

## EXHIBIT A: DRAFT RECORD OF DECISION

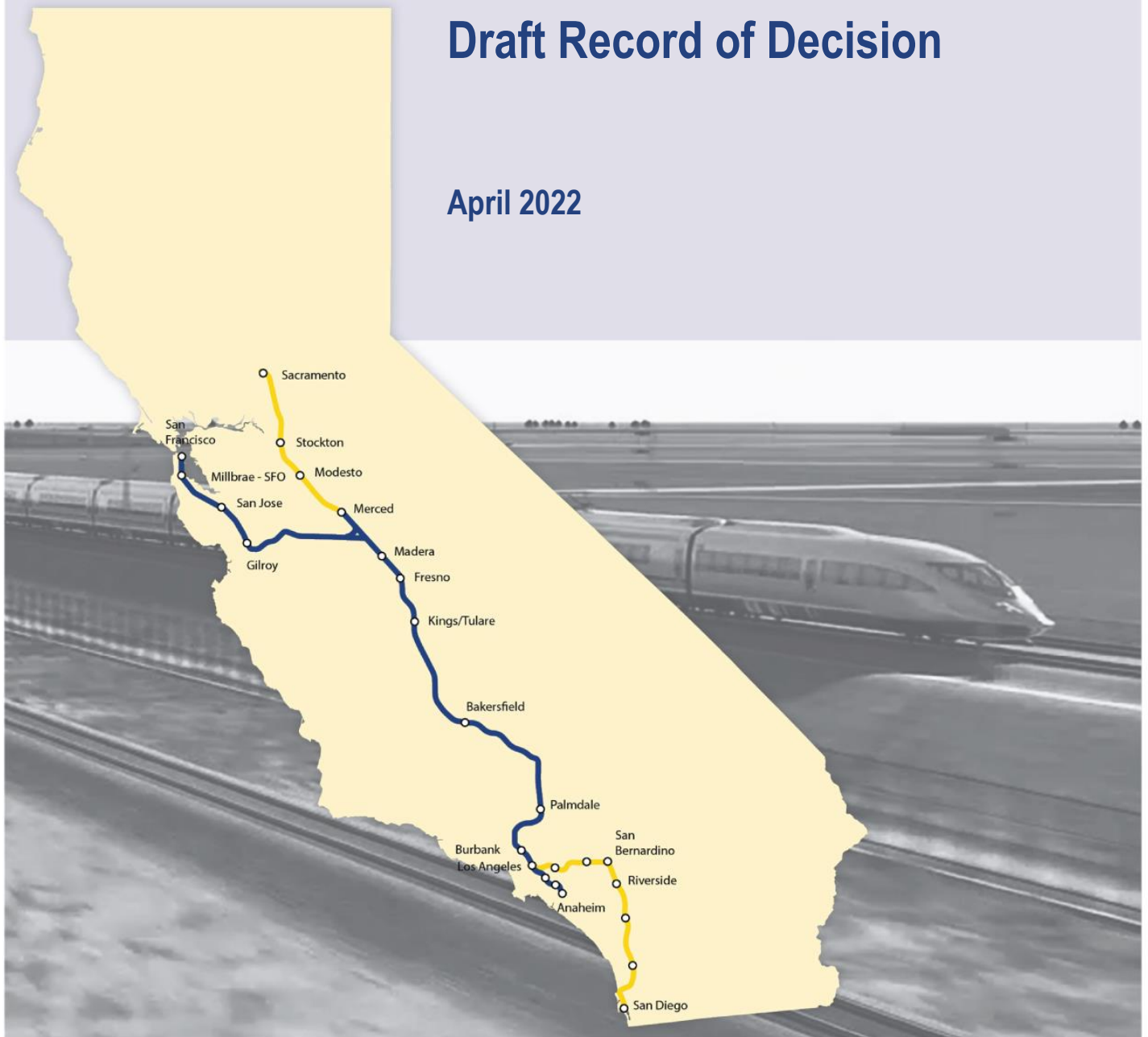


California High-Speed Rail Authority

# San Jose to Merced Project Section

Draft Record of Decision

April 2022



The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.



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## Acronyms and Abbreviations

Acronym	Definition
Authority	California High-Speed Rail Authority
BA	biological assessment
BAAQMD	Bay Area Air Quality Management District
BMP	best management practice
BO	biological opinion
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
C.F.R.	Code of Federal Regulations
CWA	Clean Water Act
DDV	Diridon design variant
DOT	U.S. Department of Transportation
DPS	distinct population segment
Draft EIR/EIS	<i>San Jose to Merced Project Section Draft Environmental Impact Report/Environmental Impact Statement</i>
EFH	Essential Fish Habitat
EIR	environmental impact report
EIS	environmental impact statement
EIS Documents	Draft EIS, Supplemental Draft EIS, and Final EIS
Fed. Reg.	<i>Federal Register</i>
FESA	federal Endangered Species Act
FHWA	Federal Highway Administration
Final EIR/EIS	<i>San Jose to Merced Project Section Final Environmental Impact Report/Environmental Impact Statement</i>
FRA	Federal Railroad Administration
GEA	Grasslands Ecological Area
HSR	high-speed rail
I-	Interstate
IAMF	impact avoidance and minimization feature
LEDPA	least environmentally damaging practicable alternative
MMEP	Mitigation Monitoring and Enforcement Plan
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MOWF	maintenance of way facility
MOWS	maintenance of way siding

Acronym	Definition
mph	miles per hour
MT	mainline track
NEPA	National Environmental Policy Act
NEPA/404/408 MOU	<i>Memorandum of Understanding—National Environmental Policy Act (42 U.S.C. 4321 et seq) and Clean Water Act Section 404 (33 U.S.C. 1344) and Rivers and Harbors Act Section 14 (33 U.S.C. 408)—Integration Process for the California High-Speed Train Program</i>
NEPA Assignment MOU	<i>Memorandum of Understanding between the Federal Railroad Administration and the State of California, Acting through its California State Transportation Agency and its California High-Speed Rail Authority, for the State of California's Participation in the Surface Transportation Project Delivery Program Pursuant to 23 U.S.C. 327</i>
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOx	nitrogen oxide
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
PAA	Preliminary Alternatives Analysis
PM <sub>2.5</sub>	particulate matter less than or equal to 2.5 microns in diameter
PM <sub>10</sub>	particulate matter less than or equal to 10 microns in diameter
Project	San Jose to Merced Project Section
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
ROD	Record of Decision
RSA	resource study area
SAA	Supplemental Alternatives Analysis
Section 106 PA	<i>First Amended Programmatic Agreement among the Federal Railroad Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the California High-Speed Train Project</i>
Section 404	Clean Water Act Section 404 (33 U.S.C. § 1344)
Section 408	Rivers and Harbors Act of 1899, Section 14 (33 U.S.C. § 408)
SFBAAB	San Francisco Bay Area Air Basin
SHPO	State Historic Preservation Officer
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SR	State Route
STB	Surface Transportation Board
TDV	tunnel design variant



Acronym	Definition
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VERA	Voluntary Emissions Reduction Agreement



# 1 INTRODUCTION

This document is the California High-Speed Rail Authority’s (Authority) Record of Decision (ROD) under the National Environmental Policy Act (NEPA) for the California High-Speed Rail (HSR) San Jose to Merced Project Section, which is part of the statewide HSR system. The Authority is the federal NEPA lead agency under what is commonly referred to as NEPA Assignment. More specifically, the environmental review, consultation, and other actions required of a federal lead agency by federal environmental laws for this San Jose to Merced Project Section (Project) are being or have been carried out by the State of California pursuant to 23 United States Code (U.S.C.) Section 327 and a Memorandum of Understanding (MOU) effective July 23, 2019, and executed by the Federal Railroad Administration (FRA) and the State of California (NEPA Assignment MOU) (FRA and State of California 2019). The Authority is also the lead agency for state environmental reviews under the California Environmental Quality Act (CEQA).

The San Jose to Merced Project Section geographically overlaps with the previously approved Merced to Fresno Project Section at the Central Valley Wye, where the north/south and east/west legs of the HSR system connect. The San Jose to Merced Project Section comprises three extents, as shown in Figure 1 below: (1) the San Jose to Central Valley Wye Project Extent from Scott Boulevard in Santa Clara to Carlucci Road in Merced County, the western terminus of the Central Valley Wye (Project); (2) the Central Valley Wye, which connects the east-west portion of HSR from the San Francisco Bay Area (Bay Area) to the Central Valley with the north-south portion from Merced to Fresno; and (3) the Ranch Road to Merced Project Extent, which is the northernmost portion of the Merced to Fresno Project Section, from the northern limit of the Central Valley Wye (Ranch Road) to the Merced Station.



HSR = high-speed rail

**Figure 1 San Jose to Merced Project Section Geographic Context**

The Authority approved the Preferred Alternative for the Merced to Fresno Project Section, inclusive of the Ranch Road to Merced Project Extent, in May 2012, following certification of the *Final California High-Speed Train Project Environmental Impact Report/Environmental Impact Statement and Final Section 4(f) Statement and Draft General Conformity Determination—Merced to Fresno Section* (Merced to Fresno Section Final EIR/EIS) (Authority and FRA 2012). The Authority approved the Preferred Alternative for the Central Valley Wye, inclusive of the

Central Valley Wye Project Extent, in September 2020, following the certification of the *Merced to Fresno Section: Central Valley Wye Final Supplemental EIR/EIS* (Authority 2020a).

The Authority has therefore focused the San Jose to Merced Project Section EIR/EIS on the San Jose to Central Valley Wye Project Extent that connects to the already-approved extents at Carlucci Road in Merced County and ends at Scott Boulevard in Santa Clara (the Project). While the northern service limit of the Project will be the San Jose Diridon Station, the engineering design and evaluation includes infrastructure and train operations north to Scott Boulevard to serve the San Jose Diridon Station. The Project is an approximately 90-mile portion of the entire 145-mile-long San Jose to Merced Project Section.

This ROD approves Alternative 4 as described in the *San Jose to Merced Project Section Final Environmental Impact Report/Environmental Impact Statement* (Final EIR/EIS) dated February 25, 2022 (Authority 2022). As set forth in this ROD, Alternative 4, which includes the San Jose Diridon Station as modified by the Diridon design variant (DDV), existing rail corridor upgrades between San Jose and Gilroy, a Downtown Gilroy Station, the South Gilroy maintenance of way facility (MOWF), dedicated HSR infrastructure through the Pacheco Pass as modified by the tunnel design variant (TDV), and dedicated HSR infrastructure continuing across the San Joaquin Valley to connect to the Central Valley Wye, and a maintenance of way siding (MOWS) west of Turner Island Road in the Central Valley, best serves the purpose and need for this Project and minimizes economic, social, and environmental impacts, and it is therefore the Selected Alternative.

The Authority proposes to construct and operate the Project after receiving the required approvals from the appropriate federal agencies. These agencies include the federal cooperating agencies—the U.S. Army Corps of Engineers (USACE), the U.S. Department of the Interior, Bureau of Reclamation (Reclamation), and the Surface Transportation Board (STB). Other federal agencies with specific review or permitting roles include the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and the Advisory Council on Historic Preservation.

To comply with NEPA and CEQA, the Authority issued a joint Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) for the Project in April 2020 (Authority 2020b) and a Revised Draft EIR/Supplemental Draft EIS in April 2021 (Authority 2021a) generally limited to new information about certain federal and state candidate species under federal and state Endangered Species Acts. Following public review of the Draft EIR/EIS and the Revised Draft EIR/Supplemental Draft EIS, the Authority considered and responded to public comments, revised the EIR/EIS to address public comments, and published a Final EIR/EIS on February 25, 2022. Consistent with 40 Code of Federal Regulations (C.F.R.) Section 1506.2,<sup>1</sup> the Final EIR/EIS is one document that covers both state and federal environmental requirements. However, because this ROD contains the decision of the Authority under its assigned responsibilities for NEPA, the documents are referred to as the “Draft EIS,” “Supplemental Draft EIS,” and “Final EIS.” In making its decision, the Authority considered the information and analysis contained in the 2020 Draft EIS, the 2021 Supplemental Draft EIS, and the 2022 Final EIS (collectively, “EIS Documents”). The Authority also considered public and agency comments received on the EIS Documents.

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<sup>1</sup> The Council on Environmental Quality (CEQ) issued new regulations, effective September 14, 2020, updating the NEPA implementing procedures at 40 C.F.R. Parts 1500–1508. However, because this Project initiated the NEPA process before September 14, 2020, it is not subject to the new regulations. The Authority is relying on the regulations as they existed prior to September 14, 2020. Therefore, all citations to CEQ regulations in this document refer to the 1978 regulations, pursuant to 40 C.F.R. Section 1506.13 (2020) and the preamble at 85 *Federal Register* (Fed. Reg.) 43340.

Table 1 summarizes major NEPA milestones and completion dates for the EIS Documents.

**Table 1 Summary of Major NEPA Milestones**

Milestone	Date
Notice of Intent Published in <i>Federal Register</i>	March 2009
Public Scoping	March 2009
Public and Agency Meetings <sup>1</sup>	September 2009–September 2013
Public and Agency Meetings <sup>2</sup>	October 2013–February 2016
Letters of Concurrence on Preliminary LEDPA Determination	March 2020
Notice of Availability Published and Issuance of Draft EIS and Section 4(f) Evaluation	April 24, 2020
Public Hearing to Receive Public Comment	May 27, 2020
Public and Agency Meetings <sup>3</sup>	May 2016–September 2021
Issuance of Supplemental Draft EIS	April 23, 2021
National Marine Fisheries Service Biological Opinion issued	June 24, 2021
U.S. Fish and Wildlife Service Biological Opinion Issued	December 22, 2021
Publication of Draft General Conformity Determination	November 26, 2021
Notice of Availability and Issuance of Final EIS and Section 4(f) Evaluation	February 25, 2022
Approval of Final General Conformity Determination	March 25, 2022
End of Waiting Period for Final EIS and Section 4(f) Evaluation	March 28, 2022

<sup>1</sup> See Chapter 9, Table 9-2, in the Final EIS for organizational/individual meetings and dates held.

<sup>2</sup> See Chapter 9, Table 9-3, in the Final EIS for organizational/individual meetings and dates held.

<sup>3</sup> See Chapter 9, Table 9-4, in the Final EIS for organizational/individual meetings and dates held.

EIS = environmental impact statement

LEDPA = least environmentally damaging practicable alternative

The San Jose to Merced Project Section will connect to the already-approved portions of the HSR system running the length of the Central Valley between Merced and Palmdale, extending the approved HSR from Santa Clara County to Los Angeles County. This decision document outlines all relevant information used by the Authority as the NEPA lead agency for approval of the Selected Alternative—Alternative 4, with the DDV and TDV, the San Jose Diridon and Downtown Gilroy Stations, the MOWF in the Gilroy area, and an MOWS west of Turner Island Road in the Central Valley. As described further in Section 4.2, Alternatives Carried Forward for Study in the EIS, the Authority considered the following project alternatives: Alternatives 1, 2, 3, and 4, which follow the same general corridor with a few exceptions. Alternatives 1, 2, and 3 are on viaduct through San Jose Diridon Station and cross over State Route (SR) 87 in the San Jose Diridon Station Approach Subsection. While Alternatives 2 and 4 follow the same general alignment in the Monterey Corridor Subsection, Alternative 2 is on embankment and in new, dedicated HSR right-of-way all the way to Gilroy. In the Morgan Hill and Gilroy Subsection, Alternatives 1 and 3 are on viaduct and venture farther east north of San Martin. South of San Martin, Alternative 3 traverses to a more eastern station and MOWF location. All of the project alternatives converge again near Casa de Fruta.

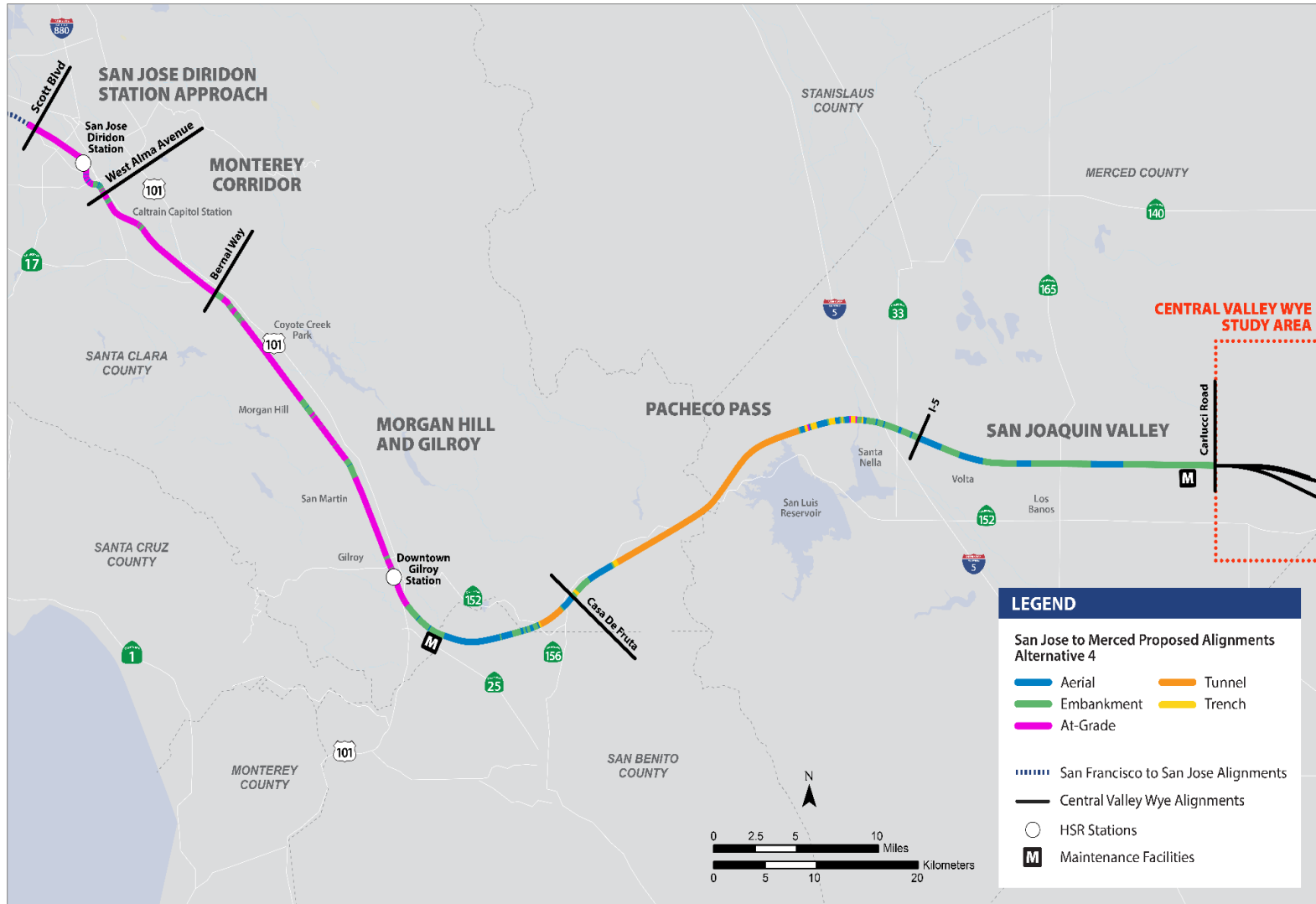
As depicted on Figure 2 and described in further detail in Chapter 2, Alternatives, of the Final EIS, the Selected Alternative spans approximately 90 miles between Santa Clara and Merced County. The alignment of the Selected Alternative begins at Scott Boulevard in Santa Clara and ends at Carlucci Road in Merced County. The Selected Alternative includes at-grade design options for the San Jose Diridon Station Approach Subsection, the Monterey Corridor Subsection, and the Morgan Hill and Gilroy Subsection and tunnel design options in the Pacheco Pass Subsection and the San Joaquin Valley Subsection. The Selected Alternative comprises 15.2 miles on viaduct, 30.3 miles at grade, 25.9 miles on embankment, 2.3 miles in trench, and two tunnels totaling 15.0 miles. The Selected Alternative extends blended electric-powered passenger railroad infrastructure from the southern limit of Caltrain's Peninsula Corridor Electrification Project through Gilroy. South and east of Gilroy, HSR will operate on a dedicated guideway.

