Chapter 16. Standard Responses

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-1: Tiering and Level of Detail in Analysis and Mitigation**
Some comments have registered concern over the review of the Merced to Fresno Section in the context of the statewide HST Project, and an alleged lack of detail in the analysis and in the mitigation measures.	California has been planning a high-speed train (HST) system since the formation of the High-Speed Rail Authority (Authority) in 1996. When completed, the nearly 800-mile train system would provide new passenger rail service to more than 90% of the state's population. More than 200 weekday trains would serve the statewide intercity travel market. The HST would be similar to electrically powered systems now in operation in Europe and Japan, capable of up to 220-mile-per-hour (mph) operating speeds, with state-of-the-art safety, signaling, and automated train control systems. Phase 1 of the HST System would connect and serve the major metropolitan areas of California, extending from San Francisco to the Los Angeles Basin. Phase 2 would add connections from Sacramento in the north to San Diego in the south. The approximately 65-mile-long Merced to Fresno Section is an essential part of this system. The Merced to Fresno Section is the location of the connection between the Bay Area and Sacramento branches of the HST System; it would provide Merced and Fresno access to a new transportation mode, and would contribute to increased mobility throughout California. *Tiering* Both CEQA and NEPA require that an agency consider the environmental effects of its actions and develop environmental documentation at the earliest point in time when the analysis is meaningful. Both CEQA and NEPA provide agencies with some discretion to fashion an environmental process as appropriate for the actions or projects they are considering. Program or first-tier EIRs/EISs are deliberately focused on the "big picture" impacts of proposed actions and the broad policy choices related to such actions. To avoid repetition and to help focus the document on issues ripe for decision, a lead agency may tier its environmental documents so that later Program or second-tier EIRs/EISs incorporate and build upon the analysis and decisions made at the Program level. A first-tier EIR/EIS may therefore be limited to the analytical information needed to make a general decision, with detailed analysis of potential impacts of a more specific decision to follow when a second-tier EIR/EIS is prepared. With this in mind, and as described in Section S.2 of the EIR/EIS, the Authority and the Federal Railroad Administration (FRA) previously decided to use a tiered environmental review process and prepared the Statewide Program EIR/EIS in 2005 (Authority and FRA 2005), providing FRA and the Authority with the environmental analysis necessary for evaluation of the overall HST System and for making broad decisions about general HST alignments and station locations for further study in second-tier EIR/EISs, including this one covering the section between Merced and Fresno. The Merced to Fresno Section is one portion of the larger HST System described in the 2005 Statewide Program EIR/EIS (Authority and FRA 2005), as well as in the subsequent 2008 Bay Area to Central Valley Final Program EIR/EIS (Authority and FRA 2008) and the 2010 Revised Final Program EIR/EIS (Authority and FRA 2010a) addressing the Bay Area to Central Valley connection for the HST System. This project EIR/EIS has been prepared in the context of the previous broader analysis, but provides more detailed analysis about the potential impacts, both beneficial and adverse, in the Merced to Fresno Section. The Merced to Fresno Section EIR/EIS properly notes that two first-tier program EIR/EISs were prepared to address broad policy issues pertaining to the proposed California HST system and also notes that these documents are and have long been available on the Authority's website (see EIR/EIS, Summary, Section S.2). The EIR/EIS Summary describes the tiered environmental review process used by the Authority and the FRA, indicating that the 2005 program EIR/EIS (Authority and

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-1: Tiering and Level of Detail in Analysis and Mitigation**
	FRA 2005) provided a first-tier analysis of the general effects of implementing the system across two-thirds of the state, while the 2008 program EIR/EIS (Authority and FRA 2008) and the 2010 Revised Program EIR/EIS (Authority and FRA 2010a) focus on connecting the Central Valley portion of the system to the San Francisco Bay area portion of the system (see EIR/EIS, Summary, Section S.2). Chapter 2 of the EIR/EIS discusses the background of the HST Project, and notes that the previously prepared Tier 1 documents provided a programmatic analysis of the proposed system and the environmental impacts of HST implementation. The first page of Chapter 2 notes that second-tier environmental documents "may incorporate" by reference analyses from prior program documents, but this EIR/EIS does not use "incorporation by reference" according to the meaning of CEQA Guidelines. Chapter 2 proceeds, first, to provide a more detailed description of the elements of the proposed system (see EIR/EIS, Sections 2.2.1 through 2.2.9) and, second, to describe in some detail the alternatives identified for analysis in the document (see EIR/EIS, Sections 2.3 **through** 2.9). In addition, Chapter 10 of the EIR/EIS lists these first-tier program environmental documents as source material for this document. The EIR/EIS does not directly incorporate the HST program documents by reference, nor is it required to do so. Because the program documents are not incorporated by reference, there is no requirement to comply with CEQA Guidelines Section 15150 (incorporation by reference). The EIR/EIS is tiering by considering the broad policy decisions previously reached about the system (e.g., electric propulsion with steel wheels on steel rails) that are based on the program EIRs as the starting point for a more detailed analysis of the impacts of implementing the HST System from Merced to Fresno, and using the previous program documents as reference documents for the analysis. The EIR/EIS is also tiering by relying on the analysis in the previous program EIRs that address the impacts of the full 800-mile system and cumulative impacts of the system as a whole. The EIR/EIS describes the tiered process and indicates where both the program documents and the decision documents are to be found (see EIR, Section S.2 and Section 2.0, text box). This complies with CEQA Guidelines Section 15152, especially subdivision (g), which governs tiering. Some comments assert that the EIR/EIS does not adequately tier off of or incorporate by reference the previously prepared HST program EIR/EISs. The Authority disagrees with these assertions. There is no requirement to incorporate the program EIR/EISs by reference; and the EIR/EIS properly tiers from the program documents by going from the more general to the more specific and by complying with the procedures set forth in CEQA Guidelines Section 15152. In a project EIR that follows a program EIR, tiering has the effect of focusing the analysis on a narrower area. By contrast, incorporation by reference can serve to bring into a Draft EIR portions of entirely unrelated documents, provided the requirements of CEQA Guidelines Section 15150 are met, and can be visualized as expanding the analysis, rather than narrowing it. Incorporation by reference can be used without tiering, and represents a separate procedure from tiering. For tiering, the later EIR must refer to any prior EIR being used for tiering and state where a copy of the prior EIR may be examined (refer to CEQA Guidelines Section 15152, subd. (g)). The EIR/EIS satisfies these requirements. *Level of Detail in Analysis* Since 2005, environmental analysis and corresponding section-specific design work have continued on portions of the HST System, including refinement of the alternative alignments and station locations identified in the 2005 program EIR/EIS (Authority and FRA 2005). The Merced to Fresno Section Project EIR/EIS analyzes the environmental impacts, both adverse and beneficial, of implementing the HST between Merced and Fresno and is based on more detailed project planning and engineering. The analysis therefore tiers from the earlier decision and analysis contained in the Program EIR/EISs, but also provides more site-specific detail and design as well as more detailed analysis of the potential environmental impacts of the

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-1: Tiering and Level of Detail in Analysis and Mitigation**
	Merced to Fresno Section of the HST System. The HST would be a "design-build" project. That is, the project design would be completed by the contractor who would be chosen to build the project. The Authority and FRA have prepared a project-specific EIR/EIS analyzing the potential environmental consequences of a refined set of alternative corridor alignments and stations along this section based on that level. This project EIR/EIS contains significantly more detail than was available at the first-tier Program EIR/EIS. However, the level of analytical detail is still limited by the fact that the project is not fully designed. At the time the Draft EIR/EIS was released for public review in August 2011 (Authority and FRA 2011a), the Merced to Fresno Section had reached the 15% level of design. The Final EIR/EIS represents a 15-30% level of design. In larger transportation infrastructure projects, consistent with both CEQA and NEPA, the environmental analysis process occurs before completion of final design, and this is common practice in projects using a design/build process for construction. This conforms to Section 1501.2 of the CEQ's regulations implementing NEPA, which does not require full design in order to complete an EIS but rather states that "[a]gencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts" (40 Code of Federal Regulations [CFR] 1501.2). Similarly, the CEQA Guidelines indicate that environmental analysis "should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment" (14 California Code of Regulations [CCR] 15004). As provided in the CEQA Guidelines, the level of detail in the environmental analysis is to "correspond to the degree of specificity involved in the underlying activity which is described in the EIR" (14 CCR 15146). The EIR/EIS is based on the level of engineering and planning necessary to identify potential environmental impacts and to identify the appropriate mitigation measures. This EIR/EIS provides a second-tier project-level environmental analysis on the Merced to Fresno portion of the HST system, and is consistent with the previous Program EIR/EISs. This EIR/EIS provides more detailed information on the system elements and alternative alignments, and more detailed analysis of environmental impacts associated with alignment alternatives and station location options in the area from Merced to Fresno. The Merced to Fresno Section EIR/EIS in provides more detail in an area that was previously covered in more general terms, primarily in the 2005 Program EIR/EIS (Authority and FRA 2005). While relying on the program analyses to treat the system as a whole, this EIR/EIS provides a more detailed review of environmental impacts of implementing the train system from Merced to Fresno, and it provides a fresh look at energy impacts, air quality impacts, growth effects, and cumulative impacts for this section of the system. For example, the growth analysis uses information initially developed in 2007, but applies refinements to the analytical approach and adds updated information specific to Merced, Madera, and Fresno counties – the three counties traversed by the Merced to Fresno Section of the HST System. This EIR/EIS provides a comprehensive analysis of the potential adverse and beneficial effects of reasonable alternatives meeting the project's purpose and need and identifies appropriate measures to mitigate adverse impacts. This EIR/EIS is supported by technical reports and studies including aesthetics and visual quality analysis, biological resources and wetland surveys, noise and vibration analysis, transportation impact analysis, community impact analysis, and air quality analysis, to list a few of the studies, all of which are available on the Authority's website. As a combined EIR/EIS, prepared for compliance with both CEQA and NEPA, this document presents effects conclusions under both NEPA and CEQA, and identifies mitigation measures to reduce all significant adverse effects. Where mitigation is infeasible, or the mitigation would not reduce or avoid

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-1: Tiering and Level of Detail in Analysis and Mitigation**
	the effect below the level of significance, the effect is identified as significant and unavoidable. *Level of Detail in Mitigation Measures.* CEQA requires the Authority to analyze the potential impacts of the HST and identify enforceable mitigation for each significant effect of the project and to mitigate or avoid the significant effects on the environment by adopting feasible mitigation measures as part of the project (Public Resources Code Section 21001.2). The Authority analyzed the system impacts in the 2005 program EIR (Authority and FRA 2005), and made mitigation commitments to be refined and applied based on future project EIR/EIS analyses. The present project-level EIR/EIS has analyzed the potential project-specific impacts of the Merced to Fresno Section of the HST System (see Sections 3.2 through 3.19). Some comments suggest that the EIR/EIS has inappropriately deferred the identification of measures necessary to mitigate significant effects that may result from construction of the Merced to Fresno Section. The EIR/EIS does not defer mitigation, but rather provides an extensive set of mitigation measures to be adopted and included in project approval decisions made in the future by the Authority and the FRA, and to be further reviewed, refined, and applied as design progresses and permits are obtained from other agencies. Under CEQA, where the design details of the project have not been fully developed and the development of specific mitigation will rely upon information not yet available, an EIR may take a phased approach to the development of specific mitigation, provided that it has analyzed the impact and made a significance determination, commits to mitigation in the form of a mitigation measure for the significant effect, and specifies "performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way" (14 CCR 15126.4(a)(1)(b)). The same is true under NEPA. The EIS must discuss mitigation “in sufficient detail to ensure that environmental consequences have been fairly evaluated,” but it is not necessary to formulate and adopt a complete mitigation plan. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989). The mitigation measures identified in the EIR/EIS meet these requirements. During preparation of the impact sections, technical staff identified those impacts that would potentially exceed a level of significance. The EIR/EIS identifies mitigation measures that will avoid, reduce, or otherwise mitigate each such potentially significant impact. Feasible mitigation is expected to be adopted to address each significant effect that was identified in the EIR/EIS. As mentioned above, the EIR/EIS identifies impacts that could not be reduced below the level of significance as significant and unavoidable. The mitigation measures were further refined prior to completion of the Final EIR/EIS (Authority and FRA 2012a) as the project design progressed, in response to comments received on the Draft EIR/EIS (Authority and FRA 2011a), and following additional consultation with public agencies. Appropriate mitigation is included in the Final EIR/EIS (Authority and FRA 2012a) and will also be included in the Authority’s decision documents and the FRA’s Record of Decision, which will require the Authority to implement the adopted mitigation measures as the project advances through final design and construction. As project design progresses, the Authority will also refine and make specific those mitigation measures that have been adopted based on specified performance standards and any adopted procedures. In addition to the mitigation measures identified through the CEQA/NEPA process, as design progresses further, the Authority will pursue necessary permits and approvals from other agencies, such as the U.S. Army Corps of Engineers (USACE) (Section 404 water quality permit) and California Department of Fish and Game (CDFG) (Section 1600 et seq. streambed alteration agreement and Section 2080.1 incidental take permit). These permitting processes, including commitment to a compensatory mitigation plan as prerequisite to issuance of the Section 404 permit, will also include mitigation commitments that further refine the biological resources and

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-1: Tiering and Level of Detail in Analysis and Mitigation**
	water quality related mitigation measures. The selected design-build contractor will be responsible, under its contract with the Authority and FRA, for implementing the refined mitigation measures resulting from the permitting process. As this planning and engineering process progresses, and as project elements proceed to final design, the Authority will monitor the implementation of the adopted mitigation. The Authority and FRA will adopt mitigation monitoring programs at the time of project approval to ensure that the mitigation measures committed to in the action are carried out (Public Resources Code Section 21081.6; 14 CCR 15097; Section 13(f), 64 Federal Register [FR] 101, 28545). Monitoring will also be required as a component of the compensatory mitigation program that will be part of the Section 404 permit.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-2: Alternatives**
The Authority received many comments expressing very strong views about the alternatives. Numerous comments expressed the opinion that the Authority should consider alternatives, such as an I-5 alignment, that had been previously considered and dismissed from further evaluation. Other comments expressed the opinion that the No Project Alternative or BNSF alternative should be selected. Many comments objected to alternatives that diverged from or extended outside existing road or train rights-of-way.	*Alternatives Analysis Process* The EIR/EIS for the Merced to Fresno HST Section analyzes several alternatives, including the No Project Alternative (see Chapter 2 for a description of each alternative). These alternatives were identified for analysis in the EIR/EIS as a result of an initial alternatives analysis process, described below, and in consideration of a larger set of alignment alternatives and station location options described in the 2005 Statewide Program EIR/EIS (Authority and FRA 2005). The 2005 Statewide Program EIR/EIS examined general HST alignment alternatives, potential station locations, and a modal alternative. An EIR/EIS is required to analyze the potential impacts of the full range of reasonable alternatives (14 CCR 15126.6, 40 CFR 1502.14(a)). Under CEQA, the alternatives are to include a No Project Alternative and a range of potentially feasible alternatives that would (1) meet most of the project's basic objectives and (2) avoid or substantially lessen one or more of the project's significant adverse effects (14 CCR 15126.6(c)). In determining the alternatives to be examined in the EIR, the lead agency must describe its reasons for excluding other potential alternatives. Under the "rule of reason," an EIR is required to study a sufficient range of alternatives to permit a reasoned choice (14 CCR 15126.6(f)). There is no requirement to study all possible alternatives. Under NEPA, the alternatives analysis "is the heart of the environmental impact statement" (40 CFR 1502.14). Accordingly, the EIR/EIS examines the range of reasonable alternatives to the proposed action, including the alternative taking no action. Pursuant to Section 14(l) of the FRA's Procedures for Considering Environmental Impacts, these included "all reasonable alternative courses of action which could satisfy the [project's] purpose and need" (64 FR 28546, May 26, 1999). The Authority and FRA considered the input of the public and interested resource agencies when developing the reasonable range of alternatives. Pursuant to NEPA and CEQA, scoping meetings were held to invite public participation in defining the scope of the analysis, including the range of reasonable alternatives. Informed by the Program-level EIR/EISs, public and agency comments received as part of the scoping process, and input received during ongoing interagency coordination meetings, the Authority and the FRA conducted a preliminary alternatives analysis process **for the Merced to Fresno section** to identify the potential alternatives for study. As discussed in Section 2.3 of the EIR/EIS, this initial assessment of potential alternatives involved both qualitative and quantitative measures that addressed applicable policy and technical considerations. Through this process, the Authority and FRA identified the alternatives that would be likely to best meet the project purpose and need (i.e., objectives), would be potentially feasible, and would be expected to have varying levels of impacts so that, in comparison, each offers lesser impacts in some area of concern. As a result of this analysis process, certain alternatives were identified as the range of alternatives to be analyzed in the Merced to Fresno Section EIR/EIS. The alternatives analysis was reviewed by the Authority Board at a noticed public meeting prior to completion of the Preliminary Alternatives Analysis (AA) Report. The Preliminary AA Report took into consideration public comments submitted on the initial recommendations concerning the alternatives for study in the EIR/EIS. The Supplemental AA report updated the Preliminary AA Report, presenting additional evaluations and refinements of previously identified alignment options and HMF locations. The revisions to potential alternatives addressed in this report included refinements to the Ave 24 Wye and the SR 152 Wye to better reflect public input, design options to the BNSF Alternative to avoid more of the communities of Le Grand and Planada, and development of a design option west of Chowchilla. As a result of this additional study and refinement of potential alternatives, the alternatives presented in the EIR/EIS reflect changes to the Preliminary AA Report and additions to those alternatives identified in the Preliminary AA

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-2: Alternatives**
	Report. The end result of the AA process, including consideration of the Program-Level EIR/EIS, the Preliminary AA Report, and the Supplemental AA Report, was the identification of the range of reasonable alternatives described in Chapter 2 of the EIR/EIS. The EIR/EIS also includes a description of the alternatives initially considered and dismissed, including a brief discussion of the reason for dismissing them. These alternatives were objectively evaluated in the EIR/EIS and the potential impacts, both beneficial and adverse, were identified and discussed. Section 2.3.1 of the EIR/EIS discusses the project-level alternatives development process. Section 2.3.2 explains the range of potential alternatives preliminarily considered, but eliminated from detailed consideration in the EIR/EIS. The April 2010 Preliminary AA Report and August 2010 Supplemental AA Report prepared by the Authority and FRA describe the alternatives identification process in more detail. Both are available on the Authority's website at http://www.cahighspeedrail.ca.gov/lib_Merced_Fresno.aspx . *I-5 Alignment* A potential I-5 alignment was considered and eliminated from further study in the 2005 Statewide Program EIR/EIS. The Authority and FRA determined that the Highway I-5 is not a reasonable alternative for detailed consideration in the Merced to Fresno Section of the HST system. While the I-5 corridor could possibly provide better end-to-end travel times compared to alignment alternatives that follow the SR 99 corridor, it would not meet project objectives and would not satisfy the project's purpose and need. First, because it is not where the bulk of the Central Valley population resides, the I-5 corridor would result in lower ridership and would not meet the current and future intercity travel demand generated by the Central Valley communities as well as the SR 99 corridor.[1] Second, the I-5 corridor would not provide transit and airport connections in this area, and thus would not meet the purpose and need and basic objectives of maximizing intermodal transportation opportunities and improving the intercity travel experience in the Central Valley area as well as the SR 99 corridor. Also, use of the I-5 corridor would encourage sprawl development – the opposite of what the HST System is intended to achieve, and was opposed by numerous agencies, including the U.S. Environmental Protection Agency (EPA). With respect to the first issue, the I-5 corridor has very little existing or projected population between the San Francisco Bay Area and Los Angeles. In contrast, well over 3 million residents are projected to live between Fresno and Bakersfield along the SR 99 corridor by 2015, which directly serves all the major Central Valley cities. Residents along the SR 99 corridor lack a competitive transportation alternative to the automobile, and the detailed ridership analysis showed that they would be ideal candidates to use an HST system. In addition, the I-5 corridor would not be compatible with current land use planning in the Central Valley, which focuses and accommodates growth in the communities along the SR 99 corridor. The concept of linking the I-5 corridor to Fresno and Bakersfield with spur lines was considered at the program level, but dismissed because it would add considerably to the I-5 corridor capital costs, and still have the same lower ridership figures compared to the SR-99 corridor.

