region.

4.0 Alternatives

This section summarizes the alternatives analysis process and the alternatives evaluated in the EIS Documents and describes the Selected and Environmentally Preferable alternatives.

4.1 Alternatives Considered in the Alternatives Analysis Process and Not Carried Forward for Consideration in the EIS Documents

FRA and the Authority have undertaken an extensive, public screening process for alternatives to study in the EIS Documents. The potential alternatives considered but eliminated from detailed study were presented in the *Preliminary Alternatives Analysis Report* (April 2010), the *Alternatives Analysis Report* (August 2010), and the *Supplemental Alternatives Analysis Report* (May 2011) and are summarized in Chapter 2 of the EIS Documents. Several potential alternatives either failed to adequately meet the project purpose, need, and objectives, failed to offer a substantial environmental advantage over one or more of the alternatives studied in the EIS Documents, or were deemed infeasible from a cost, technical, or engineering perspective and therefore were eliminated from further analysis in the EIS Documents.

4.2 Alternatives Considered in the EIS Documents

The EIS Documents included three alignment alternatives: UPRR/SR 99 Alternative, BNSF Alternative, and the Hybrid Alternative (Figure 2). The No Action Alternative was also analyzed in the EIS Documents. The EIS Documents also included the Downtown Merced HST Station, two station alternatives for Downtown Fresno (the Kern Street Station Alternative and Mariposa Street Station Alternative), five HMF alternatives, and two wye alternatives. These alternatives are described in detail in Chapter 2 of the Final EIS. The alternatives analyzed in the EIS Documents are those that FRA and the Authority considered reasonable and feasible.

4.2.1 HST Alignment Alternatives

No Action Alternative

The No Action Alternative would result in no construction and no operation of the HST System. As a result, it would not meet the Project's purpose, need, and objectives.

The No Action Alternative is the basis for comparison of the Project alternatives in the Environmental Documents. The No Action Alternative represents the state's transportation system (highway, air, bus, conventional rail) as it is currently and as it would be after implementation of programs or projects that are currently projected in regional transportation plans, have identified funds for implementation, and are expected to be in place by 2035, as well as any major planned land use changes. The entire San Joaquin Valley is projected to grow at a rate higher than any other region in California. The three counties—Merced, Madera, and Fresno—are projected to continue to grow at an average rate of 3% per year. By 2035, the population in the study area is projected to grow from 1,365,911 to 2,298,075, for a net increase of 60%. Accommodating this new population would require land acquisition and the construction of new infrastructure, including roadways, electric power generation, water and wastewater facilities, schools, hospitals, and commercial and industrial facilities. To support this growth, development would consume an estimated 91,000 acres because, according to current planning trends, these counties would develop at a density of approximately 10 persons per acre.

UPRR/SR 99 Alternative

The alignment for the UPRR/SR 99 Alternative traverses urban downtown areas in the cities of Merced, Madera, and Fresno. It is generally adjacent to SR 99 and the UPRR railway. The HST alignment is designed to follow the existing UPRR corridor adjacent to the UPRR mainline right-of-way and to avoid the existing UPRR operations right-of-way and active rail spurs to the greatest extent possible. In several locations, the HST alignment is elevated to cross over the UPRR operational right-of-way. In these instances, the alternative maintains required horizontal and vertical clearance over UPRR operational right-of-way to avoid or minimize impacts on other UPRR right-of-

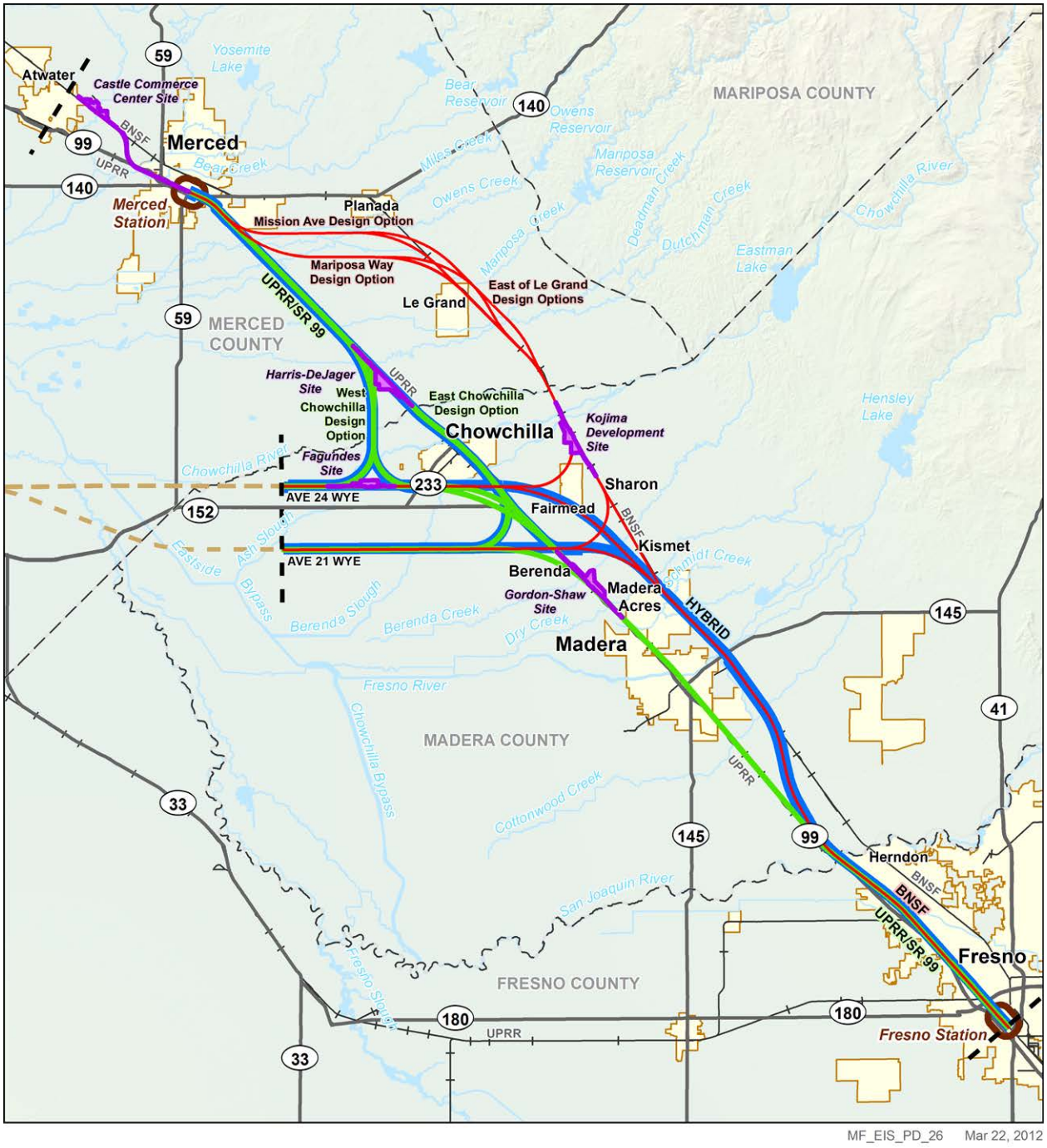


Figure 2
Alternatives Considered in the EIS Documents

way, spurs, and facilities. Similarly, the HST alignment follows the SR 99 corridor and, therefore, crosses over SR 99 in some locations and under SR 99 in Merced. As the alignment travels through rural areas, it affects existing local frontage roads used by small communities and farm operations. Where these frontage roads parallel the HST alignment, they would be shifted and reconstructed to maintain their function. Where roads are perpendicular to the proposed HST, overcrossings or undercrossings are planned approximately every two miles, while other roads would be closed.

The north-south alignment of the UPRR/SR 99 Alternative would begin at the HST station in Downtown Merced, located on the west side of the UPRR right-of-way. South of the station and leaving Downtown Merced, the HST alignment would be at-grade and cross under SR 99. As the HST alignment approaches Chowchilla, the UPRR/SR 99 Alternative has two primary design options: the East Chowchilla design option, which would pass Chowchilla on the east side of town, following the Ave 24 Wye alignment, and the West Chowchilla design option, which would travel south at a distance of three to four miles west of Chowchilla before turning back to rejoin the UPRR/SR 99 transportation corridor. Both of the Ave 21 and the Ave 24 Wye options would connect in the vicinity of Chowchilla; these wye options are described below in Section 4.2.4. The HST alignment would continue south on the east side of the UPRR corridor south of Dry Creek and remain on an elevated profile for 8.9 miles through Madera. After crossing over Cottonwood Creek and Avenue 12, the HST alignment would transition to an at-grade profile and continue to be at-grade until north of the San Joaquin River. The UPRR/SR 99 Alternative would continue toward Fresno, crossing the San Joaquin River, and rise over the UPRR railway on an elevated guideway supported by straddle bents. The HST alignment would then cross over the existing Herndon Avenue and descend into an at-grade profile. The alignment would continue west of and parallel to the UPRR right-of-way. Advancing south from Clinton Avenue between Clinton Avenue and Belmont Avenue, the two-track HST alignment would run at-grade adjacent to the western boundary of the UPRR right-of-way and then enter the station in Fresno.