In making its decision, the Authority considered the information and analysis contained in the EIS Documents and the associated administrative record and input received from the public, tribes, and other agencies.

The Authority has prepared this ROD in accordance with the NEPA Assignment MOU dated July 23, 2019; the CEQ regulations implementing NEPA (40 C.F.R. §§ 1505.2 and 1506.10), and FRA's Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545, May 26, 1999), as modified by 78 Fed. Reg. 2713 (January 14, 2013).

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.
- Summarizes the process that led to the development of the alternatives for study in the Draft EIS, Supplemental Draft EIS, and Final EIS.
- Discusses agency roles and responsibilities.
- Identifies the project alternatives considered in the EIS Documents.
- Identifies Alternative 4, with the DDV and TDV, the San Jose Diridon and Downtown Gilroy Stations, the MOWF south of Gilroy, and an MOWS west of Turner Island Road in the Central Valley, as the Selected Alternative.
- Identifies the Environmentally Preferable Alternative.
- Summarizes environmental benefits and adverse effects.
- Discusses and makes determinations required under other relevant laws and guidance, including:
  - The National Historic Preservation Act of 1966, as amended (NHPA) (54 U.S.C. §§ 306101–307106 et seq.)
  - Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. § 303)
  - Section 7 of the Endangered Species Act of 1973 (16 U.S.C. §§ 1531–1544)
  - Section 404 of the Clean Water Act (CWA) (33 U.S.C. §§ 1251–1387)
  - U.S. Presidential Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994)
  - U.S. Presidential Executive Order 11988 (Floodplain Management)
  - FRA's General Conformity Determination pursuant to the Clean Air Act (42 U.S.C. §§ 7401–7671q)



HSR = high-speed rail; I- = Interstate.

JULY 2019

Note: The SR 152 (North) to Road 11 Wye Alternative is the Selected Alternative for the Merced to Fresno Section: Central Valley Wye. This figure shows the Wye alignments as they were analyzed in the Merced to Fresno Section: Central Valley Wye Supplemental EIR/EIS (Authority 2020a).

Figure 2 Selected Alternative for the San Jose to Merced Project Section

- Summarizes the comments received on the Final EIS and responds to substantive comments that have not been previously addressed.
- Imposes impact avoidance and minimization features (IAMF) and mitigation measures that will be implemented to avoid and minimize environmental harm and sets forth a binding monitoring and enforcement program for all such features and measures.
- Presents the Authority's decision, determinations, and findings on the proposed project and identifies and discusses the factors that were balanced by the Authority in making its decision.
- Summarizes the status of compliance with permitting and other environmental requirements.
- The ROD also includes the following:
  - Appendix A, General Conformity Determination Memorandum, March 25, 2022
  - Appendix B, USFWS Biological Opinion, December 22, 2021
  - Appendix C, Mitigation Monitoring and Enforcement Plan (MMEP)
  - Appendix D, State Historic Preservation Officer (SHPO) Section 106 Concurrence Letter and Memorandum of Agreement (MOA), March 11, 2022
  - Appendix E, NMFS Biological Opinion, June 24, 2021
  - Appendix F, USACE Preliminary LEDPA Concurrence Letter, March 20, 2020, and USEPA Preliminary LEDPA Concurrence Letter, March 18, 2020
  - Appendix G, Section 4(f) Concurrence Letters
  - Appendix H, Comments Received Between the Publication of the Final EIS and the April 21, 2022, Board Meeting
  - Appendix I, Errata for Final EIS
  - Appendix J, Final Individual Section 4(f) Evaluation of Two Parks in Santa Clara County

## 1.1 California HSR System

The Authority is responsible for planning, designing, constructing, and operating the California HSR System. Its state statutory mandate is to develop an HSR 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 HSR 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 southern Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego, as shown on Figure 3. The Authority and FRA prepared three 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, Project Purpose, Need, and Objectives, of the Final EIS for a detailed description of the HSR system and the history of Tier 1 documents. The HSR system will use state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, including contemporary safety, signaling, and automatic train-control systems that will incorporate positive train control infrastructure and be compliant with the requirements of 49 C.F.R. Part 236 Subpart I, with trains capable of operating up to 220 miles per hour (mph) over a fully grade-separated, dedicated guideway alignment.





ARTIC = Anaheim Regional Transportation Intermodal Center; HSR = high-speed rail; SFO = San Francisco.

**Figure 3 Statewide California High-Speed Rail System**

The Authority plans two phases of California HSR System development. The California HSR Program 2020 Business Plan describes in detail how the California HSR System will be implemented and recognizes current budgetary and funding realities. The California HSR System Phase 1, as approved through Tier 1 decisions, has been divided into eight individual project sections for site-specific, Tier 2 analysis. The Authority and the FRA defined HSR project sections such that they will have independent utility or independent significance (i.e., be usable even if later sections of the HSR system are not completed). As of February 2022, Tier 2 environmental reviews have been completed for the following project sections.

- Fresno to Bakersfield (completed April 2012)
- Merced to Fresno (completed May 2012)
- Merced to Fresno: Central Valley Wye (completed September 2020)
- Fresno to Bakersfield: Locally Generated Alternative (Bakersfield Station) (completed November 2019)
- Bakersfield to Palmdale (completed August 2021)
- Burbank to Los Angeles (completed January 2022)

## 1.2 San Jose to Merced Project Section

With the completion of a programmatic review of the California HSR System in 2005, the Authority and the FRA, as joint lead agencies for NEPA, commenced the Tier 2 environmental review process for the Project in late 2008. In 2008, the Authority and FRA selected a Pacheco Pass connection, with corridors and station locations for further examination in Tier 2 environmental reviews. Between San Jose and Merced, the corridor advanced for Tier 2 study was the Pacheco Pass via Henry Miller Road (Union Pacific Railroad [UPRR] Connection) from San Jose to the Central Valley. The station locations advanced for Tier 2 study were a downtown San Jose Diridon Station and a Downtown Gilroy/Caltrain station, with no station between Gilroy and Merced. The Authority and FRA held scoping meetings for the Project in March 2009. Public and agency involvement for the Draft EIS started in 2009 and continued through publication of the Draft EIS, Supplemental Draft EIS, and Final EIS. From 2010 through 2013, the Authority conducted an alternatives analysis for the Project. As a result of litigation, the Authority prepared additional programmatic environmental review for the Bay Area and the Central Valley project sections and again selected the Pacheco Pass connection (Authority 2012a). During the development of the Draft EIS, between 2016 and 2019, input was solicited from the public, stakeholders, and agencies about project alternatives and to consider refinements of the prior alternatives or the addition of new alternatives responsive to their concerns.

As detailed in Chapter 9, Public and Agency Involvement, of the Final EIS, the Authority has held more than 500 meetings, briefings, and conversations to date with community stakeholders, businesses, local agencies, and elected officials to gather, confirm, and understand key community concerns so that these concerns are incorporated both into the development of alternatives and during the environmental process. The Authority conducted general outreach efforts to potentially affected minority populations and low-income populations between August 2016 and September 2021 throughout the San Jose to Merced Project Section with the objectives of raising awareness about the Project and gathering input regarding project impacts and benefits to inform the identification of the Preferred Alternative in the Draft EIS and Final EIS. Between December 2019 and September 2021, more targeted outreach efforts were conducted with a subgroup of the same populations that will experience disproportionately high and adverse effects, with the additional objective of gathering input on potential community improvements. The Authority advertised and conducted select meetings in English, Spanish, and Vietnamese, based on request from and needs of the participants and provided the same language accommodation for materials distributed.

At its September 17, 2019, meeting, the Authority Board concurred with Authority staff that Alternative 4 is the Authority's Preferred Alternative for the San Jose to Merced Project Section (Authority 2019a). The Draft EIS identified Alternative 4 as the Preferred Alternative, which the Authority confirmed in the Final EIS. This identification was based on balancing the impacts of the project alternatives on the natural environment and community resources presented in the Draft EIS and Final EIS in the context of CEQA, NEPA, CWA, stakeholder preferences, and capital construction costs. The Authority worked closely with federal, state, and regional agencies to meet regulatory requirements by refining the Selected Alternative to avoid and minimize impacts and, where necessary, to reach agreement on mitigation measures for impacts that cannot be avoided.

The Draft EIS was released on April 24, 2020, for an initial 45-day public comment period that closed on June 8, 2020. On May 15, 2020, the Authority notified USEPA that the review and comment period was being extended to end on June 23, 2020, due to the uncertainty surrounding the COVID-19 pandemic. The USEPA published the revised notice in the *Federal Register* on May 22, 2020. The Authority held a virtual public hearing on May 27, 2020, to receive oral testimony on the Project and the Draft EIS. The traditional in-person format of the public hearing was changed to a virtual public hearing held online and via telephone to comply with the Governor of California's directives and to protect public health during the COVID-19 pandemic. The Draft EIS presented the purpose and need for the Project; a reasonable range of alternatives for rail alignment, station site, and maintenance facilities; the existing setting; alternative effects (both beneficial and adverse) from construction and operation; and project design features and mitigation measures to avoid, reduce, or eliminate adverse environmental effects.

Following public review of the Draft EIS, a Supplemental Draft EIS was circulated in April 2021. The Supplemental Draft EIS was generally limited to new information about certain federal and state candidate species under the federal Endangered Species Act (FESA) and the California Endangered Species Act.

In February 2022, the Authority published the Final EIS.

The Authority received 747 comment submissions on the Draft EIS and 16 comment submissions on the Supplemental Draft EIS. The Authority considered the information presented in the comments received, and the Final EIS includes responses to all substantive comments on the EIS Documents.

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## 2 AGENCY ROLES AND RESPONSIBILITIES

The Authority is the NEPA lead agency, pursuant to the NEPA Assignment MOU. The STB, Bureau of Reclamation, and the USACE are NEPA cooperating agencies.

Multiple other federal agencies have been involved with and contributed to the environmental review, including the USEPA, USFWS, NMFS, National Park Service, Federal Emergency Management Agency, U.S. Department of Veterans Affairs, and the Advisory Council on Historic Preservation. Additionally, consultation with the Natural Resources Conservation Service was conducted to evaluate conversion of farmland to other uses.

### 2.1 Federal Railroad Administration

The FRA's responsibilities for environmental review, consultation, and other actions required by applicable federal environmental laws, including NEPA, for the proposed Project are being carried out by the Authority, acting on behalf of the State of California pursuant to 23 U.S.C. Section 327 and the NEPA Assignment MOU. Under the MOU, FRA assigned federal environmental review responsibilities for the Project to the State of California. Since July 23, 2019, the Authority has performed as the lead NEPA agency in this program, known as NEPA Assignment.

As required by law and the NEPA Assignment MOU, the FRA has retained responsibility for making air quality conformity determinations under the Clean Air Act (42 U.S.C. § 7506) and government-to-government consultation with Indian tribes (23 C.F.R. § 773.105(b)(4)). FRA issued the final air quality General Conformity Determination on March 25, 2022 (see Appendix A). FRA has carried out its government-to-government responsibilities, as described in the attached Section 106 MOA (see Appendix D).

The NEPA Assignment MOU also requires the Authority to consult with FRA prior to making any proposed constructive use determinations under Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. § 303); however, there are no such determinations associated with the Selected Alternative.

Additionally, FRA maintains authority over railroad safety under 49 U.S.C. Section 20103. As such, FRA may exercise certain regulatory authority over the Project. FRA also administers certain grant funds provided to the Authority under the American Recovery and Reinvestment Act of 2009 (Public Law 111-5) and oversees the Authority's compliance with a grant agreement for the HSR system.

### 2.2 Surface Transportation Board

The STB has authority over construction and operation of new rail lines (49 U.S.C. § 10901). As the STB explained in its June 13, 2013, decision authorizing construction of the 65-mile section of the California HSR System between Merced and Fresno (Docket No. FD\_35724\_0), 49 U.S.C. Section 10501(a)(2)(A) gives the STB jurisdiction over transportation by rail carrier in one state, as long as that intrastate transportation is carried out, "as part of the interstate rail network." The STB determined that the California HSR System will be constructed as part of the interstate rail network and therefore concluded that it has jurisdiction over the California HSR System.

The STB has participated as a cooperating agency in the environmental review process for the San Jose to Merced Project Section. Following completion of this process, the STB may adopt the Authority's EIS (or conduct additional review, as appropriate) and issue a separate ROD authorizing the Project.

### 2.3 U.S. Department of the Interior, Bureau of Reclamation

The HSR alignment crosses Reclamation lands and facilities. Reclamation may issue rights of entry permits for pedestrian surveys and ground-disturbing investigations, such as geotechnical investigations, or other information-gathering activities. It may grant temporary construction permits for the relocation of facilities and equipment such as pipes, canals, and pumps. If the facilities are relocated outside of Reclamation's ownership, the Authority will acquire any needed land rights necessary for future operations and maintenance needs and/or relocated Reclamation

features. After construction, the Authority will transfer to Reclamation necessary land rights. Reclamation will grant or transfer land rights as appropriate to the Authority. The Final EIS Appendix 3.6-A, Public Utilities and Energy Facilities, depicts all existing major utilities and energy facilities, including those on Reclamation-managed lands, within the footprint of the San Jose to Merced Project Section project alternatives. Reclamation has participated as a cooperating agency in the environmental review process for the San Jose to Merced Project Section.

## 2.4 U.S. Army Corps of Engineers

USACE is responsible for issuing permits under the CWA Section 404 (33 U.S.C. § 1344) (Section 404) and authorizations under the Rivers and Harbors Act of 1899, Section 14 (33 U.S.C. § 408) (Section 408).

The Authority, FRA, USACE, and USEPA executed an MOU (NEPA/404/408 MOU) in November 2010 (FRA et al. 2010) to ensure coordination between NEPA environmental review and regulatory processes under Section 404 and Section 408. Through the NEPA/404/408 MOU process, the “preliminary least environmentally damaging practicable alternative” is identified pursuant to the Section 404(b)(1) Guidelines.

Under Section 404, the USACE and USEPA regulate the discharge of dredged and fill materials into the waters of the U.S. Project sponsors must obtain a permit from the USACE for discharges of dredged or fill materials into waters of the U.S. Aquatic resources in the vicinity include several types of wetlands as well as other waters (i.e., streams, lakes, and other open water features) as verified by the USACE under a preliminary jurisdictional determination issued on December 5, 2019. Based on the Authority’s analysis of permanent impacts on waters of the U.S. and coordination with the USACE, the Authority expects that an individual Clean Water Act Section 404 permit will be required for the San Jose to Merced Project Section.

The project alternatives that were considered in the EIS Documents incorporated various combinations of a range of design options for each of the five subsections of the Project. In September 2017, the USEPA and the USACE concurred with the decision to carry forward the three project alternatives presented in Checkpoint B Addendum 3 (Authority and FRA 2017). In January 2019, the USACE concurred with and, in February 2019, the USEPA agreed with the decision to carry forward a fourth project alternative presented in Checkpoint B Addendum 4 (Authority 2019c). All four of these project alternatives are evaluated in the Final EIS.

The San Jose to Merced Project Section will require review from the USACE under Section 408 where the subsection will include modifications or alterations of federal flood control facilities to ensure that its usefulness is not impaired. The Selected Alternative will pass through federal flood control projects along Guadalupe River and Llagas Creek near San Martin and east Gilroy and will thus require permission from USACE under Section 14 of the Rivers and Harbors Act (33 U.S.C. § 408) for work proposed at Guadalupe River as well as Llagas Creek near San Martin. Therefore, during the design phase, the Authority will be required to coordinate with the SCVWD, now known as Valley Water, to obtain Section 408 review for the Guadalupe River crossing in San Jose and the Llagas Creek crossing near San Martin. As noted above, USACE has concurred that the overall project purpose is acceptable as the basis for the USACE 404(b)(1) alternatives analysis. Pursuant to Section 404, USACE and USEPA concurred in March 2020 that the Authority’s Selected Alternative is the preliminary LEDPA. USACE also provided a preliminary recommendation that the Authority is advancing appropriate design for the future application for authorization to modify USACE flood control facilities under Section 408.

USACE is required to comply with NEPA and issue its own NEPA decision before it can issue a permit under Section 404 or permission under Section 408. The information contained in the Final EIS will provide information that will facilitate USACE’s consideration and issuance of any necessary permits and approvals. Further, any USACE documents produced using information from the Final EIS can be used to assess proposed alterations/modifications of federal flood risk management facilities and any associated operation and maintenance activities.

## 2.5 U.S. Fish and Wildlife Service and National Marine Fisheries Service

Concurrently with the NEPA process, the Authority initiated consultations under FESA Section 7 (16 U.S.C. § 1536), pursuant to 50 C.F.R. Part 402, and regarding Essential Fish Habitat (EFH) pursuant to 50 C.F.R. Part 600. Section 7 of FESA 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 and habitat are addressed through a consultation process with USFWS and/or NMFS that is outlined under Section 7 of FESA and the implementing regulations. The Magnuson-Stevens Fisheries and Conservation Management Act (16 U.S.C. § 1801 et seq.) requires federal agencies to consult with NMFS on activities that may adversely affect EFH for species that are managed under federal fishery management plans in U.S. waters. Impacts associated with EFH are addressed through a coordination process with NMFS that may be combined with FESA Section 7 consultation.

If an action may affect a threatened or endangered species, under Section 7 a study that describes the effects, known as a biological assessment (BA), is generally 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 a FESA-listed species or result in the destruction or adverse modification of a species' critical habitat.

Because the Project may affect threatened or endangered species, the Authority prepared a BA for the Project and consulted with the USFWS and NMFS, as required. The Authority submitted the BA with a request to initiate Section 7 consultation to USFWS and NMFS in June 2020. The BA evaluates the potential adverse effects of the Project on species listed as endangered or threatened, as well as effects on designated critical habitat. NMFS issued its BO on the Project on June 24, 2021, concluding that the Project is not likely to jeopardize the continued existence of the federally listed threatened Central California Coast steelhead (*Oncorhynchus mykiss*) distinct population segment (DPS) or South Central California Coast steelhead (*O. mykiss*) DPS or destroy or adversely modify their critical habitat. NMFS also reviewed the proposed action for its effects on the federally listed threatened California Central Valley steelhead (*O. mykiss*) DPS and concurred with the Authority's conclusion that the Project is not likely to adversely affect the California Central Valley steelhead DPS. USFWS issued a BO on December 22, 2021. Appendix B of this ROD contains the USFWS BO, and Appendix E contains the NFMS BO.