[1] Kantor, Shawn. *The Economic Impact of the California High-Speed Rail in the Sacramento/Central Valley Area*. University of California, Merced. September 2008.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-2: Alternatives**
	For these reasons, the I-5 corridor was dismissed from further consideration in the Statewide Program EIR/EIS. There is no new information to indicate that this analysis should be revisited, nor that a different conclusion would be reached. The I-5 corridor does not meet many of the objectives described in the EIR/EIS (refer to Section 1.2.3). Because it is isolated from existing cities and population centers, as well as airports, it does not meet the purpose and need of the project of using high-speed intercity travel capacity to supplement critically over-used interstate highways and commercial airports. *SR 152* Some comments requested that an alignment following SR 152 be considered as an alternative. The eastern end of the SR 152 alignment is discussed in Section 2, Alternatives, of the EIR/EIS for the Merced to Fresno Section. An extensive analysis of the SR 152 alignment, including its eastern connection into the north-south Merced to Fresno line (i.e., the SR 152 Wye), will be included in the EIR/EIS for the San Jose to Merced Section. For purposes of the Merced to Fresno Section EIR/EIS, to avoid any predetermination of the east-west and wye connection between the San Jose to Merced and Merced to Fresno sections, and thus the alignment for the San Jose to Merced Section, the Authority and FRA will defer making a decision on both the east-west connection and the SR 152 Wye until completion of the San Jose to Merced Section EIR/EIS process. *Wyes* Wyes are curved, high-speed alignments that would connect the Central Valley sections of the HST with the Bay Area sections (refer to Chapter 2, Alternatives, for a complete description of the wyes). The evaluation of the east-west connections from the Merced to Fresno Section to the San Jose to Merced Section balanced ecological, agricultural, and community avoidance issues against travel time and longer track development. The wye alternatives were selected through the process described in the AA Report, which is available on the Authority's website at http://www.cahighspeedrail.ca.gov/lib_Merced_Fresno.aspx. Of the five preliminary east-west routes, the two that were carried forward for evaluation in the Merced to Fresno Section EIR/EIS are the routes following Avenue 24 and Avenue 21 (refined from the original Avenue 22 design option for environmental avoidance purposes). These are referred to as the "Ave 24 Wye" and the "Ave 21 Wye" design options for the Merced to Fresno Section. The SR 152 connection from the Merced to Fresno Section to the San Jose to Merced Section is being studied in the San Jose to Merced Section EIR/EIS, including consideration of comments from regulatory agencies (EPA and USACE). Design refinements to this connection would avoid many of the impacts that led to its original dismissal from consideration. The Authority developed the SR 152 Wye with connections to all three north-south alignment alternatives to a conceptual level to be consistent with Caltrans planning, the SR 152 Freeway Agreement (State of California and Madera County 1969), and HST engineering criteria. The environmental impacts of the two wyes for the portion of the wyes that fall within the Merced to Fresno construction footprint (Ave 21 Wye and Ave 24 Wye) have been analyzed as part of the Merced to Fresno Section EIR/EIS. Any potential environmental impacts of the wyes that are not within the Merced to Fresno construction footprint but within the San Jose to Merced construction footprint will be analyzed in the upcoming San Jose to Merced Section EIR/EIS. Some commenters assert that the selection of the Merced to Fresno preferred alignment alternative would effectively prejudge the wye alternative that will be chosen when the San Jose to Merced Final EIR/EIS is completed. This is incorrect. Each of the three wye alternatives could connect to any of the alignment alternatives being considered for the San Jose to

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-2: Alternatives**
	Merced Section. In fact, deferring the selection of the wye alternative allows for all wye configurations to be fully evaluated for the San Jose to Merced Section**.** Therefore, selection of the preferred north-south alignment will not limit the future ability of the Authority and FRA to select any of the wyes being considered. *Stations* Using the decisions made in the two Program-level EIR/EISs and the information collected from the public and agencies, including the scoping process, the Merced to Fresno Preliminary AA Report's (Authority and FRA 2010b) initial range of potential station alternatives for examination through the AA process included the following: • Castle Commerce Center • Merced Intermodal Transit Center • Merced Amtrak Depot • Merced Municipal Airport • Chowchilla • Madera The purpose of the Merced to Fresno HST includes providing travel between major urban centers and connectivity to airports, mass transit systems, and the highway network in the south San Joaquin Valley. The Castle Commerce Center, Merced Amtrak, Merced Airport, Chowchilla, and Madera station alternatives were dropped from further review because they would not meet the project's purpose and need, would result in undesirable community impacts, would not meet station location criteria for TOD, had a low potential to serve as a multi-modal station, or were inconsistent with local plans. Additional information regarding the elimination of these alternatives can be found in the Preliminary AA report on the Authority's website at http://www.cahighspeedrail.ca.gov/lib_Merced_Fresno.aspx**.** *Existing Transportation Corridors* Some comments have suggested that the EIR/EIS should examine alternative routes that are located completely within existing transportation corridors, primarily the BNSF and UPRR/SR 99 corridors. As a corollary, comments have suggested using existing tracks or upgrading Amtrak facilities to allow Amtrak to operate at higher speed. *Unsuitability of Existing Tracks.* Because of proposed operating speeds and FRA's safety requirements, the proposed HST System in the Central Valley would require fully grade-separated tracks that are dedicated for HST use. Grade separation is necessary to avoid accidents where tracks cross roads or other rail lines. Crossing guards do not provide a sufficient level of exclusion (at upper speeds, an HST travels the length of a football field in less than 1 second). Dedicated tracks (those only used by HSTs) are necessary to avoid scheduling conflicts and potential conflicts with slower-moving trains, as well as to ensure the proper maintenance of tracks for high-speed operation and to include curves engineered for high speeds. Existing railroad tracks in the project area are built to support freight and lower-speed passenger service. These services share the track in some locations, requiring passenger trains to wait for the passage of freight trains on a regular basis. The 2005 Program EIR/EIS (Authority and FRA 2005) concluded that this would be unacceptable for HSTs because it would prevent them from providing high-speed service and travel times required by Proposition 1A. The existing rail tracks are not grade-separated from all intersecting roads, with at-grade crossings being the normal configuration. Neither the existing

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-2: Alternatives**
	tracks nor the roadbed were built to accommodate or meet minimum standards for high-speed rail operations. In addition to the safety and capacity constraints, portions of the existing rail rights-of-way are not sufficiently straight to accommodate the design speed of the HST, which would necessitate divergence to maintain sufficiently high speeds. For example, an operating speed of 220 mph requires that track curves have a minimum radius of 5 miles. Use of existing track for the HST in the Merced to Fresno Section was therefore not considered to be a reasonable alternative for study in this EIR/EIS. *Limitations of Existing Corridors and Amtrak Upgrade.* Proposition 1A (2008) calls for the HST alignment to follow existing transportation or utility corridors to the extent feasible. However, due to HST engineering and operational needs, it cannot feasibly be built solely within the existing transportation corridors. Existing corridors are not sufficiently straight nor are their curve radii long enough to support high-speed operation along their full lengths. Safety considerations also dictate the need to separate the HST from roads and conventional rail (see Section 2.4.2.1, Alignment Requirements). As a result, the potential to run the HST down the center of SR 99, as suggested by some comments, does not exist. Further, to make greater use of existing corridors, additional right-of-way would be needed to provide sufficient width and curve radii for high-speed operations. This would necessitate acquisition and removal of substantially greater numbers of homes and businesses to expand and straighten these corridors, with greatly increased impacts on existing communities as the alignments pass through urban areas. In compliance with the objective of using existing corridors where feasible, in making decisions regarding HST alignments and station locations, the Authority and the FRA have gone to great lengths to maximize the feasible use of existing transportation corridors and to minimize impacts on both agricultural lands and communities. Accordingly, the Authority and FRA have eliminated potential “new corridor” alignment alternatives to the west and east of SR 99 from further consideration and have identified downtown station locations for study in Merced and Fresno. These downtown locations would help to minimize impacts on agriculture while promoting urban infill development. To achieve the non-stop travel times set in Assembly Bill (A.B.) 3034, sustained operations over 200 mph are required throughout most of the Central Valley. At best, track upgrades to the infrastructure used by Amtrak to improve service would allow speeds of approximately 120 mph. This would, therefore, not meet a basic objective of the project.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-3: HST and Growth in the San Joaquin Valley – Measures to Realize Densification Benefits of HST – Role of Local Governments/Station Area Cities and Counties in Making it Happen**
Some comments questioned the role of the HST System in influencing growth, and the HST System's influence on station areas and local jurisdictions' growth.	**The analysis of growth impacts involves modeling, using reasonable assumptions of future trends, to develop reasonable projections. Growth projections were made at a countywide level and are not as detailed as the analysis of direct impacts, such as the effect on Waters of the U.S., which is calculated in fractions of an acre.** The analysis undertaken by the Authority and FRA show that the HST System has the potential to induce some growth and intensify growth near stations. Both population and employment in Fresno, Madera, and Merced counties are projected to grow at a higher average annual rate than California as a whole and are described in detail in Section 3.18. The growth inducement analysis in Section 3.18 of the EIR/EIS shows that in counties analyzed within the study area (Merced, Madera, and Fresno), the HST alternatives are projected to induce somewhat more population growth (about 3% more total population) and create additional future employment opportunities (about 4% more total jobs) than would occur under the No Project Alternative (refer to Table 3.18-16 in the EIR/EIS). The HST would help provide employment opportunities in the San Joaquin Valley counties, which traditionally have higher rates of unemployment than the statewide average and would encourage more compact growth around the proposed stations at greater intensities than currently exist. projected, but would provide opportunities to encourage more compact development, particularly around the stations. The project would also redirect development growth to central cities, in conjunction with the SB 375 (state legislation requiring regional targets for reduction of greenhouse gas [GHG] emissions) regional efforts, and future plans of the cities of Merced and Fresno, and would reduce the pressure for the future conversion of farmlands by encouraging new investments around the stations in Merced and Fresno, rather than in peripheral areas. HST construction- and operation-related employment impacts were estimated using a Regional Input-Output Modeling System (RIMS) II multiplier model of the Merced, Madera, and Fresno county region. The analysis of population and employment growth updated the population and employment estimates that were originally developed for the growth analysis in the Bay Area to Central Valley Program EIR/EIS (Authority and FRA 2008). The potential impacts of induced employment growth were evaluated based on the infill potential and magnitude of land needed to accommodate the projected population and employment growth. The analysis of land consumption estimated the population and employment growth that could fit within the urban growth boundaries delineated by the current general plans of Fresno, Madera, and Merced, and the cities of Chowchilla, Fresno, Madera, and Merced. The population, employment, and land consumption estimates were then reviewed to characterize the potential secondary impacts (see Section 3.18.3, Methods for Evaluating Impacts). Under the No Project Alternative, the populations of Merced, Madera, and Fresno counties are projected to increase by 80.1%, 103.9%, and 59.3%, respectively, between 2010 and 2035. In Merced and Madera counties alone, employment is anticipated almost to double from approximately 138,000 jobs in 2010 to almost 250,000 jobs in 2035 (California Employment Development Department [CEDD] 2010). While the recent changes in the economy have slowed this growth, the general long-term trends are expected to continue because the region attracts people seeking affordable housing, and the cities of Merced and Fresno are the main economic centers. The EIR/EIS analysis shows that the HST alternatives would create additional employment and business opportunities and attract higher-wage jobs in comparison to the No Project Alternative during both construction and operation (see Section 3.18). In addition, the population is forecasted to increase by approximately 78,446 people (Table 3.18-16) compared to the No Project Alternative. However, the HST alternatives would only slightly raise the projected population and employment

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-3: HST and Growth in the San Joaquin Valley – Measures to Realize Densification Benefits of HST – Role of Local Governments/Station Area Cities and Counties in Making it Happen**
	growth beyond growth that would occur under the No Project Alternative. The analysis of current general plans cities and counties within the region found that the cities have enough area within their current spheres of influence to accommodate the planned growth to 2035 as well as the HST-induced growth. Accommodating HST-induced growth would, therefore, not impose an additional burden of future farmland conversion, or future extension of public infrastructure beyond what is currently planned. *Relocation and Long Range Commuting* The growth-inducement analysis in the EIR/EIS considered the potential for people to move from the coast to less expensive housing in the Central Valley, including commuters. However, the future conditions necessary to identify the sites where such commuters might live–including the location of employment centers, types of employment, range of salaries, price of fuel, regional and local land use plans and regulations–are unknown. Therefore, projecting the extent and specific locations of growth resulting from relocations from the coast would be a speculative endeavor and has not been undertaken. Some comments assert that the shortened travel time between the San Joaquin Valley, with its relatively low housing costs, and the Bay Area and Los Angeles Basin, which have both higher salaries and higher housing costs, would result in substantial numbers of coastal residents moving to the Valley and commuting to work on the HST System. However, travel time alone does not determine a reasonable commute mode and commute distance. Willingness to relocate in order to save housing costs is a function of housing cost, the quality of available housing (including quality of schools, etc.), commute time, and cost of the daily commute. The HST will not be a below market cost, subsidized commuter rail service, but instead would provide rapid long-distance travel, priced at commercial market rates. HST fares are expected to be tied to typical airplane fares. The cost of the fares will discourage relocation and a daily commute to and from the Bay area and the Los Angeles Basin. *Growth at Proposed HST Stations.* Future development intensification near the Merced and Fresno stations would help maximize systemwide ridership, support local land use plan changes near the stations encouraged by the San Joaquin Valley Blueprint and anticipated in the City of Merced and City of Fresno General Plans, reduce potential farmland conversion, and reduce the demand for new development areas to the extent that some of the region's anticipated future growth would be captured by the mixed-use TOD envisioned for the areas around stations. The Authority and FRA have determined that station-area development and value-capture at and around station sites are essential for promoting HST ridership, and recognize the need to work with local governments to ensure that effective land use policies are adopted and implemented. Therefore,, the Authority has developed HST Station Area Development General Principles and Guidelines (discussed in Section 3.13, Station Planning, Land Use, and Development) that articulate the following principles for development around the stations: (1) development density greater than the community average; (2) mixed land use; (3) compact, high-quality, pedestrian-oriented development; (4) an active, defined center; (5) limited, managed parking; and (6) public leadership (Authority and FRA 2011b). The Authority and FRA, along with the EPA, U.S. Housing and Urban Development, and the Federal Transit Administration (FTA), have also entered into a "Memorandum of Understanding for Achieving an Environmentally Sustainable High-Speed Train System in California," which includes a common goal of integrating HST station access and amenities into the fabric of surrounding neighborhoods (Authority and