BNSF Alternative

The alignment for the BNSF Alternative traverses from north to south, crossing the cities of Merced, Le Grand, Madera, and Fresno. The north-south alignment of the BNSF Alternative would begin at the HST station in Merced. South of Merced, there are two design options that traverse east to the BNSF in the vicinity of the community of Le Grand. The BNSF alternative would remain at-grade through Merced and would cross under SR 99 at the south end of the city. Just south of the SR 99/East Childs Avenue interchange, the BNSF Alternative would cross over SR 99 and UPRR once more as it begins to curve to the east, crossing over the E Mission Avenue interchange. It would then travel east to the vicinity of Le Grand where it would turn south and travel adjacent to the BNSF tracks. Continuing southeast along the west side of BNSF, the HST alternative would begin to curve just before Plainsburg Road through a predominantly rural and agricultural area. One mile south of Le Grand, the HST alignment would cross

Deadman and Dutchman creeks. The HST alignment would deviate from the BNSF corridor just southeast of S White Rock Road, and would remain at-grade for another seven miles, except at the bridge crossings, and would continue on the west side of the BNSF corridor through the community of Sharon. The HST alignment would continue at-grade through the community of Kismet until reaching the crossing at Dry Creek. The BNSF Alternative would cross Dry Creek and continue at-grade through agricultural areas along the west side of the BNSF corridor through the community of Madera Acres north of the City of Madera. Between Le Grand and Madera, the proposed Ave 21 or Ave 24 Wye alignments would connect with this north-south portion of the alternative. The wye alignments are described below in Section 4.2.4. The HST alignment would continue at-grade on the west side of the BNSF corridor, crossing over the Fresno River and SR 145. This would involve raising the HST tracks over the existing SR 145 undercrossing. South of Avenue 15 east of Madera, the alignment would transition toward the UPRR corridor. The alignment would follow the east side of the UPRR corridor near Avenue 9 south of Madera and then would continue along nearly the same route as the UPRR/ SR 99 Alternative over the San Joaquin River to enter the community of Herndon. The HST alignment for the BNSF Alternative in the Fresno vicinity would be the same as for the UPRR/SR 99 Alternative.

Hybrid Alternative

From north to south, generally, the Hybrid Alternative would follow the UPRR/SR 99 alignment with either the West Chowchilla design option and Ave 24 Wye or the East Chowchilla design option and Ave 21 Wye; at the wye connection, it would join the BNSF Alternative through Madera and would continue south over the San Joaquin River on to the Fresno station. The HST alignments in the Merced vicinity for the Hybrid Alternative and design options are the same as for the UPRR/SR 99 Alternative. Approaching the Chowchilla city limits, the Hybrid Alternative would follow one of two wye options. In the vicinity of Madera and south to Fresno, the Hybrid Alternative is the same as the BNSF Alternative, and throughout the Fresno vicinity, both the Hybrid and BNSF Alternatives are the same as the UPRR/SR 99 Alternative

4.2.2 Station Alternatives

The Downtown Merced and Downtown Fresno stations would each occupy several blocks, to include the station plazas, drop-offs, multimodal transit center, and parking structures. The stations would include the platforms and associated building for passenger services and concessions, and back-of-house functions and access structures. Both the Merced and Fresno stations would have additional platform tracks, with the platforms at-grade.

Downtown Merced Station

The Downtown Merced Station would be between Martin Luther King Jr. Way to the northwest and G Street to the southeast, approximately seven blocks west of the existing Amtrak station. The station would be accessible from both sides of the UPRR, but the

primary station house would front 16th Street. The major access points from SR 99 include V Street, R Street, Martin Luther King Jr. Way, and G Street. Primary access to the parking facility would be from W 15th Street and W 14th Street, just one block east of SR 99. The closest access to the parking facility from the SR 99 freeway would be R Street, which has a full interchange with the freeway. The site proposal includes a parking structure that would have the potential for up to six levels with a capacity of approximately 2,250 cars and an approximate height of 50 feet. During Phase 1 of the HST System (see Section 1.1), when parking demand would be higher at the station, additional parking would be provided either at existing sites distributed throughout the community or at a second structure.

Fresno Mariposa Street Station Alternative

The Mariposa Street Station Alternative is located in Downtown Fresno, less than one half mile east of SR 99. The station would be centered on Mariposa Street and bordered by Fresno Street on the north, Tulare Street on the south, H Street on the east, and G Street on the west. The station building would be approximately 75,000 square feet, with a maximum height of approximately 64 feet. The two-level station would be at-grade, with passenger access provided both east and west of the HST guideway and the UPRR tracks, which would run parallel with one another adjacent to the station. The first level would contain the public concourse, passenger service areas, and station and operation offices. The second level would include the mezzanine, a pedestrian overcrossing above the HST guideway and the UPRR railway tracks, and an additional public concourse area. Entrances would be located at both G and H Streets. The eastern entrance would be at the intersection of H Street and Mariposa Street, with platform access provided via the pedestrian overcrossing. This entrance would provide a "front door" connection with Downtown Fresno on an axis that also includes the County Courthouse and City Hall several blocks to the east. The main western entrance would be located at G Street and Mariposa Street.

The Mariposa Street Station Alternative includes the potential for up to three parking structures occupying a total of 5.5 acres. Two of the three potential parking structures would each sit on two acres, and each would have a capacity of approximately 1,500 cars. The third parking structure would be slightly smaller in footprint (1.5 acres), with five levels and a capacity of approximately 1,100 cars. An additional two-acre surface parking lot would provide approximately 300 parking spaces. Currently, Downtown Fresno has a large amount of excess public parking within a mile of the proposed HST station. Based on discussions with the City of Fresno, the balance of spaces needed to satisfy the estimated year 2035[13] parking demand (7,400 total spaces) would be accommodated by existing public spaces, without the need for additional parking lots or structures.

[13] During Phase 2 of the California HST System (see Section 1.1).

Fresno Kern Street Station Alternative

The Kern Street Station Alternative for the HST station is also situated in Downtown Fresno and would be centered on Kern Street between Tulare Street and Inyo Street. This station would include the same components as the Mariposa Street Station Alternative, but under the Kern Street Station Alternative, the station would not encroach on the historic Southern Pacific Railroad depot just north of Tulare Street and would not require relocation of existing Greyhound facilities. The station building would be approximately 75,000 square feet, with a maximum height of approximately 64 feet. The station building would have two levels housing the same facilities as the Mariposa Street Station Alternative (i.e., UPRR tracks, HST tracks, mezzanine, and station office). The approximately 18.5-acre site would include 13 acres dedicated to the station, bus transit center, short-term parking, and kiss-and-ride accommodations. Two of the three potential parking structures would each sit on two acres and each would have a capacity of approximately 1,500 cars. The third structure would be slightly smaller in footprint (1.5 acres) and have a capacity of approximately 1,100 cars. Like the Mariposa Street Station Alternative, the balance of the spaces needed to satisfy the estimated year 2035 parking demand (7,400 total spaces) would be accommodated by existing public spaces, and the majority of station facilities would be sited east of the HST tracks.

4.2.3 Heavy Maintenance Facility

One HMF site will be required for operation of the entire HST System. The HMF, to be located within the Central Valley, would serve two functions: (1) support train arrival, assembly, testing, and commissioning to operations and (2) become the state's system-wide heavy maintenance workshop. It is anticipated that permanent emergency standby generators will be located at the HMF. The EIS Documents evaluated five different locations for the HMF site (as shown in Figure 2):

- Castle Commerce Center, accessible by all HST alternatives.
- Harris-DeJager, accessible along the UPRR/SR 99 and Hybrid alternatives if coming from the Ave 21 Wye. (This site was withdrawn from consideration by the property owners on October 27, 2011.)[14]
- Fagundes, accessible by all HST alternatives, via the Ave 24 Wye.
- Gordon-Shaw, accessible along the UPRR/SR 99 Alternative.
- Kojima Development, accessible along the BNSF Alternative if coming from the Ave 21 Wye.

4.2.4 Wyes

The connection between the east-west alignment of the San Jose to Merced Section (i.e., Pacheco Pass connection) and the north-south alignment of the Merced to Fresno

[14] Kopshever, Jim. 2011. E-mail from Jim Kopshever, Harris-DeJager site property owner, to Peter Valentine, regarding withdrawal of site from consideration for use as an HMF, October 27, 2011.

Section would require a railroad wye. Two railroad wye locations (see Figure 2) were considered in the EIS Documents. These include the Ave 24 Wye (generally following the south side of Avenue 24) and the Ave 21 Wye (generally following the north side of Avenue 21). Based on input from regulatory agencies, FRA and the Authority have determined that a previously studied SR 152 east-west alignment and related wyes merit detailed study as well. Although the Final EIS identifies the possibility of the SR152 wye, full environmental analysis of this wye option as well as additional analysis on the Ave 24 and Ave 21 options, where necessary, will occur in the San Jose to Merced Project EIR/EIS.