## 2.6 Advisory Council on Historic Preservation

The Advisory Council on Historic Preservation is an independent federal agency that promotes the preservation, enhancement, and productive use of our nation's historic resources and advises the President and Congress on national historic preservation policy. Established by the National Historic Preservation Act in 1966, the Advisory Council on Historic Preservation has the legal responsibility to encourage federal agencies to factor historic preservation into federal project requirements (50 C.F.R. § 1502.25).

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### 3 PURPOSE AND NEED

#### 3.1 Purpose of the High-Speed Rail System

As established in the 2005 Statewide Program EIR/EIS for HSR (Authority and FRA 2005), the purpose of the California HSR 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.

#### 3.2 Purpose of the San Jose to Merced Project Section

The purpose of this Project is to implement the San Jose to Merced Project Section of the California HSR System: to provide the public with electric-powered HSR 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 Francisco Bay Area and Central Valley and to connect the northern and southern portions of the statewide HSR system.

The purpose and need for the San Jose to Merced Project Section was developed through a process established by the Authority, FRA, USACE, and USEPA pursuant to a November 2010 MOU that was intended to facilitate the integration of NEPA, Section 404 of the CWA, and Section 14 of the Rivers and Harbor Act (NEPA/404/408 MOU). The parties reached agreement on the purpose and need in August 2011.

#### 3.3 Statewide and Regional Need for the High-Speed Rail System in the San Jose to Merced Project Section

The approximately 145-mile-long San Jose to Merced Project Section is an essential component of the statewide HSR system. The San Jose to Merced Project Section will provide access to a new transportation mode, contribute to increased mobility throughout California, and connect the Bay Area to the rest of the statewide HSR system via four counties: Santa Clara, San Benito, Merced, and Madera, as illustrated on Figure 1-3 of the Final EIS. As major population and economic centers for California, the South Bay and Central Valley regions contribute significantly to the statewide need for a new intercity transportation service that will connect San Francisco with the Central Valley and Los Angeles.

The capacity of California's intercity transportation system, including the southern Bay Area and Central Valley systems, is insufficient to meet existing and future travel demand. The current and projected future system congestion will continue to result in deteriorating air quality, reduced reliability, increased travel times, more highway accidents, and increasing greenhouse gas emissions. The system has not kept pace with the tremendous increase in population, economic activity, and tourism in the state, including in the Bay Area and Central Valley.

The interstate highway system, commercial airports, and the conventional passenger rail system serving the intercity travel market are operating at or near capacity and will require large public investments in 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 may be impractical or may be constrained by physical, regulatory, environmental, political, and other factors.

The need for improvements to intercity travel in California, including intercity travel between the Bay Area and the Central Valley, relates to the following issues:

- Future growth in demand for intercity travel, including the growth in demand in the Bay Area and Central Valley regions
- Capacity constraints that will result in increasing congestion and travel delays, including those in the South Bay and Central Valley regions

- Unreliability of travel stemming from congestion and delays, weather conditions, accidents, and other factors that affect the quality of life and economic well-being of residents, businesses, and tourists in California, including in the South Bay and Central Valley regions
- Reduced mobility as a result of increasing demand on limited modal connections among major airports, transit systems, and passenger rail in the state, including in the South Bay and Central Valley regions
- Poor and deteriorating air quality and pressure on natural resources and agricultural lands due to expansion of highways and airports, as well as continued urban development, including in the Bay Area and Central Valley
- Legislative mandates to moderate the effects of transportation on climate change, including required reductions in greenhouse gas emissions caused by vehicles powered by the combustion of carbon-based fuels

As major population and economic centers, the southern San Francisco Bay Area and Central Valley regions contribute significantly to the statewide need for a new intercity transportation service that will connect these regions to each other and to other major population and economic centers of the state. The following sections provide additional information about the factors contributing to the need for the San Jose to Merced Project Section.

## 4 ALTERNATIVES CONSIDERED

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

### 4.1 Alternatives Analysis Process and Alternatives Considered but Eliminated from Detailed Study

At the conclusion of the 2005 Statewide Program EIR/EIS (Authority and FRA 2005), the Authority and FRA identified selected preferred corridors for most of the statewide system to be studied in more detail in Tier 2 EIR/EISs. At the time, the Authority deferred selection of preferred corridors for Bay Area to Central Valley to a second Tier 1 EIR/EIS process.

The Authority and FRA undertook an extensive, public screening process to identify and refine alternatives for study in the EIS. The initial project-level alternatives were presented in the *San Jose to Merced Preliminary Alternatives Analysis (PAA) Report* (Authority and FRA 2010). After the 2010 PAA report, the Authority prepared two Supplemental Alternatives Analysis (SAA) reports in May and July 2011 (Authority and FRA 2011a, 2011b), which presented a refined range of alternatives addressing multiple criteria and emphasizing the project objective of maximizing the use of existing transportation corridors and available right-of-way. Following the 2011 SAA reports, the Authority continued to refine the alternatives by responding to stakeholder, agency, and public comments; performing additional engineering and environmental review; and maintaining consistency with the Authority's design objectives. In 2013, the Authority and FRA developed a Checkpoint B Summary Report (Authority and FRA 2013), largely drawn from the work completed for the PAA and SAA reports between June 2010 and July 2011, for review by the USACE and USEPA. The USACE and USEPA concurred in August and September 2014, respectively, with the alternatives recommended for inclusion in the Draft EIS. Following the completion of the Checkpoint B analysis in 2013, work on the San Jose to Merced Project Section was suspended.

In late 2015, the Authority reinitiated work on the Project. The additional analysis began with, and built upon, the range of alternatives that had been documented in the *Checkpoint B Summary Report* (Authority and FRA 2013) for the San Jose to Merced Project Section. The 2016 Business Plan (Authority 2016) included updated ridership forecasts and operational planning undertaken since the 2012 Business Plan (Authority 2012b). As such, the Authority identified certain new alternatives (such as a viaduct alternative between San Jose and Gilroy and blended operation north of San Jose Diridon Station) and also reconsidered the formerly dismissed at-grade alignment for the San Jose Diridon Station Approach Subsection. With Project reinitiation, the Authority and FRA reached out to the public, stakeholders, and agencies to solicit their input and concerns about project alternatives and to consider refinements of the prior alternatives or the addition of new alternatives responsive to those concerns. The reconsideration of alternatives in 2016 and 2017 used a two-phase screening process to evaluate the direct and relative performance of conceptual alternatives. The Authority and FRA (2017) developed a *Checkpoint B Summary Report Addendum 3* to narrow the range of alternatives to three of the end-to-end project alternatives evaluated in the Draft EIS.

In light of operational planning undertaken since the 2016 Business Plan, the Authority reconsidered the formerly dismissed at-grade alignment for the San Jose Diridon Station Approach Subsection and extending blended service proposed for the San Francisco to San Jose Project Section from San Jose to Gilroy as part of the 2018 Business Plan (Authority 2018). The Authority and FRA developed a *Checkpoint B Summary Report Addendum 4* (Authority 2019c) to review the preliminary effects of this alternative and assess whether to evaluate a new alternative in the Draft EIS. The alternatives analysis process is further summarized in Chapter 2 and Appendix 2-1 of the Final EIS.

Potential alternatives considered over the course of project development either failed to adequately meet the project purpose and need/project objectives, failed to offer a substantial environmental advantage over other alternatives studied, and/or were deemed not to be feasible

from a cost, technical, or engineering perspective. These potential alternatives were eliminated from analysis in the EIS Documents.

## 4.2 Alternatives Carried Forward for Study in the EIS

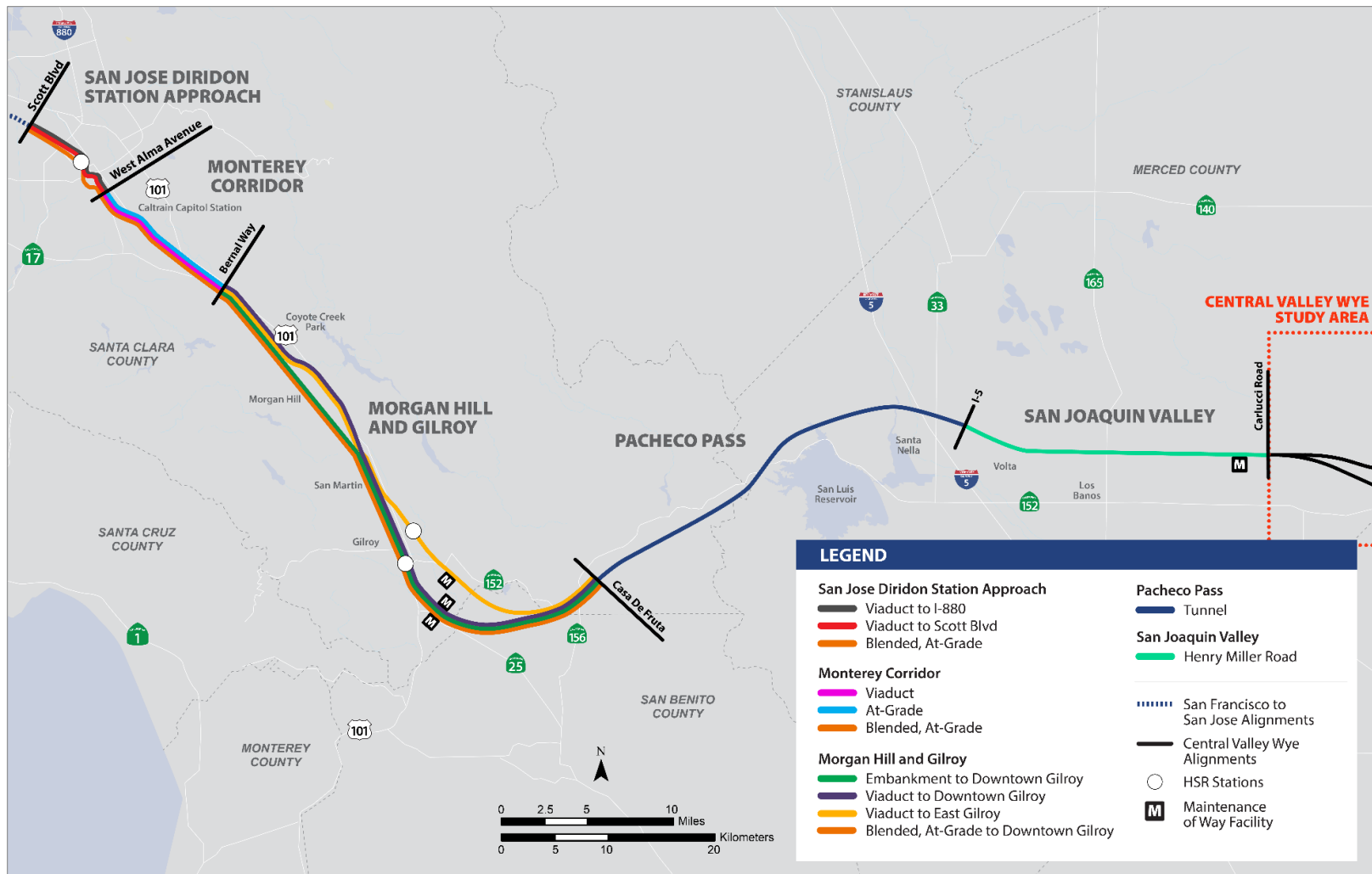
As a result of a comprehensive alternative analysis process, the EIS evaluated four alignment alternatives and two design options that could be used with any alternative: Alternatives 1, 2, 3, and 4; the DDV design option; and the TDV design option. To more clearly describe the location of environmental resources and project impacts, all four project alternatives are divided into five geographic subsections. Figure 4 and Table 2 show the design options of each project alternative by subsection. The DDV is illustrated on Figure 5.

**Table 2 Design Options by Subsection**

Subsection/Design Options	Alternative 1	Alternative 2	Alternative 3	Alternative 4
<b>San Jose Diridon Station Approach</b>				
Viaduct to Scott Blvd	–	X	X	–
Viaduct to I-880	X	–	–	–
Blended, At-Grade	–	–	–	X
<b>Monterey Corridor</b>				
Viaduct	X	–	X	–
At-Grade	–	X	–	–
Blended, At-Grade	–	–	–	X
<b>Morgan Hill and Gilroy</b>				
Embankment to downtown Gilroy	–	X	–	–
Viaduct to downtown Gilroy	X	–	–	–
Viaduct to east Gilroy	–	–	X	–
Blended, At-Grade to downtown Gilroy	–	–	–	X
<b>Pacheco Pass</b>				
Tunnel	X	X	X	X
<b>San Joaquin Valley</b>				
Henry Miller Rd	X	X	X	X

Source: Authority 2019d

I = Interstate; X = present; – = absent



Source: Authority 2019d

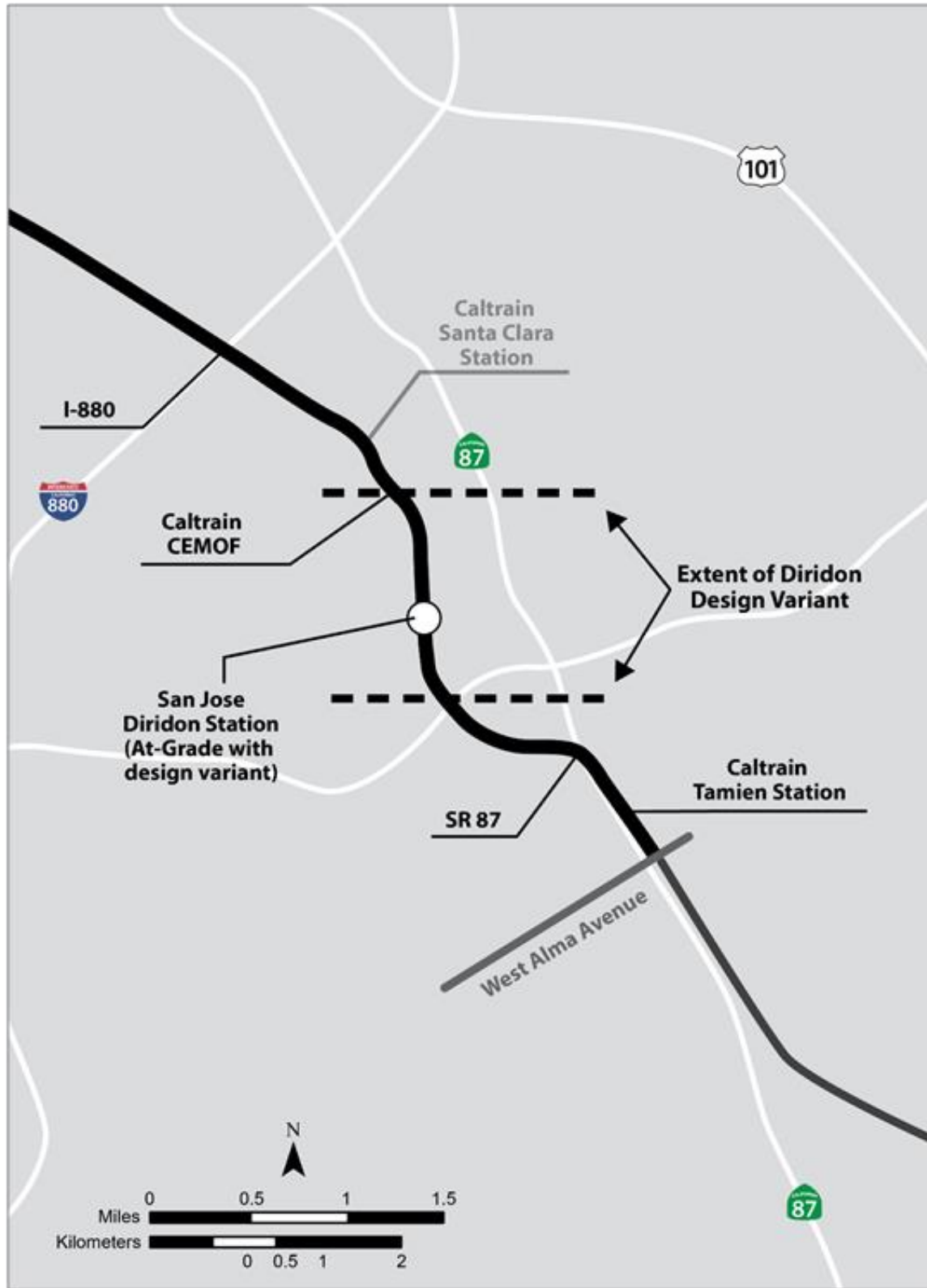
HSR = high-speed rail; I- = Interstate

Note: The design options for each subsection are described in Chapter 2 of the Final EIS.

Note: The SR 152 (North) to Road 11 Wye Alternative is the Selected Alternative for the Merced to Fresno Section: Central Valley Wye. This figure shows the Wye alignments as they were analyzed in the Merced to Fresno Section: Central Valley Wye Supplemental EIR/EIS (Authority 2020a).

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Figure 4 San Jose to Merced Project Section Alternatives Considered in the EIS



CEMOF = Centralized Equipment Maintenance and Operation Facility; I- = Interstate; SR = State Route

**Figure 5 Extent of Diridon Design Variant**

The Project is an approximately 90-mile portion of the 145-mile-long San Jose to Merced Project Section. It comprises mostly dedicated HSR system infrastructure, HSR station locations at San Jose Diridon and Gilroy, an MOWF in the Gilroy area, and an MOWS west of Turner Island Road in the Central Valley. HSR stations at San Jose Diridon and Gilroy will support transit-oriented development, provide an interface with regional and local mass transit services, and provide connectivity to the South Bay and Central Valley highway network.<sup>2</sup> The Project begins at Scott Boulevard in Santa Clara. The HSR infrastructure and operations transition from the blended system between San Francisco and Santa Clara to a fully dedicated system north of the San Jose Diridon Station, either at Scott Boulevard in Santa Clara (Alternatives 2 and 3) or near Interstate (I-) 880 (Alternative 1); or, in the case of Alternative 4, the blended system extends to downtown Gilroy. The Project continues south and east from Gilroy, continuing east through the Pacheco Pass to the Central Valley, to end at Carlucci Road, the western limit of the Central Valley Wye. As shown in Figure 4, the Project comprises the following five subsections:

- San Jose Diridon Station Approach—Extends approximately 6 miles from north of San Jose Diridon Station at Scott Boulevard in Santa Clara to West Alma Avenue in San Jose. This subsection includes San Jose Diridon Station.
- Monterey Corridor—Extends approximately 9 miles from West Alma Avenue to Bernal Way in the community of South San Jose. This subsection is entirely within the city of San Jose.
- Morgan Hill and Gilroy—Extends approximately 30 miles from Bernal Way in the community of South San Jose to Casa de Fruta Parkway/SR 152 in the community of Casa de Fruta in Santa Clara County.
- Pacheco Pass—Extends approximately 25 miles from Casa de Fruta Parkway/SR 152 to east of I-5 in unincorporated Merced County.
- San Joaquin Valley—Extends approximately 20 miles from I-5 to Carlucci Road in unincorporated Merced County.