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-3: HST and Growth in the San Joaquin Valley – Measures to Realize Densification Benefits of HST – Role of Local Governments/Station Area Cities and Counties in Making it Happen**
	FRA 2011b), available at http://www.cahighspeedrail.ca.gov/WorkArea/DownloadAsset.aspx?id=11174. These principles have been at the forefront during project-level environmental review and will be particularly important in the selection of station sites, including those in Merced and Fresno, and in implementing station development. HST station area development principles draw on TOD strategies from the MTC, Bay Area Rapid Transit (BART), and the Sacramento Area Council of Governments, among others, that have been effective at focusing compact growth within walking distance of rail stations and other transit facilities. The Authority recognizes that land use is within the purview of local government and acknowledges that local governments will play a key role in implementing station area development. This role would include adopting plans, policies, zoning provisions, and incentives for higher densities, and approving a mix of urban land uses within at least a ½-mile radius around proposed HST stations, as provided in the HST Station Area Development General Principles and Guidelines. The Authority has offered matching funds to local agencies for station area planning. The Authority has signed an agreement with, and is providing funding and technical assistance to, the City of Fresno for development of a station area plan that reflects the Authority's General Principles and Guidelines. The Authority is still working toward an agreement with and providing funding to the City of Merced. Merced is in the process of identifying the necessary matching funds. As discussed above, growth is expected to occur within the region under the No Project Alternative as well as with the HST System. The cities of Merced and Fresno already have existing general plan policies promoting pedestrian-friendly development near transit, have undertaken redevelopment activities to help revitalize their downtowns, and are considering stronger general plan and community plan policies that would promote TOD or mixed uses near the HST stations (i.e., Merced General Plan 2030 and the draft Fresno Downtown Neighborhoods Community Plan both in progress as of February 2011 . The San Joaquin Valley Blueprint generally encourages higher-density development near the stations of the proposed HST System. The "sustainable communities strategies" or "alternative planning strategies" to be adopted by the Metropolitan Planning Agencies in Madera, Merced, and Fresno counties pursuant to SB 375 (2008) are expected to include policies and transportation funding incentives that will encourage compact development patterns in order to meet the region's GHG reduction targets for automobiles and light trucks (5% by 2020, 10% by 2035). Therefore the project is not only consistent with existing local plans in Merced and Fresno, the project would actually help create a market and help local government harness this market for intensified development near HST stations, in furtherance of those plans, to accommodate the needs of HST riders. That market driver would not exist without the HST System. The Transit Oriented Development Design Proposals for Fresno Final Report (UC Berkeley 2010) and The Transit Oriented Development for High Speed Rail in the Central Valley, California: Design Concepts for Stockton and Merced (UC Berkeley 2008) analyzed the potential effects of HST stations in Downtown Fresno and in Downtown Merced, respectively. The reports identified a number of vacant and underutilized parcels (i.e., surface parking lots) adjacent to the UPRR corridor that are available for infill development in both downtown areas and how the existing wide streets in both downtown areas provide opportunities for widened sidewalks, streetscapes, and bicycle lanes. Higher development densities in the station areas would translate into higher levels of transit, and the stations could become major transit hubs. Office development would be attracted to the area because of the improved access to the larger markets of Los Angeles and the Bay Area and the stations could become 18-hour destinations as more commercial businesses are drawn to the area.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-4: Impacts to Agricultural Lands and the Agricultural Economy**
Numerous comments expressed concern over the loss of productive agricultural land, agricultural activities such as dairies, agriculture-related industries, and the resultant effect on the local economy.	*Regional Agriculture and Loss of Agricultural Land* The Central Valley of California is one of the most productive agricultural areas in the world. As described in Section 3.14 of the EIR/EIS, the project would have a direct effect on agricultural production through conversion of agricultural land and agricultural operations in Merced and Madera counties, and a resultant indirect effect on the agricultural economy. Agricultural land in Fresno County would not be directly affected. Under the Hybrid Alternative, approximately 1,291 to 1,420 acres of farmland, including approximately 283 to 299 acres of prime farmland, would be converted to a transportation-related use as a result of the project. This would result in the permanent loss of those agricultural lands. However, the amount of land that would be removed from agricultural production in the two counties is a very small percentage of the agricultural land in those counties (see Section 3.12.5.3). Madera County has about 762,000 acres of agricultural land, including 97,500 acres of prime farmland. Merced County has about 1.16 million acres of farmland, including about 272,100 acres of prime farmland. Nonetheless, the overall impact of the project on agricultural land in the San Joaquin Valley is expected to be significant (see Table 3.14-16). In order to preserve the maximum amount of prime farmland, farmland of statewide importance, farmland of local importance, and unique farmland and to mitigate potential impacts, the Authority would work with local, regional, and Department of Conservation representatives to identify suitable land in the region and willing landowners to establish agricultural conservation easements on an acre-for-acre basis, ensuring permanent protection and long-term stewardship for working agricultural lands (see Section 3.14.7, Mitigation Measure Ag-MM#1). The Authority will enter into a contract with the Department of Conservation's California Farmland Conservancy Program (CFCP) for comprehensive assistance in this endeavor. The Authority would fund the purchase of such easements through the CFCP. The project would have an effect on agricultural production through its conversion of agricultural land and effects on infrastructure (including access roads). It is expected that some of this production would relocate elsewhere within the San Joaquin Valley. Relocation would depend upon a number of variables, including the desires of the displaced farm owners, and cannot be accurately predicted. In some cases, production could not be easily replaced given the limited availability of suitable replacement lands or difficulties related to permitting necessary to continue production at a new site. Affected dairies, in particular, would require new permits from state (i.e., Regional Water Quality Control Board [RWQCB] water quality permit) and local (i.e., conditional use permit [CUP]) agencies before a new site could be approved. Transferring production to other permitted dairies may occur to some extent, but would be limited to the permitted capacity of those dairies (typically either capacity for waste disposal under the RWQCB permit or total cows under a local CUP). Whether such permits could be obtained in a timely manner, or at all, is uncertain. Some relocated agricultural production would take time to re-establish full production levels. In addition, any reduced agricultural production would have an additional multiplier effect on the region's economy and could affect businesses involved in agricultural services, food processing, and the transportation of goods (see Section 3.12). In order to address this concern, the EIR/EIS includes a new commitment (see Section 3.14.6, Project Design Features) to assist confined animal facility owners in obtaining new or amended permits for the continued operation or relocation of the facility. For information on relocation assistance, see Chapter 3.12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and MF-Response-SOCIAL-1. *Dairies* Fresno, Madera, and Merced counties support a large number of dairies. According to the California Department of Food and

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-4: Impacts to Agricultural Lands and the Agricultural Economy**
	Agriculture[2], in 2010 there were 106 dairies in Fresno County (with 1,118 cows/dairy), 56 dairies in Madera County (with 1,329 cows/dairy), and 258 dairies in Merced County (with 1,040 cows/dairy). The number of dairies operating in these counties varies from year to year. Between 2009 and 2010, Fresno County gained 4 dairies, Madera County gained 1 dairy, and Merced County lost 10 dairies. The dairy industry has been consolidating in recent years. According to the California Department of Food and Agriculture, in 2005 Fresno County had 118 dairies, Madera County had 57 dairies, and Merced County had 327 dairies[3]. Although in Fresno and Merced counties there has been a loss in the number of dairies since 2005, the total number of cows in dairies in each county actually increased over that period. The total production of Grade A milk overall in the three counties has increased during that period as well; increases in Fresno and Madera counties made up for a similar reduction in Merced County. As discussed in Section 3.14.5, the project could result in the closure or relocation of one to two dairies and acquisition of property from several other confined animal facilities. The Authority and FRA recognize that this could be a considerable loss for those individuals; however, it would not be an impact with substantial intensity relative to the total dairy production in this portion of the San Joaquin Valley. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Relocation Act) (42 United States Code [U.S.C.] Ch. 61). For more information on the Uniform Relocation Act, see Chapter 3.12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and MF-Response-SOCIAL-1. The project must also adhere to California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available at the Authority's website: http://www.cahighspeedrail.ca.gov/rightofway.aspx. Even with this assistance there would be potential for temporary disruption to agricultural operations as production is reallocated between owners, where severed parcels are transferred to adjoining owners, and as facilities are relocated. Related economic sectors, such as processing facilities, could also experience some short-term multiplier effects from reduced production. *Employment* Employment in the agricultural sector accounted for about 16% and 24% of the total industry employment in 2008 in Merced and Madera counties, respectively (see Section 3.12.5.3). In 2008, farm earnings accounted for about 9% and 7% of the total personal income in Merced and Madera counties, respectively. The loss of agricultural land could result in a reduction in the number of farm workers, who could be negatively affected if the acquisition were to result in permanent job losses or they were unable to find work on another farm or industry in the region. This effect would be minimized if the agricultural production were to relocate elsewhere in the region. *Road Closures* In addition to the permanent property acquisitions, the project would also result in road closures where the alignment would

[2] California Department of Food and Agriculture. *California Dairy Statistics 2010 Data*. Sacramento, CA. 2010.

[3] California Department of Food and Agriculture. *Dairy2006 Statistics and Trends*. Sacramento, CA. 2006

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-4: Impacts to Agricultural Lands and the Agricultural Economy**
	be at-grade. Permanent road closures resulting from the project were examined to identify potential effects on regional access for agricultural operations (please see Section 3.14.5). The potential effects from restriction in regional access include increased costs to operations and increased difficulties in moving workers and equipment to cultivate and harvest fields and deliver products to processing facilities and markets. However, for all HST alternatives and HMF locations, the road closures associated with the project would be dispersed and detours to alternative routes would be approximately 2 miles long or less. As a result, regional access for agricultural operations (e.g., moving workers and equipment to cultivate and harvest fields and deliver products to processing operations and markets) is not expected to be restricted. *Impacts to Individual Agricultural Operations* While the overall impact of the project on agricultural operations in the San Joaquin Valley is not expected to be significant, the project would adversely affect individual farms and other agricultural operations. Construction of the HST System would result in disruption to or removal of existing infrastructure such as buildings and other structures, pumps and wells, reservoirs/tailwater ponds, irrigation systems (including distribution lines, canals, and gravity flow systems), power supplies, and access. These disruptions and removals would be, understandably, very important to individual farm owners and operators and in extreme cases may make continuing the existing agricultural operation infeasible. The Authority and FRA are sensitive to the importance of these disruptions, including the acquisition of all or a portion of agricultural operations. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Act (42 U.S.C. Ch. 61). The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see Chapter 3.12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and MF-Response-SOCIAL-1. The project must also adhere California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available at the Authority's website: http://www.cahighspeedrail.ca.gov/rightofway.aspx.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-5: Community Impacts – Focus on Impacts for Communities That Would Not Have a Station**
Many comments were received from residents of communities where stations would not be located, such as Madera and Chowchilla, stating that they would be adversely impacted but would not receive any benefit compared to the communities that do have stations. Impacts they were concerned about included community division, acquisitions, agricultural impacts, visual changes, noise, and dust. Some were concerned about access to or distance to the stations.	*Community Cohesion* "Community cohesion" refers to the degree of interaction among the individuals, groups, and institutions that make up the community. This takes into consideration access and linkages, community facilities, and local businesses in the surrounding area that provide opportunities for residents to gather and interact. The Community Impact Assessment prepared for the Merced to Fresno Section considered the following key neighborhood and community issues relative to community cohesiveness: residential relocations; changes in neighborhood quality; barriers to social interaction in the analysis of potential impacts of the HST project on neighborhoods, community cohesion, and community facilities; impacts on community facilities; and impacts on public services, safety, and security. Community facilities for the analysis include schools (public and private), religious institutions, parks and recreation facilities, government facilities (e.g., courthouses, city halls, post offices, and libraries), cemeteries, fire stations, police stations, hospitals, social institutions (e.g., community centers, senior facilities, and food banks), and cultural locations (e.g., entertainment venues and museums). Impacts on these community resources do not automatically constitute an adverse impact on neighborhood cohesion; rather, these impacts are evaluated collectively in association with mitigation measures to determine their impact on community cohesion. In order to alleviate or minimize general community cohesion related impacts associated with the alignment alternatives in the Merced to Fresno Section, the Authority and FRA have made an effort to involve the community in the project development (including outreach to minority and low-income populations in compliance with EO 12898), workshops, public information meetings, and community meetings. In addition to the meetings noted in the EIR/EIS (refer to Section 3.12.3.5), during 2010 the Authority held scoping, public information, or workshop meetings in Chowchilla, Fairmead, Fresno, Madera, Merced, and Planada. Meeting notices were published in English and Spanish. information was presented in English and Spanish at community meetings, with information in Lao at presentations at the Merced Lao Family Community Center. Section 8 of the Final EIR/EIS describes outreach activities. Table 8-1 lists meetings held from 2009 through 2011, including community outreach. Attendees included members of the public and elected officials. *Evaluation of Impacts* Impacts to neighborhoods and communities within the study area are evaluated in the EIR/EIS in Section 3.12, Socioeconomics, Communities, and Environmental Justice, and in the *Merced to Fresno Section Community Impact Assessment* (Authority and FRA 2012b). The Community Impact Assessment considered four key neighborhood and community issues: changes in neighborhood quality; barriers to social interaction in the analysis of potential impacts of the HST Project on neighborhoods, community cohesion, and community facilities; impacts on community facilities; and impacts on public services, safety, and security. The Community Impact Assessment also provides a demographic analysis with complete race, ethnicity, income, and housing characteristics for socioeconomics, communities, and environmental justice and identifies potential mitigation and strategies for socioeconomics, communities, and environmental justice resources. The Draft Community Impact Assessment is available on the Authority's website at http://www.cahighspeedrail.ca.gov/draft-eir-m-f.aspx under the heading "Technical Reports." The final Community Impact Assessment will be published at the same time as the Final EIR/EIS. Impact-related strategies (e.g., design standards, traffic management plans, visual quality, and permanent impact categories that are commonly of concern for this type of project) are discussed in the impact sections of the EIR/EIS. A few examples of

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-5: Community Impacts – Focus on Impacts for Communities That Would Not Have a Station**
	the mitigation measures related to these strategies include VQ-MM#3b: Screen Elevated Guideways Adjacent to Residential Areas, SO-MM#3: Implement Measures to Reduce Impact Associated with the Division of Existing Communities, SO-MM#4: Implement Measure to Reduce Impacts Associated with the Relocation of Community Facilities, and TR-MM#1: Access Maintenance for Property Owners. Section 3.12, Socioeconomics, Communities, and Environmental Justice, of the EIR/EIS presents the socioeconomic data regarding population trends, demographic characteristics, housing characteristics, household income, fiscal resources, and agricultural industry characteristics for each alignment alternative. The socioeconomic data used in the analysis are derived from various sources, including the U.S. Census Bureau, California Department of Finance, California Employment Development Department, and various city and county agencies. In communities without HST stations or an HMF site, direct social impacts would include the effects of property acquisitions, visual changes, noise, and changes in community cohesion. Where the project alternatives are adjacent to the existing transportation corridors there is an incremental change. Resource impacts (such as transportation, noise, and air quality) that have the potential to affect community cohesion across all alternatives are presented in Section 3.12, Table 3.12-11. Impacts particular to each of the alternative alignments are described in Section 3.12.5.3. Refer to Appendix 3.13-B, Land Use and Communities, for additional information on the areas adjacent to the HST alternatives. Mitigation measures SO-MM#1 through SO-MM#8, discussed in detail in Section 3.12.7, Mitigation Measures, would minimize or avoid identified adverse impacts for communities of concern. With the implementation of the mitigation measures described in the EIR/EIS, impacts on communities of concern would not be disproportionately high or adverse, except for the impact on the Franklin-Beachwood community,.

<table>
<tr><th>Comment Summary</th><th>Response</th></tr>
<tr><td>GENERAL</td><td>MF-Response-GENERAL-6: Relationship of the Authority's Business Plan to the Analysis in the EIR/EIS</td></tr>
<tr><td>Many comments expressed concern about project ridership and how it relates to the Business Plan that was released after the Draft EIR/EIS was issued. The cost of riding the HST was also a question.</td><td>
The Draft 2012 Business Plan, which was released to the public in November 2011, presents a range of ridership forecasts for the HSR system in 2040, with a focus on Full Phase 1 ridership. These forecasts differ from those presented in the Merced-to-Fresno EIR/EIS, which rely on forecasted ridership for the full HST system assuming a high ridership level (refer to Section 2.5 of the EIR/EIS). The forecasts differ because they were developed for distinct purposes and are based on different assumptions. The underlying project, construction of the HST between Merced and Fresno, remains the same and the separate preparation of business planning forecasts does not invalidate the environmental analysis presented in the EIR/EIS or change the nature or scope of the underlying project. The ridership forecasts described in the EIR/EIS appropriately support the evaluation of potential environmental impacts.
In contrast to the purpose of the Business Plan ridership study, the purpose of the EIR/EIS ridership forecasts was to help the Authority and FRA appropriately analyze and understand the potential environmental impacts of the project. To avoid underestimating the potential environmental effects of the project, the EIR/EIS forecasts identify reasonable, higher levels of ridership on the HSR system. This ensured that the EIR/EIS would adequately identify and disclose potential environmental impacts and identify applicable mitigation measures. To avoid underestimating ridership, the forecasts were based on more optimistic assumptions about future population growth than those in the 2012 Business Plan. Additionally, the EIR/EIS presents a range of forecasts based on the relatively higher HSR ticket prices assumed in the 2012 Business Plan (83% of airfare), as well as a lower fare assumption (50% of airfare) that generates more riders.
The ridership model includes the effect of improvements in the transportation network on overall trip-making such as the phenomenon described as "latent demand." The number of total inter-regional trips with the HST full system statewide in 2035 is expected to be on the order of a million more annually. However, this is not as large as the forecast diversion of trips from cars and aircraft, so overall miles driven in the state and the San Joaquin Valley counties are forecast to go down by several percent. The project benefits associated with a reduction in vehicle traffic have been updated to include a scenario that assumes a less optimistic ridership forecast based on high fares (83% versus 50% of air fare). This provides a "worst case" benefits scenario similar to the "worst case" impacts scenario based on higher ridership levels (50% of air fare).
The following table compares the EIR/EIS and Draft 2012 Business Plan forecasts. Note that this is for year 2035, to allow a direct comparison between common forecast years.
<table>
<tr><th>Ridership Forecast</th><th>Full Phase 1 (in millions of passengers)</th><th>Full System(in millions of passengers)</th></tr>
<tr><td>EIR/EIS low forecast (ticket price at 83% of airfare)</td><td>40.2</td><td>69.3</td></tr>
<tr><td>Business Plan medium ridership scenario (ticket price at 83% of airfare)</td><td>35.8</td><td>51.2</td></tr>
<tr><td>EIR/EIS high forecast (ticket price at 50% of airfare)</td><td>57.0</td><td>98.2</td></tr>
</table>
</td></tr>
</table>

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-6: Relationship of the Authority's Business Plan to the Analysis in the EIR/EIS**

Business Plan high forecast (ticket price at 50% of airfare)	53.0	77.0

The higher ridership estimates for the EIR/EIS reflect a conservative approach allowing the Authority and FRA to understand the environmental impacts at the highest reasonable forecast of ridership. The level of annual HST ridership influences the frequency of service, thereby affecting the level of environmental impacts related to traffic, air quality, noise, and energy. The EIR/EIS uses the high ridership forecast for analyzing the anticipated adverse environmental impacts from operating the HST system. This "worst-case scenario" approach ensures disclosure of the higher level of adverse environmental effects that may occur with higher ridership (e.g., pass-by train noise, station-area traffic). If eventual ridership is lower, adverse environmental impacts would also be lower.

The ridership numbers are projections for the year 2035, assuming an average condition of the economy rather than either a booming economy such as California experienced in the late 90s or the currently economic downturn. Factors such as population and employment growth, the quality of the rail service, and future driving costs are just as important in the long run as the ups and downs of the economic cycle, and travel does not stop because of a recession. For example, 40% more people rode the San Joaquin trains in 2010-2011 than in 2000-2001, even with much higher unemployment last year than at the beginning of the decade. (see 2008 CA State Rail Plan, p. 119 and Amtrak news release Sept 29, 2011).

It is important to keep in mind that total forecast annual ridership on the HST System is not the primary driver of most aspects of HST System design. While the Authority and FRA weighed ridership and revenue potential in evaluating alignment and station alternatives, the design of most HST System components is dictated by the agencies' performance objectives and safety requirements, rather than by total annual ridership. For example, in order to meet the Authority's performance objectives and the speed and trip time (including the requirements of Proposition 1A), the HST System will have at least two-tracks throughout, with four tracks at intermediate stations.

Certain aspects of the HST System design are influenced by ridership. For example, the size of the HMF and the light maintenance facilities is based on the 2035 full system high ridership forecast to ensure adequate sizing of these facilities to accommodate maximum future needs. This approach is consistent with general planning and design practices for a large infrastructure project, acquiring enough land for future needs up front rather than trying to purchase property at a later date when it may no longer be available or impractical to acquire.

For stations, forecast annual ridership and peak-period ridership play a role in determining the size of some station components, such as those required for public access and egress, including parking. The 2035 full-system, high-ridership forecast formed the basis for the conceptual service plan, which in turn influenced the station designs so that station facilities would be sufficient to accommodate the anticipated future use of the HST System, which is expected to build over time. The Draft 2012 Business Plan similarly anticipates that future growth of the system will be phased over time.