4.3 Selected Alternatives

4.3.1 Alignment Alternative

The Selected Alternative is the Hybrid Alternative with the Downtown Merced Station and Downtown Fresno Mariposa Street Station Alternative. Chapter 7 of the Final EIS identified the Hybrid Alternative as the preferred north-south alignment for the Merced to Fresno Section, as shown in Figure 3. In identifying a preferred north-south alignment alternative, FRA was guided by the project purpose and need and project objectives found in the Final EIS Chapter 1, Project Purpose, Need, and Objectives, as well as the objectives and criteria developed for and recorded in the *Merced to Fresno Section Preliminary Alternatives Analysis Report*[15] and *Supplemental Alternatives Analysis Report.*[16] For the Merced to Fresno Section, these objectives and criteria primarily include impacts on biological resources, agricultural resources, cultural resources, impacts on urban environments (e.g. noise and parks), and cost.

The Hybrid Alternative will result in the least or similar effects on biological resources compared to the other build alternatives. It will have the fewest effects on waters of the United States, including impacts on seasonal wetlands and direct impacts on vernal pools, whereas the BNSF Alternative would have resulted in substantially more permanent effects on waters of the United States. Overall, direct conversion of conservation habitats, habitats to support special-status wildlife species, and wildlife corridors are minimized through the selection of the Hybrid Alternative.

The Hybrid Alternative effects on prime farmland resources is similar to the UPRR/SR 99 Alternative, which would have up to a third fewer acres removed from production over the BNSF Alternative. While the UPRR/SR 99 Alternative would have the fewest effects on farmlands, the Hybrid Alternative counters this difference with the

[15] Authority and FRA. 2010. *Preliminary Alternatives Analysis Report, Merced to Fresno Section HST Project EIR/EIS.* Available at http://www.cahighspeedrail.ca.gov/lib_Merced_Fresno.aspx. Prepared by AECOM and CH2M HILL. Sacramento, CA, and Washington, DC. April 7, 2010

[16] Authority and FRA. 2010. *Supplemental Alternatives Analysis Report, Merced to Fresno Section HST Project EIR/EIS.* Available at http://www.cahighspeedrail.ca.gov/lib_Merced_Fresno.aspx. Prepared by AECOM and CH2M HILL. Sacramento, CA, and Washington, DC. August 5, 2010

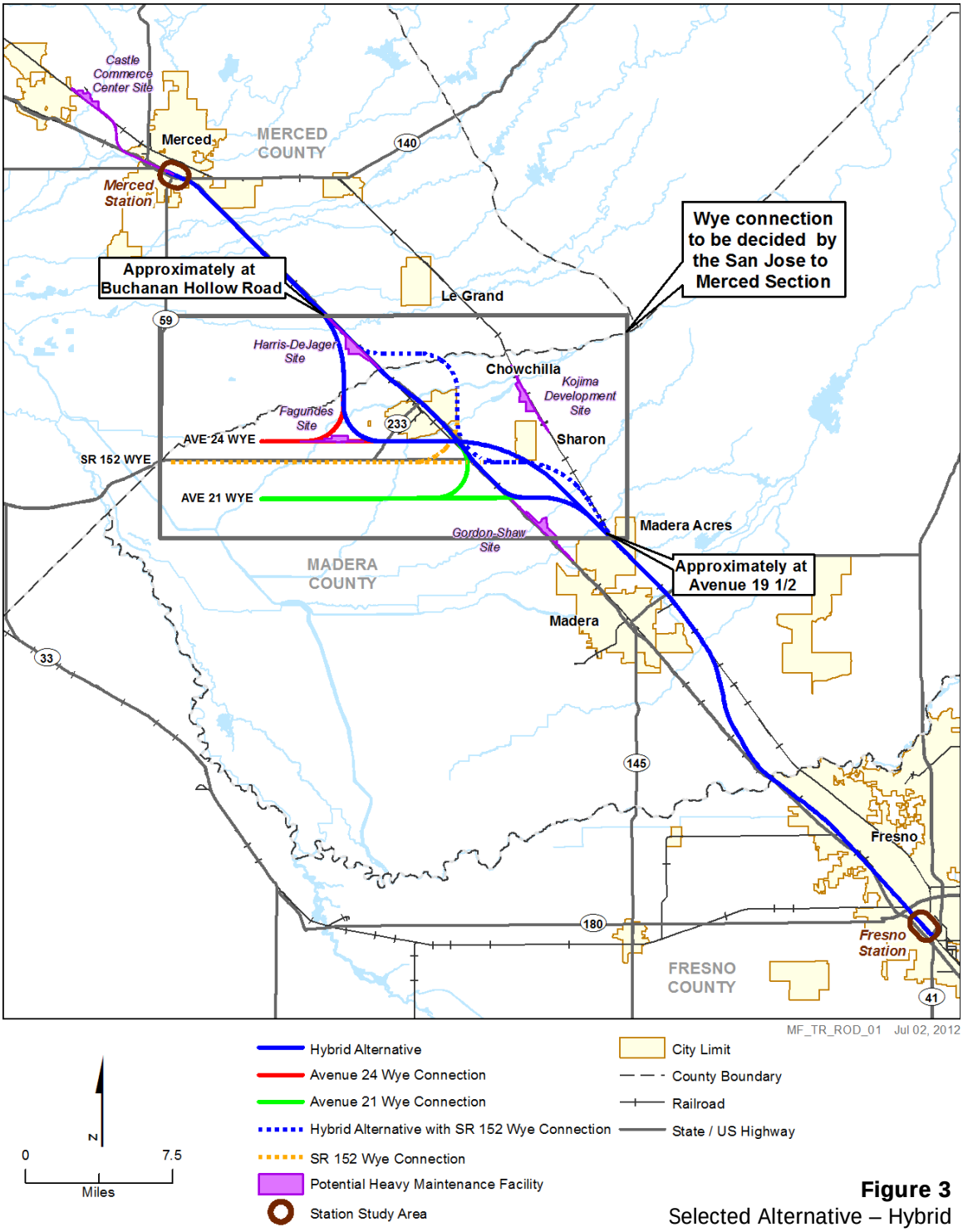


Figure 3
Selected Alternative – Hybrid

advantage of avoiding more community resources than the other alternatives. The Hybrid Alternative will result in fewer effects on community resources than either of the other two alternatives but substantially less than the UPRR/SR 99 Alternative, for which impacts would be exacerbated during construction for resources such as noise, dust, and air quality, as well as reduced access to parks and businesses. Additionally, the Hybrid Alternative was found to result in the least harm to Section 4(f) resources. Overall, in balancing the effects on natural and community resources, the Hybrid Alternative will minimize environmental impacts the most among the three action alternatives.

Consistent with the purpose and need to construct, operate, and maintain an electric-powered high-speed train system, the Hybrid Alternative's performance is comparable to if not better than the other alternatives. In terms of HST System travel time, the Hybrid Alternative offers the second-best travel time, taking only 30 seconds longer between San Francisco and Los Angeles, a minute more between Merced and Fresno, and the same amount of time between San Francisco and Merced compared to the UPRR/SR 99 Alternative. The BNSF Alternative would have the same travel time as the Hybrid Alternative between San Francisco and Los Angeles but otherwise would take as much as four minutes longer than the UPRR/SR 99 Alternative. The Hybrid Alternative is shorter in length than the BNSF Alternative and has less elevated guideway and fewer impacts on adjacent infrastructure than the UPRR/SR 99 Alternative. This difference translates into fewer emissions during construction and less disturbance on local traffic patterns and traffic circulation in adjacent communities.

Consistent with the NEPA/404/408 MOU, permitting criteria were also considered in the selection of the alternatives. These considerations are consistent with the criteria used in the Section 404(b)(1), implementing regulations (40 C.F.R. 230–233), including minimizing impacts on waters of the United States and other sensitive environmental resources. As a result of the analyses incorporated in the EIS Documents as well as NEPA/404/408 MOU documentation, USACE and EPA concurred (on March 26, 2012,[17] and March 23, 2012,[18] respectively) that the Hybrid Alternative is the LEDPA, consistent with USACE's permit program (33 C.F.R. Parts 320–331) and EPA's Section 404(b)(1) Guidelines (40 C.F.R. Part 230).

Overall, the Hybrid Alternative best balances the minimization of impacts on the environment, farmland, and communities. It would avoid the greater impacts on the environment and rural communities in Merced County that would occur with the BNSF Alternative and it would avoid the greater impacts on more urban areas, such as in the City of Madera, along the UPRR/SR 99 Alternative. A summary of the environmental effects associated with the Selected Alternative is provided in Section 5.0, below. The Hybrid Alternative also best meets the regulatory and permitting criteria under Sections 404 and 408.

[17] USACE, 2012.
[18] EPA, 2012.