The four end-to-end project alternatives illustrated in Figure 4 share many common elements. Because all four project alternatives follow the same general corridor, they address many of the same concerns regarding local infrastructure. All four project alternatives are identical in the Pacheco Pass and San Joaquin Valley Subsections; Alternatives 2 and 3 use the same design options in the San Jose Diridon Station Approach Subsection; Alternatives 1 and 3 use the same design options in the Monterey Corridor Subsection; and all four project alternatives use different design options in the Morgan Hill and Gilroy Subsection. The No Project Alternative (synonymous with the No Action Alternative) was also analyzed in the EIS Documents. The project alternatives analyzed in the EIS are the alternatives that the Authority identified as reasonable and feasible and capable of meeting the Project’s purpose and need. All project alternatives include a station in San Jose. A second station will be constructed in either downtown Gilroy or east Gilroy, depending upon the project alternative selected.

The following sections describe the four project alternatives, two design options, two design variants, stations, and the maintenance facilities evaluated in the EIS Documents. All of these project alternatives and options are described in detail in Chapter 2 of the Final EIS.

#### 4.2.1 Alternative 1

As discussed in Chapter 2, Alternatives, of the Final EIS, Alternative 1 would begin at Scott Boulevard in blended service with Caltrain at grade. Beginning at I-880 on the southbound approach to West Hedding Street, Caltrain tracks would be realigned to accommodate the HSR tracks. Dedicated HSR tracks would diverge from the Caltrain Mainline Track (MT) 2 and MT3 and continue south along the north side of the existing Caltrain corridor, crossing under West Hedding Street. Southeast of West Hedding Street, the dedicated HSR tracks would transition from a two-track at-grade configuration to retained fill and finally to a two-track aerial profile. The

<sup>2</sup> South Bay refers to Santa Clara County.

HSR alignment would rise on embankment to an approximately 70-foot-high aerial structure. Continuing on an aerial structure, the alignment would diverge from the Caltrain right-of-way south of the San Jose Diridon Station HSR platforms by turning sharply east at the Park Avenue overcrossing. The HSR aerial structure would cross over Los Gatos Creek and San Carlos Street, then over Royal Avenue and the intersection of Bird Avenue and Auzerais Avenue, then over the I-280/SR 87 interchange. Continuing south along the east side of SR 87, the HSR aerial structure would cross over West Virginia Street and the Guadalupe River Trail, then over the Caltrain rail bridge, the Guadalupe River, and Willow Street. The HSR aerial structure would continue south over the Caltrain Tamien Station on an alignment between Tamien Station and the SR 87 freeway, transitioning to the Monterey Corridor Subsection at West Alma Avenue.

Alternative 1 would continue predominantly on viaduct in the median of Monterey Road for 9 miles within San Jose city limits and remain on viaduct via the Morgan Hill Bypass to downtown Gilroy approximately 30 miles, from Bernal Way in South San Jose to Casa de Fruta. This alternative is distinguished by an alignment around downtown Morgan Hill and a low viaduct approach to an aerial Downtown Gilroy Station. Alternative 1 would include an MOWF south of Gilroy on the east side of the alignment. The alignment would continue predominantly on viaduct and embankment across the Soap Lake floodplain before entering a 1-mile tunnel (Tunnel 1) west of Casa de Fruta.

From Casa de Fruta, the alignment would generally follow the existing SR 152 corridor east for approximately 17 miles, then diverge north around the Cottonwood Creek ravine of the San Luis Reservoir for approximately 8 miles before transitioning to the San Joaquin Valley Subsection near I-5 in Merced County.

The alignment and guideway in the Pacheco Pass Subsection would be the same for all four project alternatives, entailing a 13.5-mile tunnel through Pacheco Pass to avoid any encroachment into the San Luis Reservoir or surficial encroachment into the Cottonwood Creek Wildlife Area. The alignment would continue around the northern arm of the San Luis Reservoir and viaducts over the California Aqueduct, Delta-Mendota Canal, and I-5. East of the I-5 overcrossing, the guideway would be predominantly on embankment along the south side of Henry Miller Road to Carlucci Road, traveling on several mile-plus-long sections of viaduct over major watercourses, the UPRR alignment, and Ingomar Grade Road. The guideway would also be on viaduct through several sections of the Grasslands Ecological Area (GEA) to allow for wildlife movement. Wildlife crossings are also provided via culverts where the guideway is on embankment in this subsection. Several local roadways—Delta Road, Turner Island Road, and Carlucci Road—would be relocated on bridges over the HSR embankment. An MOWS would be located near Turner Island Road.

Overall, the HSR guideway under this alternative would comprise two tunnels totaling 15.0 miles, 45.4 miles of viaduct, 21.9 miles of embankment, 2.3 miles in trench, and 4.3 miles at grade in an excavated hillside cut. Figure 2-53 of the Final EIS illustrates the primary design features of Alternative 1.

#### **4.2.2 Alternative 2**

As discussed in Chapter 2, Alternatives, of the Final EIS, Alternative 2 would begin at Scott Boulevard at grade in blended service with Caltrain. Approximately 300 feet south of Scott Boulevard, the HSR tracks would separate from the Caltrain tracks and begin ascending to embankment and then to the 50-foot-tall, dedicated viaduct at Main Street. Alternative 2 would use a longer viaduct than Alternative 1, ascending to aerial structure near Scott Boulevard rather than ascending to aerial structure south of I-880. A result of the longer viaduct is that blended service with Caltrain would occur north of Scott Boulevard. The long viaduct under Alternative 2 would have a wider footprint than the short viaduct to I-880 under Alternative 1, requiring more curve straightening of the Caltrain tracks north of I-880. South of Santa Clara Station, the three relocated UPRR tracks would cross under the HSR viaduct so that all Caltrain and UPRR tracks would be west of the HSR viaduct. The viaduct would then ascend to approximately 68 feet to cross over I-880.



Between West Alma Avenue and the northern base of Communications Hill, Alternative 2 would be the same as Alternative 1, but it would begin the viaduct transition to the Monterey Road/UPRR corridor approximately 400 feet north of the transition under Alternative 1. The alignment would be generally at grade through the Monterey Corridor Subsection. On the approach to Monterey Road, the aerial structure would cross over the UPRR tracks and the Caltrain Capitol Station. Continuing south, the alignment would descend into a trench beneath a widened Capitol Expressway bridge before ascending to grade at Skyway Drive. Branham Lane and Roeder Road/Chynoweth Avenue would be lowered to be separated from the HSR and existing railroad crossings. The alignment would continue south at grade under SR 85/West Valley Freeway, with modifications to the existing highway bridge to allow HSR to pass underneath. Under Alternative 2, one left turn lane would be removed south of Senter Street and one left turn lane would be removed south of Roeder Road where Monterey Road would be depressed and grade-separated from adjacent properties. Alternative 2 differs from Alternative 1 by shifting all Monterey Road travel lanes and median east of their current locations.

From the southern limit of the Monterey Corridor Subsection, Alternative 2 would be at grade on retained fill between the UPRR right-of-way and Monterey Road in South San Jose. Alternative 2 would require construction of new roadway grade separations to maintain east-west connectivity across Monterey Road. South along the UPRR alignment through Morgan Hill, the alignment would cross over Monterey Road on a clear-span bridge and then on embankment along the east side of the UPRR alignment, crossing over Main, East/West Dunne, San Pedro, and Tennant Avenues on short bridges over the roadways, which would be depressed to maintain east-west connections. The existing bridge at Butterfield Boulevard would be extended to cross over the realigned Railroad Avenue and at-grade HSR alignment, and the Butterfield canal would be relocated to the east to accommodate the HSR alignment adjacent to the UPRR alignment.

Continuing south, the HSR alignment would ascend onto embankment, and West Little Llagas Creek would flow through a new culvert. Monterey Road and the UPRR alignment would be realigned westward between East Middle Avenue and Roosevelt Avenue. HSR would cross over San Martin Avenue and Oak Street, which would be below grade. HSR would continue south at grade adjacent to the east side of the UPRR alignment, while numerous roads would be raised onto bridges, realigned, or depressed to accommodate HSR and the UPRR alignment.

Continuing south into Gilroy, the alignment would shift east for the approach to the Downtown Gilroy Station. HSR and the UPRR alignment would be on embankment (approximately 15 to 25 feet high) and cross over several roads on bridges before arriving at the Downtown Gilroy Station on embankment (approximately 16 feet high). The HSR alignment would continue on embankment south from the Downtown Gilroy Station and descend into a trench under Luchessa Avenue and U.S. Highway 101. Alternative 2 would include an MOWF south of Gilroy on the east side of the alignment. The remainder of this subsection—to Casa de Fruta—would be the same as under Alternative 1. As described in Alternative 1, an MOWS would be located near Turner Island Road.

Overall, this alternative would comprise 20.9 miles on viaduct, 8.5 miles at grade, 41.0 miles on embankment, two tunnels totaling 15.0 miles, and 3.2 miles in trench. Figure 2-59 of the Final EIS illustrates Alternative 2.

### 4.2.3 Alternative 3

As discussed in Chapter 2, Alternatives, of the Final EIS, Alternative 3 was designed to minimize the project footprint through the use of viaduct and by going around downtown Morgan Hill, much like Alternative 1. Alternative 3 would bypass downtown Gilroy to an East Gilroy Station, further minimizing interface with the UPRR corridor in comparison to Alternative 1. Like Alternative 2, Alternative 3 would use the viaduct to Scott Boulevard design option, requiring less disruption of UPRR track than the shorter viaduct to I-880 option. Alternative 3 would incorporate the same alignment and profile as Alternative 1 in the Monterey Corridor, Pacheco Pass, and San Joaquin Valley Subsections, and the same alignment and profile as Alternative 2 in the San Jose Diridon Station Approach Subsection.

The primary difference between Alternative 3 and Alternative 1 is in the Morgan Hill and Gilroy Subsection. From Bernal Way in South San Jose, the alignment through Morgan Hill and San Martin would be the same as described for Alternative 1. South of the Monterey Corridor Subsection, Alternative 3 would diverge east from Alternative 1 north of Gilroy, near the intersection of Monterey Road and Church Avenue. Beginning at Church Avenue, a new freight track would diverge off the UPRR mainline to provide a freight connection to the MOWF. The aerial alignment would cross over Denio Avenue and Buena Vista Avenue on viaduct before descending onto embankment. On the north end of the East Gilroy Station site, the alignment would cross beneath Las Animas Avenue; on the south end of the station site, Leavesley Road would be raised on bridges over the HSR embankment. The alignment would cross Llagas Creek on a low viaduct, and Levee Road would be realigned north of Llagas Creek. Continuing south, the alignment would ascend to approximately 25 feet above grade on embankment approaching the East Gilroy MOWF site on the south side of the more eastern alignment. SR 152 would be grade-separated and realigned, crossing over the MOWF on a bridge. Both Frazier Lake Road and Holsclaw Road would connect to the grade-separated SR 152. Continuing on a 40-foot-high embankment and then on viaduct, the alignment would cross the Pajaro River, Millers Canal, Lake Road, Pacheco Creek, Lovers Lane, San Felipe Road, and SR 152 before entering the west portal of Tunnel 1. The Alternative 3 alignment would converge a short distance west of Tunnel 1 with the alignments of the other project alternatives. The alignment and guideway in the Pacheco Pass and San Joaquin Valley Subsections would be the same under all four project alternatives. As described in Alternative 1, an MOWS would be located near Turner Island Road.

Overall, this alternative would comprise 43.2 miles on viaduct, 1.8 miles at grade, 24.9 miles on embankment, 2.4 miles in trench, and two tunnels totaling 15.0 miles.

#### 4.2.4 Alternative 4

As discussed in Chapter 2, Alternatives, of the Final EIS, Development of Alternative 4 was intended to extend blended electric-powered passenger railroad infrastructure from the southern limit of Caltrain's Peninsula Corridor Electrification Project through Gilroy. Additionally, Alternative 4 was intended to modernize and electrify the rail corridor, which encompasses the addition of tracks, rebuilding infrastructure, and electrifying the corridor as described below and in Section 2.6.2.7, Alternative 4 of the Final EIS. The alternative is distinguished from the other three project alternatives by a blended, at-grade alignment that will operate on two electrified passenger tracks and one conventional freight track predominantly within the existing Caltrain and UPRR rights-of-way to Gilroy. As a result, it includes numerous at-grade crossings that will require four-quadrant gates and other modifications between Santa Clara and Gilroy.

Alternative 4 will begin at Scott Boulevard in blended service with Caltrain on an at-grade profile following Caltrain MT2 and MT3 south along the east side of the existing Caltrain corridor. The existing Lafayette Street pedestrian overpass will remain in place, as will the De La Cruz Boulevard and West Hedding Street roadway overpasses. New UPRR track east of Caltrain MT1 will start just south of Emory Street to maintain freight movement capacity north of San Jose Diridon Station. The existing Santa Clara Station will remain, and the existing College Park Caltrain Station will be reconstructed. A new bridge will be built over Taylor Street for the UPRR alignment to tie into the Lenzen Wye.

The blended at-grade alignment will continue along MT2 and MT3 to enter new dedicated HSR platforms at grade at the center of San Jose Diridon Station (Final EIS Figure 2-66). Continuing south, the blended at-grade three-track alignment will remain in the Caltrain right-of-way through the Gardner neighborhood. The existing underpass at Park Avenue and the existing overpass at San Carlos Street will remain in place. Four-quadrant gates with channelization will be built at Auzerais Avenue and West Virginia Street. A new bridge for the blended HSR/MT3 track over I-280 will be constructed. The existing underpasses at Bird Avenue and Delmas Avenue will be reconstructed, as will the rail bridge overpasses. New standalone rail bridges over Prevost Street, SR 87, the Guadalupe River, and Willow Street will be built for MT3. MT1 and MT2 will remain on the existing structures. The existing Tamien Caltrain Station will remain in place.

From West Alma Avenue the alignment will extend southeast to Bernal Way and will be in blended service with Caltrain on an at-grade profile within the Caltrain and UPRR right-of-way. The Michael Yard will be reconfigured to a double-ended facility and relocated to the east side of the corridor. A new standalone bridge over West Alma Avenue will be constructed for MT3 and a maintenance track, with MT1 and MT2 remaining on the existing structure. A new bridge over Almaden Road will be constructed for MT2 and MT3, while MT1 will remain on the existing structure. Capitol Caltrain Station and Blossom Hill Caltrain Station will be reconstructed. Four-quadrant barrier gates with channelization will be built at Skyway Drive, Branham Lane, and Chynoweth Avenue.

From Bernal Way in South San Jose, the alignment will extend through Morgan Hill and San Martin to the Downtown Gilroy Station, then curve generally east across the Pajaro River floodplain and through a portion of northern San Benito County before entering Tunnel 1 at the base of the Diablo Range. In this subsection, three private road crossings will be eliminated and alternate access will be provided to those properties. The existing Bailey Avenue overpass will remain in place. The Monterey Road underpass will be reconstructed to accommodate the future widening of Monterey Road to four lanes. The Morgan Hill Caltrain Station will be reconstructed with two new side platforms built outside MT2 and MT3. The platform will be reached by a new pedestrian underpass built at the north end of the platform. The existing Butterfield Boulevard overpass will remain in place. Upper Llagas Creek bridge will be reconstructed.

The San Martin Caltrain Station will be reconstructed—the existing platform will be removed, and a new center platform will be built between MT2 and MT3. The platform will be reached by a new pedestrian overpass constructed at the south end of the platform. The existing bridge at Miller Slough will be replaced with a triple-cell box.

The Downtown Gilroy Station approach will be at grade with dedicated HSR tracks to the west of the UPRR alignment between Old Gilroy Street/7th Street and 9th Street (Final EIS Figure 2-68). A new HSR station will be built south of the existing Caltrain station. The Alternative 4 MOWF will be similar to the facility described in Alternative 1. South and east of Gilroy, HSR will operate on a dedicated guideway similar to that of Alternatives 1 and 2 into Tunnel 1 and then through the Pacheco Pass and San Joaquin Valley Subsections, which are the same for all four project alternatives. As described in Alternative 1, an MOWS will be located near Turner Island Road.

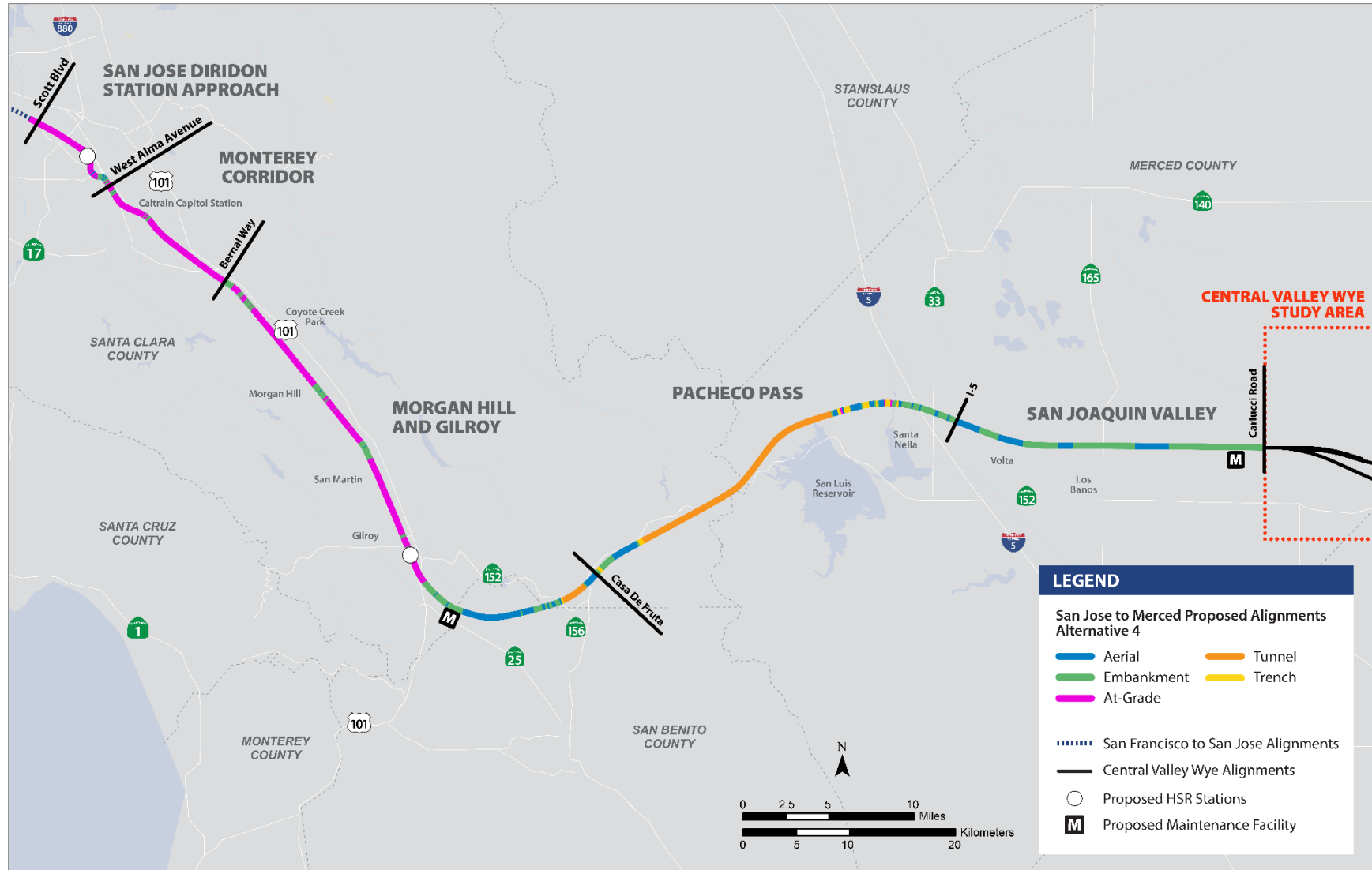
Overall, this alternative will comprise 15.2 miles on viaduct, 30.3 miles at grade, 25.9 miles on embankment, 2.3 miles in trench, and two tunnels with a combined length of 15.0 miles.