In the EIR/EIS, the 2035 full system high ridership forecast was used to estimate the maximum potential station parking demand and to allow for an analysis of where and how parking demand might be accommodated near the HST station. For the Merced HST station, however, the maximum ridership and parking demand would occur with Phase 1 operations; therefore, Phase 1 operations were used for the analysis of the potential parking needs near the Merced station.

The EIR/EIS's analysis of high forecasts for parking provides flexibility over time to reduce the amount of station parking

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-6: Relationship of the Authority's Business Plan to the Analysis in the EIR/EIS**
	based on more refined demand projections and TOD around station areas. Land use development around the HST stations is assumed in the EIR/EIS to occur over time. The amount of nearby development, as well as the future availability of local transit connections, both of which tend to decrease parking demand, will influence the future need for parking. While HST would be a catalyst for such development, its timing would be dictated by land use decisions by the cities of Merced and Fresno and market conditions. Demand for parking facilities would also depend on how HST ridership grows over time. The Authority and FRA would therefore retain the flexibility to make decisions about what parking facilities to construct initially and how additional parking might be phased or adjusted depending on how the HST System ridership increases over time. For example, it is possible that some parking facilities might be constructed at the 2020 project opening, only to be replaced in whole or in part, or augmented later with development or other parking facilities (see Section 2.5.3).

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-7: Length of Review Period for the Draft EIR/EIS**
Some comments assert that agencies and the public were not given sufficient time to review the Draft EIR/EIS. They note that the Draft EIR/EIS is very large and therefore reviewers should have been allowed substantially more than 60 days to review the document and submit their comments.	The following is a general timeline for the publication of the Merced to Fresno Section Draft EIR/EIS and the opportunity for public comment: • The Draft EIR/EIS was posted on the Authority's website for public review on August 9, 2011. • Formal notice was published in the **Federal Register (FR)** on August 9, 2011, which included a 45-day public review and comment period. • The Draft EIR/EIS was formally made available to California state agencies by the State Clearinghouse beginning August 10, 2011. • On September 8, 2011 FRA published a notice in the FR advising the public that the comment period would be extended until October 13, 2011. • Formal hearings were held in the project area and written and verbal comments accepted on September 14, 15, and 20, 2011. • The public review and comment period ended on October 13, 2011, a full 60 days after the notice was published regarding the public review and comment period. The 60-day period of review exceeds the time required under CEQA and under FRA's Procedures for Considering Environmental Impacts, as described below. The CEQA Guidelines provide: "The public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days except under unusual circumstances. When a draft EIR is submitted to the State Clearinghouse for review by state agencies, the public review period shall not be less than 45 days that the public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days except under unusual circumstances. A draft EIR submitted to the State Clearinghouse for review by state agencies is to have a public review period that shall not be less than 45 days, unless a shorter period, not less than 30 days, is approved by the State Clearinghouse" (14 CCR 15105). Likewise, Section 13(c)(9) of the FRA Procedures for Considering Environmental Impacts provides: "The draft EIS shall be made available for public and agency comment for at least 45 days from the Friday following the week the draft EIS was received by EPA. The time period for comments on the draft EIS shall be specified in a prominent place in the document, but comments received after the stated time period expires should be considered to the extent possible" (64 FR 101, page 28545, May 26, 1999). The Authority and FRA believe this was sufficient time for the public to review and provide comments on the Merced to Fresno Draft EIR/EIS. Some comments suggested that because the Fresno to Bakersfield Draft EIR/EIS was published concurrently, it was unreasonable to expect the public to review and comment on both documents. In early October 2011, in response to public and agency comments, the Authority and FRA determined that it was appropriate to supplement the Fresno to Bakersfield Draft EIR/EIS. The Authority and FRA are currently preparing a Revised Draft EIR/Supplemental Draft EIS to address some concerns raised by resource agencies and the public. Once completed, this new document will be made available for public review and comment consistent with Authority and FRA noticing procedures.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-7: Length of Review Period for the Draft EIR/EIS**
	Recognizing that the Draft EIR/EIS is a lengthy document, the Authority and FRA provided extraordinary outreach to the community. The Authority and consultant staff held several advertised public workshops in the project area during the review period to present the Draft EIR/EIS to give the public an opportunity to ask questions and collect information about the project prior to the more formal public hearings. These four educational workshops were held during the last week of August in Chowchilla, Fairmead, Fresno, and Le Grand, at which members of the public could review copies of the Draft EIR/EIS and obtain help in identifying how the project might affect their property. Three public hearings were held in mid-September in Merced, Madera, and Fresno by the Authority and FRA, at which the public could submit written or verbal comments. To ensure that agencies and the public had the opportunity to review and comment on the Draft EIR/EIS, the Authority and FRA provided widespread notice of its availability. Section 8.0 of the Draft EIR/EIS describes the distribution of the Draft EIR/EIS, listing many of the agencies, Native American tribes, elected officials, and organizations and businesses that were provided notice of its availability. On August 9, 2011, the Authority sent a press release to all major newspapers in the area advising the public of the availability of the Draft EIR/EIS on the Authority's website. As required by law, notices were placed in newspapers of general circulation in the area and in the FR. The Authority also mailed notices to the approximately 7,300 agencies, elected officials, Native American tribes, organizations, and individuals on the project's mailing list. This included the owners of land adjoining and near the alternative alignments. The Authority used the County Assessors' rolls in Fresno, Madera, and Merced counties to identify landowners. The Draft EIR/EIS was made available to the public for review in several ways. As noted above, the document was posted on the Authority's website, beginning on August 9, 2011. Printed and electronic copies were made available in 12 libraries and community centers located in Atwater, Chowchilla, Fairmead, Fresno, Le Grand, Los Banos, Madera, Madera Ranchos, Merced, and Planada. Copies were sent to cooperating federal agencies, state responsible and trustee agencies (including copies sent through the State Clearinghouse), and were available at the Authority's office in Sacramento. DVDs with the Draft EIR/EIS in electronic form were sent, without charge, to all who requested them. The public was given the opportunity to comment in any of several ways. Comments could be submitted to the Authority and FRA by card or letter (including cards and letters submitted at the public hearings), verbally at the three public hearings, and by means of e-mail. The Authority and FRA assessed and considered all substantive comments on the Draft EIR/EIS that were received by the close of the comment period and are including a response, where necessary, in the Final EIR/EIS. However, the formal review period does not limit the consideration of comments received from agencies, organizations, and the public after the end of the comment period. The Authority and FRA have considered comments received after October 13, 2011 and will reproduce them in the Final EIR/EIS. The primary difference between comments received before October 13 and those received afterward is that the latter may not be responded to in writing in the Final EIR/EIS if they were received after the document had been drafted. Approximately 895 sets of comments were submitted during the comment period from August 9 through October 13, 2011. These were provided via e-mail, submitted at the public meetings and hearings, via mailed letters, via fax, and via the Authority's website.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-8: Preferred Alternative**
Many comments expressed concern about impacts to their property or to a resource from a specific alternative.	The Preferred Alternative for the Merced to Fresno Section does not include and therefore will not impact the property discussed in **these** comments.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-9: General Support of HST**
Several commenters expressed their general support for the HST Project. Benefits mentioned included economy, reduced congestion on roadways, and reduced pollution and related health benefits.	High-speed rail would bring significant benefits to California, both in the near term and in the long run. It would benefit individuals and the state as a whole. Benefits would be statewide and would encompass both economic and environmental concerns. California's population is growing rapidly and, unless new transportation solutions are identified, traffic **and congestion** will only worsen and airport delays will continue to increase. The proposed 220-mph HST System would provide lower passenger costs than travel by air for the same city-to-city markets. It would increase mobility**,** while reducing air pollution, decreasing dependence on fossil fuels, and protecting the environment by reducing GHG emissions, and would promote sustainable development. By moving people more quickly and at lower cost than today, the HST System would boost California's productivity and enhance the economy. In November 2008, California voters passed Proposition 1A, which provides $9 billion toward the implementation of HST service in California. Please see the Statewide Program EIR/EIS (Authority and FRA 2005) for more information in regard to the rationale for building the proposed HST System. Also see the discussion under Section 1.2.4, Statewide and Regional Need for the HST System with the Merced to Fresno Section.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-10: Support of/Opposition to BNSF Alternative or UPRR/SR 99 Alternative**
Many comments expressed support for or opposition to either the BNSF or the UPRR/SR 99 alternative, often based on specific impacts to properties, agriculture, or biological resources.	Several comments either supporting or opposed to the BNSF or UPRR/SR 99 Alternatives included opinions regarding alignments following existing transportation corridors and concerns about impacts involving aspects such as displacements (businesses and homes), noise and vibration, transportation, agricultural lands, visual/aesthetic resources, and construction-related air quality impacts to specific properties or communities. Among some commenters, reasons for supporting the BNSF Alternative or UPRR/SR 99 Alternative included economic benefits, such as jobs created from HMFs nearby and improvements in the communities from the construction and presence of the HST. Proposition 1A requires that the HST alignment follow existing transportation or utility corridors to the extent feasible. The Authority and FRA have gone to great lengths to maximize the use of existing transportation corridors to minimize potential impacts on agricultural lands. However, HST operations impose design requirements that do not always fit within the alignment of the existing transportation corridors and therefore cannot feasibly be built solely within those corridors. Existing corridors are not sufficiently straight, nor are their curve radii long enough to support high-speed operation along their full

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-10: Support of/Opposition to BNSF Alternative or UPRR/SR 99 Alternative**
	lengths and in many cases cannot maintain the speeds necessary to meet the Prop. 1A travel time requirements. Additionally, safety considerations dictate the need to separate the HST from roads and conventional rail (refer to Section 2.4.2.1, Alignment Requirements). The EIR/EIS provides an overview of the relative differences among physical and operational characteristics and potential environmental consequences associated with the HST north-south alignment alternatives and station locations. The physical/operational characteristics included alignment, length, capital cost, travel time, ridership, constructability, and operational issues. The potential environmental impacts included transportation-related topics (air quality, noise and vibration, and energy), human environment (land use and community impacts, farmlands and agriculture, aesthetics and visual resources, socioeconomics, utilities and public services, hazardous materials and wastes), cultural resources (archaeological resources, historical properties) and paleontological resources, natural environment (geology and seismic hazards, hydrology and water resources, and biological resources and wetlands), and Section 4(f) and Section 6(f) resources (parklands, recreation areas, wildlife/waterfowl refuges, and historical sites). The Authority used the information in the Draft EIR/EIS and input from the agencies and public to identify the Hybrid Alternative as the Preferred Alternative (see Chapter 7 for a full discussion of the Preferred Alternative). The Authority's decision included consideration of the project purpose and need and the project objectives presented in Chapter 1, Project Purpose and Need, as well as the objectives and criteria in the alternatives analysis, and the comparative potential for environmental impacts. The Hybrid Alternative was identified as the Preferred Alternative because it would have the least overall impact on the environment and local communities, the lowest cost, and the fewest constructability constraints of the project alternatives evaluated. The BNSF Alternative would have greater impacts on natural resources than the UPRR/SR 99 and Hybrid alternatives. These natural resource impacts include habitat for special-status species, Waters of the U.S., vernal pools and seasonal wetlands, conservation areas, and wildlife crossings. Impacts to riparian communities would be similar for all alternatives. The UPRR/SR 99 Alternative would result in the highest level of community impacts, followed by the BNSF Alternative, while the Hybrid Alternative would result in the least. The UPRR/SR 99 Alternative would have 5 more miles of trackway within the urbanized area that would not be served by a station than either the BNSF or Hybrid alternatives. All alternatives would equally affect the Merced and Fresno areas, but these communities also would realize the greatest community benefits as a result of the stations; therefore, the differentiators among the alternatives are related to effects on the communities of Le Grand, Fairmead, and Madera Acres and the cities of Chowchilla and Madera. The UPRR/SR 99 Alternative would result in impacts to the City of Chowchilla and community of Fairmead, because in that the route would result in operational noise and have a lasting presence within those community limits, and would have an even greater impact on the City of Madera. The BNSF Alternative would result in impacts to Le Grand and Madera Acres. The Hybrid Alternative would avoid most communities, passing south of Fairmead. While it avoids Downtown Madera, the Hybrid would have the same effects on Madera Acres as the BNSF Alternative. See Chapter 7 for additional detail on the selection of the Preferred Alternative. The Hybrid Alternative avoids Downtown Madera and the community of Le Grand and in doing so minimizes constructability issues that can lead to delay and cost escalation The estimated cost of the Hybrid Alternative is substantially less than the other alternatives (about $450 million less than the BNSF Alternative and over $1 billion less than the UPRR/SR 99 Alternative) (see Chapter 5 of EIR/EIS**)**.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-10: Support of/Opposition to BNSF Alternative or UPRR/SR 99 Alternative**
	Neighborhoods (particularly those near the HST stations) may experience increased vitality once the system is in operation in terms of improved access, residential infill, employment growth, and greater patronage of local business. The area around the HST stations could improve community cohesion because improvements in the area with the development of the stations could provide new meeting places for residents from the surrounding neighborhoods. However, as discussed in Section 3.12.5.3communities that are farther from the HST stations, including Chowchilla, Fairmead, and the Tower District in Fresno, may experience physical deterioration adjacent to the HST corridor that could result in negative impacts. Depending on the wye selected later following the San Jose to Merced Section EIR/EIS review, the Hybrid Alternative could be permanently adjacent to SR 99 within Chowchilla and Fairmead. Under the Ave 21 Wye design option, the Hybrid Alternative is located within lands zoned freeway commercial and opposite from where residential developments are located in Chowchilla, but close to the church and some residential areas in Fairmead. If Ave 24 Wye were selected, the Hybrid Alternative would avoid Chowchilla, but would travel along the south side of Fairmead in an elevated profile and be seen from some residential areas. See Section 3.12 Socioeconomics, Communities, and Environmental Justice (3.12.5.3, HST Alternatives) for additional information.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-11: Comments with Opinion Only**
Some comments stated a person's opinion on the project, but not necessarily support or opposition for an alternative.	These comments present opinions on the project. CEQA and NEPA require a final EIR and EIS to respond to the responsible comments received on environmental issues (see 14 CCR §15088(a) and FRA Procedures for Considering Environmental Impacts 14(s). The comments do not address an environmental issue.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-12: Impact of HST on Existing Amtrak Service**
Some comments related to impacts associated with ending Amtrak service and how that would affect current users and employees, as well as how it would be integrated with the Initial Construction Section (ICS).	At full build out, the HST would operate separately from state supported Amtrak service. The decision whether to continue Amtrak service on the San Joaquin line (using existing BNSF infrastructure) is outside the purview of the Authority. However, as described in Section 3.2 of the EIR/EIS and Section 6.5.1.5 in the Transportation Technical Report, (available at http://www.cahighspeedrail.ca.gov/draft-eir-m-f.aspx) it is anticipated that the Amtrak San Joaquin rail service would be adjusted to function as a feeder service to the HST System. Where the San Joaquin stops at more stations, it is anticipated that connecting service would be provided to maintain accessibility at or better than current service levels to Bakersfield and, as a feeder service, the San Joaquin line would be important in its support of new riders. The ICS will include parts of the Merced to Fresno and Fresno to Bakersfield sections of the HST System; as noted in the November 2011 Draft 2012 Business Plan, HST passenger operations will begin with the construction of the IOS connections to either the San Francisco Bay Area or the Los Angeles Basin, respectively. Amtrak provides service to the San Joaquin Valley from both the Bay Area and Los

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-12: Impact of HST on Existing Amtrak Service**
	Angeles Basin. Regardless of which IOS is built first, Amtrak's San Joaquin line can provide passenger rail service to any of several Central Valley termini of the HST System while the other IOS is under construction. Once the Phase I HST system is operating, Amtrak could also provide feeder service from Sacramento to the Merced HST station until Phase 2 of the HST System is built.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-13: Analysis of Amtrak on Initial Construction Segment**
Several commenters inquired about the independent utility of the proposed ICS between Merced and Bakersfield. Some asked "why not prioritize urban HST sections first and why spend the money in an area that would have low potential ridership?' Others asserted that since it is unlikely that this project would be built, the EIR/EIS should review the effects of using Amtrak on this route and recirculate the document.	The first section of the California HST System requires a section of over 100 miles of high speed track to test the High-speed trains. The Central Valley is the best location for this initial phase. However, even if HST project were not to be fully funded, American Recovery and Reinvestment Act (ARRA) funding must be used towards a project that has operational benefits or can demonstrate "independent utility" as that term is defined in FRA's High-Speed Intercity Passenger Rail (HSIPR) Interim Program Guidance (74 FR 29900, 29905 (June 23, 2009). The ICS could accommodate non-electrified passenger trains (e.g. Amtrak San Joaquin service) from the north and existing stations in Merced and Madera via a crossover trackway with the BNSF railroad (at Avenue 17 near Madera) to Bakersfield in the south if the Authority's Preferred Alternative were selected, even if no other portion of the HST System is constructed. Independent utility under ARRA could be achieved by allowing non-electrified passenger trains to utilize the ICS. The ICS track would be vastly superior to existing passenger train track in the same corridor, thus allowing much faster and smoother service than currently exists. Such interim service is undefined at present but could range from the existing Amtrak San Joaquin service (although improved because of the improved track) to modern diesel multiple unit trains capable of speeds and comfort significantly better than the existing Amtrak San Joaquin service. The Merced to Fresno section could also have utility as a test track for the eventual expansion of the HST system. High speed testing is crucial to the safe and efficient operation of the system. The relatively straight alignment would allow for the testing of track, signaling systems, and trainsets at operational speeds. Improved non-electrified passenger service utilizing the ICS is not part of the Project (i.e., a high-speed electrified train project) for environmental review purposes. If such service were to be proposed, environmental review would be conducted by those agenc(ies) that would institute and operate such service. As an indirect practical matter, however, potential environmental impacts of construction that would permit such service were fully analyzed in the Draft EIR/EIS because any such service would run on HSR track, the construction impacts of which were fully analyzed. The Authority has met the funding requirement of the federal ARRA funding that the ICS have "independent utility" by stipulating in the funding agreement that the ICS must be capable of being connected to existing infrastructure for use of its infrastructure by other operators in the event that the HST does not go into operation. Operation of the section by Amtrak or any other provider or type of non-HST service is not a part of this project. The Authority has no jurisdiction to operate trains which operate at less than 125 mph. Comments have cited 23 CFR 771.111 as the guiding federal regulations applicable to the segmenting of the NEPA which do not apply to FRA funded projects. Furthermore, FRA's programmatic requirement that projects using ARRA funds