4.3.2 Station Alternatives

Chapter 7 of the Final EIS also describes the Downtown Merced HST station, between Martin Luther King Jr. Way and G Street, and the Downtown Fresno Mariposa Street Station Alternative as preferred station locations, as shown in Figures 4 and 5, respectively. The Downtown Merced Station is consistent with the City of Merced's future land use plans for the downtown area and the intent to strengthen connectivity with the city's transit center. The City of Fresno's Fulton Corridor Specific Plan (2011) specifies that the Mariposa Street Station Alternative would better serve the planned transit improvements for the downtown area.[19]

4.3.3 Heavy Maintenance Facility

The HMF site will be located in the Central Valley. While the EIS contains a thorough analysis of the potential impacts of the HMF alternatives in the Merced to Fresno Section, FRA and the Authority are also examining possible HMF alternatives in the Fresno to Bakersfield and San Jose to Merced sections. As only one HMF site will be required for full HST operations, FRA and the Authority will select the HMF site once all three Central Valley HST section EIS processes are complete. FRA and the Authority are conducting additional environmental analysis of the HMF as necessary, as part of the San Jose to Merced and Fresno to Bakersfield Section EISs.

4.3.4 Wyes

The Hybrid Alternative would eventually connect to an HST wye with one of three associated east-west alignments (along Avenue 24, Avenue 21, and SR 152) (see Figure 3). The wyes and east-west alignments would connect the selected Hybrid Alternative with the San Jose to Merced Section north of Madera Acres at approximately Avenue 19½, depending on the eventual selection of the east-west connection and wye. All alignments within the area denoted by the rectangle on Figure 3 will be carried forward for further study and consideration as part of the San Jose to Merced Section Draft EIS. A decision on the east-west alignment within this area is anticipated to occur at the conclusion of the San Jose to Merced Section EIS process.

4.4 Environmentally Preferable Alternative

CEQ regulations implementing NEPA require that an agency identify the alternative or alternatives considered to be environmentally preferable, which is defined as "the alternative that will promote the national environmental policy as expressed in the NEPA, Section 101" (440 C.F.R. 1505.2). This means the alternative that causes the least damage to the physical environment; it also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources.

[19] City of Fresno. Fulton Corridor Specific Plan. October 14, 2011. Available at http://fresnodowntownplans.com/project/details/fcsp.

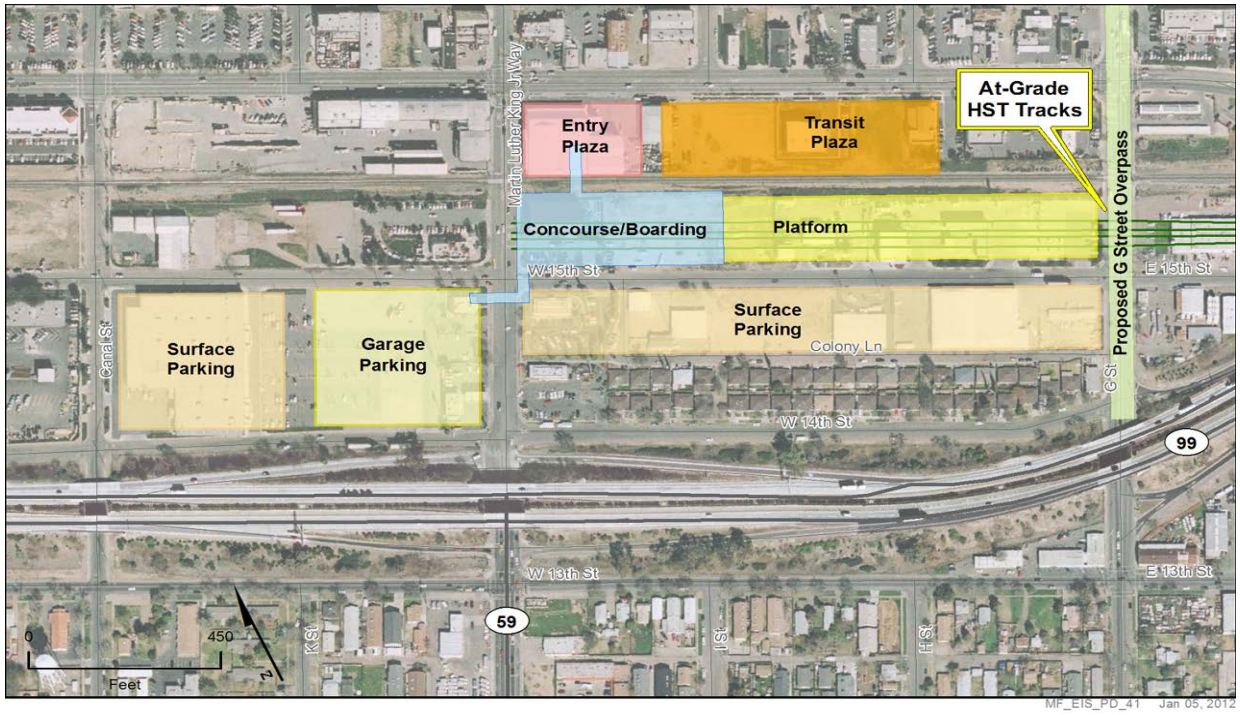
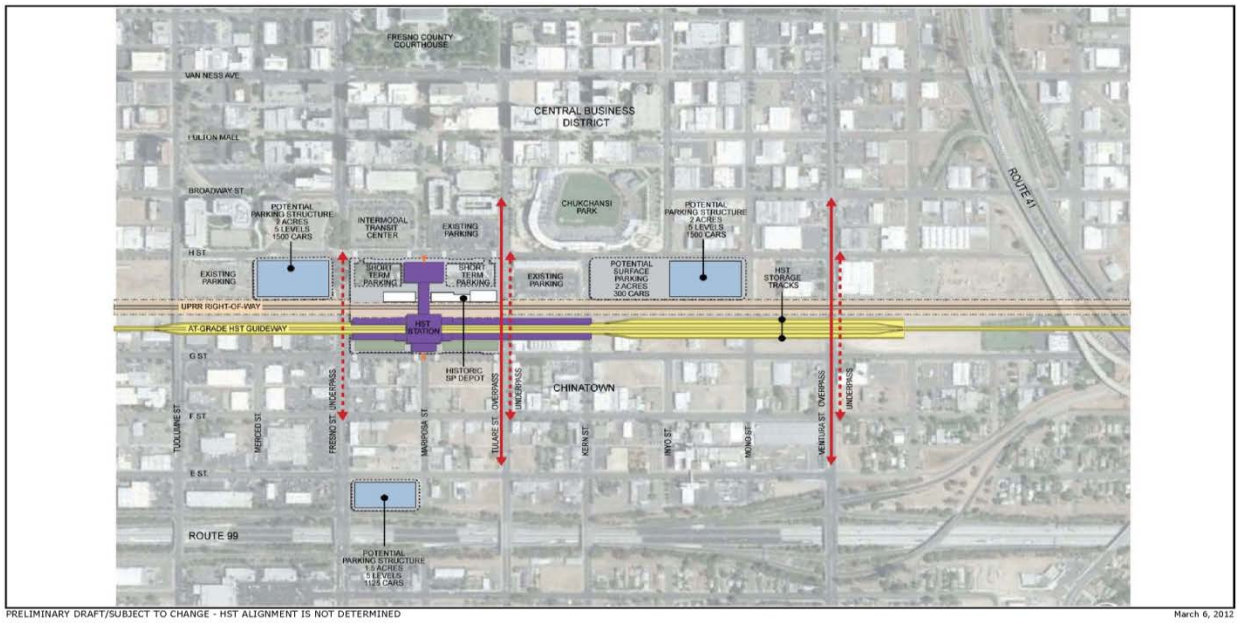


Figure 4
Downtown Merced Station



Source: URS (2011).

Figure 5
Downtown Fresno Mariposa Street Station Alternative

In determining an environmentally preferable alternative, FRA considered all action alternatives, as well as the No Action Alternative. FRA weighed and balanced the physical environmental effects associated with the action alternatives as well as those associated with the No Action Alternative. FRA determined that the adverse environmental effects associated with the Hybrid Alternative were less substantial than the consequences associated with the No Action Alternative in terms of air quality, energy, and traffic, and thus identified an action alternative as environmentally preferable. Final selection of the Hybrid Alternative as the Environmentally Preferred alternative over the UPRR/SR 99 and the BNSF alternatives involved the above noted advantages as well as the comparably relatively low community, farmland, and biological effects, including lower impacts on jurisdictional wetlands. Based on consideration of these factors, FRA identified the Hybrid Alternative as the Environmentally Preferable Alternative.

The Hybrid Alternative would result in fewer effects on community resources than either of the other two alternatives but substantially less than the UPRR/SR 99 Alternative, for which impacts would be exacerbated during construction for resources such as noise, dust, and air quality, as well as reduced access to parks and businesses. Overall, in balancing the effects on natural and community resources, the Hybrid Alternative would minimize environmental impacts the most. Of the three alignment alternatives, the Hybrid Alternative is the LEDPA for issuance of the necessary Section 404 permits.

For the HST station in Merced, the Authority only developed one alternative, in close cooperation with the City of Merced to consider environmental and community factors, and it is thus considered the Environmentally Preferable Alternative. For the Downtown Fresno Station, two alternatives were considered and the environmental impacts were similar. Both stations would affect eligible historic structures listed on the NRHP. Other effects include noise, which would be mitigated, as well as temporary impacts on businesses and transportation circulation during construction. However, due to the City of Fresno's planning and the orientation of the Downtown Fresno City Center, the preferred Mariposa Street Station Alternative offers substantially more opportunities for transit-oriented development. As a result, the Mariposa Street Station Alternative was determined to be the Environmentally Preferable Alternative.