#### 4.2.5 Diridon and Tunnel Design Variants

The Authority developed two design variants intended to optimize train speed: the DDV and the TDV. As shown on Figure 4, the DDV will be located north and south of San Jose Diridon Station and at the station platforms and, if adopted, will apply only to the Selected Alternative, Alternative 4. The TDV will be located at the two tunnels east of Gilroy and through the Pacheco Pass and applies to all four project alternatives.

The DDV will allow for higher speeds in the approaches and through San Jose Diridon Station than the preliminary design for the Selected Alternative will provide. The preliminary design is based on the Peninsula Corridor Electrification Project track geometry and restricts speeds approaching and through the station to 15 mph. The DDV will reduce the curvature in the alignment to the north of the station between Julian Street and Santa Clara Street and from the south of the station to San Carlos Street. The design variant will also modify the preliminary design for the Selected Alternative of the ends of the platforms, providing for increased speeds of 40 mph, comparable to the design speeds provided by Alternatives 1, 2, and 3.

The tunnel design variant consists of alterations to all the alternatives (i.e., as compared to the base preliminary designs in Volume 3) of the tunnel and tunnel approaches in the Morgan Hill and Gilroy Subsection (Tunnel 1) and the tunnel and tunnel approaches in the Pacheco Pass Subsection (Tunnel 2) to accommodate an operating speed of 220 mph. Figure 6 depicts the extent of the TDV. The Tunnel 1 design variant will be in the same



Source: Authority 2019a

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Figure 6 Alternative 4 Proposed Alignment

horizontal and vertical location as the preliminary design, but it will have a greater super elevation<sup>3</sup> in the curves providing for increased speeds up to 220 mph in the tunnel and tunnel approaches. The Tunnel 2 design variant will be in the same horizontal location as the preliminary design, and the tunnel will be slightly deeper below the surface. It will also have a greater super elevation in the curves, providing for increased speeds up to 220 mph in the tunnel and tunnel approaches.

### 4.3 Description of the Selected Alternative

The Authority has identified Alternative 4, including the DDV and TDV, the at-grade San Jose Diridon Station, the at-grade Downtown Gilroy Station, the MOWF south of Gilroy, and an MOWS west of Turner Island Road in the Central Valley, as the Selected Alternative. The Selected Alternative extends from Scott Boulevard in Santa Clara and ends at Carlucci Road in Merced County. Figure 2 shows the Selected Alternative. As described above, the Selected Alternative will be comprised of 15.2 miles on viaduct, 30.3 miles at grade, 25.9 miles on embankment, 2.3 miles in trench, and two tunnels totaling 15.0 miles. The Selected Alternative is intended to extend blended electric-powered passenger railroad infrastructure from the southern limit of Caltrain's Peninsula Corridor Electrification Project through Gilroy. South and east of Gilroy, HSR will operate on a dedicated guideway.

The Selected Alternative will begin at Scott Boulevard in blended service with Caltrain on an at-grade profile following Caltrain MT2 and MT3 south along the east side of the existing Caltrain corridor. The Authority has developed a DDV that will allow for higher speeds in the approaches and through Diridon Station than the preliminary design for Alternative 4 will provide. As originally designed, Alternative 4 was based on the Peninsula Corridor Electrification Project track geometry and restricts speeds approaching and through the station to 15 mph. The DDV will improve the curvature in the alignment described above to the north of the station between Julian Street and Santa Clara Street and from the south end of the station to San Carlos Street. The design variant will also modify the preliminary design of the ends of the platforms, providing for increased speeds of 40 mph, comparable to the design speeds provided by Alternatives 1, 2, and 3.

The existing Lafayette Street pedestrian overpass will remain in place, as will the De La Cruz Boulevard and West Hedding Street roadway overpasses. New UPRR track east of Caltrain MT1 will start just south of Emory Street to maintain freight movement capacity north of San Jose Diridon Station. The existing Santa Clara Station will remain, and the existing College Park Caltrain Station will be reconstructed. A new bridge will be built over Taylor Street for the UPRR alignment to tie into the Lenzen Wye.

The blended at-grade alignment will continue along MT2 and MT3 to enter new dedicated HSR platforms at grade at the center of San Jose Diridon Station (Final EIS Figure 2-66). Continuing south, the blended at-grade three-track alignment will remain in the Caltrain right-of-way through the Gardner neighborhood. The existing underpass at Park Avenue and the existing overpass at San Carlos Street will remain in place. Four-quadrant gates with channelization will be built at Auzerais Avenue and West Virginia Street. A new bridge for the blended HSR/MT3 track over I-280 will be constructed. The existing underpasses at Bird Avenue and Delmas Avenue will be reconstructed, as will the rail bridge overpasses. New standalone rail bridges over Prevost Street, SR 87, the Guadalupe River, and Willow Street will be built for MT3. MT1 and MT2 will remain on the existing structures. The existing Tamien Caltrain Station will remain in place.

From West Alma Avenue the alignment will extend southeast to Bernal Way (Final EIR/EIS Figure 2-65) and will be in blended service with Caltrain on an at-grade profile within the Caltrain and UPRR right-of-way. The Michael Yard will be reconfigured to a double-ended facility and relocated to the east side of the corridor. A new standalone bridge over West Alma Avenue will

<sup>3</sup> *Super elevation* is the vertical distance between the height of the inner and outer rails at a curve. Super elevation is used to partially or fully counteract the centrifugal force acting radially outward on a train when it is traveling along the curve.

be constructed for MT3 and a maintenance track, with MT1 and MT2 remaining on the existing structure. A new bridge over Almaden Road will be constructed for MT2 and MT3, while MT1 will remain on the existing structure. Capitol Caltrain Station and Blossom Hill Caltrain Station will be reconstructed. Four-quadrant barrier gates with channelization will be built at Skyway Drive, Branham Lane, and Chynoweth Avenue.

From Bernal Way in South San Jose, the alignment will extend through Morgan Hill and San Martin to the Downtown Gilroy Station, then curve generally east across the Pajaro River floodplain and through a portion of northern San Benito County before entering Tunnel 1 at the base of the Diablo Range. In this subsection, three private road crossings will be eliminated and alternate access will be provided to those properties. The existing Bailey Avenue overpass will remain in place. The Monterey Road underpass will be reconstructed to accommodate the future widening of Monterey Road to four lanes. The Morgan Hill Caltrain Station will be reconstructed with two new side platforms built outside MT2 and MT3. The platform will be reached by a new pedestrian underpass built at the north end of the platform. The existing Butterfield Boulevard overpass will remain in place. Upper Llagas Creek bridge will be reconstructed. Twelve wildlife crossings or jump-outs will be built in this subsection and wildlife intrusion deterrents will be constructed for at-grade crossings at Blanchard Road, Palm Avenue, Live Oak Avenue, and Bloomfield Avenue.

The Downtown Gilroy Station approach will be at grade with dedicated HSR tracks to the west of the UPRR alignment between Old Gilroy Street/7th Street and 9th Street (Final EIS Figure 2-68). A new HSR station will be built south of the existing Caltrain station. The MOWF south of Gilroy on the east side of the alignment. . The alignment will continue predominantly on viaduct and embankment across the Soap Lake floodplain before entering a 1.5-mile tunnel (Tunnel 1) west of Casa de Fruta.

From there, the alignment will generally follow the existing SR 152 corridor east from Casa de Fruta for approximately 17 miles, then diverge north around the Cottonwood Creek ravine of the San Luis Reservoir for approximately 8 miles before transitioning to the San Joaquin Valley Subsection near I-5 in Merced County. The alignment and guideway in the Pacheco Pass Subsection includes a 13.5-mile tunnel (Tunnel 2) through Pacheco Pass to avoid any encroachment into the San Luis Reservoir or surficial encroachment into the Cottonwood Creek Wildlife Area. The TDV consists of alterations of the tunnel and tunnel approaches in the Morgan Hill and Gilroy Subsection (Tunnel 1) and the tunnel and tunnel approaches in the Pacheco Pass Subsection (Tunnel 2) to accommodate an operating speed of 220 mph. For more detail about the TDV, refer to Section 2.6.2.4, Alternative 1, in the Final EIS. The alignment will continue around the northern arm of the San Luis Reservoir and viaducts over the California Aqueduct, Delta-Mendota Canal, and I-5. East of the I-5 overcrossing, the guideway will be predominantly on embankment along the south side of Henry Miller Road to Carlucci Road, traveling on several mile-plus-long sections of viaduct over major watercourses, the UPRR alignment, and Ingomar Grade Road. Four wildlife crossing culverts will be provided west of the California Aqueduct, with an additional two between the California Aqueduct and the Delta-Mendota Canal and one between the Delta-Mendota Canal and I-5. Three wildlife crossings will be provided between I-5 and Santa Nella Road, and three more between Santa Nella Road and Fahey Road. Viaducts will also function as wildlife movement areas in this subsection. The guideway will also be on viaduct through several sections of the GEA to allow for wildlife movement. Wildlife crossings will also be provided via culverts where the guideway is on embankment in this subsection. Several local roadways—Delta Road, Turner Island Road, and Carlucci Road—will be relocated on bridges over the HSR embankment. An MOWS will be located near Turner Island Road.

#### 4.4 Environmentally Preferable Alternative

The CEQ NEPA regulations require that the ROD identify all alternatives that were considered, "...specifying the alternative or alternatives which were considered to be environmentally preferable" (40 C.F.R. § 1505.2).

In determining an environmentally preferable alternative, the Authority considered all San Jose to Merced Project Section project alternatives as well as the No Action Alternative. The Authority

weighed and balanced the physical environmental effects associated with the project alternatives as well as those associated with the No Action Alternative. The Authority determined that the adverse environmental effects associated with the Selected Alternative were less substantial than the environmental consequences associated with the No Action Alternative in terms of air quality and traffic, and thus identified a project alternative as environmentally preferable. The Authority identified the environmentally preferable alternative by balancing the adverse and beneficial impacts of the project alternatives on the human and natural environment. As discussed in Section 2.4, U.S. Army Corps of Engineers, of this ROD, the USACE and USEPA concurred in March 2020 that the Authority's Selected Alternative is the preliminary LEDPA, consistent with USACE's permit program (33 C.F.R. Parts 320–331) and USEPA's Section 404(b)(1) Guidelines (40 C.F.R. Parts 230–233). Additionally, as identified in Section 8.4.5, Identification of the Preferred Alternative, and Section 8.6, Environmentally Preferable Alternative, of the Final EIS, and in accordance with 40 C.F.R. Section 1505.2, Alternative 4, including the DDV and TDV, the San Jose Diridon and Downtown Gilroy Stations, the MOWF south of Gilroy, and an MOWS west of Turner Island Road in the Central Valley, is the environmentally preferable alternative for the following reasons:

- Alternative 4 will have the lowest overall impacts because it will result in the fewest displacements of residences, businesses, community facilities, and agricultural structures; will result in the least conversion of agricultural farmland to nonagricultural uses (and thus lowest impact on agricultural employment); and will cause the least change in aesthetics and visual quality. Alternative 4 will have the most noise impacts (with noise barrier mitigation only) but the lowest impacts on Monterey Road travel times. While Alternative 4 will potentially have the most impact on emergency vehicle response times, this could be mitigated by the Authority working with local jurisdictions to construct and operate new fire stations and install new responder equipment at existing stations. The other project alternatives would have greater impacts than Alternative 4 in terms of key community resources, with the exception of noise.
- Alternative 4 will result in the lowest impacts on key natural environmental factors of the four project alternatives, such as wetlands and other aquatic habitats providing high-value habitat for a diverse array of species. Alternative 4 is also the project alternative most likely to receive support for permitting by the USACE under the CWA (see Section 8.7, Least Environmentally Damaging Practicable Alternative, of the Final EIS). Alternative 4 will have the lowest impacts of the four project alternatives on high-value aquatic habitats and habitat for special-status plant and wildlife species.
- Alternative 4 will result in the lowest impacts from permanent use of Section 4(f) parks and National Register of Historic Places (NRHP)-listed or -eligible built environment historic resources.
- Alternative 4 is the lowest capital cost project alternative.

Table 8-1 and Section 8.4, Preferred Alternative, in the Final EIS provide a detailed comparison of the various criteria evaluated for the San Jose to Merced Project Section project alternatives.

When compared to Alternatives 1, 2, and 3, Alternative 4, with the DDV and TDV, the San Jose Diridon and Downtown Gilroy Stations, the MOWF south of Gilroy, and an MOWS west of Turner Island Road in the Central Valley, will result in the fewest impacts related to the number of displacements, biological resources, Section 4(f)/6(f) resources, aesthetics and visual quality, agricultural farmland, and built environment resources. Alternative 4 will have the most alignment in proximity to existing transit corridors, and Alternative 4 is the only alternative that will provide the opportunity to extend electrified Caltrain service to Gilroy.

In accordance with 40 C.F.R. Section 1505.2, the Authority identifies Alternative 4, with the DDV and TDV, the San Jose Diridon and Downtown Gilroy Stations, the MOWF south of Gilroy, and an MOWS west of Turner Island Road in the Central Valley, as the environmentally preferable alternative.

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## 5 SUMMARY OF POTENTIAL EFFECTS

Construction and operation of the Selected Alternative has the potential to affect a variety of environmental and social resources. Impacts on these resources could be adverse or beneficial. NEPA impact determination requires consideration of both context and intensity. Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures, of the Final EIS includes a full discussion of the potential impacts of the San Jose to Merced Project Section, organized by resource area. To fully understand the potential range of impacts of the Selected Alternative, the Final EIS analyzed all reasonably foreseeable environmental impacts resulting from its construction and operation.

The Selected Alternative will not result in impacts in the following resource areas: electromagnetic fields and electromagnetic interference; public utilities and energy; geology, soils, seismicity, and paleontology; hazardous materials and waste; socioeconomics and communities; and regional growth. Additionally, some resource sections have adverse impacts under NEPA under some of the project alternatives but not for the Selected Alternative: station planning, land use, and development, as well as parks, recreation, and open space. These resources have also been excluded from this decision document. In determining that the Selected Alternative will not result in impacts on these resources, implementation of IAMFs, mitigation measures, and best management practices (BMPs) are presumed and will be required as part of project implementation as described further in Section 6, Mitigation Commitments and Monitoring, of this ROD.

Although adverse impacts on biological resources are resolved with mitigation, this document also includes a discussion of impacts on these resources due to the strong public and agency interest in these issues throughout the process.

Although adverse impacts on hydrology and water resources are resolved with mitigation, this document also includes a discussion of impacts on these resources to support the floodplains determination in Section 9.6.

The following sections summarize the adverse and the beneficial impacts that may occur with construction and operation of the Selected Alternative.

### 5.1 Transportation

As discussed in Section 3.2, Transportation, of the Final EIS, operation of the Selected Alternative will result in increased traffic adjacent to stations in San Jose and Gilroy and increased gate-down time at the at-grade crossings, which will adversely affect intersections in the San Jose Diridon Station Approach, Monterey Corridor, and Morgan Hill and Gilroy Subsections but will have adverse effects at fewer intersections than the other project alternatives. Alternatives 1, 2, and 3 would result in increased traffic at the San Jose and Gilroy stations, would result in traffic delays due to the narrowing of Monterey Road in South San Jose, and would alter other roadways, resulting in adverse effects on intersections in the San Jose Diridon Station Approach, Monterey Corridor, and Morgan Hill and Gilroy Subsections. Temporary road closures and realignments will result in increases in travel times, delays, and inconvenience to the traveling public under all four project alternatives, with the Selected Alternative having the least disruption during construction due to fewer proposed modifications of existing roadways than the other project alternatives.

Construction of the Selected Alternative will lead to temporary impacts on major roadways, freeways, and intersections from temporary road closures and relocations during construction. Construction will also result in permanent road closures and realignments that will have permanent impacts on intersection operations. Operation of the Selected Alternative will also result in permanent effects on intersection operations.

Some public parking may require temporary closure during construction, but temporary effects on parking at the San Jose Diridon Station and SAP Center under the Selected Alternative will be smaller than with the other project alternatives. Operation of the Selected Alternative will permanently displace parking at and adjacent to the San Jose Diridon Station, the SAP Center,

and the Downtown Gilroy Station, but the Selected Alternative includes construction of replacement parking on a 1:1 basis under TR-IAMF#9, so there will be no permanent reduction of available parking at these locations. The demand for parking for HSR riders in the area surrounding the San Jose Diridon Station can be accommodated through public and private parking venues and offset through the existing and planned expansion in transit access to the station.

Construction of the Selected Alternative will involve the temporary closure of bus stops, parking areas, transit stations, and roadway travel lanes. Operation of the Selected Alternative will result in continuous permanent impacts on bus services, with delays caused by increased congestion along 10 bus routes. Construction of the Selected Alternative will also result in temporary impacts on pedestrian and bicycle access from the temporary closure or removal of pedestrian facilities, bicycle lanes, and paths.

Construction of the Selected Alternative will result in temporary impacts on freight rail operations from temporary closure or relocation of tracks, , and disruption and delay will last hours or days. Operation of the Selected Alternative will not result in continuous permanent impacts on freight rail capacity because there will be no limiting of freight service from sharing of tracks in portions of different project alternatives. Freight operation hours will be constrained during operation of the Selected Alternative, which will cause changes in freight operations and inconvenience to operators, but freight operations overall will be maintained.

To minimize potential effects on transportation, the Authority will implement numerous strategies and design features (set forth in IAMFs) to avoid or minimize effects during construction, such as the adoption of a construction transportation plan and contractor requirements to avoid or minimize circulation impacts due to road closures. Project features to address parking impacts include identification of employee parking locations, off-street parking for construction-related vehicles, and replacement for temporary displacement of special event parking at the SAP Center. Project features to address nonmotorized travel impacts include providing and maintaining pedestrian and bicycle accessibility across the HSR corridor, to and from stations, and on station property.

In addition to these IAMFs, the Authority will require numerous mitigation measures that will further minimize and/or compensate for adverse effects of the Selected Alternative. The mitigation measures that address roadways, freeways, and intersections include installation, modification, and/or optimization of signals; widening and reconfiguring of specific approaches and intersections; and restriping to address traffic delay impacts. Of the 32 intersections with adverse effects, mitigation will avoid adverse effects at 10 intersections, leaving adverse effects at 22 locations under the Selected Alternative—the fewest affected intersections among the project alternatives. Mitigation for transit includes installation of transit signal priority to address both construction and operational effects on transit delays. Mitigation to address construction disruptions to passenger and freight rail includes a railway disruption control plan. The Selected Alternative's overall impact on transportation resources in the region and state will be beneficial through substantial reductions in vehicle miles traveled, increased transit connectivity, and reduction in the need to expand freeways and airports.