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-13: Analysis of Amtrak on Initial Construction Segment**
	demonstrate independent utility as defined in FRA's Interim Guidance cited above should not be confused with the requirement for independent utility under NEPA. This Project has been developed as a result of the tiered EIR/EIS process and the alternatives have been further refined through project level scoping and the alternatives analysis. All reasonable alternatives are being thoroughly analyzed at the project level to identify potential environmental impacts and where appropriate, mitigation measures consistent with CEQA, CEQ's regulations, and FRA's Environmental Procedures. As part of this process, review for related projects demonstrating independent utility. However, that citation is part of the Federal Highways Administration (FHWA) regulations for the implementation of NEPA. The FHWA's regulations do not apply to the FRA and the FRA's NEPA regulations (i.e., 64 FR 28545) have no corresponding requirement. Nonetheless, the Authority and FRA have divided the HST System into logical sections that will support operation of HST service between stations initially, such as between Merced and Fresno, and as the system is expanded. International experience has shown that an HST system can be successfully built in sections over time, with each section attracting additional private investment, and need not be built immediately as a complete system in order to be successful. Merced and Fresno are two of the largest cities in the San Joaquin Valley. They are both surrounded by metropolitan areas and are economic hubs within the region. Given their potential ridership and regional economic importance, they make logical termini for a section of the HST system. The November 2011 Draft 2012 Business Plan describes the Authority's plan for the long-term development of the HST system, using a combination of federal, state, and private financing. As discussed in the Business Plan, international experience has shown that HST systems make money from their operations and do not require government subsidies to cover those costs. To the contrary, they earn sufficient operational profits to attract private investments in various components of the system, including operations. These aspects demonstrate that a section such as Merced to Fresno can both be a part of an HST system eventually extending from the Bay Area to the Los Angeles Basin, as envisioned since 1996 with the establishment of the Authority, and have independent utility.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)**
Many comments were submitted opposing the overall project, based on one or more reasons, including cost; funding; impacts on cities, counties, communities, farmland, agriculture, natural environment, wildlife and habitat, air quality, business, land access,	As discussed in Chapter 1 of the EIR/EIS, California's population is growing rapidly and, unless new transportation solutions are identified, traffic will only become more congested and airport delays will continue to increase. The proposed 220-mph HST System would provide lower passenger costs than air travel for the same city-to-city markets and service competitive with automobile travel. It would increase mobility while reducing air pollution, decreasing dependence on fossil fuels, protecting the environment by reducing GHG emissions, and **promoting** sustainable development in the areas near the stations, in comparison to existing trends. By moving people more quickly and at lower cost than today, the HST System would boost California's productivity and also enhance the economy. See the discussion under Section 1.2.4, Statewide and Regional Need, in the EIR/EIS.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)**
and residential areas.	High-speed rail systems around the world cover their own operating costs through revenues, which is a key reason why 13 nations have built almost 10,000 miles of high-speed rail lines in the last few decades and why 24 countries are planning and building another 16,000 miles. The financial analysis of the California system, described in the November 2011 Draft 2012 Business Plan, clearly demonstrates that the ridership and revenues are well able to cover the costs of operating the system, meaning that no operational subsidy would be required. The HST Project is being financed through a combination of federal and state funds, including the federal High-Speed Intercity Passenger Rail Program and California Proposition 1A's Safe, Reliable High-Speed Passenger Train Bond Act adopted by state voters in November 2008. To date, California has $6.33 billion to invest in the development of its HST Project, including approximately $3.5 billion in federal grant funds obligated through Cooperative Agreements. *Employment Opportunities* The EIS/EIS estimates that approximately 10,200 to 17,700 one-year full-time job equivalents would be created within Merced, Madera, and Fresno counties over the entire construction period, depending on the alternative selected (EIS/EIS Section 3.12.5.3). The Authority estimates that permanent employment associated with the operation of the project in the three-county region would be approximately 1,300 jobs (EIR/EIS Section 3.18.5.3). Ticket Prices The Revised Draft 2012 Business Plan includes a scenario of fares being set at 83% of anticipated airline fares. This follows the strategy of HST systems worldwide to set fares that are below those of airlines serving the same market and above the out-of-pocket driving costs in shorter distance travel markets. The appropriate fare level will take into account direct competition from air and road travel and system service costs. The ticket pricing structure is expected to be similar to that of an airline, with different classes of ticket as well as different price points depending upon the time and day of travel, how long travel is purchased before the departure date, how many stops the train makes, etc. *Air Quality* In the long-term, the HST would help improve air quality in the San Joaquin Valley air basin by reducing vehicle-miles traveled (VMT) in comparison to the No Project Alternative. Automobiles produce a major portion of the air pollutants generated within the air basin, and reducing VMT reduces these emissions. Over the long term (year 2035), the HST Project would result in smaller increases in motor vehicle emissions than would occur with the No Project Alternative, and these reductions would more than offset any short-term emission increases associated with the construction and long-term operation of the HST System itself (refer to Section 3.3.5.3 of the EIR/EIS). Wildlife and Habitat All HST alternatives have both direct and indirect effects on wildlife habitat as well as associated special-status species of plants and wildlife. Effects are either direct during site preparation and construction or indirect through runoff, noise, motion, startle, and ongoing facility operation. During site preparation, plant communities, some of which comprise wildlife habitat elements, would be removed from the construction area (i.e., areas where track would be laid) prior to heavy construction activities. It is during this phase of the project that wildlife would be displaced or otherwise affected through the clearing,

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)**
	scraping, and removal of vegetation. The displacement of wildlife into the adjoining habitat would create increased pressures for survival as other individuals would compete for finite resources, which generally reduces the local populations due to the habitat reduction. The pre-project landscape contains restrictions to wildlife movement, such as SR 99 urban development and the BNSF and UPRR tracks. The UPRR/SR 99 and Hybrid alternative alignments are designed to traverse the minimum distance within the Eastman Lake-Bear Creek Essential Connectivity Area (ECA) in order to minimize the project's effect on wildlife mobility in this linkage. The BNSF Alternative, which is not the preferred alternative, has the longest potential barrier across this linkage, as well as the most watercourses and riparian corridor crossings. Wildlife crossing opportunities include those areas within the ECA or modeled wildlife linkage that integrate linear features, such as riparian crossings, into the design. These project design features include bridges and culverts that can funnel wildlife movement. Farmland Overall, the amount of land that would be removed from agricultural production in Merced County and Madera County is a very small percentage of the two-county total land in production (see Section 3.12.5.3 of the EIR/EIS). The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Act (42 U.S.C. Ch. 61). The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see Section 3.12 of the EIR/EIS and MF-Response-SOCIAL-1. The project must also adhere California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Even so, there would be potential for temporary disruption to agricultural operations as production is reallocated between owners and as facilities are relocated. Related economic sectors, such as processing facilities, could also experience some short-term multiplier effects from reduced production. *Agriculture Impacts* The project would adversely affect individual farms and other agricultural operations. Construction of the HST System would result in disruption to or removal of existing infrastructure such as buildings and other structures, pumps and wells, reservoirs/tailwater ponds, irrigation systems (including distribution lines, canals, and gravity flow systems), power supplies, and access. These disruptions and removals would be, understandably, very important to individual farm owners and operators and, in extreme cases, could make the existing agricultural operation infeasible to continue. The HST right-of-way would sever parcels, including parcels of agricultural land. Although some parcel severance is inevitable with any HST alignment, the Authority and FRA have made great efforts to minimize this impact through alignment selection, station locations, and careful project design. In some areas, severance would create small remnant parcels rendered uneconomic for farming operations. Typically, these remnants would be located between road rights-of-way and the HST alignment. The Authority is committed to working with agricultural property owners to resolve or mitigate, if possible, acquisitions that result in the division of farmlands. Mitigation measures include creation of a farmland consolidation program to sell these uneconomic remnant parcels to neighboring landowners (see Mitigation Measure AG-MM#2 in Section 3.14.6 of the EIR/EIS)

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)**
	and creation of overcrossings or undercrossings at reasonable intervals to preserve access across the HST right-of-way (see Mitigation Measure S0-MM#8 in Section 3.12.7 of the EIR/EIS). The Authority and FRA recognize the importance of these disruptions. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Act (42 U.S.C. Ch. 61). The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see **Section 3.12** of the EIR/EIS and MF-Response-SOCIAL-1. The project must also adhere California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available at the Authority's website: http://www.cahighspeedrail.ca.gov/rightofway.aspx. *Business Impacts* Project construction would require acquisition and relocation of a number of businesses. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Act (42 U.S.C. Ch. 61). The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see Section 3.12 of the EIR/EIS and MF-Response-SOCIAL-1. The project must also adhere **to** California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available at the Authority's website: http://www.cahighspeedrail.ca.gov/rightofway.aspx. It is anticipated that many of the jobs at these businesses would be relocated rather than lost. Section 3.12.5 of the EIR/EIS provides information about property acquisition impacts on businesses. Depending on the location of the construction activities and the nature of the activities, the impacts on businesses would vary. Business-related impacts would be more likely to occur near surface construction activities. Businesses that tend to rely on drive-by traffic to attract customers would experience the greatest impacts; however, some of these businesses may receive positive business impacts as construction workers buy goods and services, in addition to regular customers. As described in Section 3.12.7 of the EIR/EIS, mitigation measures have been identified that would minimize the impacts on businesses during construction, including signage and maintaining access to the extent practicable, and providing relocation assistance (see SO-MM#1 and SO-MM#2). In addition, other sections of the EIR/EIS identify mitigation measures related to noise (Section 3.4.7), dust (Section 3.3.7), and traffic (Section 3.2.7). Operation could also result in positive business impacts related to TOD in those areas where growth and higher densities are encouraged (i.e., Downtown Merced and Downtown Fresno). The HST stations could act as a catalyst for TOD. Sections 3.12.5 and 3.13.5 of the EIR/EIS provide additional information on the benefits for businesses. *Communities* None of the HST alternatives would result in significant impacts on community interaction or community facilities, as identified in Section 3.12.5 of the EIR/EIS. The project would generally avoid bisecting neighborhoods, as it predominantly would travel along or adjacent to existing major transportation facilities within the urban areas and would maintain through access. As

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)**
	described in Section 3.12.4 of the EIR/EIS, many communities in the study area developed around the railroad, which may have been the draw for development originally but has remained a dividing feature within the communities. Because the HST System would be grade-separated, it would provide safe and free-flowing connecting roads across the trackway. Within the rural areas, communities would not be bisected as the alignments generally parallel existing transportation corridors. While some residences would have visual impacts resulting from vegetation removal or the presence of the HST structures and/or changes in the roadway system, especially where the alternatives are at-grade, these impacts would only affect residences adjacent to the project elements and would not affect overall neighborhood quality or social interaction. There is the potential for physical deterioration, primarily from the elevated guideways in urban areas. The Authority and FRA are working together to minimize and avoid effects leading to physical deterioration. Refer to the EIR/EIS, Sections 3.12.5 and 3.12.7, for complete information on community impacts and additional mitigation details, respectively. The HST Project would require property acquisitions along the borders of some neighborhoods, but these acquisitions would not affect overall neighborhood cohesiveness. After mitigation, impacts on these neighborhoods are expected to be minimal. Around the HST stations, the existing land uses are predominantly commercial and industrial; however, there are residential uses in close proximity that could be affected by station activities. Limits on parking in neighborhoods or business districts adjacent to the stations would be the responsibility of the city that has jurisdiction where the station lies. Parking is expected to be developed in phases over time, as demand increases and in response to development around the stations such as TODs, as well as future expansion of local transit links at multi-modal stations, that may reduce actual demand. Section 2.5.3 of the EIR/EIS explains how the Authority would take a flexible approach to providing the necessary parking at stations. Refer to Sections 3.2, Transportation, 3.3 Air Quality, 3.4 Noise, and 3.10 Safety and Security, of the EIR/EIS for additional information on potential impacts in the station area and mitigation measures to reduce or avoid the impacts. The evaluation of impacts on neighborhoods and communities within the study area is provided in Section 3.12 of the EIR/EIS and in the Merced to Fresno Section Community Impact Assessment (Authority and FRA 2012b) and MF-Response-GENERAL-5. This assessment considered the following key neighborhood and community issues: changes in neighborhood quality; barriers to social interaction in the analysis of potential impacts of the HST Project on neighborhoods, community cohesion, and community facilities; impacts on community facilities; and impacts on public services, safety, and security. In addition, the Community Impact Assessment provides a demographic analysis with complete race, ethnicity, income, and housing characteristics for socioeconomics, communities, and environmental justice. For more information, refer to the Authority website at http://www.cahighspeedrail.ca.gov/draft-eir-m-f.aspx. *Growth* Population growth is anticipated to increase in the Central Valley even without the HST System. The growth inducement analysis in Section 3.18 of the EIR/EIS shows that in Merced, Madera, and Fresno Counties, the HST alternatives are projected to induce about 3% more total population and create about 4% more total jobs than would occur under the No Project Alternative (refer to Table 3.18-16 in the EIR/EIS). The HST would help provide employment opportunities in an area of high unemployment and would encourage more compact growth around the proposed stations at greater intensities than currently exist.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)**
	Land use is highly dependent on transportation facilities because enhancing access leads to higher attractiveness for commercial land uses. The HST System is not like a freeway with multiple on- and off-ramps; access would be limited to the stations. So, despite passing through rural areas, the HST would not provide direct access to those areas. The project would provide opportunities to encourage more compact development around the stations and redirect development growth to central cities, in conjunction with the SB 375 regional efforts and future plans of the cities of Merced and Fresno, and would reduce the pressure for the future conversion of farmlands by encouraging new investments in Merced and Fresno, rather than in peripheral areas. For more information regarding growth related to the HST System, please refer to Section 3.18, Regional Growth, and MF-Response-GENERAL-3.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-15: HMF Decision**
A number of comments were received either supporting or opposing a specific HMF location, or requesting that a specific location be dropped from consideration.	The Authority has not identified a Preferred Alternative HMF site at this time. This decision will be made as part of the San Jose to Merced Section EIR/EIS document because selection of the HMF is highly dependent on the selection of the wye and the Fresno to Bakersfield Section EIR/EIS process. The subsequent San Jose to Merced Section Final EIR/EIS, which also evaluates the SR 152 wye, will select the preferred east-west wye connection, which may also influence the range of potential HMF sites. Once a wye is selected and additional environmental review is complete for both the Fresno to Bakersfield and San Jose to Merced sections, the preferred HMF site will be identified. As discussed in Chapter 2 of the EIR/EIS, all environmental impacts for potential HMF sites in the Merced to Fresno section have been evaluated in this EIR/EIS. To support this future decision, additional comparative study, design, and review may be necessary. Subsequent review and study may include further design development.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-16: Decision on Wye**
A number of comments were received either supporting or opposing a specific wye location, or requesting that a specific location be dropped from consideration. Some also expressed concern that all wye options will not be equally evaluated in the San Jose to Merced Section EIR/EIS.	As discussed in Section 2.3.2 of the EIR/EIS**,** the Authority has not identified a Preferred Alternative for the wye option at this time. This will be determined as part of the San Jose to Merced Section EIR/EIS. The Merced to Fresno Section EIR/EIS process will result in selection of the north-south alignment, which would narrow the wyes to those connecting to the recommended alignment; however, there are other factors west of the wye that may influence the final selection of the wye. The San Jose to Merced Section EIR/EIS will fully evaluate all three wye configurations currently under consideration, including the two wye configurations that would connect to the Hybrid Alternative identified in the Merced to Fresno Section EIR/EIS and the SR 152 Wye. For purposes of the Merced to Fresno Section EIR/EIS, to avoid any predetermination of the east-west and wye connection between the San Jose to Merced and Merced to Fresno sections, and thus the alignment for the San Jose to Merced Section, the Authority and FRA will defer making a decision on both the east-west connection and the SR 152 Wye until completion of the San Jose to Merced Section EIR/EIS process.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-17: Public Outreach**
A number of comments were concerned with the public involvement process and suggested that the outreach was not adequate for a project of this size and scope. Some were specifically concerned about outreach to environmental justice populations.	Pursuant to the requirements of NEPA and CEQA, the Authority and FRA have conducted an extensive public and agency involvement program as part of the environmental review process. Public involvement and outreach included informational materials, such as fact sheets; informational and scoping meetings (including town hall meetings), public and agency scoping meetings, meetings with individuals and groups, as well as presentations and briefings. Agency involvement included agency scoping meetings, an Interagency Working Group, meetings with agency representatives, and other agency consultation. Public and agency outreach included notification and circulation of the EIR/EIS. Chapter 8 (Public and Agency Involvement) describes the public and agency involvement efforts conducted during the preparation, and after publication, of the Draft EIR/EIS. Table 8-1 lists the agency and public meetings held as part of the Authority's outreach efforts, during and after scoping, and during preparation of the Merced to Fresno Section EIR/EIS. Public meetings were announced through direct mail to those in the project database, advertisements in local newspapers, email notices, and postings on the Authority's website (www.cahighspeedrail.ca.gov). Notifications of public meetings were posted in newspapers that have general circulation in areas potentially affected by the proposed project. Direct mailed notices for public meetings were in English and Spanish or contained a toll-free phone number for Spanish speakers to call. Emailed notices for public meetings were in English and Spanish. The email distribution list initially included several hundred addresses and grew to over 4,000. Toll-free lines in English and Spanish were established to field questions or information requests. The toll-free numbers were included on handouts and materials distributed at public meetings. If required, Spanish, Lao, and Hmong language interpreters were available at the Public Information Meetings and Draft EIR/EIS Hearings. These public meetings included: • December 17, 2009 – Merced to Fresno Section, Madera Public Information Meeting • December 17, 2009 – Merced to Fresno Section and San Jose to Merced Section, Joint Merced Public Information Meeting • January 19, 2010 – Fresno to Bakersfield Section, Public Information Meeting • March 16, 2010 – Fresno to Bakersfield Section, Public Information Meeting (Merced to Fresno Section supporting) • April 29, 2010 – Merced to Fresno Section, Merced Public Information Meeting • April 29, 2010 – Merced to Fresno Section, Madera Public Information Meeting • May 12, 2010 – Merced to Fresno Section, Madera Multicultural Outreach (Specifically to reach out to Spanish speakers in Madera) • June 17, 2010 – San Jose to Merced Section, Dos Palos Public Information Meeting • July 15, 2010 – San Jose to Merced Section, Merced Public Information Meeting • September 28, 2010 – Merced to Fresno Section, Merced Public Information Meeting • October 5, 2010 – Merced to Fresno Section, Madera Public Information Meeting • May 17, 2011 – Fresno Public Information Meeting (Joint) • June 1, 2011 – Merced Public Information Meeting • June 2, 2011 – Madera Public Information Meeting • July 14, 2011 – Authority Board Meeting • August 23, 2011 – Public Information Workshop, Le Grand