5.0 Summary of Potential Effects

Construction and operation of the Selected Alternative has the potential to affect a variety of natural and social resources. Some impacts will be beneficial, others will be adverse. Those impacts that are adverse can be further categorized as impacts that are significant and those that are not significant. Under NEPA, determining the significance of an impact requires consideration of both context and intensity.[20]

[20] The context of an impact is the setting of the affected environment in which the impact occurs. Intensity refers to the severity of the impact, which includes consideration of the type, quality, and

To fully understand the potential range of impacts of the Selected Alternative, the Final EIS analyzed all potential impacts resulting from construction and operation of the HST. A full discussion of the potential impacts of the Selected Alternative, organized by resource area, can be found in Chapter 3 of the Final EIS. Most potential impacts will not be significant when considering the context and intensity of the impact. Potential impacts of the Selected Alternative will not rise to the level of significance in the following resource areas: electromagnetic fields and electromagnetic interference; public utilities and energy; hydrology and water resources; geology, soils, and seismicity; hazardous materials and waste; and station planning, land use, and development. In determining that the Selected Alternative will not result in significant impacts on these resources, implementation of project design features and best management practices (BMP) are presumed and will be required as part of project implementation as described further in Section 6.0. Although not discussed below, FRA considered these adverse but not significant impacts in reaching its decision.

Some potential adverse impacts would be significant were it not for implementation of mitigation measures that effectively avoid or reduce the impact. Other impacts would be significant even after mitigation measures are implemented. Finally, some impacts of the Selected Alternative will be beneficial. The following sections summarize the significant adverse impacts, the adverse impacts that would be significant if not for the implementation of mitigation, and the beneficial impacts that may occur with construction and operation of the Selected Alternative.

5.1 Transportation

The Selected Alternative will benefit the regional transportation system by diverting intercity trips from the regional roadway system and commercial air flights to high-speed rail. Diverting trips to high-speed rail will reduce the overall number of vehicle trips on the regional roadway system, improve future levels of service, and reduce overall vehicle miles traveled.

The Selected Alternative will cause traffic impacts in congested urban areas due to realignment of SR 99, increased traffic around HST stations, and road closures. Specifically, realignment of SR 99 will change traffic circulation patterns due to closure of interchange ramps, thereby increasing traffic at intersections in the vicinity of the freeway shift and impacting freeway operations. HST stations and road closures in Merced and Fresno will increase traffic at local roadways and intersections nearby, reducing acceptable levels of service in those locations. Traffic mitigation measures to improve operations at key intersection and roadway segments will include lane widening, modification to signals, additional lanes, and restriping. Although all of these impacts will be reduced with the implementation of such measures, the Selected

sensitivity of the resource involved, as well as the location, extent, and duration of the effect (40 C.F.R. 1508.27).

Alternative may result in extending the duration of peak periods of congestion in already-congested urban areas, and these impacts are considered significant.

5.2 Air Quality and Climate Change

Operation of the HST will benefit statewide and regional air quality. The HST will result in a permanent net benefit to air quality because it will lower emissions of mobile source air toxics, greenhouse gases, volatile organic compounds (VOCs), nitrogen oxides (NO_x), sulfur dioxide, carbon monoxide, and particulate matter smaller than or equal to 10 microns and 25 microns in diameter (PM_{10}, and $PM_{2.5}$) by diverting trips from modes with higher emissions (commercial air flights and automobile trips) to high-speed rail, which has lower emissions.

Construction of the HST will create temporary air quality impacts. Construction emissions of VOCs and NO_x are expected to cause or contribute substantially to violations of air quality standards in the San Joaquin Valley Air Basin (SJVAB). If ballast material is hauled from quarries located in the South Coast Air Basin (SCAB), NO_x may exceed air quality standards in the SCAB. With mitigation, air quality impacts in these two air basins will be reduced and will not be significant.

Specifically, the Authority will mitigate construction emissions in the SJVAB by providing funds for the San Joaquin Valley Air Pollution Control District (SJVAPCD) Emission Reduction Incentive Program[21] to fund grants for projects that achieve emission reductions, thus offsetting impacts on air quality related to the Selected Alternative. Purchase of offset emissions through a Voluntary Emission Reduction Agreement (VERA) with the SJVAPCD for these pollutants will reduce construction emission impacts in the SJVAB to less than significant. If ballast is hauled from the SCAB, the Authority will mitigate construction emissions in the SCAB by purchasing NO_x offsets from the South Coast Air Quality Management District, reducing these impacts to less than significant as well.

5.3 Noise

The Selected Alternative will cause severe noise impacts for up to 525 sensitive receivers, such as residences, without mitigation. Sound barriers will eliminate most significant noise impacts. However, some receivers are located outside of areas where barriers can be effective, or a sound barrier will not fully eliminate the severe noise impact. Because the degree of noise level change in residential areas, including in rural areas, is expected to affect such a high number of receivers, noise impacts resulting from operation of the HST will be significant.

[21] SJVAPCD. 2011. Emission Reduction Incentive Program. Available at www.valleyair.org/Grant_Programs/GrantPrograms.htm.

The realignment of SR 99 in Fresno will create noise impacts for surrounding sensitive receivers. However, with sound barriers and building insulation as mitigation, the number of noise impacts would be reduced.

With full implementation of the *Proposed California HST Project Noise and Vibration Mitigation Guidelines*,[22] most significant noise impacts will be eliminated. However, where sound barriers are used, even with the implementation of such mitigation, significant noise effects will remain for some receivers because they are located outside of the area where the barrier will be fully effective or the sound barrier will not fully mitigate the effect (i.e., noise is reduced by five decibels but would still be significant). Furthermore, significant noise effects will remain for receivers mitigated only with indoor sound insulation or with implementation of noise easements.

5.4 Public Utilities and Energy

The statewide and regional impact on energy use from operation of the HST will be beneficial. While the HST System will require electricity to operate, it will result in a permanent net reduction in energy use because it will divert trips from transportation modes with higher energy use (commercial air flights and automobiles) to high-speed rail, which has lower energy use.

The Selected Alternative will not cause any significant adverse impacts on public utilities or energy.

5.5 Biological Resources and Wetlands

The Selected Alternative will not cause significant impacts on biological resources or wetlands after mitigation measures are implemented. The Selected Alternative will not result in significant impacts on wildlife movement, critical habitat, essential fish habitat, or mitigation banks. Other resource impacts that would be significant prior to mitigation, and the mitigation measures identified to reduce impacts to less than significant, are described below.

Riparian habitat will be temporarily affected during construction and there will be permanent impacts as a result of the Selected Alternative. Restoration of riparian habitat shortly after construction disturbance will mitigate construction period impacts to less than significant. The Authority will compensate for permanent impacts on riparian habitat, determined in consultation with the appropriate agencies (e.g., California Department of Fish and Game [CDFG]), by restoring nearby areas to suitable habitat through permittee-responsible mitigation and/or by purchasing credits in a mitigation bank. This mitigation measure will result in less than significant permanent impacts on riparian habitat.

[22] Authority and FRA. 2012. *Proposed California HST Project Noise and Vibration Mitigation Guidelines.* Appendix 3.4-A of the *California HST Merced to Fresno Section Final Project EIR/EIS. Volume II: Technical Appendices.* Sacramento, CA, and Washington, D.C. April 2012.

The Selected Alternative may result in an incremental regional effect and measureable adverse loss of **special-status plant species** populations. Measures to mitigate impacts on special-status plant species include developing and implementing a plan to address monitoring, salvage, relocation, and propagation of special-status plant species during and after construction; the purchase of credits from an existing mitigation bank; and/or conducting a special-status plant re-establishment program within the same watershed or in proximity to the impact area. Mitigation measures and compliance with the Section 7 BO and the Incidental Take Permit will mitigate temporary and permanent impacts on special-status plant species to less than significant.

The Selected Alternative may result in an incremental regional effect and measurable adverse loss of **jurisdictional waters and wetlands**. Measures to mitigate impacts on jurisdictional waters and wetlands include monitoring of construction impacts, restoration of disturbed areas after construction, compensation for permanent impacts, and implementation of a Habitat Mitigation and Monitoring Plan. Mitigation measures and compliance with the CWA, regulatory agency permit conditions, and the Streambed Alteration Agreement (pursuant to Section 1600 of the California Fish and Game Code) will mitigate impacts on jurisdictional waters and wetlands to less than significant both temporarily during the construction period and permanently.

The Selected Alternative will result in an incremental regional effect and measurable adverse loss of **special-status wildlife species** populations. Measures to mitigate impacts on special-status wildlife populations include implementation of a Habitat Mitigation and Monitoring Plan, submittal of post-construction compliance reports to regulatory agencies, and compensation through habitat replacement or monetary contributions, among others. Mitigation measures and compliance with the Section 7 BO and the Incidental Take Permit will mitigate impacts on special-status wildlife species to less than significant temporarily during the construction period and permanently.