## 5.2 Air Quality and Greenhouse Gases

As discussed in Section 3.3, Air Quality and Greenhouse Gases, of the Final EIS, annual construction emissions of the Selected Alternative will exceed the General Conformity *de minimis* threshold in the San Joaquin Valley Air Basin (SJVAB) for nitrogen oxide (NO<sub>x</sub>) for all years of construction between 2022 and 2028 even with implementation of IAMFs. NO<sub>x</sub> emissions associated with construction of the Selected Alternative will also exceed the General Conformity *de minimis* threshold in the San Francisco Bay Area Air Basin (SFBAAB) between 2023 and 2025 even with implementation of IAMFs. All other pollutants will be below applicable *de minimis* thresholds. Construction of the Selected Alternative will lead to new violations of the PM<sub>10</sub> and PM<sub>2.5</sub> CAAQS and NAAQS, as well as potentially contribute to existing PM<sub>10</sub> and PM<sub>2.5</sub> violations through exceedances of the SIL. The Selected Alternative will also violate the 1-hour NO<sub>2</sub> NAAQS and CAAQS. Construction of the Selected Alternative will generate GHG emissions.

However, these emissions will be temporary and will be offset from the emissions benefit that will occur during the operations period. As a result, the Selected Alternative will not result in global climate change impacts from greenhouse gas emissions.

The Selected Alternative, as well as any of the other project alternatives, will avoid localized impacts from asbestos and lead-based paint exposure. To reduce impacts on the environment, construction of the Selected Alternative will include project features to avoid and minimize impacts on air quality. Specifically, the Selected Alternative will employ measures to reduce fugitive dust emissions, use renewable diesel fuel in construction diesel equipment and on-road diesel trucks, and reduce criteria exhaust emissions from both on-road construction vehicles and heavy-duty off-road construction equipment. The Selected Alternative will reduce the potential impact of concrete batch plants through siting and control measures. The Authority will require mitigation measures that will further minimize and/or compensate for adverse effects of the Selected Alternative. These mitigation measures include additional on-site emissions controls to reduce fugitive dust and requirements for the use of zero emission and/or near-zero emission vehicles and off-road equipment. The Authority will also offset project construction emissions in the SFBAAB and the SJVAB. The Authority will enter into an agreement with the Bay Area Air Quality Management District (BAAQMD) to reduce NO<sub>x</sub> to the required levels by acquiring emissions offsets. The Authority and the San Joaquin Valley Air Pollution Control District (SJVAPCD) will enter into a Voluntary Emissions Reduction Agreement (VERA) to cover the portion of the Project approved and funded for construction within the SJVAB. Through the VERA, the Authority will fund emission reduction projects that will achieve the necessary emission reductions.

Operation of the Selected Alternative, as well as any of the other project alternatives, will provide statewide and regional air quality benefits. This will result in a permanent net benefit to air quality during operations because it will lower emissions of mobile source air toxics, greenhouse gases, volatile organic compounds, NO<sub>x</sub>, sulfur dioxide, carbon monoxide, PM<sub>10</sub>, and PM<sub>2.5</sub> by diverting trips from travel modes with higher emissions (e.g., commercial air flights and automobile trips) to HSR, which has lower emissions.

### 5.3 Noise and Vibration

As discussed in Section 3.4, Noise and Vibration, of the Final EIS, the Selected Alternative will have similar noise impacts related to construction activities near sensitive receptors at night as the other project alternatives. Construction vibration impacts will also occur during rail corridor construction for the Selected Alternative and the other project alternatives. The Selected Alternative will result in the most vibratory compaction at embankments and at-grade portions of all project alternatives; construction in existing right-of-way will require more nighttime work to minimize service disruptions.

Operation of the Selected Alternative will generate noise above ambient levels primarily from train passbys throughout the project section and also from horn sounding at at-grade crossings and stations between San Jose and Gilroy. The elevated noise levels will result in adverse impacts from the exposure of sensitive receptors to severe noise without mitigation. The other project alternatives would be grade-separated and would have fewer operational noise impacts. Operation of the Selected Alternative will also generate traffic and associated noise at HSR stations as well as additional noise associated with train movements in and out of the MOWF near Gilroy. Operation of all project alternatives will also generate additional noise associated with traction power facilities, and the Selected Alternative will have the greatest number of these impacts prior to mitigation due to the higher level of noise impacts due to train horn sounding. All project alternatives will have limited operations impacts associated with human and livestock startle. Operation of the Selected Alternative will cause permanent vibration annoyance impacts at sensitive receptors. The Selected Alternative will result in the most vibration impacts prior to mitigation, and Alternative 1 would result in the least.

To avoid or minimize potential noise and vibration effects associated with construction and operation, the Authority will adhere to all applicable state and federal regulations, including Federal Highway Administration (FHWA) and FRA guidelines for noise from transportation

sources and the abatement of excessive noise; Occupational Safety and Health Administration (OSHA) regulations that protect workers from hazardous noise exposure; FHWA and OSHA guidelines regarding modeling and mitigating noise from construction sources for both construction workers and sensitive receptors in proximity to construction; and the California Department of Transportation *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* (Caltrans 2011), which provides a methodology for evaluating construction and traffic noise and for evaluating the effectiveness and feasibility of different sound abatement methods.

Additionally, the Authority has developed project-specific design strategies that will further reduce the potential for adverse effects associated with construction and operation of the Selected Alternative to levels below those that will be achieved through regulatory compliance alone. However, even with implementation of regulatory requirements and these project-specific design strategies, the Selected Alternative will still have the potential to result in adverse impacts. To further reduce project-related construction and operations noise and vibration, the Authority has developed mitigation measures that include sound barriers, building sound insulation, and noise easements; requiring preparation and adherence to a construction noise mitigation and monitoring program; conducting subsequent noise and vibration environmental analysis during final design; ensuring that train vehicle procurement meets pertinent federal noise regulations for locomotives and rail cars; and ensuring stations, MOWFs, and traction power substations are designed to reduce noise. In addition, where local jurisdictions decide to apply to the FRA for establishment of a quiet zone, the Authority will support that effort, which may result in reduction of horn sounding at the at-grade crossings within any established quiet zones.

#### 5.4 Biological and Aquatic Resources

As discussed in Section 3.7, Biological and Aquatic Resources, of the Final EIS, the Selected Alternative will reduce adverse impacts on biological and aquatic resources after IAMFs and mitigation measures are implemented. Although adverse impacts on biological resources are resolved with mitigation, this document includes a discussion of impacts on these resources due to the strong public and agency interest in these issues throughout the process.

The Selected Alternative will have the fewest impacts on most biological and aquatic resources compared to other project alternatives, as summarized below:

- The Selected Alternative will disturb or remove special-status species (plants and wildlife) or their habitats during construction, but it will have the lowest overall impact on special-status species among the project alternatives. Operations impacts on special-status species are expected to be similar among all project alternatives, including the Selected Alternative.
- The Selected Alternative will disturb non-special-status species during construction, including the disturbance or removal of habitats for these common species but will have the lowest overall impact on non-special-status species among the project alternatives. The Selected Alternative will also affect habitat for waterfowl and shorebirds within the GEA; however, the impacts with the GEA are identical among the project alternatives. Operations impacts are primarily associated with wildlife movement and are discussed further below.
- The Selected Alternative will disturb or remove special-status plant communities during construction, but it will have the lowest overall impact on special-status plant communities among the project alternatives. Operations impacts will include the intermittent disturbance or degradation of special-status plant communities during maintenance of the right-of-way; however, operations impacts from the Selected Alternative are expected to be similar to the other project alternatives.
- The Selected Alternative will disturb or remove aquatic resources during construction, but it will have the lowest overall impact on aquatic resources among the project alternatives. Operations impacts will include the intermittent disturbance or degradation of aquatic resources during maintenance of the right-of-way; however, operations impacts from the Selected Alternative are expected to be similar to the other project alternatives.

- The Selected Alternative will result in the removal of protected trees during construction, but it will have the lowest overall impact on protected trees among the project alternatives. Operations impacts on protected trees are not expected.
- The Selected Alternative will affect wildlife movement and wildlife movement corridors during construction. The Selected Alternative will have the least impact because it will be located within the existing UPRR right-of-way in Coyote Valley and will therefore require a smaller project footprint. Outside of the Coyote Valley area and UPRR right-of-way, the Selected Alternative will have identical effects to other project alternatives related to other wildlife movement corridors, including effects from noise, light, and visual disturbance. Operations impacts will result from intermittent noise, vibration, visual disturbance, lighting, and strike but are expected to be similar among the project alternatives.
- The Selected Alternative will affect conservation areas, but it will have the lowest impact in terms of the number of acres affected and the number of conservation areas affected, among the project alternatives. Operations impacts on conservation areas are expected to be minor, primarily indirect effects on conservation areas adjacent to the right-of-way and are expected to be similar among all project alternatives.
- The Selected Alternative will affect habitat conservation plans, but it will have similar impacts to the other project alternatives. There will be a potential conflict with the Santa Clara Valley Habitat Plan because the Santa Clara Valley Habitat Authority has obtained an easement to protect California sycamore woodland along Pacheco Creek at the Pacheco Creek Open Space Regional Reserve, and the Selected Alternative will have permanent and temporary direct impacts within the protected area. Operations are not expected to result in any conflicts with habitat conservation plans.

To minimize potential effects on biological resources and aquatic resources during construction and operation of the Selected Alternative, the Authority will implement numerous strategies and design features (set forth in IAMFs) that will avoid or minimize effects and will comply with all biological permit requirements. These IAMFs include designated areas for staging, access, and construction; biological monitors; bird-safe design features, and the establishment of protocols to further avoid or minimize impacts. In addition to these IAMFs, the Authority will require numerous mitigation measures that will further minimize and/or compensate for adverse effects of the Selected Alternative. These include broad mitigation strategies designed to minimize impacts through the establishment of environmentally sensitive areas and nondisturbance zones; installing wildlife exclusion fencing; installation of dedicated wildlife crossings; installation of noise/visual barriers or structures at important wildlife movement areas; conducting pre-construction surveys; preparation of a Habitat Mitigation Plan to guide compensatory mitigation; and off-site habitat restoration, enhancement, and preservation strategies, including the purchase of conservation bank credits from agency-approved banks. Additional mitigation measures have been developed to minimize potential effects on specific special-status species or groups of species.

## 5.5 Hydrology and Water Resources

Of the topics analyzed in Section 3.8, Hydrology and Water Resources, none will have adverse effects under NEPA. To support the findings in Section 9.6, this section addresses impacts to floodplains from the Selected Alternative. Construction of the Selected Alternative will place new structures and/or modify existing structures within 100-year floodplains regulated by the Federal Emergency Management Agency, which will result in changes to channel geometry and flood flow characteristics and have the potential to result in permanent impacts on floodplain hydraulics. However, with implementation of IAMFs, which will require flood protection measures that minimize effects on 100-year floodplain water surface elevations and coordination with the U.S. Army Corps of Engineers, no permanent effects on designated floodplains from construction will occur. In addition to having minimal impacts on the hydraulics of the Soap Lake floodplain, the Selected Alternative will have minimal impacts on the hydrology of the Soap Lake floodplain. The project will increase the peak 100-year flow rate by 0.25 percent from the existing condition, and

preliminary hydraulic analysis indicates there will be negligible impacts on downstream floodplains and floodways as a result of this minimal increase in peak flow rates. Construction of the Selected Alternative in the Soap Lake floodplain will not have substantial downstream impacts.

The design of the Selected Alternative with IAMFs minimizes impacts to floodplains. As a result, the Authority does not need to implement mitigation measures to further minimize and/or compensate for adverse effects of the Selected Alternative.

## 5.6 Safety and Security

Of the safety and security topics described in Section 3.11 Safety and Security (i.e., emergency services, wildfire hazards, community safety, and security), of the Final EIS, only the area of emergency vehicle response delays have adverse effects after the implementation of IAMFs, mitigation measures, and BMPs. Through effective implementation of roadway improvements, project features will minimize permanent construction impacts on the exposure of motor vehicle drivers, pedestrians, and bicyclists to traffic hazards, and these users will benefit from overpasses and underpasses, local street widening, traffic restrictions, new traffic signals, and intersection improvements that are part of the Project.

Construction of the Selected Alternative, as well as any of the other project alternatives, will result in temporary closures of and modifications to certain roadways during construction, which will result in temporary delay to emergency vehicle response in certain areas, with the Selected Alternative having the least amount of roadway closure during construction. Alternatives 1, 2, and 3 would narrow Monterey Road during construction, which would result in delays to emergency vehicle response. The Selected Alternative will not entail narrowing Monterey Road, but there will be temporary delays caused by temporary detours and closures associated with construction.

To address these impacts, the Authority will, in collaboration with construction contractors and/or local jurisdictions, prepare and implement plans to maintain emergency vehicle access during construction and to establish procedures for implementing temporary road and lane closures. The Authority will coordinate efforts between the construction contractor and local jurisdictions to minimize conflicts and maintain pedestrian, bicycle, and transit access.

Construction of the Selected Alternative, as well as any of the other project alternatives, will result in increased traffic around the San Jose Diridon Station, which will result in emergency vehicle response delays. Alternatives 1, 2, and 3 would permanently narrow Monterey Road, which would result in delays to emergency response, but the Selected Alternative will not entail narrowing Monterey Road. Operations of the Selected Alternative will result in increased gate-down time at at-grade crossings, which will result in delays to emergency response in certain locations. To reduce this impact, emergency vehicle priority at traffic signals will be installed. Mitigation for the Selected Alternative will also include additional emergency response improvements, such as emergency vehicle bypass lanes, provision of additional equipment to emergency providers, increase in emergency services, and construction of new fire stations, among other options as necessary to address adverse emergency response delays due to implementation of the Selected Alternative. This mitigation will fully mitigate the Selected Alternative's impacts on emergency vehicle response time, if implemented. While the Authority can provide funding for these improvements, it cannot compel the City of San Jose, Santa Clara County, the City of Morgan Hill, or the City of Gilroy to construct and operate the improvements. If local jurisdictions do not implement emergency vehicle response improvements with the Authority funding for construction, proposed site-specific traffic mitigation measures that address peak-hour delays at intersections adjacent or nearby to locations with significant emergency vehicle response time effects due to gate-down time (TR-MM#1e, TR-MM#1t, TR-MM#1u, TR-MM#1w, TR-MM#1x.6, TR-MM#1x.8, TR-MM#1x.9, and TR-MM#1x.10) will help to reduce congestion near at-grade crossings but will not eliminate delays at the at-grade crossings themselves.

## 5.7 Agricultural Farmland

As discussed in Section 3.14, Agricultural Farmland, of the Final EIS, construction of the Selected Alternative will have direct and indirect impacts on Important Farmland. Direct impacts will include the temporary use of Important Farmland during construction, in addition to the permanent conversion of Important Farmland to nonagricultural use.

Indirect impacts on Important Farmland by the Selected Alternative will include permanent creation of remnant parcels of Important Farmland during construction, as well as temporary and permanent disruption of agricultural infrastructure affecting Important Farmland during construction. The Selected Alternative will result in the temporary use of 461 acres of Important Farmland, which is the least impact of the project alternatives.

The Selected Alternative will also result in the permanent conversion of Important Farmland to nonagricultural use caused by direct use of the land. Construction of the Selected Alternative and other project alternatives, including acquisition of land for the construction of the HSR right-of-way, access easement, stations, and maintenance facilities, will require the long-term use of Important Farmland, resulting in direct permanent impacts or the conversion of Important Farmland to a nonagricultural use. Construction of the Selected Alternative will result in permanent conversion of 1,033 acres of Important Farmland, which is the least impact of the project alternatives.

Included in the 1,033 acres of Important Farmland permanently converted to nonagricultural use by construction of the Selected Alternative, 17.8 acres are within agricultural conservation easements. This is more than Alternative 1 and less than Alternatives 2 and 3.

The Selected Alternative will result in indirect permanent conversion of 147 acres of Important Farmland through the creation of remnant parcels. This will have the least impact among the project alternatives proposed. From the standpoint of access and the disruption of agriculture infrastructure, the Selected Alternative will result in the permanent closure of 12 roads and in 3 permanent farm road modifications. This is the least impact among the four project alternatives, because it will be built where possible within an existing railroad right-of-way.

Construction of the Selected Alternative will temporarily disrupt 207 electrical lines and 18 pipelines or canals serving Important Farmland. This is the least impact on electrical lines compared to Alternative 1 (215 electric lines), Alternative 2 (231 electric lines), and Alternative 4 (210 electric lines). The Selected Alternative will have impacts on 18 pipelines or canals, which is fewer impacts than Alternative 1 (20 pipelines or canals) and Alternative 2 (231 pipelines or canals) and more than Alternative 3 (17 pipelines or canals).

During operations, HSR trains will generate wind along the sides and at the rear of the train (known as *wake*); however, the impact from wind will be minimal and will not lead to the indirect permanent conversion of Important Farmland to nonagricultural use. Operations and maintenance activities associated with the electrical transmission facilities will be the same for all project alternatives as under existing conditions. The electrical transmission facilities will not generate any wind and will not lead to the indirect permanent conversion of Important Farmland to nonagricultural use.

The Authority has developed IAMFs to avoid or minimize the Selected Alternative's impacts on Important Farmland (refer to Appendix C). However, even with adherence to these IAMFs, the Selected Alternative will still result in the permanent conversion of Important Farmland to a nonagricultural use. To offset these impacts, the Authority will, through an agreement with the California Department of Conservation, fund the California Farmland Conservancy Program's work to identify suitable agricultural land for mitigation of impacts and to fund the purchase of agricultural conservation easements from willing sellers at a replacement ratio of 1:1 for lands that are directly permanently converted to nonagricultural use by the Project. This agreement provides for the purchase of agricultural conservation easements to preserve Important Farmland in an amount commensurate with the quantity and quality of converted farmlands. Additionally, to mitigate impacts, the Authority will minimize the area of Important Farmland near aerial

guideways near Casa de Fruta, which will also result in minor localized beneficial effects for wildlife. Also, prior to construction, the Authority will coordinate with property owners to evaluate potential for modified access to remnant parcels, to allow continued use of agricultural lands and facilities, and to determine drainage facility relocations so that relocations will reduce impacts on continued operations of the drainage facilities. Mitigation to reduce impacts on Important Farmland will benefit the agricultural community by preserving land for agricultural uses.

## 5.8 Aesthetics and Visual Quality

As discussed in Section 3.16, Aesthetics and Visual Quality, of the Final EIS, construction of the Selected Alternative will cause temporary impacts on visual character and quality by introducing construction activities and equipment into the viewsheds of all viewer groups, including worker parking and equipment and materials storage areas. Impacts will be greater where there are sensitive viewers or where larger portions of the Selected Alternative will be visible. Construction will be visible from some locations with scenic vistas, such as from elevated roadways and bridges that cross or parallel the existing rail corridors or from adjacent multilevel buildings, degrading visual quality where sensitive viewers are present.

Operation of the Selected Alternative will result in permanent direct visual impacts from the increase in lighting levels at HSR facilities in rural agricultural settings where existing nighttime light levels are low, including an MOWF south of Gilroy and an MOWS in the San Joaquin Valley. In these locations near HSR facilities, project features will reduce impacts on nighttime light levels through visually sensitive lighting design, but they will not eliminate the presence of nighttime light. Unlike Alternatives 1, 2, and 3, the Selected Alternative will not have adverse effects from nighttime operation of trains because spillover light from passing trains will be similar to existing light from passenger and freight trains. The Selected Alternative will have less train light spillover compared to the other project alternatives because it will run at grade, and the light spillover will be contained by existing vegetation and noise barriers. Also, the Selected Alternative will operate in blended service with Caltrain in urbanized areas, with lights from HSR similar to lights from existing passenger and freight service, resulting in the least impact of the four project alternatives. In other locations, the overall impact from light spillover will be the same under all four project alternatives.