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-17: Public Outreach**
	• August 24, 2011 – Public Information Workshop, Chowchilla • August 25, 2011 – Public Information Workshop, Fresno • August 30, 2011 – Public Information Workshop, Planada • September 6, 2011 – Draft EIR/EIS Public Hearings (Merced, Madera, Fresno) Various publications and materials were developed in English and Spanish and made available at public meetings and the Authority's website, including the Merced-Fresno High-Speed Train Fact Sheet, Merced to Fresno Frequently Asked Questions, "Your Property, Your High-Speed Rail Project," and the Permit to Enter fact sheet. In addition, the Authority website includes information about HSTs, the proposed HST route, the Authority's updated Final Business Plan, newsletters, press releases, board of directors meetings, recent developments, status of the environmental review process, Authority contact information, and related links. During scoping and beyond, the development of the reasonable range of alternatives and many of the studies supporting the EIS can be traced to public comments. Early on, the suggestion for inclusion of the Western Madera (A3) Alternative (and later its removal) is a prime example of how public input shaped the scope of study. The west Chowchilla bypass was also developed in response to the City of Chowchilla's request to find a route that avoided the city. Persons along the BNSF commented on the BNSF Alternative taking too much prime farmland. These comments are supported through the environmental review and resulted in the identification of a preferred alternative that did not take as much prime farmland. More fine-grained changes have also occurred in the design development in response to concerns about avoiding impacts to the Fairmead Church, the Women's Correctional facility, and several dairy businesses.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-18: Funding and Project Costs**
Many comments were received regarding increases in project cost and concern that sufficient funding will be available. Many of these comments were also concerned about spending such a large amount of money during the current economic downturn and that the local, state and federal governments cannot afford it.	Historically, federal funds have supported approximately 50% to 80% of many major transportation investments, including highway, transit, and aviation sector-related projects. This means although California's high-speed rail program is much larger than most individual transportation projects, there is precedent for substantial federal support for large and nationally significant transportation programs. California has been extremely successful in winning federal high-speed rail grants, obtaining close to 40% of the approximately $10 billion of federal High-Speed and Intercity Passenger Rail grant funds available for the country as a whole. This initial federal funding allows California to move forward with the first step in the high-speed rail program. The Passenger Rail Investment and Improvement Act (PRIIA) of 2008 (www.fra.dot.gov/downloads/PRIIA%20Overview%20031009.pdf) established the framework for the national high-speed rail and intercity passenger rail program. Using PRIIA as a framework, in February 2009, Congress appropriated through the ARRA an investment of $8 billion for new high-speed and intercity passenger rail grants. Congress continued to build upon this ARRA funding by making available, through the Fiscal Year 2010 Appropriations, an additional $2.1 billion, bringing the total program funding to $10.1 billion. In 2011 Congress rescinded $400 million of that FY 10 funding. As a result, California's high-speed rail program has received $3.5 billion or 34% of these federal funding sources. Of this amount, slightly more than $3.3 billion is committed to constructing the ICS. This, combined with funding from Proposition 1A, would provide the estimated $6 billon needed to build the ICS. The High-Speed Intercity Passenger Rail Program has been the single largest source of federal grant funding for high-speed rail. The program was developed to provide funding to new or improved high-speed or intercity passenger rail service. These project grants have the effect of delivering transportation, economic recovery, livable communities, and certain project success factors. According to the International Union of Railways, HST systems around the world achieve positive operating revenues (refer to the November 2011 Draft 2012 Business Plan, page 1-11.). Availability Payments (APs) are multi-year funding commitments in which a government undertakes to make annual payments to a private party that agrees to construct, maintain, and finance infrastructure, provided the asset meets certain specified performance standards over the contract period. AP mechanisms have been used for high-speed rail projects in France and are planned in Portugal, as well as many other types of infrastructure projects in other European countries. In each case, the central governments have entered into long-term contracts with private companies to finance, deliver, and operate infrastructure assets. European high-speed rail projects use the AP approach in conjunction with a design-build-finance-maintain structure. The APs compensate the infrastructure service provider for its delivery of the infrastructure, its ongoing performance to maintain it, and the cost to repay debt and equity financing of the infrastructure construction costs. In this regard, an AP approach can be viewed as both a procurement method and a financing tool that can be useful to accelerate private-sector capital investment. Project cost estimates for the Merced to Fresno HST are included in Chapter 5 of the EIR/EIS. The Hybrid Alternative, which is the Preferred Alternative, has the lowest cost of the alternatives considered in the EIR/EIS. The cost of the statewide HST system has been evaluated in the Draft 2012 Business Plan, which was made available to the public on November 1, 2011. The current cost estimate has increased significantly since the last estimate in 2009, which was based on the programmatic

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-18: Funding and Project Costs**
	conceptual design. That estimate, covering the Full Phase 1 between San Francisco and Los Angeles/Anaheim, was $36.4 billion in 2010 dollars. The 2012 Business Plan estimate ranges from $24.6 to $31.7 billion for the IOS, $40.8 to $48.3 billion for the Bay to Basin system, and $65.4 to $74.5 billion for the Full Phase 1 system. Eighty to 85% of this increase is for additional viaducts, tunnels, embankment, and retaining wall/trenches directly attributable to changes in scope and alignment based on stakeholder input, environmental necessity, and improved knowledge of site conditions. To assess the reasonableness of the program's cost estimates, the Authority studied the most recent cost estimates against those of other operational high-speed rail projects. These include worldwide costs evaluated by the World Bank and improvements to the Northeast Corridor proposed by Amtrak. Of note, a cost comparison of different high-speed rail projects can only provide an order of magnitude indication of the current estimate's reasonableness for the California program because every project has its own set of unique physical, environmental, and policy issues. This is particularly the case with European and Asian high-speed rail programs, built in different political and environmental settings.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-19: Employment Opportunities**
A number of comments were received requesting information on employment opportunities related to construction and operation of the project. Many also mentioned conducting specific outreach to minority businesses and communities and low-income communities.	The various alternatives would employ substantial numbers of people and result in substantial induced employment within the area during years 1 through 5 of the construction phase (refer to Section 3.18, Regional Growth, of the EIR/EIS). The number of projected construction jobs for the Preferred Alternative ranges from approximately 10,000 to 17,000 depending on the design option. The Authority would contract, through an open and transparent competitive bidding process, with private-sector engineering, architectural, and construction firms to complete the final design and construction of the system. Design and construction would occur with oversight by the Authority. Pursuant to Mitigation Measure SO-MM#5, the Authority will develop special recruitment, training, and job set-aside programs to ensure that study area minority and low-income populations are able to benefit from the project's job creation (refer to Section 3.1.2.6 of the EIR/EIS). Approximately 85% of the cost of California's HST System represents capital construction and related work, which by their nature must occur in-state. The Authority will work with local job training programs in San Joaquin Valley communities well in advance of planned advertisement of construction contracting opportunities to ensure that funding is available for construction job training and contracting for project area residents and companies, particularly minority individuals and minority-owned firms. As a federal- and state-funded project, the Authority's contracts must be compliant with the Davis-Bacon and related acts. This federal regulation requires contractors and subcontractors to pay their laborers and mechanics employed under the contract no less than the locally prevailing wages and fringe benefits for corresponding work on similar projects in the area as determined by the U.S. Secretary of Labor. Moreover, for contracts in excess of $100,000, contractors and subcontractors must also, under the provisions of the Contract Work Hours and Safety Standards Act, as amended, pay laborers and mechanics, including guards and watchmen, at least one and one-half times their regular rate of pay for all hours worked over 40 hours in a workweek. As a federal- and state-funded project, the Authority's contracts for construction activities will include small business and minority business set-asides. The HST Project will adhere to all state and federal goals for small business, minority business, women-owned, and disabled veteran enterprises. Additionally, the Authority's Board of Directors will consider policies on business goals. The Authority has adopted procurement rules that will govern Disadvantaged Business Enterprise/Small Business participation.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-20: Castle Commerce Center HMF Guideway (Guideway Should Not Be Included as Part of the HMF)**
There are a number of comments stating that the lead tracks to CCC create an unfair comparison between CCC and other HMF sites (CCC looks worse than it really is because the tracks are actually part of the Merced to Sacramento HST Section).	The Authority understands that it would be advantageous if the lead tracks could double as the primary route alignment going north toward Sacramento. However, this is impracticable for two reasons. First, the north extension of HST trackway would end north of and beyond the CCC site when following the design criteria for the curvature radius extending from the Merced Station to bring the HST trackway design up to the required speed profile. The only way to use the CCC site is to reduce the speeds well below the project requirements as the lead tracks are currently designed uniquely for the CCC HMF site. Second, the Authority has not determined the alignment moving north between Merced and Sacramento. Therefore, at this time, the Authority cannot attribute this lead track (even if the design were to link up to the HMF site) to the project north of Merced. The review of the HMF alternatives will be continued into the subsequent environmental review documents in the Fresno to Bakersfield and the San Jose to Merced sections. The consideration of all HMF sites will includes the design of the appropriate lead tracks**,** which may change during the additional environmental review and evaluation.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-21: EIR/EIS Economic Benefits Assume Completion of Statewide Project**
Some comments stated that the benefits of the project would not be experienced unless the entire statewide project is constructed.	The November 2011 Draft 2012 Business Plan (Authority 2011) and the Revised 2012 Business Plan describe the Authority's plan for the long-term development of the HST System, using a combination of federal, state, and private financing. As discussed in the Business Plan, international experience has shown that HST systems make money from their operations and do not require government subsidies to cover those costs. To the contrary, they earn sufficient operational profits to attract private investments in various components of the system, including operations. In many instances they earn sufficient operational profits to attract private investments in various components of the system, including infrastructure and equipment. Additionally, international experience has shown that HST systems are successfully built in sections over time, and need not be built immediately as a complete system in order to be successful. This international experience demonstrates that a section such as Merced to Fresno can be a part of an HST system that is initially only partially in service and is eventually extended from the Bay Area to the Los Angeles Basin, as envisioned since 1996 with the establishment of the Authority.

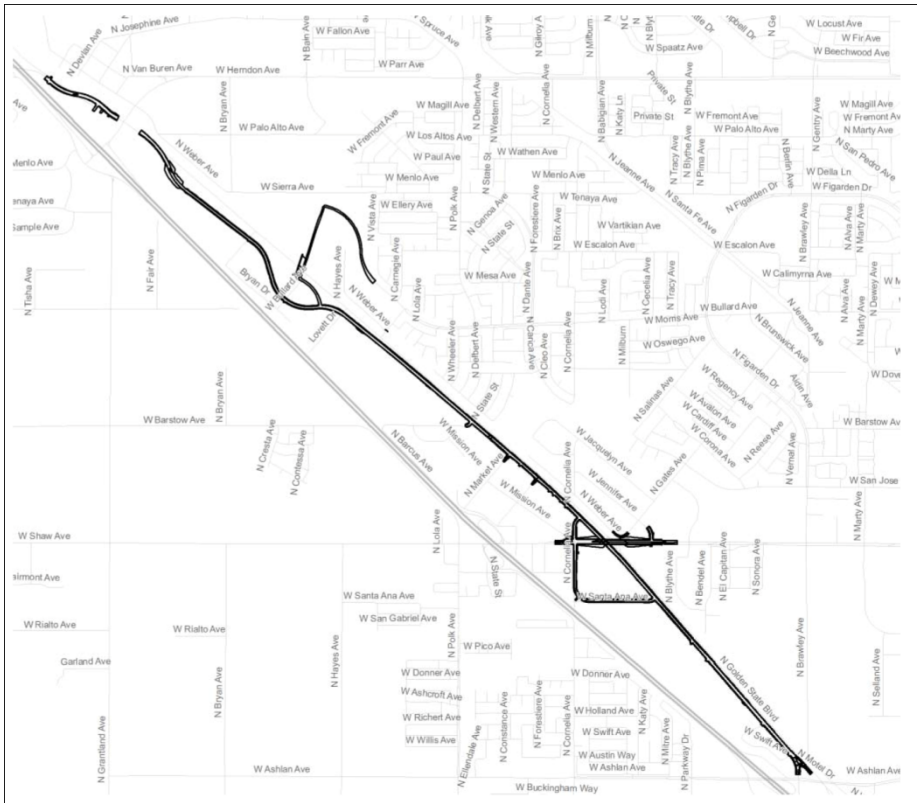
Comment Summary	Response
GENERAL	**MF-Response-GENERAL-22: Improper Piece-mealing of Statewide Project**
Some comments expressed concern that the project has been piece-mealed, or broken into smaller pieces to avoid disclosing the impacts of the entire project.	The comment suggests that the project and the EIR/EIS have been piece-mealed in violation of CEQA and NEPA because the determination on the east-west connection and wye will be made as part of the San Jose to Merced Section EIR/EIS process. The Merced to Fresno HST Section includes analysis of the north/south alignment, stations, the HMF, and the east-west connection to the San Jose to Merced Section of the HST System with a wye. These project components are described in Chapter 2 and the alternatives are analyzed in Chapter 3. The EIR/EIS analyzes east-west connections along Avenue 21 and Avenue 24 and related wye alternatives for the UPRR/SR 99 alignment, the BNSF alignment, and the Hybrid Alignment. The east-west connection and wye component of the project has not been piece-mealed from the environmental analysis**; the analysis** will be included **in both the Merced to Fresno and** the San Jose to Merced Project EIR/**EISs**. Chapter 2 does explain, however, that the lead agencies will stage their decision-making to allow for additional study of a third east-west connection and wye along SR 152 prior to the east-west connection and wye decision being made. This approach provides for an expanded environmental analysis and avoids constraining the range of alternatives in the San Jose to Merced EIR/EIS. In addition, because the three north/south alignment alternatives are compatible with each of the three east-west connection and wyes (Avenue 21, Avenue 24, and SR 152), the decision on the north/south alignment does not improperly constrain or pre-determine the decision on the east-west connection and wye.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-23: Project Description Level of Detail**
Commenters questioned the level of detail of the HST Project, suggesting that the evaluation was inadequate if the design has not fully considered the full operational and construction elements of the project.	The Authority and FRA disagree with comments that the project is described with a level of detail insufficient for adequate identification of impacts and mitigation. In general terms, the comments suggest that the project must be engineered to the level of final construction documents, which is the last step prior to commencement of actual construction, in order for CEQA/NEPA analysis to be conducted. However, CEQA and NEPA do not require full design prior to completing the environmental analysis, and in fact counsel against it. "EIRs should be prepared as early in the planning process as possible to enable environmental considerations to influence project, program or design." *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 395. Similarly, NEPA analysis should be conducted "at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts." 40 CFR § 1501.2. Because final design is not complete, the EIR/EIS took a conservative approach in identifying a footprint area within which project construction would occur and permanent structures would be placed. The EIR/EIS then evaluated impacts as if the entire footprint area would be impacted by the project. When completely designed, the project would not impact every square inch of this footprint area, but would only impact some portion of it, depending upon the precise location within the footprint, as determined in final engineering determines for the project's elements and the construction approach taken. Accordingly, the EIR/EIS's approach was conservative and ensures that the full range of potential construction or permanent impacts were analyzed. This approach also provides flexibility for final engineering designs to incorporate mitigation measures and other design refinements to reduce environmental impacts, as identified through the EIR/EIS process. The project footprint that could be affected permanently or just during construction can be found in Appendix 3.1-A of the

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-23: Project Description Level of Detail**
	EIR/EIS. Figure 3.1-2 in Chapter 3 of the EIR/EIS illustrates. Figure 3.1-2 in Chapter 3 of the ERI/EIS illustrates that final construction, and construction and staging areas, would be located within the evaluated construction footprint The construction footprint is based on 15% project engineering design drawings, which were made part of the EIR/EIS in Volume III (Alignments and Other Plans). These design drawings and associated footprint contain the project description elements that commenters claim were not contained in the EIR/EIS. This includes upgraded or modified electric utility lines to power the HST and upgraded PG&E substations (also described and evaluated in Section 3.6), which would be accessed for construction and maintenance purposes from the existing roads that abut the utility line corridors. Upgrades to existing lines may or may not include installing new powerline support structures that may include changing to the opposite side of the roadway. If the location must change, the position would avoid sensitive lands and take advantage of public right-of-way where possible. The design includes stormwater drainage necessary to accommodate the project. Regarding new or modified bridges, the footprint includes staging for the bridge abutments and the crossing structure. These design drawings and footprint documents also show roadway and freeway changes (e.g., closures, new interchanges and overpasses and/or modifications, etc.) necessary to accommodate the project; these changes also are identified and described in Appendix 2-A, which is listed in the EIR/EIS Table of Contents. The potential impacts of all these items were evaluated in the EIR/EIS, including for example, the potential air quality and biological impacts associated with constructing the roadway modifications necessary for the project. These items were included in the project description that was analyzed. Potential environmental impacts that relate to HST operations (e.g., running trains), rather than track construction and permanent facilities placement, were based on an Operations and Service Plan that is referenced and discussed in Chapter 2 of the EIR/EIS (and included as Appendix 5-A) and includes information such as anticipated trains per hour.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-24: Justifying the Baseline of Study**
Some comments were received suggesting that not enough baseline information was collected for the EIR/EIS analysis, or that the project alternatives were compared to the No Project Alternative instead of existing conditions.	The FRA and Authority disagree with comments that state that the Draft EIR/EIS failed to use existing physical conditions as the environmental baseline for analysis. The EIR/EIS evaluated all impacts against existing conditions and proposed associated mitigation. In addition, to fully understand and analyze impacts for some resource areas – transportation and air quality, for example – the EIR/EIS additionally evaluated impacts against anticipated future pre-project conditions and proposed associated mitigation. Disclosing impacts and mitigation using both baselines is authorized in the recent cases of Pfeiffer v. City of Sunnyvale (2011) 200 Cal. App. 4th 1552 6th Appellate District, November 22, 2011, case no. H036310) and, Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council (2010) 190 Cal. App. 4th 1351 and Madera Oversight Coalition v. County of Madera (2011) 199 Cal. App. 4th 48. The traffic and air quality analyses disclosed impacts under both baselines. The EIR/EIS disclosed potential impacts, and mitigation against both baselines was clearly identified and described in the transportation section (see Section 3.2.3.2) and in the air quality section (see Section 3.3.3). The Authority and FRA disagree with the comment that the EIR/EIS analysis only considered the future Veteran's Boulevard configuration in the baseline conditions. The project vs. existing conditions scenario evaluated project conditions vs. existing traffic volumes and existing traffic/roadway configurations; the existing conditions baseline includes the absence of a Veteran's Boulevard overcrossing, which is the current condition. Details are in the Transportation Technical Report, Section 6.6, Fresno Analysis between Herndon and Shaw Avenue. Also regarding Veteran's Boulevard, and to clarify, the project would construct Phase I of the Veteran's Boulevard overcrossing, which includes a crossing of the railroad right-of-way. Phase II of the Veteran's Boulevard overcrossing (i.e., continuing the overcrossing to the west across SR 99) is programmed to be done by local/regional agencies prior to the project being operational**.** Figures below show Phase I and Phase II of the Veteran's Boulevard Overcrossing Project. As stated on pages 6-1, 6-17, 6-33 and 6-37 of the 2011 Regional Transportation Plan for the Fresno COG (Fresno COG 2010), Veteran's Blvd is on the list of projects for which funding has been identified or is reasonably expected to be available within a time period that is prior to HSR becoming operational. Lastly, regarding agricultural impacts, the EIR/EIS section on agriculture does not utilize a future-conditions baseline to evaluate the project's potential to convert important farmland. All calculations of potential farmland conversion are based on existing farmland as of today. The Agriculture section (3.14) of the EIR/EIS does, separately, include a qualitative discussion of how the project compares to the No Project Alternative – a discussion clearly required by CEQA.