The Selected Alternative will potentially impact some of the species and habitat present at **Camp Pashayan** within the San Joaquin River Ecological Reserve and could contribute to an incremental regional and measurable loss of populations. Minimization and mitigation measures and project design features at the San Joaquin River developed in ongoing coordination with CDFG will result in less than significant impacts on biological resources at Camp Pashayan.

5.6 Hydrology and Water Resources

Currently, groundwater supports many existing water uses along the Selected Alternative. As a result of the Selected Alternative, some of these uses will no longer exist. The elimination of some water uses will reduce regional groundwater drawdown, which will be a beneficial effect to groundwater supplies in the region.

The Selected Alternative will not cause any significant adverse impacts on hydrology or water resources.

5.7 Safety and Security

Operating on a fully grade-separated, dedicated track alignment, using contemporary safety, signaling, and automated train control systems, the HST System, including the Selected Alternative, would provide a safe and reliable means of intercity travel. Design of the system also would avoid conflicts with other vehicles, existing rail systems, pedestrians, and bicyclists and allow the trains to operate year-round under different weather conditions. Overall, the HST would provide a safety benefit. The Selected Alternative will also improve safety where existing at-grade railroad crossings are replaced with grade-separated crossings, resulting in a beneficial effect on safety at railroad crossings in local communities.

The demand for local emergency services may increase in the Downtown Merced and Downtown Fresno station areas due to the number of additional people present at the stations. The Authority will monitor service levels in the vicinity of the stations to establish baseline service demands and will fund the Authority's fair share of services above the average baseline service demand level, based on projected passenger use. The resulting impact on emergency providers will be less than significant.

5.8 Socioeconomics, Communities, and Environmental Justice

Project construction will temporarily benefit regional economic conditions through increased sales tax revenues and job creation due to project spending. Jobs will be created through construction of the Selected Alternative and through other sectors that provide materials, equipment, and services. Construction will also benefit employment for low-income and minority communities (also called communities of concern) with the implementation of mitigation measures such as special recruitment, training, and other employment programs.

Permanent benefits include improved mobility within the region, improved traffic conditions on freeways, improvements in regional air quality, new employment opportunities, and increased tax revenues in the region. Benefits of the Selected Alternative will likely accrue to a greater degree in minority and low-income communities because they comprise a large percentage of the population in the project area.

The Selected Alternative will result in adverse effects on minority and low-income populations. With mitigation, the effects of noise impacts on communities of concern in Merced and Fresno and visual impacts, displacements, and relocations on communities of concern in the City of Madera and Madera Acres will not be appreciably more severe or greater in magnitude than those effects on the general population. Therefore, impacts on these communities of concern are not considered disproportionate.

In the community of Fairmead, even with the implementation of mitigation measures, visual impacts, displacements, and relocations may result in significant impacts on

communities of concern. Visual impacts of the elevated guideway may reduce property values due to the size of the structure and its proximity to the small community. In addition, residents may need to relocate outside of Fairmead because there are not enough replacement properties available within the community. The Authority will implement mitigation measures such as considering relocation of structures on existing properties or nearby vacant parcels, constructing replacement housing on vacant lots, and implementing design measures to minimize the potential for physical deterioration around and under the elevated HST structure.

The offsetting benefits associated with the Selected Alternative are considered as part of the environmental justice analysis. The Selected Alternative will provide benefits to all populations, including communities of concern. Because much of the study area population includes communities of concern, the benefits of the Selected Alternative are likely to accrue to a greater degree to the communities of concern. To offset any disproportionate effects, special recruitment, training, and job set-aside programs will be developed so that communities of concern are able to benefit from the jobs created by the Selected Alternative.

5.9 Station Planning, Land Use, and Development

The Selected Alternative will result in beneficial effects on regional land use and development. Increased density around the HST stations will minimize sprawl, promote transit-oriented development, and revitalize the downtown areas of Merced and Fresno. Concentrated and infill development may also assist in preserving agricultural lands and natural resources in the region. The Selected Alternative will fulfill local and regional plans that promote infill and redevelopment opportunities and encourage reduced automobile dependency and the use of alternative transportation modes.

The Selected Alternative will not cause significant adverse impacts on land use or development.

5.10 Agricultural Lands

The Selected Alternative will convert between 1,273 and 1,426 acres of important farmland to a transportation use, causing significant loss of farmland in the project area. Mitigation measures will preserve land for agriculture and consolidate remnant parcels so that they remain in agricultural production. To support farmland preservation, the Authority will enter into a contract with the California Department of Conservation (DOC) to provide agricultural land mitigation services. On behalf of the Authority, DOC's California Farmland Conservancy Program will establish permanent agricultural conservation easements on land of similar acreage, location, and quantity to that affected by the Selected Alternative. The new conservation easements will prevent the future loss of currently unprotected farmland to development. However, these mitigation measures will not create new farmland or replace the converted farmland in an area of high

production agricultural soils that are threatened by development encroachment. Therefore, the farmland loss is considered a significant impact.

5.11 Parks, Recreation, and Open Space

Construction of the Selected Alternative will require permanent acquisition of 0.6 acre of the San Joaquin River Ecological Reserve property at Camp Pashayan to install piers for elevating the guideway, representing an impact of 2% of the Camp Pashayan total area. This impact, in addition to temporarily limiting access to a small portion of Camp Pashayan for up to four years, will result in significant impacts on the park. The Authority will compensate CDFG, the park owner, for construction staging in the park through an allowance or additional property to accommodate for displaced park use during construction. However, even with this mitigation, the impact on the park will remain significant in the context of the local region and due to the duration of the construction use.

The projected increase in noise to Roeding Park resulting from the Selected Alternative will be significant without mitigation. Construction of a sound barrier will reduce the noise impact on Roeding Park to less than significant.

5.12 Aesthetics and Visual Resources

The HST stations will improve visual quality in the Merced and Fresno downtown urban centers. The architecture of the HST stations and landscape improvements proximate to the stations will enhance visual quality. Indirect impacts of the HST stations could reach beyond the immediate station area and increase the overall visual quality of the larger downtown areas, which are areas of high viewer sensitivity in which the visual changes will be long in duration. These impacts will create beneficial visual effects in downtown Merced and Fresno.

The Selected Alternative will create significant adverse visual effects in certain areas west of SR 99 where elevated HST structures and road overcrossings of the HST will remove orchards and fields, block views, and degrade the visual quality in the area. Mitigation measures such as planting trees and other vegetation to screen the structures will reduce the visual effect, but the change will remain significant.

Traction power substations will potentially alter the visual character of adjacent lands and/or potentially block views toward areas beyond the HST alignment. Mitigation with physical or vegetative screening and location selection will result in less than significant visual impacts from the substations.

5.13 Cultural and Paleontological Resources

The Selected Alternative will affect resources in known archaeological sites and may affect archaeological sites that are presently unknown or undiscovered. Mitigation measures, such as halting construction if a previously undiscovered archaeological site is

revealed, conducting archaeological monitoring near identified or sensitive sites, and planning intentional site burial and preservation in place if avoidance is not feasible, will reduce impacts on archaeological resources to less than significant.

The Selected Alternative will physically affect built cultural resources, resulting in significant impacts on historic properties. Even with treatment measures such as relocating historic structures, preparing and submitting nominations for historic registers, documenting historic resources, preparing structural reports, creating interpretive exhibits, and planning to prepare for inadvertent damage, the impacts will remain significant.

Destruction of fossil deposits during construction will result in significant impacts on paleontological resources without mitigation. Mitigation measures such as monitoring, implementing a paleontological plan, and halting construction when paleontological resources are found will reduce impacts to less than significant.

6.0 Commitments

Consistent with 40 C.F.R. 1505.2(c), all practicable means to avoid or minimize environmental harm caused by the Selected Alternative have been identified and included as mitigation measures in the Mitigation Monitoring and Enforcement Plan (MMEP), included as Appendix C.[23] The MMEP describes mitigation measures that will avoid, minimize, or compensate for potential adverse environmental impacts that result from constructing and operating the Merced to Fresno Section of the California HST System. These measures were developed by FRA and the Authority in consultation with appropriate agencies, as well as with input from the public. The Authority has also proposed mitigation measures that were determined necessary to comply with CEQA. For the purposes of compliance with NEPA, measures that are specific to CEQA are described in the MMEP as "voluntary." The Authority adopted the measures listed as voluntary mitigation in the MMEP to comply with CEQA, and they are included in FRA's MMEP to provide the comprehensive mitigation strategy for the Selected Alternative. The Authority is required to comply with all mitigation measures adopted with the ROD, including those specific to CEQA and those addressing Federal laws and requirements.