Construction of the Selected Alternative will cause direct permanent impacts on visual character and quality resulting from physical changes of the landscape that alter the existing visual character or that block, screen, obstruct, or interfere with views of scenic resources and important visual landmarks, resulting in degraded visual quality. In general, permanent construction impacts will be greater where the HSR is on viaduct and the scale of the infrastructure dominates the existing landscape. The Selected Alternative will have the lowest operations impact on aesthetics and visual quality because the at-grade alignment will be mostly within the Caltrain right-of-way, both within the San Jose Diridon Station Approach Subsection and the Monterey Corridor Subsection, and it will be at grade mostly within the UPRR right-of-way within the Morgan Hill and Gilroy Subsection.

To avoid or lessen other visual impacts of the Selected Alternative, the Authority has developed IAMFs, which include adherence to the Authority's aesthetic guidelines and review process for non-station structures. The application of station area development principles will help to maximize the performance of the transportation investment, enhance the livability of the communities it serves, create long-term value, and sensitively integrate the Project into the communities along the HSR system corridor. The Authority will encourage context-sensitive designs by working with local governments to enhance the public benefits of HSR station development so that they meet the needs of the local communities.

To further reduce potential adverse visual effects associated with construction of the Selected Alternative, the Authority has developed mitigation measures that will require contractors to minimize and/or screen construction areas and to minimize or avoid nighttime light disturbance. These measures will also require the Authority to engage with local communities to help inform the design of elevated guideways so that they are more visually harmonious with the local context. Landscape treatments and other plantings after construction will also help enhance



visual quality. Mitigation measures also include ensuring the prompt treatment of graffiti on new infrastructure.

## 5.9 Cultural Resources

As discussed in the *San Jose to Merced Project Section 106 Finding of Effect Report* (Authority 2020d) and Section 3.17, Cultural Resources, of the Final EIS, the Selected Alternative will affect pre-contact and historic-era archaeological resources and historic built environment resources and may affect presently unknown or undiscovered cultural resources. Construction of the Selected Alternative will adversely affect the fewest historic built resources (5) compared to Alternatives 1 and 3 (7), and Alternative 2 (11). The Selected Alternative will have an adverse effect on five built environment historic properties, including three that will be demolished (the Madrone Underpass, Live Oak Creamery, and the Cozzi Family Property). Additionally, construction of new HSR station facilities will remove character-defining features and alter historic setting characteristics of the Southern Pacific Depot in San Jose and diminish the agricultural setting of the Negra Ranch.

Mitigation is available to address impacts, including: relocation of an historic property to avoid demolition (CUL-MM#4), preparation and submittal of additional recordation and documentation (CUL-MM#6) should design changes result in expansion of the area of potential effects, preparation of interpretive or educational materials (CUL-MM#7), visual screening (CUL-MM#9), and station design consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 C.F.R. Part 68) (CUL-MM#10).

In consultation with the SHPO and other consulting parties, the Authority has determined that the APE contains two known archaeological historic properties (CA-SCL-30/H (P-43-000050) and CASCL-338H (P-43-000245)) and 31 other archaeological resources that are currently unevaluated and presumed NRHP-eligible for planning purposes. Because of limited access to private lands within the area of potential effects during development of the EIS, all project alternatives have the potential to damage previously unidentified archaeological sites prior to construction or buried sites found during construction. The Selected Alternative has the fewest archaeologically sensitive acres, including land in the existing right-of-way and new acquisition areas.

To avoid or minimize cultural resources impacts, the Authority will incorporate IAMFs, including requirements for additional surveys; training sessions for construction personnel to be able to identify cultural resources; a monitoring plan; a discovery plan; a procedure to be followed if unanticipated discoveries are made during ground-disturbing activities; and plans to protect and to avoid or minimize damage to historic properties. Additionally, the Selected Alternative will incorporate mitigation measures concerning both archaeological resources and built environment resources. Mitigation includes phased identification of archaeological and built environment resources, allowing for the potential discovery of previously unidentified resources once access to all properties within the construction area is secured.

Surveys for such resources will be conducted on all properties that have not been subject to prior surveys before construction begins. Should any resources be identified, the Authority will consult with Section 106 consulting parties and agree upon appropriate mitigation measures, which may include preservation in place, data recovery, or other appropriate steps outlined in the Built Environment Treatment Plan (Authority 2021b) or Archaeological Treatment Plan (Authority 2021c). Archaeological mitigation will set forth protocols and standards to ensure that any unanticipated discoveries are properly evaluated, avoided if possible, and treated and that will halt construction work in the area while such discoveries are evaluated.

## 5.10 Cumulative Impacts

As discussed in Section 3.19, Cumulative Impacts, of the Final EIS, adherence to IAMFs and/or mitigation measures will avoid or minimize most impacts associated with construction and operation of the Selected Alternative. However, when combined with other past, present, and reasonably foreseeable projects, the Selected Alternative, even with adherence to IAMFs and

mitigation measures as appropriate, will contribute to cumulative construction and operations impacts in the following resource areas:

- Construction—Transportation, air quality, safety and security, agricultural farmland, aesthetics and visual quality, and cultural resources
- Operations—Noise, safety and security, and parks and recreation resources

Under the Selected Alternative, roadway closures and construction traffic associated with construction of the San Jose Diridon and Gilroy Stations will result in temporary effects on traffic networks, including bus transit. Operation of the Selected Alternative will result in localized increases in traffic levels in the San Jose Diridon and Gilroy Station areas. Operation of the Selected Alternative will also contribute to cumulative intersection delays due to increased gate-down time at existing at-grade crossings in downtown San Jose, along the Monterey Corridor, and in Morgan Hill and Gilroy. Even with the mitigation measures identified in Appendix C, the Selected Alternative will result in a cumulative impact under NEPA.

Construction of the Selected Alternative, in combination with cumulative projects, will increase emissions of carbon monoxide, nitrogen dioxide, PM<sub>2.5</sub>, and PM<sub>10</sub>. Even with mitigation, emissions will not be reduced below thresholds. Therefore, the Selected Alternative, in combination with cumulative projects, will result in a cumulative impact under NEPA.

Operation of the Selected Alternative, in combination with cumulative projects, will result in cumulative noise and vibration impacts. Even with the implementation of mitigation measures identified in Appendix C, the Selected Alternative will result in a cumulative impact under NEPA.

With respect to emergency response and services, the Selected Alternative and other cumulative projects will result in temporary closures of and modifications to certain roadways during construction, which will result in temporary delay to emergency vehicle response in certain areas, with the Selected Alternative having the least amount of roadway closure during construction. Mitigation will provide funding for the City of San Jose, the City of Morgan Hill, and the City of Gilroy to implement emergency vehicle priority at traffic signals along Monterey Road, which will reduce the contribution to emergency vehicle delays during construction.

During operations, the Selected Alternative will also result in increased traffic around the San Jose Diridon Station and the Downtown Gilroy Station, which will result in emergency vehicle response delays. Mitigation will provide funding for the City of San Jose and the City of Gilroy to implement emergency vehicle priority at traffic signals near the stations, which will reduce the contribution to emergency vehicle delays during operation. The Selected Alternative will also result in increased gate-down time at at-grade crossings, which will result in delays to emergency response in certain locations. Where monitoring identifies or forecasts impacts relative to at-grade crossings, the Authority will develop an Emergency Vehicle Priority Treatment Plan in conjunction with local agencies and will fund the necessary emergency vehicle response improvements that will be implemented by local jurisdictions. These improvements will reduce the Project's contribution to increased emergency response times. If the local jurisdictions are not able to implement all the necessary mitigation, the Selected Alternative in combination with planned and foreseeable projects will result in a cumulative impact under NEPA during operations.

The Selected Alternative, in combination with cumulative projects in the cumulative RSA, will result in a cumulative impact on agricultural farmland because construction will permanently convert large areas of agricultural farmland to nonagricultural uses or indirectly by creating remnant parcels, despite project features. To mitigate this impact, the Authority will fund the California Farmland Conservancy Program's work to identify suitable agricultural land for mitigation of impacts and to fund the purchase of agricultural conservation easements from willing sellers. The Authority will also minimize the area required to operate and maintain the aerial guideway.

Operation of the Selected Alternative, in combination with cumulative projects, will result in cumulative impacts on parks, recreational facilities, open space resources, or school district play

areas. Even with adherence to the mitigation measures identified in Appendix C, the operation of the Selected Alternative will result in a cumulative impact under NEPA.

Construction of the Selected Alternative and other project features, combined with other cumulative projects, will result in permanent cumulative aesthetic impacts because the visual quality and setting will be degraded. The Selected Alternative includes aesthetic guidelines and an aesthetic review process to integrate HSR infrastructure into the surrounding landscape and local context. Mitigation will include incorporating aesthetic design preferences into final design, providing vegetation screening adjacent to residential areas, replanting unused portions of land, and screening traction power facilities and radio towers. Nonetheless, the Selected Alternative will result in a cumulative impact under NEPA.

Construction of the Selected Alternative, in combination with cumulative projects, will result in cumulative impacts on built historic resources. Even with the mitigation measures identified in Appendix C, the Selected Alternative will result in a cumulative impact under NEPA.

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## 6 MITIGATION COMMITMENTS AND MONITORING

The Authority will supervise construction and require implementation of mitigation measures for the Selected Alternative. The Authority is responsible for ensuring that these commitments are implemented, and the Authority has a full oversight role for this Project. It is also expected that USACE, the State Water Resources Control Board, and the California Department of Fish and Wildlife will make frequent compliance reviews to ensure that all conditions of their respective permits are satisfied. Consistent with 40 C.F.R. Section 1505.2(c), all practicable means to avoid or minimize environmental harm caused by the Selected Alternative have been identified and incorporated as IAMFs. Further means to reduce and/or compensate for environmental impacts have been identified and included as mitigation measures included in the MMEP (Appendix C). The Authority will monitor the implementation of environmental commitments in the MMEP consistent with the NEPA Assignment MOU and with CEQ regulations and guidance.

The MMEP describes mitigation measures that will avoid, minimize, or compensate for reasonably foreseeable environmental impacts that result from constructing and operating the San Jose to Merced Project Section of the California HSR System. These measures were developed by the Authority, pursuant to its responsibilities under NEPA Assignment, in consultation with appropriate agencies, as well as with input received from the public.

The Selected Alternative also incorporates many IAMFs and BMPs that are identified in the Final EIS. The Authority, as part of the Final EIS, identified these measures to avoid and minimize potential project impacts. The Authority will apply these IAMFs and BMPs to avoid impacts in several resource areas. Regulatory requirements (such as hazardous material disposal and various mandatory safety strategies) provide additional assurance that impacts on the environment will not occur or will be minimized to the fullest extent practicable. The applicable regulatory requirements and the IAMFs that are part of the Selected Alternative are described in more detail in the MMEP. The IAMFs are a condition of project approval and must be implemented by the Authority during design, construction, and operation of the Selected Alternative approved by this ROD.

All IAMFs and mitigation measures are included within the MMEP. The Authority is required to comply with all mitigation measures adopted with this ROD. The MMEP, as incorporated into this ROD, is a formal commitment by the Authority to carry out all of the measures identified therein as a condition of project approval. Therefore, in designing, constructing, and operating the Selected Alternative, the Authority is required to adhere to and provide appropriate funding for all IAMFs and mitigation measures in the MMEP.

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 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. Agency partners, including FRA, will receive regular updates from meetings and reports that will demonstrate compliance and progress relevant to their regulatory requirements.

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## 7 SUMMARY OF COMMENTS ON THE FINAL EIS AND RESPONSES

During the 30-day waiting period following publication of the Final EIS, the Authority received **[number]** comment submittals. Staff responses were provided on **[date]** for the comments received by the Authority. These staff responses are available for the public on the Authority's website: <http://www.hsr.ca.gov/>. All substantive comments received by the Authority during the waiting period referenced issues that were previously addressed in detail in Volume 4 of the Final EIS or by the Authority staff responses.

The range and types of comments received by the Authority during the waiting period pertaining to either CEQA or NEPA included, in general, concerns and questions on the following topics **[list to be updated after conclusion of 30-day period]**:

- 

The range and types of comments received during the April 20 and 21, 2022, Board meeting included concerns and questions on the following topics:

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

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## 8 CORRECTIONS TO FINAL EIS

As a part of the Authority's review of the San Jose to Merced Project Section Final EIS, several minor corrections and clarifications were identified. Corrections are identified in Appendix I of this document. The corrections and clarifications are not considered significant new information and do not change the analysis or conclusions of the EIS. These corrections and clarifications address items already covered in the Final EIS. These clarifications do not trigger the need to prepare a supplement, per the CEQ NEPA regulations (40 C.F.R. § 1502.9(c)(1)). The errata described within Appendix I are herewith corrected in the Final EIS and associated technical reports for the San Jose to Merced Project Section of the California HSR System.

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## 9 DECISION

The Authority finds that Alternative 4, with the DDV and TDV, the San Jose Diridon and Downtown Gilroy Stations, the MOWF south of Gilroy, and an MOWS west of Turner Island Road in the Central Valley—with the specific limits extending from Scott Boulevard in Santa Clara to Carlucci Road in Merced County—identified in the Final EIS as the Preferred Alternative is the Selected Alternative. In making this finding, the Authority concludes that, among the alternatives considered, the Selected Alternative best fulfills the purpose and need and objectives for the Project while balancing impacts on the natural and human environment.

In reaching this decision, the Authority considered the physical and operational characteristics and potential environmental consequences associated with all considered San Jose to Merced Project Section alternatives. The Authority, as lead agency, consulted with the cooperating agencies and considered the Draft EIS, Supplemental Draft EIS, and Final EIS, including the analysis of the No Action Alternative, all project alternatives, and all public and agency comments received during the review periods in reaching this decision.

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. The FRA, SHPO, the Authority, and the Advisory Council on Historic Preservation executed the *Programmatic Agreement among the Federal Railroad Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority Regarding Compliance with Section 106 of the National Historic Preservation Act, As It Pertains to the California High-Speed Train Project* (Section 106 PA) in 2011 (FRA et al. 2011) and extended the Section 106 PA by executing a First Amendment on July 21, 2021 (FRA et al. 2021). The Section 106 PA sets forth numerous requirements intended to ensure appropriate treatment of historic resources during ground-disturbing activities associated with project construction. The Section 106 PA also provides protocols for how and when formal eligibility determinations will be made. Eligibility determinations will be made by the appropriate agency based on information presented in the appropriate, completed state site records forms. Moreover, the Section 106 PA sets forth requirements for tribal monitoring of construction activities to help ensure protection of cultural resources that may be encountered. Adherence to the terms of the Section 106 PA will fulfill all obligations under Section 106.

In accordance with the Section 106 PA, an MOA for the treatment of adverse effects on historic properties in the San Jose to Merced Project Section of the California HSR System was executed by the SHPO and the Authority on [March 11, 2022. Concurring parties include:

- Amah Mutsun Tribal Band
- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Indian Canyon Mutsun Band of Costanoan
- North Valley Yokuts Tribe
- Tamien Nation
- City of San Jose
- City of Gilroy
- San Jose Historical Landmarks Commission
- Santa Clara Valley Transportation Authority

Additionally, the STB is an invited signatory to the MOA. The MOA summarizes the results of the Section 106 process and the treatment measures for both aboveground and below-ground cultural resources.

The assessment of adverse effects required under Section 106 of the NHPA was documented in the *San Jose to Merced Project Section, Section 106 Finding of Effect Report* (Authority 2020d) that was approved by SHPO on March 27, 2020, in a Concurrence Letter (see Appendix D).

## 9.2 Section 4(f)/6(f)

Projects that are undertaken by an operating administration of the U.S. Department of Transportation (DOT) or that may receive federal funding and/or discretionary approvals from such an operating administration must demonstrate compliance with Section 4(f) of the DOT Act of 1966. Section 4(f) protects publicly owned lands that are parks, recreational areas, and wildlife refuges. Section 4(f) also protects historic sites (including archaeological resources) of national, state, or local significance that are on public or private land.

Under the NEPA Assignment MOU, the Authority has been delegated the power to make determinations under Section 4(f). The NEPA Assignment MOU stipulates that the Authority must consult with the FRA prior to making any constructive use determination but otherwise delegates all responsibilities under Section 4(f) to the Authority. As further detailed below, there is no constructive use determination associated with the San Jose to Merced Project Section.

As described in Chapter 4, Final Section 4(f)/6(f) Evaluations, of the Final EIS, Section 4(f) properties were considered throughout the planning and alternatives development and analysis process to avoid and minimize impacts on resources protected by Section 4(f). During this process, the Selected Alternative was designed to avoid direct adverse effects on parks, recreational areas, and historic resources, including Reed Street Dog Park; Los Gatos Creek Trail and Park; Guadalupe River Trail, Reach 6; Sunlite Baking Company; Coyote Creek Trail; Stevens/Fisher House; Barnhart House; Morgan Hill Community and Cultural Center; IOOF Orphanage Home; and Cottonwood Creek Wildlife Area. The Final EIS contains the Authority's evaluation of whether the San Jose to Merced Project Section project alternatives will result in any of the following "uses" of properties protected under Section 4(f):

- Permanent use (which encompasses permanent easements or temporary easements that exceed limits for temporary occupancy),
- Temporary occupancy, and
- Constructive use.

Impacts were then evaluated to see if the criteria for a *de minimis* impact determination were met, and appropriate coordination with officials having jurisdiction over each resource was conducted. There are 84 Section 4(f) properties in the Selected Alternative's RSA for recreational and cultural resources. Of the 84 properties evaluated, 1 park/recreational resource (Fuller Park) was determined to have *de minimis* impacts, 2 parks (Coyote Creek Parkway County Park and Field Sports County Park) were determined to have a temporary occupancy, 1 park (Coyote Creek Parkway County Park) was determined to have a permanent use, 4 historic properties (Southern Pacific Depot [Diridon Station/Hiram Cahill Depot], Cozzi Family Property, Madrone Underpass, and Live Oak Creamery) were determined to have a permanent use, and 1 historic property (San Martin Winery) was determined to have a *de minimis* impact. The remaining properties did not have a Section 4(f) use. The Authority issued its Draft Section 4(f) Evaluation in the Draft EIS. The Authority prepared a draft individual Section 4(f) assessment for Coyote Creek Parkway County Park and Field Sports County Park and provided it to Santa Clara County Parks and Recreation Department on January 7, 2022 for a 45-day review period, which concluded on February 22, 2022. The Authority received comments from Santa Clara County Parks and Recreation Department on February 22, 2022. The Section 4(f) Evaluation was finalized in the Final EIS, and the final individual Section 4(f) assessment for Coyote Creek Parkway County Park and Field Sports County Park is presented as Appendix J to this ROD. The analysis and information in the Section 4(f) Evaluation included with the Final EIS is incorporated herein by reference, as is the analysis in Appendix J.