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-24: Justifying the Baseline of Study**



Phase I of the Veteran's Blvd Overcrossing Project

Phase II of the Veteran's Blvd Overcrossing Project

Comment Summary	Response
GENERAL	**MF-Response-GENERAL-25: HST Operations**
Commenters inquired about or requested information on the proposed HST operations, including whether or not the HST was currently running.	The HST is in the planning and environmental review stage. It is not currently in operation. Precise schedules for service have not been developed, although a general Operations and Service Plan (see MF-Response-General 23) has been developed to facilitate environmental review. Scheduling will follow construction of the ICS and testing of the system. Construction of the initial phase is anticipated to begin in late 2012. Similar to passenger air and train stations, HST stations would be designed and built to serve the needs of travelers. Accommodations and potential costs will be part of the design of the future train cars and future operational planning with considerations to typical passenger needs, including mobility assistance needs, luggage storage, bicycles, and pet/animal carriers. Internet amenities would also be provided and are expected to include wireless internet service, passenger information systems, and internet data port access.

Comment Summary	Response
TRAFFIC/TRANSPORTATION	**MF-Response-TRAFFIC-1: Construction Period Traffic Management Plan**
Some commenters had concerns about material hauling and other construction impacts, short-term impacts due to road closures, additional information regarding detailed construction activity, and construction impacts on school transportation and on farm equipment.	A detailed Traffic Management Plan (TMP), also referred to as a Construction Transportation Plan, will be prepared as the project progresses into the final design phase and more details are developed regarding construction plans. TMPs are standard means of minimizing traffic conflicts during construction and depending on the type and extent of construction, typically include detours and lane control features such as signage, lighting, and flag persons. Additional detail has been added to Section 3.2.6, Project Design Features, in the EIR/EIS to clarify the types of activities addressed by the TMP. The TMP will address in detail the activities to be carried out in each construction phase. Such activities include, but are not limited to, the routing and scheduling of materials deliveries, materials staging and storage areas, construction employee arrival and departure schedules, employee parking locations, and temporary road closures, if any. The TMP will include a traffic control plan that addresses temporary road closures, detour provisions, allowable routes, and provisions for emergency access, school transportation, and farm equipment. Extensive coordination with the local public agencies, including school districts, will be conducted during the TMP development process and measures will be included in the TMPs to address the impacts to local roads. Because of both the timing of the project and because the selected proposal for design-build will likely influence the outcome, the TMP will not be prepared prior to the award of a design-build contract. The TMP will be prepared by the design-build contractor to match their proposed work program. The local jurisdiction (city or county) where the work will occur will provide its requirements and criteria to be included as the design-build contractor prepares the TMP. The design-build contractor's TMP will be developed in close cooperation with the local jurisdictions.

Comment Summary	Response
TRAFFIC/TRANSPORTATION	**MF-Response-TRAFFIC-2: Road Closures**
There were several comments pertaining to road closure impacts on property access, impacts of detour traffic on the existing roads; inadequate analysis of detour traffic because of the proposed road closures.	HSR policy is to provide roadway overpasses approximately every 2 miles, resulting in no more than 1 mile of out-of-direction travel for vehicles, including school buses, to cross the HST tracks. In most locations in the Merced to Fresno Section, roadway overpasses would be provided more frequently, approximately every mile or less, because of the existing roadway infrastructure. Consequently, out-of-direction travel would be limited to approximately 1 mile in nearly all locations in the project area. As presented in Section 3.2.5 of the EIR/EIS, based on existing field traffic counts of similar roadways and information from local agencies, the traffic volumes on these local roads are generally less than 500 vehicles per day. Because most detours are limited and because few travelers are affected, only small effects to traffic circulation are expected as a result of the closures and diversion of traffic. Road closure and property access impact mitigation measures are identified under Section 3.2.7 of the EIR/EIS. Transportation Mitigation Measure #1 (TR MM#1) states that if a proposed road closure restricts current access to a property, the project would provide alternative access via connections to existing roadways. If adjacent road access is not available, then feasible new road connections would be provided. If alternative road access is not feasible either, then the property would be considered for acquisition.

Comment Summary	Response
TRAFFIC/TRANSPORTATION	**MF-Response-TRAFFIC-3: Freeway Congestion**
Several commenters expressed concern regarding increase in congestion on SR 99 due to trips generated by Merced HST Station.	Based on the implementation of Phase 1 of the project, a net auto trip reduction on SR 99 is expected. This reduction in trips would occur on SR 99 because of travel mode shift from auto to HST. A higher trip reduction percentage would occur on SR 99 south of the Merced Station, and a comparatively lower percentage would occur on SR 99 north of the Merced Station. The lower percentage of trip reduction north of Merced occurs because of the offsetting addition of new auto trips generated by the station that originate from areas north of Merced (i.e., HST passengers who drive to and park at the station). Overall, a net reduction of approximately 800 auto trips per day is expected on SR 99 north of Merced. On SR 99 south of Merced, the reduction in auto trips due to mode shift is anticipated to be much higher (approximately 7,900 auto trips per day).

Comment Summary	Response
TRAFFIC/TRANSPORTATION	**MF-Response-TRAFFIC-4: Impacts to Amtrak**
There were several comments about HST impacts on Amtrak and Amtrak ridership, and specific concern regarding loss of the Madera Amtrak station	The HST would operate separately from Amtrak service. The decision about the continued operation of Amtrak service on the San Joaquin line is outside the purview of the Authority. However, as described in Chapter 3, Section 3.2, of the EIR/EIS, and Chapter 6, Section 6.5.1.5 in the Transportation Technical Report (Authority and FRA 2012**),,** the Amtrak San Joaquin rail service is likely to be adjusted to function as a feeder service to the HST System. The San Joaquin Route could be particularly important as a connecting service during Phase 1 HST operations, prior to the extension to Sacramento. While San Joaquin service adjustments are expected to occur, connecting or direct service to existing markets is expected to be provided, and would likely improve as the HST System is implemented.

Comment Summary	Response
TRAFFIC/TRANSPORTATION	**MF-Response-TRAFFIC-5: Station Parking**
Some commenters had concerns regarding Merced station on-site and off-site parking facilities, station footprint and its effect on traffic flow.	Offsite parking locations at Merced HST Station were identified in coordination with City of Merced staff. The EIR/EIS presents traffic analysis for two parking scenarios--one that identifies all parking onsite at the station and a second that identifies a mixture of onsite and dispersed parking. Traffic impacts and mitigations for both scenarios are presented in the EIR/EIS, Section 3.2.5. Under the dispersed parking scenario, multiple locations for parking were identified in conjunction with City of Merced staff that were within a reasonable distance from the proposed HST station. In the EIR/EIS, the 2035 full system high ridership forecast was used to estimate the maximum potential station parking demand and to allow for an analysis of where and how parking demand might be accommodated near the HST station. For the Merced HST Station, however, the maximum ridership and parking demand would occur with Phase 1 operations; therefore, Phase 1 operations were used for the analysis of the potential parking needs near the Merced Station. The EIR/EIS's analysis of high forecasts for parking provides flexibility over time to reduce the amount of station parking based on more refined demand projections and TOD around station areas. Land use development around the HST stations is anticipated to occur over time. The amount of nearby development, as well as the future availability of local transit connections, both of which tend to decrease parking demand, would influence the future need for parking. While the HST would be a catalyst for such development, the actual timing would be dictated by land use decisions by the cities of Merced and Fresno and market conditions. Demand for parking facilities would also depend on how HST ridership grows over time; essentially and within the parameters of the environmental analysis, parking would be constructed as needed, taking into account the existing parking availability. The Authority and FRA would therefore retain the flexibility to make decisions about what parking facilities to construct initially and how additional parking might be phased **in** or adjusted depending on how the HST System ridership increases over time and how the station area develops over time. For example, it is possible that some parking facilities might be constructed at the 2020 project opening, only to be replaced in whole or in part, or augmented later with development or other parking facilities (see Section 2.5.3). To the extent these new facilities are not covered by the current environmental review, they may require additional environmental review in the future prior to changes in parking supply. However, as discussed in Section 3.2.5, the project has a plan to accommodate maximum possible parking demand to prevent , from spilling over into the neighborhood.

Comment Summary	Response
AIR QUALITY	**MF-Response-AQ-1: Dust from train operation**
Commenters raised concern about air quality and health impacts (for example, respiratory diseases) due to fugitive dust emissions caused by the moving HST. Commenters requested clarification on the dust emissions, effects on human health, and the controls that would be applied to reduce the dust emissions.	The moving HST would induce airflow in its immediate proximity. The speed of the induced airflow can be high near the passing train but drops off sharply a short distance away. Based on the U.S. Department of Transportation (DOT)-FRA computer model, induced airflow would be approximately 22 mph at 10 feet from the train, for a period of approximately 1 second (see Section 3.14.5.1). Wind speed would drop substantially with increased distance from the train. Because the track would be at least 21 feet from the edge of the right-of-way, train-induced wind outside the right-of-way would be minimal. Fugitive dust emissions due to the HST-induced airflow were evaluated in the EIR/EIS. As discussed in Section 3.3.5.3 of the EIR/EIS, Appendix 3.3-A of the EIR/EIS, and Appendix C of the Air Quality Technical Report (Authority and FRA 2012), as the airflow diminishes, fugitive dust emissions beyond 10 feet from a train traveling at high speed and the subsequent health risks would be negligible. The estimated fugitive dust emissions caused by one train trip, based on the most conservative assumption of surface parameters and the maximum HST speed of 220 mph, would be 27 lb/mile of PM10 and 4 lb/mile of PM2.5. Emissions at lower vehicle speeds, such as through populated urban areas or when approaching stations, would be much lower. In addition, HST would typically travel along areas with less residential land use. When the HST travels in populated or urban areas, the sound walls installed in these areas and near stations for noise control would retain a portion of the dust emissions within the project right-of-way. Generally, PM2.5 emissions are a greater health concern than PM10 emissions. As indicated by the emission data, only a small portion of the fugitive dust would be fine particles (PM2.5). See Table 3.3-13 and Table 3.3-14 of the EIR/EIS. As evaluated in the EIS/EIR, the HST would reduce the vehicle miles traveled (VMT) for regional traffic; thus, the fugitive dust emissions caused by the HST trips would be totally offset by the reduction in regional emissions from that reduced VMT.

Comment Summary	Response
AIR QUALITY	**MF-Response-AQ-2:**
The air quality analysis has identified emission impacts from the project during the construction phase. During operation of the High Speed Train	**MF-Response-AQ-2: Exaggerated Ridership:** See MF-Response-GENERAL-6: Relationship of the Authority's Business Plan to the Analysis in the EIR/EIS.

Comment Summary	Response
AIR QUALITY	**MF-Response-AQ-3: General Environmental Concern**
Commenters raised general concerns about air quality impacts due to the HST Project construction and operation.	The air quality analysis has identified emission impacts from the project during the construction phase. The regional significant construction emission impacts will be completely offset through a Voluntary Emissions Reduction Agreement between the Authority and the San Joaquin Valley Air Pollution Control District. HST operations would help improve long-term air quality in the San Joaquin Valley Air Basin by reducing VMT, a major source of air pollution. As automobiles produce a major portion of the air pollutants generated within the basin, reducing VMT would reduce these emissions and result in lower emissions than would occur under the No Project Alternative. As described in EIR/EIS Section 3.3.5.3, the reductions in VMT and the consequential reduction in air pollution would more than offset any emission increases associated with the operation of the HST System itself.

Comment Summary	Response
AIR QUALITY	**MF-Response-AQ-4: Increased Emissions Due to Re-routed Travel of Farm Vehicles**
Commenters indicated that due to the HST Project operation, people would need to travel greater distances to get to a location to cross the track. The commenters suggested that additional VMT caused by rerouting to an overpass may cause additional air quality impacts.	On average, roadway overpasses would be provided approximately every 2 miles along the track. It is estimated that the proposed project would result in no more than 1 mile of out-of-direction travel for vehicles to cross the HST tracks. The width of the roadway overpasses would accommodate both farm equipment and school buses traveling in opposite lanes. Due to this frequency of roadway overpasses, additional distances traveled by vehicles to cross the HST tracks are expected to be negligible relative to regional VMT reductions, and therefore would not cause additional air quality impacts. For more details on roadway overcrossings, see Sections 2.2.4 and 2.2.5 of the EIR/EIS.

Comment Summary	Response
AIR QUALITY	**MF-Response-AQ-5: Induced Growth Impacts**
Commenters requested that the EIR/EIS include air quality impacts due to induced growth as a result of the project.	See MF-Response-GENERAL-3: HST and Growth in the San Joaquin Valley.

Comment Summary	Response
AIR QUALITY	**MF-Response-AQ-6: Localized Air Emission Increase**
Commenters acknowledged the regional air quality benefits during project operation but suggested that air quality impacts in a specific city or county were not evaluated.	Air quality benefits of the HST Project operation are evaluated at the regional level. The HST would improve long-term air quality in the San Joaquin Valley Air Basin by reducing motor VMT. Automobiles produce a major portion of the air pollutants generated within the basin, and reducing VMT would reduce these emissions. Over the long-term (year 2035), the HST Project would result in smaller increases in motor vehicle emissions than would occur with the No Project Alternative, and these reductions would more than offset any emission increases associated with the operation of the HST System itself. See Section 3.3.5.3 of the EIR/EIS for a summary of the potential impacts. Details of VMT and emission reductions in each county in the study area are included in the Air Quality Technical Report, which is available on the Authority's website. At the local level, microscale analyses were completed at the locations along the alignment from Merced to Fresno, where the potential air quality impacts are highest, including heavily traveled roadways, congested intersections, and areas near HST station parking structures. No violations of ambient air quality standards, and therefore no significant air quality impacts, are predicted to occur at any of these locations.

Comment Summary	Response
AIR QUALITY	**MF-Response-AQ-7: Mitigation**
Commenters indicated that because project construction would have significant air quality impacts, additional evaluation of mitigation measures needs to be included in the EIR/EIS. All feasible mitigation measures need to be implemented. Commenters suggested several mitigation measures, including using offsite mitigation measures, additional vehicle and construction equipment emission control, additional toxic emission control at HMF, and fugitive dust control from concrete batch plants.	Mitigation measures were refined in the Final EIR/EIS as a result of continuing project design, comments received on the Draft EIR/EIS, and additional consultation with public agencies. Many of these mitigation measures are based on performance standards. Appropriate mitigation is included in the Final EIR/EIS and will also be included in FRA's Record of Decision, which will require the Authority to comply with all mitigation measures as the project advances through final design and construction. Detailed mitigation measures have been revised to incorporate the comments and are described in Section 3.3.9 of the EIR/EIS, which include: • Reduce construction equipment exhaust emissions by using the cleanest reasonable available equipment. • Reduce emissions from material hauling trucks during project construction by using vehicles that are equivalent to model year 2010 or newer. • Locate concrete batching plant at 1,000 feet from sensitive receptors. • Offset project construction emissions through the San Joaquin Valley Air Pollution Control District (SJVAPCD) Voluntary Emissions Reduction Agreement (VERA) program. • Purchase offsets for emissions associated with hauling ballast materials outside of the San Joaquin Valley Air Basin (SJVAB). • Reduce potential impacts from air toxics from HMF sites, including the use of electric or hybrid trucks, use of eclectic or Clean Switcher Locomotives, adjustment of facility operation and orientation, and definition of buffer distance between diesel truck operation and sensitive receptor areas.