The mitigation measures in the MMEP contain formal commitments required for project approval. Therefore, in designing, constructing, and operating the Selected Alternative, the Authority is required to adhere to and provide appropriate funding for all mitigation measures in Appendix C. The Authority will implement an Environmental Management System consisting of strategic planning, policies and procedures, organizational structure, staffing and responsibilities, milestones, schedule, and resources devoted to achieving the Authority's environmental commitments. The Environmental Management System will also track the implementation of environmental requirements

[23] FRA will monitor the implementation of environmental commitments in the MMEP consistent with CEQ regulations and guidance.

and compliance reports. This system will rely on data from the design/build contractor, regional consultants, permitting activities, monitoring, inspections, and other compliance activities. This database will be managed by the Authority, and agency partners, including FRA, will receive regular updates from meetings and reports that will demonstrate compliance activities and progress relevant to their regulatory requirements.

In addition to mitigation measures, the Selected Alternative incorporates many design features and BMPs that are identified in the Final EIS and included in detail in the technical reports. As a result of applying these design features and BMPs, the Selected Alternative will avoid significant impacts in several resource areas. In addition, the regulatory requirements for many activities provide additional assurance that significant impacts on the environment will not occur. The applicable regulatory requirements and project design features that are part of the Selected Alternative are described in more detail in the MMEP (Appendix C). Like the mitigation measures (Appendix C), the project design features are a condition of project approval and must be implemented by the Authority during design, construction, and operation of the Selected Alternative.

7.0 Summary of Comments on the Final EIS

During the 30-day waiting period following publication of the Final EIS, FRA received 12 comment letters. In addition to the comment letters received by the FRA during the 30-day waiting period, the Authority received a combination of 26 comment letters and emails, as well as hearing from speakers at the Authority Board hearing held on May 2, 2012, focusing primarily on CEQA-related issues. Staff responses were prepared on May 3, 2012 for the comments received by the Authority. These staff responses are available for the public on the Authority's website: http://www.cahighspeedrail.ca.gov/final-eir-m-f.aspx. All substantive comments received in the waiting period referenced issues that were previously addressed in detail in Volume IV of the Final EIS or by the Authority staff responses and therefore do not require any further response here. No issues were identified in the comments that were not previously addressed.

The range and types of comments received during the waiting period included concerns and questions regarding the following topics:

- Range of alternatives considered
- Technology to be used for the project
- Notification of availability of the environmental document
- Process for decision making regarding the wye connections
- Coordination with UPRR and the associated impacts on freight service
- Location of barriers and walls and the required/adequate distances and clearances
- Right-of-way and relocation assistance

- Mitigation measures for agricultural lands
- Adequacy of the water analysis, specifically the demand during construction, water demand estimates, and the preparation of a water supply assessment
- Environmental Justice, specifically the determination of disproportionate impacts on environmental justice populations, construction duration estimates, residential and business displacements by community, mitigation measures, and implementation of Title VI of the Civil Rights Act
- Sprawl inducement, land use, station area development, and California Senate Bill 375
- Utility relocation and associated impacts
- Emissions from hauling materials outside SJVAB, specifically adequately addressing hauling from outside the project area, hauling ballast, and the inclusion of water trucks in construction emission calculations
- Mitigation measures for air quality
- Staging areas and batch plants
- Noise and vibration, specifically noise monitoring sites and mitigation measures
- Operation of Amtrak and the HST
- Project funding
- Biological performance standards, specifically wildlife surveys, baseline, and performance standards
- Forestiere Underground Gardens and historic property impacts
- Coordination with local school districts and associated impacts on school districts, school bus routes, and poverty-level students
- Road closures and detours
- Safety and security; derailment
- Maintenance access and emergency responses
- Independent utility

In issuing this ROD, FRA has considered all comments received on the Final EIS, as well as the comments previously received on the Draft EIS.

8.0 Corrections to the Final EIS

FRA and the Authority prepared an errata sheet to identify minor corrections to the Final EIS and issued it on April 27, 2012. The errata sheet identifies the location of the correction in the Final EIS, the incorrect text, the corrected text, and the reason for the correction. None of these corrections materially affected the FRA's decision. These corrections are noted in an errata sheet in Appendix D and pertain to the following chapters of the Final EIS: cover sheet; Summary; Alternatives; Transportation; Air Quality and Global Climate Change; Public Utilities and Energy; Biological Resources

and Wetlands; Hazardous Materials and Wastes; Socioeconomics, Communities, and Environmental Justice; Agricultural Lands; Parks, Recreation, and Open Space; Aesthetics and Visual Resources; Cultural and Paleontological Resources; Cumulative Impacts; Preferred Alternative and Station; and Public and Agency Involvement. Changes made to mitigation measures in the errata have been incorporated into the MMEP, included as Appendix C.

As discussed in Section 1.3, the Authority proposes to use the design/build method of project delivery. As the Selected Alternative proceeds into final design, project design modifications may occur. FRA and the Authority will consider whether project design modifications could result in new environmental impacts of a type or severity not analyzed in the EIS Documents. Where appropriate, FRA and the Authority will evaluate the modification to determine whether it would result in a substantial change that requires a supplemental Final EIS consistent with 40 C.F.R. 1502.9(c).

9.0 Decision

FRA finds that the Hybrid Alternative, Merced Downtown Station, and Fresno Mariposa Street Station Alternative best fulfill the purpose and need and objectives for the Project while balancing impacts on the natural and human environment. FRA considered the physical and operational characteristics and potential environmental consequences associated with the HST alternatives. FRA, as lead agency, consulted with the joint lead agency and cooperating agencies and considered the EIS Documents, including the analysis of the No Action Alternative, all action alternatives, and all public and agency comments received during the review periods in identifying the Selected Alternative. The cooperating agencies may issue their own decision documents, as appropriate, consistent with their statutory and regulatory responsibilities.

9.1 Section 106

Section 106 of the NHPA (16 U.S.C. 470f) requires that any Federal agency having direct or indirect jurisdiction over a proposed Federal or Federally assisted undertaking take into account the effect of the undertaking on any district, site, building, structure, or other object that is listed or eligible for listing on the NRHP.

FRA, the SHPO, the Authority, and the Advisory Council for Historic Preservation executed a Programmatic Agreement (PA) for the California High-Speed Rail Program on July 22, 2011. The PA sets forth a process for consistent application of Section 106, including consultation, for all project sections. The PA outlines a uniform approach for the identification of cultural resources located within the Area of Potential Effect (APE), as well as the evaluation, assessment of effects, and treatment of cultural resources potentially affected by each undertaking. The PA stipulates that Memoranda of Agreement (MOA) be developed for each undertaking where the FRA determines there would be an adverse effect to Historic Properties.

An MOA for the treatment of adverse effects to historic properties for the Merced to Fresno Section of the HST System was developed and executed among FRA, the Authority, and the SHPO on August 31, 2012 (Appendix A). The MOA summarizes the results of the Section 106 process and the treatment measures agreed to among the Selected Alternative's consulting and concurring parties. The treatment measures are elaborated upon in detail in two primary attachments to the MOA: the Archaeological Treatment Plan and the Built Environment Treatment Plan.

The City of Madera, City of Fresno, County of Fresno, California Valley Miwok Tribe, Cold Springs Rancheria of Mono Indians, North Fork Rancheria of Mono Indians, Santa Rosa Rancheria Tachi Tribe, North Fork Mono Tribe, and the Chowchilla Tribe of Yokuts were consulted in the development of the MOA and treatment plans. The City of Madera, the City of Fresno, and Fresno County, as well as the following Federally-recognized Native American tribes: Cold Springs Rancheria of Mono Indians, Santa Rosa Rancheria Tachi Tribe, the North Fork Rancheria of Mono Indians, and the California Valley Miwok Tribe; and the following non-Federally recognized Native American tribes: North Fork Mono Tribe and the Chowchilla Tribe of Yokuts, have accepted the Authority and FRA's invitations to be consulting parties to the MOA and treatment plans. [24]

9.2 Section 4(f) Determination

The Final EIS included an evaluation required by Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303). The alternatives evaluation process conducted as part of the Merced to Fresno Section EIS process concluded that in accordance with 49 U.S.C. 303(c), there was no feasible and prudent HST alternative within the study area that did not result in a use of a Section 4(f) resource. Further, the least harm analysis determined that the Selected Alternative is the alternative with the least overall harm to Section 4(f) resources. FRA also identified the appropriate measures to minimize harm to 4(f) properties as part of the EIS and 4(f) Evaluation in cooperation with the agencies that have jurisdiction over each 4(f) resource. These measures have been incorporated into the MMEP (Appendix C), and the Authority will implement them as a condition of project approval.

FRA finds that there is no feasible and prudent alternative to the permanent use of two historic resources, the Weber Avenue Overcrossing Bridge and the Belmont Avenue Subway and Traffic Circle in Fresno, because these sites will be permanently incorporated into the Selected Alternative.

- The Weber Avenue Overcrossing Bridge (NRHP-eligible) in Fresno is in the direct path of the Selected Alternative, the construction of which will result in the physical destruction, damage, or alteration of this historic property. This will be a permanent use under Section 4(f).
- The Belmont Avenue Subway and Traffic Circle (recommended as NRHP-eligible) in Fresno, which is located just southeast of Roeding Park, is in the

[24] Signatures of potentially concurring parties are currently being sought.

direct path of the Selected Alternative and associated roadway improvements, and the construction of the Selected Alternative will result in the elimination of this historic property. This will be a permanent use under Section 4(f).