### 9.2.1 Measures to Minimize Harm/Mitigation

The Authority developed measures to minimize harm to Southern Pacific Depot [Diridon Station/Hiram Cahill Depot], Cozzi Family Property, Madrone Underpass, Live Oak Creamery, Coyote Creek Parkway County Park, and Field Sports County Park resources during project planning to avoid or minimize impacts, as well as mitigation measures to compensate for unavoidable project impacts. Table 4-10 of the Final EIS, which is incorporated herein by reference, lists the measures identified by the Authority to minimize harm, as required by 49 U.S.C. 303(c)(2). The measures identified in this table that are applicable to the Selected Alternative are now incorporated into the Selected Alternative. The Authority is continuing ongoing coordination, as appropriate, with the officials with jurisdiction over the Section 4(f) properties. During the Authority's consideration of its decision and during final design, the Authority, in consultation with the officials with jurisdiction, may identify and implement additional measures to further reduce potential impacts on the Southern Pacific Depot (Diridon Station/Hiram Cahill Depot), Cozzi Family Property, Madrone Underpass, Live Oak Creamery, Coyote Creek Parkway County Park, and Field Sports County Park.

### 9.2.2 Section 4(f)/6(f) Determination

Section 4(f) requires the selection of an alternative that avoids the use of a Section 4(f) property if that alternative is deemed feasible and prudent and the use does not qualify for a finding of *de minimis* impact. After making a Section 4(f) determination and identifying measures to minimize harm, if there is more than one alternative that results in the use of a Section 4(f) property, the Authority must also compare the alternatives to determine which alternative has the potential to cause the least overall harm in light of the preservationist purpose of the statute.

As described in Chapter 4 of the Final EIS, the Authority has made a *de minimis* determination under 49 U.S.C. 303(d) for Fuller Park. The Director of the City of San Jose Department of Parks, Recreation, and Neighborhood Services, the official with jurisdiction over Fuller Park, concurred in writing with this finding on September 21, 2021 (see Appendix G).

As described in Chapter 4 of the Final EIS and in Appendix J, the Authority has made a determination that the Selected Alternative will result in a temporary occupancy of land that is adverse in terms of the Section 4(f) statute's preservation purpose and a permanent use under Section 4(f) for Coyote Creek Parkway County Park. As noted above, the Authority came to this determination after undertaking an evaluation to conclude that there are no feasible or prudent avoidance alternatives to the Selected Alternative, the Selected Alternative includes all possible planning to minimize harm to these Section 4(f) properties resulting from such use, and the Selected Alternative will cause the least overall harm in light of Section 4(f)'s preservation purpose.

As described in Chapter 4 of the Final EIS and in Appendix J, the Authority has made a determination that there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose for Field Sports County Park. As noted above, the Authority came to this determination after undertaking an evaluation to conclude that there are no feasible or prudent avoidance alternatives to the Selected Alternative, the Selected Alternative includes all possible planning to minimize harm to these Section 4(f) properties resulting from such use, and the Selected Alternative will cause the least overall harm in light of Section 4(f)'s preservation purpose.

As described in Chapter 4 of the Final EIS and in Appendix J, the Authority has made a determination that the Selected Alternative will result in a permanent use of land that is adverse in terms of the Section 4(f) statute's preservation purpose and a permanent use under Section 4(f) for Coyote Creek Parkway County Park. As noted above, the Authority came to this determination after undertaking an evaluation to conclude that there are no feasible or prudent avoidance alternatives to the Selected Alternative, the Selected Alternative includes all possible planning to minimize harm to these Section 4(f) properties resulting from such use, and the Selected Alternative will cause the least overall harm in light of Section 4(f)'s preservation purpose.

As described in Chapter 4 of the Final EIS, the Authority has made a *de minimis* determination under 49 U.S.C. 303(d) for San Martin Winery. The California SHPO, the official with jurisdiction over San Martin Winery, concurred in writing with the no adverse effect finding on March 27, 2020 (see Appendix G).

As described in Chapter 4 of the Final EIS, the Authority has made a determination that there is a permanent use under Section 4(f) for four historic properties: Southern Pacific Depot (Diridon Station/Hiram Cahill Depot), Cozzi Family Property, Madrone Underpass, and Live Oak Creamery. As described in Chapter 4 of the Final EIS, the Authority came to this determination after undertaking an evaluation to conclude that there are no feasible or prudent avoidance alternatives to the Selected Alternative, the Selected Alternative includes all possible planning to minimize harm to these Section 4(f) properties resulting from such use, and the Selected Alternative will cause the least overall harm in light of Section 4(f)'s preservation purpose.

Among all of the San Jose to Merced Project Section project alternatives, the Selected Alternative will result in the least overall harm to resources protected by Section 4(f) because the Selected Alternative will have an impact on the fewest Section 4(f) resources of all of the project alternatives analyzed in the Draft EIS and Final EIS. Thus, the Selected Alternative will cause the least overall harm to Section 4(f) resources.

There are four Section 6(f) properties within the RSA: Guadalupe River Park, Guadalupe Gardens (part of Guadalupe River Park), San Luis Dinosaur Development (part of San Luis Reservoir State Recreation Area), and the Cottonwood Creek Wildlife Area (NPS 2016). The Selected Alternative will not require permanent or temporary acquisition of land from any of the Section 6(f) properties. In addition, construction activities will not occur within any of the resources. While construction of the tunnel underneath Cottonwood Creek Wildlife Area may result in the lowering of groundwater due to tunnel inflows, Mitigation Measures BIO-MM#9 and HYD-MM#1 will avoid affecting wildlife function. Therefore, no impacts on Section 6(f) resources will occur.

### 9.3 General Conformity Determination

As part of the environmental review of the San Jose to Merced Project Section, the Authority conducted and FRA approved a general conformity evaluation pursuant to 40 C.F.R. Part 93, Subpart B. The Authority conducted the general conformity evaluation following all regulatory criteria and procedures and in coordination with the USEPA, BAAQMD, SJVAPCD, and the California Air Resources Board. As a result of this review, the FRA concluded, because project-generated emissions will either be fully offset (for construction phase) or less than zero (for operational phase), that the Project's emissions can be accommodated in the state implementation plan for the SFBAAB and SJVAB.

The FRA has determined that the Project as designed will conform to the approved state implementation plan based on the following:

- The Authority will commit that construction-phase NO<sub>x</sub> emissions will be offset consistent with the applicable federal regulations by entering into an agreement with BAAQMD and through the Authority's existing commitments in its June 2014 MOU and VERA with the San Joaquin Valley Unified Air Pollution Control District (Authority and SJVAPCD 2014), respectively.
- The Authority, BAAQMD, and SJVAPCD will enter into a contractual agreement to mitigate the Project's NO<sub>x</sub> emissions by providing funds to BAAQMD and SJVAPCD to fund grants for projects that achieve the necessary emission reductions.
- BAAQMD and SJVAPCD will seek and implement the necessary emission reduction measures, using Authority funds.
- BAAQMD and SJVAPCD will serve as administrators of the emissions reduction projects and verifiers of the successful mitigation effort.

Therefore, the FRA has concluded that the proposed Project, as designed, conforms to the purpose of the approved state implementation plan and is consistent with all applicable general conformity requirements. The Final General Conformity Determination is included with this ROD as Appendix A.

#### 9.4 Section 7 Endangered Species Finding

The proposed action (construction and operation of the Selected Alternative) is in compliance with Section 7 of the ESA. Because the proposed action is likely to affect threatened or endangered species subject to USFWS and NMFS jurisdiction, the Authority prepared a joint BA for the Project and consulted with USFWS and NMFS, as required under Section 7 of the FESA. After evaluating the potential effects of the proposed action, and after additional informal consultation with the USFWS and NMFS, the Authority determined that the San Jose to Merced Project Section may affect, and is likely to adversely affect, the following species:

- Metcalf Canyon jewelflower (endangered)
- Santa Clara Valley dudleya (endangered)
- Bay checkerspot butterfly (threatened)
- Vernal pool fairy shrimp (threatened)
- Vernal pool tadpole shrimp (threatened)
- Valley elderberry longhorn beetle (threatened)
- Steelhead–central California coast DPS (threatened)
- Steelhead–south-central California coast DPS (threatened)
- California red-legged frog (threatened)
- California tiger salamander (threatened)
- Least Bell’s vireo (endangered)

The Authority developed and submitted the BA, which evaluated direct, indirect, and cumulative effects of the Project on federally listed species and their designated critical habitat, to the NMFS and USFWS in early 2020 and requested the initiation of formal Section 7 consultation. The BA was subsequently revised and resubmitted in October 2020 to address NMFS comments. The Authority’s informal and formal Section 7 consultation with USFWS and NMFS has been ongoing and was instrumental in scoping the biological resource analysis for the EIS Documents, as well as for the BA. The Authority held numerous meetings with USFWS and NMFS following submittal of the BA to each agency. The Authority consulted with both agencies regarding effects on listed species (extent of take and whether or not take was reasonably certain to occur), conservation measures, and overall findings in each agency’s BO.

NMFS issued its BO and completed consultation on June 24, 2021 (Appendix E). USFWS issued its BO and completed consultation on December 22, 2021 (Appendix B). In the BOs, USFWS and NMFS concurred with the determinations made by the Authority regarding effects on federally listed species and determined that the proposed action is not likely to jeopardize the continued existence of any federally listed species. The BOs each contain an Incidental Take Statement, and, consistent with Section 7 requirements, the BOs also stipulate several reasonable and prudent measures to avoid or minimize potential incidental take of listed species. The Authority will implement the measures identified in the USFWS and NMFS BOs.

The Coyote hydrologic unit (18050003) within the Santa Clara Valley region contributes to the EFH watershed historically utilized by both coho and Chinook salmon. The Authority also consulted with NMFS in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1855(b)) for this action. NMFS concluded that the Project will adversely affect the EFH of coho and Chinook salmon in the action area and included EFH Conservation Recommendations in the BO. As required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act, the Authority provided a detailed response to NMFS regarding its ability to implement the EFH Conservation Recommendations within 30 days of receipt of the BO (Appendix E).

## 9.5 Wetlands Finding

In addition to NEPA and other environmental laws, the federal lead agency is also required to make findings pursuant to U.S. Executive Order 11990, Protection of Wetlands (May 24, 1977), and the DOT Wetlands Order, DOT Order 5660.1A, Preservation of the Nation's Wetlands (August 24, 1978).

Aquatic resources in the vicinity include several types of wetlands as well as other waters (i.e., streams, lakes, and other open water features) as verified by the USACE under a preliminary jurisdictional determination issued on December 5, 2019. The Project will require authorization under Section 404 of the CWA. Construction of the Selected Alternative will have direct and indirect impacts on aquatic resources. Portions of the project extent that cross or abut aquatic resources will result in placement of fill (e.g., for construction of bridge supports), installation of culverts, and associated in-channel work. Construction of track and systems could also alter surface and subsurface hydrology that supplies or drains aquatic features. Additional effects on aquatic resources may result from groundwater reduction during tunnel construction and the associated disruption of hydrologic cycles of surface water resources. Though impacts on waters of the United States may occur as part of the Selected Alternative, in April 2020, the USEPA and the USACE provided letters on the preliminary LEDPA determination by the Authority. Both agencies concurred that Alternative 4 represents the preliminary LEDPA for the San Jose to Merced Project Section. Design requirements and permit conditions will require contractors to avoid impacts on jurisdictional waters wherever feasible. The requirements identified in the MMEP, incorporated as part of this document (Appendix C), will minimize the destruction, loss, or degradation of wetlands and preserve and enhance the natural and beneficial values of wetlands.

To the maximum extent practicable, the Authority will implement pre- and post-construction BMPs for sediment and erosion control. The measures and features included in the MMEP will reduce and offset impacts on wetlands to a level sufficient to achieve no net loss. However, if determined to be necessary by USACE or the State Water Resources Control Board, these measures may be increased through their respective permitting processes, or additional measures may be recommended and reflected in other project permits and authorizations.

Based upon USACE findings and the Authority's evaluation, the Authority determines that the Project is consistent with U.S. Executive Order 11990 and DOT Order 5660.1A.

## 9.6 Floodplains Finding

DOT Order 5620.2 implements U.S. Executive Order 11988, Floodplain Management (May 24, 1977). These orders state that the federal lead agency may not approve an alternative involving a significant encroachment unless the agency can make a finding that the proposed encroachment is the only practicable alternative. The major purposes of U.S. 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.

Construction of the Selected Alternative will place new structures and/or modify existing structures within 100-year floodplains regulated by the Federal Emergency Management Agency, which will result in changes to channel geometry and flood flow characteristics and have the potential to result in permanent impacts on floodplain hydraulics. However, with implementation of IAMFs, which will require flood protection measures that minimize effects on 100-year floodplain water surface elevations, no permanent effects on designated floodplains from construction will occur. As indicated in Section 3.8, Hydrology and Water Resources, of the Final EIS, the Authority, as the federal lead agency under the NEPA Assignment MOU, concludes that the Selected Alternative will not result in any substantial adverse impacts on floodplains, will not result in a substantial change in flood risks, and will not substantially affect access to the facilities for maintenance and other activities at either the new bridge located upstream from existing railroad bridges over the Guadalupe River or the reconstructed bridge over Llagas Creek.



Design of the Selected Alternative also includes effective measures to avoid or minimize the potential for exposure of HSR passengers and employees to flooding, and new or additional exposure to flooding risks and hazards from the failure of a levee or dam will not occur. Based upon these findings, the Authority determines that the proposed action is consistent with requirements of U.S. Executive Order 11988.

## 9.7 Environmental Justice Finding

U.S. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 16, 1994), and the DOT Order 5610.2C, U.S. Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-income Populations (May 14, 2021) (USDOT 2021), require 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 (“environmental justice communities”).

The San Jose to Merced Project Section project alternatives, including the Selected Alternative, will result in adverse effects on all populations, including low-income populations or minority populations, residing at certain locations along the project corridor in Santa Clara, parts of San Jose, Morgan Hill, Gilroy, and the San Joaquin Valley. The Authority has held more than 250 meetings, briefings, and outreach activities to date with community stakeholders, businesses, local agencies, and elected officials in environmental justice communities to gather, confirm, and understand key community concerns so that these concerns are considered both in the development of project alternatives and during the environmental process.

Chapter 5, Environmental Justice, of the Final EIS considers the project adverse effects, direct mitigation, project benefits, and offsetting mitigation. “Direct mitigation” refers to mitigation found in Chapter 3 of the Final EIS that directly reduces project adverse effects, such as proposed noise barriers along the rail corridor where necessary to address project-related severe noise effect. “Offsetting mitigation” refers to community improvements that will help to offset residual project effects (after consideration of direct mitigation and project effects) through related improvement in affected communities that will have a reasonable nexus to project effects.

As discussed in Chapter 5 of the Final EIS, the Selected Alternative will include the application of IAMFs and all practicable direct mitigation measures that reduce disproportionately high and adverse effects on low-income populations and minority populations (see the MMEP, Appendix C). After application of IAMFs and direct mitigation but prior to consideration of project benefits and offsetting mitigation measures, the Project will result in these disproportionately high and adverse effects on minority populations and low-income populations within the environmental justice RSA:

- Localized operational traffic intersection delays near the San Jose Diridon Station, South San Jose, Morgan Hill, and Gilroy;
- Business displacement in Gilroy of four industrial businesses with likely local inadequate relocation availability;
- Emergency vehicle response time delays in South San Jose and Gilroy; and
- Operational noise in Santa Clara, San Jose (near San Jose Diridon Station, Gardner/Willow Glen, Washington/Guadalupe/Tamien/Alma/Almaden, and South San Jose), Morgan Hill, Gilroy, and the San Joaquin Valley.

The Authority considered the potential offsetting benefits associated with the Selected Alternative. The Project will result in regional benefits associated with increased statewide accessibility to jobs, goods, and services; reduced vehicle miles traveled; long-term air quality improvements; reduction in greenhouse gas emissions; public safety benefits realized through new safety and signaling systems; and new employment opportunities during construction and operations. Public safety benefits will be realized throughout the San Jose to Merced Project Section, while benefits

related to increased accessibility, emission reductions, long-term air quality improvements, and job creation will be realized across the three-county region. Regional beneficial effects for minority populations and low-income populations within the environmental justice RSA will be similar to the beneficial effects for the general public. HSR stations can also become a focal point of economic activity as public and private investment seeks to capture the travel benefits of increased intercity accessibility. Localized beneficial effects are anticipated in the area surrounding the San Jose Diridon and Downtown Gilroy Stations, where minority populations and low-income populations are present. These offsetting benefits of the Project will reduce the overall effect of the Project on minority populations and low-income populations and will offset the disproportionately high and adverse effects related to localized operational traffic intersection delays in San Jose, Morgan Hill, and Gilroy and business displacement of industrial businesses in Gilroy.

After consideration of project adverse effects, direct mitigation, and project benefits but prior to consideration of selected offsetting mitigation measures, the Project will result in these remaining disproportionately high and adverse effects on minority populations and low-income populations within the environmental justice RSA:

- Emergency vehicle response time delays in South San Jose and Gilroy; and
- Operational noise in Santa Clara, in San Jose (near the San Jose Diridon Station, Gardner/Willow Glen, Washington/Guadalupe/Tamien/Alma/Almaden, and South San Jose), Morgan Hill, Gilroy, and the San Joaquin Valley.

The Authority has identified a total of 26 offsetting mitigation measures for the Selected Alternative, including measures in every one of the eight environmental justice communities identified above with residual disproportionately high and adverse effects. These measures were developed through a 21-month community improvement planning process that included three rounds of community engagement to identify and evaluate potential community improvements with potential to offset residual disproportionately high and adverse project effects. Most of the community improvements evaluated were initially identified by members of the affected communities or through review of prior community assessments of unmet needs. The selected offsetting mitigation measures have a reasonable nexus to residual disproportionately high and adverse effects and will offset these effects. The Authority considered input from individuals, organizations, and representatives of minority communities and low-income communities on the value of the offsetting mitigation measures. The Authority is committed to funding the specific identified offsetting mitigation measures working in concert with local implementing partners.

After consideration of direct mitigation, project benefits, offsetting mitigation measures, and the input of environmental justice communities, the Authority has determined that the Selected Alternative will not have disproportionately high and adverse effects on minority populations or low-income populations.

## 10 CONCLUSION

The Authority, as the federal lead agency, and as authorized by the NEPA Assignment MOU, has reached a decision that most closely aligns with the Authority's statutory mission and the responsibilities assigned to it by FRA pursuant to NEPA Assignment, considering economic, environmental, technical, and other factors and based on the information contained within the Final EIS and the project record.

For the San Jose to Merced Project Section, the Authority approves Alternative 4, with the DDV and TDV, the San Jose Diridon and Downtown Gilroy Stations, the MOWF south of Gilroy, and an MOWS west of Turner Island Road in the Central Valley, with the specific limits extending from Scott Boulevard in Santa Clara to Carlucci Road in Merced County. The Authority has selected this alternative because: (1) it best satisfies the Purpose, Need, and Objectives for the proposed action; and (2) it minimizes impacts on the natural and human environment by utilizing an existing transportation corridor where practicable and incorporating mitigation measures. Accordingly, Alternative 4 with the DDV and TDV, the San Jose Diridon and Downtown Gilroy Stations, the MOWF south of Gilroy, and an MOWS west of Turner Island Road in the Central Valley, with the specific limits extending from Scott Boulevard in Santa Clara to Carlucci Road in Merced County, has been selected and approved for project implementation.

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Brian P. Kelly  
Chief Executive Officer  
California High-Speed Rail Authority

Date

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