FRA found that the Selected Alternative resulted in a *de minimis* impact under 49 U.S.C. 303(d) to Camp Pashayan. FRA and the Authority worked with CDFG, the agency with jurisdiction over the resource, to develop mitigation measures and determine concurrence with FRA's findings. FRA received written concurrence with its *de minimis* determination about project effects on Camp Pashayan from CDFG on September 10, 2012, included as Appendix E.

9.3 General Conformity

As part of the environmental review of the Selected Alternative, FRA conducted a general conformity evaluation pursuant to 40 C.F.R. Part 51, Subpart W and 40 C.F.R. Part 93 Subpart B, which can be found in the Merced to Fresno Section project library at Authority's website.[25] The general conformity regulations apply to the Selected Alternative because the project area is located in an area that is designated as a severe nonattainment area for the 8-hour ozone standard, nonattainment for $PM_{2.5}$, and, in the urban areas of Fresno County, a maintenance area for CO. FRA conducted the general conformity evaluation following all regulatory criteria and procedures and in coordination with EPA, SJVAB, and the California Air Resources Board. As a result of this review, FRA concluded, based on the fact that project-generated emissions will either be fully offset (for construction phase) or less than zero (for operational phase), that the Selected Alternative's emissions can be accommodated in the State Implementation Plan (SIP) for the SJVAB. FRA has determined that the Selected Alternative as designed will conform to the approved SIP, based on the following findings:

- A commitment from the Authority that all construction-phase NO_x and VOC emissions for the years that the conformity applicability thresholds will be exceeded will be offset through a VERA with SJVAPCD.
- The Authority and the SJVAPCD will enter into a contractual agreement to mitigate the Selected Alternative's NO_x and VOC emissions (in the years of exceedance) by providing funds for the SJVAPCD's Emission Reduction Incentive Program to fund grants for projects that achieve the necessary emission reductions.
- The SJVAPCD will seek and implement the necessary emission reduction measures, using Authority funds.
- The SJVAPCD will serve in the role of administrator of the emissions reduction projects and verifier of the successful mitigation effort.

[25]The Authority library for the Merced to Fresno Section is located online at www.cahighspeedrail.ca.gov/lib_Merced_Fresno.aspx.

Therefore, FRA concludes that the Selected Alternative, as designed, conforms to the purpose of the approved SIP and is consistent with all applicable requirements.

9.4 Section 7 Endangered Species Finding

Since the Selected Alternative will result in a "take" of special status fish species under Section 7 of the ESA, NMFS and USFWS prepared BOs to identify the effect and extent of the take and propose conservation measures to avoid and/or minimize potential adverse effects of the Selected Alternative.

Based upon these findings, summarized below, FRA determines that the Selected Alternative is consistent with Section 7 of the ESA.

9.4.1 Biological Opinion Issued by NMFS

NMFS cannot accurately estimate the number of individual fish subject to take from the Selected Alternative. Therefore, NMFS is using an environmental surrogate to estimate the level of take to Central Valley spring-run Chinook salmon or Central Valley steelhead that may occur. NMFS utilizes the area of sound pressure wave impacts extending into the water column during pile driving as a surrogate for the number of fish subject to take. Take may also occur during handling of stranded individuals during dewatering activities prior to construction work. This level of take is anticipated to be less than 10% of those individuals handled.

FRA and the Authority have proposed conservation measures including performing fish surveys, limiting the construction window, and measures to limit effects during construction. Given this, NMFS has determined that the level of take resulting from the construction of the Selected Alternative is not likely to jeopardize the continued existence of Central Valley spring-run Chinook salmon or Central Valley steelhead. However, NMFS has incorporated several reasonable and prudent measures to further minimize incidental take of Federally listed fish species. NMFS also proposes conservation recommendations including BMPs to protect aquatic and riparian habitat outside of the work zone including implementation of measures from the 1602 permit and the stormwater pollution prevention plan.

9.4.2 Biological Opinion Issued by USFWS

USFWS has determined that even with the implementation of the proposed conservation measures, there is a likelihood of take of San Joaquin kit fox, central California tiger salamander, conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, and valley elderberry beetle from the Selected Alternative. USFWS has also concluded that there will be adverse effects to the Colusa grass, San Joaquin Valley Orcutt grass, hairy Orcutt grass, Greene's tuctoria, and succulent owl's clover. USFWS has also stated that it cannot accurately estimate the number of individual listed species subject to take from the Selected Alternative. Therefore, USFWS is using the amount of habitat affected by the Selected Alternative as a surrogate to estimate the level of take.

USFWS has concluded that the Selected Alternative is not likely to jeopardize the continued existence of any listed species because the amount of anticipated take is of such a limited scale, relative to the status of these species in and around the action area and range-wide. In addition, USFWS has concluded that the Selected Alternative will not result in adverse modification of designated critical habitat.

USFWS has incorporated terms and conditions and conservation recommendations to further minimize incidental take of listed plant and wildlife species affected by the Selected Alternative.

9.5 Wetlands Finding

In addition to NEPA and other environmental laws, FRA is also required to make findings pursuant to Executive Order 11990, Protection of Wetlands, and the U.S. Department of Transportation Wetlands Order, DOT Order 5660.1A.

It is anticipated that impacts on waters of the United States may occur as a result of the Selected Alternative. However, as noted in Section 2.2 above, in March 2012 USACE identified the Selected Alternative as the LEDPA. Design requirements and permit conditions will require contractors to avoid impacts on jurisdictional waters wherever feasible.

In addition to the Section 404 permit, the Authority will submit water quality certification applications, prepared pursuant to Section 401 to the State Water Resources Control Board (SWRCB) for the Selected Alternative. To the maximum extent practicable, the Authority will implement pre- and post-construction BMPs for sediment and erosion control. If avoidance of impacts on jurisdictional waters is not feasible, mitigation will be determined by USACE and SWRCB and reflected in permits and other authorizations issued for the Selected Alternative.

Based upon these findings, FRA determines that the Selected Alternative is consistent with Executive Order 11990 and DOT Order 5660.1A.

9.6 Floodplains

DOT Order 5620.2 implements Executive Order 11988, Floodplain Management. These orders state that FRA may not approve an alternative involving a significant encroachment on a floodplain unless FRA can make a finding that the proposed encroachment is the only practicable alternative. The major purposes of Executive Order 11988 are to avoid Federal support for floodplain development; to prevent uneconomic, hazardous, or incompatible use of floodplains; to restore and preserve the natural and beneficial floodplain values; and to be consistent with the standards and criteria of the National Floodplain Insurance Program.

FRA concludes that the Selected Alternative will not result in any substantial adverse impact on natural and beneficial values of the floodplains, will not result in a substantial change in flood risks or damage, and will not have a substantial potential for

interruption or termination of emergency service and evacuation routes. Based upon these findings, FRA determines that the Selected Alternative is consistent with requirements of Executive Order 11988.

9.7 Environmental Justice Finding

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. DOT Order 5610.2(a), "Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 77 FR 27534 (May 10, 2012), imposes similar obligations on DOT operating administrations to promote the principles of Executive Order 12898 and incorporate such principles in all programs, policies, and activities, including the NEPA process.

Moderate noise impacts and displacements and relocations in the cities of Merced and Fresno will be predominantly borne by communities of concern. With mitigation, the effects of displacements and relocations on communities of concern will not be substantial and will not be appreciably more severe or greater in magnitude than the adverse effect on the general population. Benefits will likely accrue to a greater degree to communities of concern because they comprise a large percentage of the population in the study areas and in the community. These benefits will include improved mobility within the region, improved traffic conditions on freeways, improvements in air quality within the region, and new employment opportunities during construction and operation. Jobs created by construction and operation of the Selected Alternative will likely be filled by workers in the region. The new jobs will not result in any benefits that will accrue to a greater degree to the communities of concern unless they have the necessary skills or they receive training or participate in some other type of program that enables employment.

10.0 Conclusion

FRA has reached a decision that most closely aligns with FRA's statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors and based on the information contained in the EIS Documents. FRA selects the Hybrid Alternative, Merced Downtown Station, and Fresno Mariposa Street Station Alternative for the Project in this ROD. FRA has selected these alternatives because they: 1) best satisfy the Purpose, Need, and Objectives for the proposed action, and 2) minimize impacts on the natural and human environment by utilizing an existing transportation corridor where practicable and incorporating other mitigation measures. Accordingly, the Hybrid Alternative, Merced Downtown Station, and Fresno Mariposa Street Station Alternative have been selected based on processes in compliance with NEPA and other applicable requirements.

Joseph C. Szabo
Administrator
Federal Railroad Administration

9/18/12
Date

Appendices:

Appendix A: Memorandum of Agreement for the Treatment of Adverse Effects on Historic Properties under Section 106 of the National Historic Preservation Act
Appendix B: Biological Opinion (USFWS and NMFS)
Appendix C: Mitigation Monitoring and Enforcement Plan (MMEP)
Appendix D: Corrections to the Final EIS (Errata Sheet)
Appendix E: CDFG Concurrence of FRA's Section 4(f) Finding of *De Minimis* Impact on Camp Pashayan