Comment Summary	Response
	• Equipment at the HMF will use best industry practice or alternative equipment to reduce emissions.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-1: Animal Effects**
Commenters expressed concerns related to animal effects from noise and vibration, including effects on production and breeding and animal responses to startle.	Research on noise effects on wildlife and livestock is limited, but suggests that noise levels about 100 decibels (dBA) Sound Exposure Level (SEL) (the total A-weighted sound experienced by a receiver during a noise event, normalized to a 1-second interval) may cause animals to alter behavior. Accordingly, the FRA High Speed Ground Transportation Noise and Vibration Impact Assessment Manual (2005) considers an SEL of 100 dBA the most appropriate threshold for disturbance effects on wildlife and livestock of all types. The level is based on a summary of the research and studies referenced in the FRA Guidance Manual in Appendix A. ~~Wolff~~,. Given a reference SEL of 102 dBA at 50 feet for a 220-mph HST on ballast and tie track, an animal would need to be within 100 feet of an at-grade guideway to experience an SEL of 100 dBA. At locations adjoining an elevated guideway, an SEL of 100 dBA would not occur beyond the edge of the elevated structure. Refer to Section 3.4.3.3, Impact Assessment Guidance, and Section 3.4.5.3, High-Speed Train Alternatives, of the EIR/EIS under the heading Noise Effects on Wildlife and Domestic Animals for further information regarding noise effects on wildlife and livestock. Table 3.4-19 of the EIR/EIS summarizes the distances to the HST tracks within which the level would exceed the criteria and therefore may affect animals for both at-grade and elevated structures. The criterion for assessing potential noise impact on wildlife and domestic animals is an SEL of 100 dBA from HST pass-by events. This criterion is based on research into potential effects from HST noise on animals. These potential effects include relocation, running, physiological effects such as changes in hormones or blood composition, and startle. The criteria for potential startle from rapid onset rates of HST noise apply to humans as the supporting research is based primarily on human response to rapid onset rates from military aircraft flights. At this time, there is no conclusive evidence of noise and vibration decreasing production in livestock or affecting breeding habits.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-2: Schools**
Commenters expressed concerns related to specific schools, and some comments request calling out schools by name in the document. Some commenters also expressed concerns that schools are not given special regard with FTA criteria and effects to children's health are not addressed.	FRA noise impact assessment methodology contains criteria for noise and vibration impact to schools as well as other institutional land use. Schools and other institutional land uses with no nighttime use are included in FRA Land Use Category 3 for noise and vibration impact criteria. Category 3 includes institutional land use with primarily daytime and evening use. This includes schools, libraries, and churches, where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. The impact assessment in the EIR/EIS identifies specific locations with impacts to sensitive receptors (such as a school). However, if an impact is not projected, the receptor is not discussed in the assessment. In other words, if a school (an example of a sensitive receptor) is outside the radius from the train at which the criterion/threshold is no longer exceeded, then a precise noise prediction at that location is not projected. It is important to note that the FRA and FTA noise and vibration impact criteria are based on human annoyance. The criteria are not related to health effects, nor do separate criteria exist for children. This is because the noise descriptors in the FRA manual are largely based on EPA studies that looked at the effects of noise on public health in the 1970s. The noise-sensitive areas (NSAs) discussion presented in Section 5.2.1, Noise Measurement Methodology, of the Noise and Vibration Technical Report, aims to

Comment Summary	Response
	summarize land use in the area near the proposed alternatives. Not every sensitive receptor analyzed is listed in these summaries; however, every sensitive receptor within approximately 2,500 feet of the tracks was included in the noise and vibration assessment.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-3: General Assessment Methodology Concerns - Use of FRA Methodology/Criteria**
Commenters expressed concerns regarding how the noise and vibration assessments were completed in general. Some concerns relate to the criteria used and how noise levels are presented. Some commenters also requested more noise measurements.	The FRA guidance manual (High Speed Ground Transportation Noise and Vibration Impact Assessment, 2005) was the primary methodology used for analyzing HST noise for the EIR/EIS. For evaluation of non-HST noise, such as noise from stations, maintenance facilities, and construction, FTA methodology was used (Transit Noise and Vibration Impact Assessment FTA Guidance Manual, 2006). To analyze the potential noise impacts during operations, the noise impact assessment procedure followed the FRA methodology. The FRA noise impact criteria are based on the potential annoyance of people to the project noise, and are not based on the potential audibility of a noise source. The noise impact criteria are defined such that where no impact is predicted, the project would result in an insignificant increase in the number of people highly annoyed by the new noise. . Noise is evaluated using models. The existing noise levels were determined throughout the corridor by taking direct field noise measurements at certain noise-sensitive receptors following the FRA methodology. Noise measurements were taken at specific noise-sensitive locations near the alignment in the study area that were considered representative of conditions throughout the study area (see Figures 3.4-5 through 3.4-8 in the EIR/EIS). Specific measurement locations were selected based on their physical relationship to existing noise sources, such as major roads. Noise levels measured at these locations are representative of certain existing noise conditions and are applied to several neighborhoods with similar noise sources. Dominant existing noise sources in the study area were first determined by field observations and then confirmed by measurement data results, which indicated which noise events were the greatest contributors to the existing measured noise levels. Refer to Section 3.4.4, Affected Environment, for further information on noise measurement locations. The FRA and FTA noise criteria are based on a comparison of existing noise levels to future noise levels with the addition of project noise sources. The criteria are defined using a sliding scale in which there is greater potential for impact in areas where existing noise levels are quieter (i.e., rural areas) and less potential for impact where existing noise levels are higher (i.e., suburban and urban areas) because it requires less noise from the project to increase noise levels in the quieter areas. But the sliding scale also allows a larger increase in noise levels in the quieter areas than in areas with higher existing noise levels. The justification is that people already exposed to high levels of noise should be expected to tolerate only a small increase in the amount of noise in their community. For project noise levels, all the noise sources during a train pass-by are combined to provide the model with a single reference noise level for a train pass-by. FRA and FTA methods take this single reference noise level and, using the number of trains per hours during daytime and nighttime, use it to compute either the peak hour noise level or the L_{dn} (Day and Night Level) noise level. The peak hour noise level is used to identify noise levels at places that are used primarily for daytime activities, such as schools and parks. The L_{dn} is used to identify noise levels at places with sleep-related activities, such as homes, apartments, hospitals, and hotels. The L_{dn} adds a 10-dBA penalty to the hours between 10 p.m. and 7 a.m. to account for people being more sensitive to noise during these hours.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-3: General Assessment Methodology Concerns - Use of FRA Methodology/Criteria**
	Noise impact categories are defined according to FTA and FRA guidance. A severe noise impact is where the change in cumulative noise level (existing plus project noise) would be noticeable to most people and likely to generate strong, adverse reactions. A moderate noise impact is where the change in cumulative noise level would be noticeable to most people, but may not be sufficient to generate strong, adverse reactions. The L_{max} is the maximum noise level for a particular event. The FRA noise impact assessment methodology is not based on L_{max}, but rather on cumulative noise descriptors, which take into account how loud each event is, how long each event lasts, and, for land use where people sleep, how many events occur each day (including nighttime events). Reference levels at a particular distance and train speed are adjusted based on (1) the actual distances for each receptor along the corridor and (2) the actual train speeds at that location (both through trains and trains that may stop at additional stations). For example, because HSTs are powered electrically rather than by diesel engines (which are louder), an HST has to achieve a speed of 150 mph before it makes as much sound as a commuter train at 79 mph. The duration of the sound is also different; an HST moving at 220 mph would only be heard for about 4 seconds, while a typical freight train traveling at 30 mph can be heard for 60 seconds. Project analysts assessed noise impacts for noise-sensitive land uses based on a comparison of measured existing noise levels at representative locations along the proposed alignments, with modeled future noise levels from the HST and other project sources. The construction noise impact analysis was based on evaluating the noise expected to be generated by typical construction equipment and construction methods in comparison to existing noise levels. As mentioned above, the existing noise levels were determined throughout the corridor by direct field noise measurements.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-4: Sensitive Land Use**
Commenters requested additional analysis on land uses that are not sensitive according to FRA and FTA criteria. General comments on sensitive land use are also included.	The goal of the noise and vibration impact assessment is to identify all the areas that might be impacted by noise and vibration. Noise- and vibration-sensitive land is categorized according to FTA guidelines, as described in Section 3.4.3.3, Impact Assessment Guidance. Noise- and vibration-sensitive areas were identified based on current information available, including GIS data, aerial mapping, and field surveys. The potential for noise and vibration impact was assessed at all sensitive locations along the project corridor. Potential noise impact will be assessed and mitigation will be considered for undeveloped lands where sensitive receptors will be if there is substantial physical progress (i.e., laying the building foundation) toward construction of the property by the time the notice of intent of the project has been issued. According to FRA guidance, parks and other outdoor land use are not considered vibration sensitive. Parks are only considered to be noise-sensitive if the park is used in a manner that is noise-sensitive; active outdoor land uses, such as pedestrian and bike paths, are not considered noise sensitive. Only compatible land use, as determined first by FRA and Department of Homeland Security and then as approved by the local jurisdiction's land use plan, would be placed under the elevated guideway in the future. Startle effects are based on a combination of the speed of the train and the distance from the tracks. The projected distance of 45 feet within which startle may occur is based on the maximum train speed of 220 mph, which will not be achieved at all locations. According to FRA and FTA policy, for noise-sensitive locations identified within the distance where surprise may

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-4: Sensitive Land Use**
	occur, the onset-rate adjusted sound levels are used to identify impact. For the Merced to Fresno Section, the project right-of-way is approximately 50 feet from the track centerline. Therefore, the potential for surprise would occur only within the project right-of-way, as startle effects on noise-sensitive land uses would only occur within 45 feet from the track centerline. Because the right-of-way is approximately 50 feet from the track centerline, no noise-sensitive land uses would be within the distance where onset-rate adjusted sound levels would be applied. HST stations are not considered noise-sensitive, so additional annoyance from rapid onset rates at stations is not considered an impact; however, potential startle to patrons waiting on station platforms would be minimized with the use of audible and/or visual notification systems.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-5: Vibration Damage (Noise Damage)**
Commenters expressed concern for vibration damage to structures, soil, and crops. One comment on noise damage to crops is also included.	The vibration impact assessment is primarily designed to identify the potential human annoyance from vibration from HST operations for buildings with vibration-sensitive use as described by the FRA and FTA land use categories. However, all buildings in close proximity to the proposed alignments assessed for potential structural damage from HST operations and/or construction. The potential for damage from vibration from HST operations is limited to extremely fragile buildings locations within 30 feet of the tracks, which is within the project right-of-way. Typical buildings, such as residences, located outside this distance would not have the potential for damage from vibration. Agricultural resources, such as crops, would not be affected by noise and vibration from HSTs. As described in EIR/EIS Section 3.4.3, locations with potential vibration impacts in the project corridor are because of the potential for annoyance effects from HST operations. While the vibration at these locations might be felt by receptors, it would be well below the thresholds for damage to structures. It is helpful to note that the vibration levels generated by passing HSTs would generally be less than the levels generated by freight trains in the study area.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-6: Determining Mitigation**
Commenters expressed concern regarding mitigation options, how mitigation was determined, and how it will be implemented. Commenters requesting specific mitigation are also included.	Potential noise impact has been assessed at sensitive receptors and these areas are identified in Section 3.4.7, Mitigation Measures, of the EIR/EIS and shown in Figures 3.4-14 through 3.4-17. The locations of proposed barriers are illustrated on Figures 3.4-19 through 3.4-22. Refer to Section 3.4.7 for a complete listing of noise impact mitigation measures that would reduce noise impacts below a “severe” level. The Proposed California High-Speed Train Project Noise and Vibration Mitigation Guidelines developed by the Authority (see Appendix 3.4-A of the EIR/EIS) were used to determine whether mitigation would be proposed for these areas of potential impact. The Guidelines require consideration of feasible and effective mitigation for severe noise impacts (impacts where a significant percentage of people would be highly annoyed by the HST Project’s noise). The Authority will refine mitigation for homes with residual severe noise impacts (i.e., severe impacts that remain notwithstanding noise barriers) and address them on a case-by-case basis during final design of the Preferred Alternative. In addition to the potential use of noise barriers, other forms of noise mitigation may include improvements to the home itself

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-6: Determining Mitigation**
	that will reduce the levels by at least 5 dBA, such as adding acoustically treated windows, extra insulation, and mechanical ventilation as detailed in Section 3.4.7.2, Project. The EIR/EIS proposes noise barriers in areas of severe noise impacts resulting from the project, where the barriers meet the cost-effectiveness criteria. To meet the cost-effectiveness criteria, barriers must mitigate noise for more than 10 sensitive receptors, be not less than 800 feet in length, be less than 14 feet in height, and cost below $45,000 per benefitted receiver. A receiver that receives at least 5-dBA noise reduction due to the barrier is considered a benefitted receiver. Mitigation measure N&V-MM#3 provides that sound barriers may be installed to reduce noise to acceptable levels at adjoining properties. These may include walls, berms, or a combination of walls and berms. The specific type of barrier will be selected during final design, and before operations begin. In addition, mitigation measure N&V-MM#3 provides that prior to operation, the Authority will work with communities regarding the height and design of sound barriers using jointly developed performance criteria., when the vertical and horizontal location have been finalized as part of the final design of the project. Mitigation measure VQ-MM#6 requires the provision of a range of options to reduce the visual impact of the sound barriers.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-7: Screening Distances**
Commenters expressed concerns specifically related to the FRA Manual screening distances.	The FRA guidance manual specifies that, within a screening distance of 1,300 feet (for a new project corridor in a quiet suburban/rural environment), noise-sensitive receptors would be close enough to a proposed project that there is the possibility of impact and that beyond this distance there is less possibility of impact. Screening distances are not meant to represent the distances within which the HST would be audible. The screening process is only an interim step in the analysis procedure. The screening allows for a high-level review of the corridor, to identify potential locations where noise impacts possibly may occur (thereby allowing more detailed analysis of those potential locations to determine if impacts actually would occur there) and to identify locations where impacts would not occur. This screening distance is based on the assumptions associated with typical projects such as the number of train operations, train speeds, and existing noise conditions. Based on the specific factors of the HST Project, potential impact was assessed for all noise-sensitive receptors within approximately 2,500 feet and potential impact has been identified at distances up to approximately 2,300 feet, which is further than the standard screening distance of 1,300 feet. One of the primary reasons that potential noise impact extends further than the typical screening distance is the low (i.e., less than 50-dBA L_{dn}) existing noise in some areas.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-8: General Plans**
Commenters expressed concerns regarding the use of General Plans and their criteria for the noise	Local and City noise ordinances were acknowledged and presented in Appendix A, Local Noise Regulations, of the Noise and Vibration Technical Report (Authority and FRA 2012). However, as this is a federally funded project, the Authority and FRA are required to follow the assessment guidelines set forth by the FRA and FTA, which provide uniform guidance on rail and

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-8: General Plans**
assessment.	transit projects. As a state agency, the Authority is not subject to local noise ordinances. However, during construction, the Authority and its design/build contractor will consider local noise sensitivities consistent with local ordinances and employ best management practices (BMPs) to avoid excess noise impacts during construction.

Comment Summary	Response
NOISE and VIBRATION	**MF-Response-NOISE-9: Figure 3.4-1**
These comments reference Figure 3.4-1, which was incorrectly labeled in the EIR/EIS.	Figure 3.4-1 in the Draft EIR/EIS presents reference levels at 100 feet and was incorrectly labeled with the L_{dn} descriptors. The noise levels in Figure 3.4-1 are expressed in terms of L_{max}, and are correctly labeled L_{max} in the Final EIR/EIS.

Comment Summary	Response
PUBLIC UTILITIES & ENERGY	**MF-Response-PUE-1: Analysis of Traction Power Stations and Project Driven Transmission Line Upgrades**
The comments express concern that the modifications to existing electricity infrastructure required to power the HST Project, including the construction of new power lines or modification of PG&E-owned power lines that would connect the project to existing substations, were not analyzed in the EIR/EIS. Comments were received regarding compliance with General Order 131D, which sets forth provisions that must be adhered to when public electric utilities construct any new electric generating plant or modify an existing electric generating plant, substation, or electric transmission, power, or distribution line. In addition, questions were raised about the substations proposed as project elements, particularly with regard to their land use requirements.	Proposed modifications to electrical facilities, including transmission line upgrades and additions, are discussed for each HST alternative in Chapter 2, Alternatives, of the EIR/EIS, which describes the project elements. For example, Section 2.2.7.1, Traction Power Substations, explains that the 32,000–square-foot traction power substations would require parcels up to 2 acre in size to accommodate a substantial buffer area around them for safety purposes and the collocation of switching facilities. Transmission line upgrades and PG&E substation connections were included in the construction footprint analysis in Chapter 3 of the Draft EIR/EIS. Areas required for easements for power line upgrades are shown in Appendix 2-B.

Comment Summary	Response
PUBLIC UTILITIES & ENERGY	**MF-Response-PUE-2: Construction and Demolition (C&D) Debris Disposal**
Comments were received regarding the disposal of construction and demolition debris. Concern was expressed that the disposal location and potential reuse of construction and demolition waste was not addressed in the EIR/EIS. A commenter indicated that a mitigation measure should be implemented to require the recycling of construction and demolition waste in order to lessen the potential impact on Fairmead Landfill.	Disposal of construction waste is addressed in Section 3.6, Public Utilities and Energy. As detailed in Section 3.6.5.3, High-Speed Train Alternatives, "As standard construction practice, the contractor would divert [Construction and Demolition (C&D)] waste from landfills by reusing or recycling to aid with implementing the Local Government C&D Guide (Senate Bill 1374) and meet solid waste diversion goals..." The section also discusses potential locations for disposal of non-recyclable materials and their capacities, concluding that use of these established facilities would result in a less than significant impact because the maximum amount of C&D material generated would be only a fraction of the permitted capacity of nearby facilities (including the Billy Wright, Highway 59, and Fairmead landfills). Because the impact is not significant and reuse of materials is incorporated into the project as a standard practice, which the contractor will be responsible for meeting, no specific mitigation measure is needed for recycling or reuse of demolition waste.

Comment Summary	Response
PUBLIC UTILITIES & ENERGY	**MF-Response-PUE-3: Electricity Supply Impacts**
Several comments question the ability of the region's existing electrical infrastructure to support the additional demand of the HST. One commenter wrote that the EIR/EIS fails to adequately analyze the impact of the HST on the energy supplied to rural communities and agricultural areas. Another commenter stated that brownouts and threats of blackouts are evidence that the existing infrastructure cannot support the added energy requirements of the HST.	California's electricity grid would power the proposed HST System. Management of California's electricity infrastructure and power supply includes demand forecasting, which include buffer, or reserve, electricity generating capacity above expected peak demand that is available to call upon as needed. The Merced to Fresno Section of the HST is estimated to require 50 megawatts (MW) of peak demand, which is within existing reserves. The EIR/EIS provides information about the HST energy demand in Table 3.6-23, allowing utility providers to consider it in their demand forecasts. No impacts to the supply of electrical power to existing users would be anticipated. The HST Project would not require the construction of a separate power source, although it would include the addition and upgrade of power lines to a series of substations positioned along the HST corridor. Please refer to the summary of electricity requirements in Section 2.2.7, Traction Power Distribution, in Chapter 2, Alternatives. Section 3.6.5.3, High-speed Train Alternatives, discusses how the energy demand would be met.

Comment Summary	Response
PUBLIC UTILITIES & ENERGY	**MF-Response-PUE-4: Use of Renewable Energy**
Comments were received regarding the source of energy to power the HST. While one commenter questioned where the electricity would come from, another suggested that the Project Summary should clarify the statement that the HST would be powered by clean, renewable energy.	The Authority's policy goal is to use 100% clean, renewable electricity for the operation of the HST. This goal can be achieved through purchase agreements with power suppliers, and through the design of project buildings and facilities to meet Leadership in Energy and Environmental Design (LEED) Silver Level certification. California utilities are required to achieve a state-mandated 33% renewable portfolio within the time frame of projected operation of the HST. This will offer new opportunities for obtaining clean, renewable energy from those sources. Further, the Authority has entered into a Memorandum of Understanding (MOU) with FRA, EPA, and the U.S. Department of Energy to support common sustainability goals. These include minimizing air and water pollution, energy usage, and other environmental impacts. This MOU is located on the Authority website here: http://www.cahighspeedrail.ca.gov/Partnerships.aspx. The signatory agencies recognize that construction and operation of the HST System would require a large amount of energy, and that ample opportunities exist to promote energy efficiency and renewable energy.

Comment Summary	Response
PUBLIC UTILITIES & ENERGY	**MF-Response-PUE-5: Utility Coordination for Final Design**
Several local districts, municipalities, and state agencies wrote letters describing site-specific characteristics of their utility systems and requesting the opportunity to work with the Authority and FRA to identify and evaluate these resources. Comments also recommended coordination of plans to improve or expand utilities with local utility providers.	The Authority is actively assimilating information on existing and planned utilities. The designs presented in the EIR/EIS are preliminary (15%-30% complete). The Authority will coordinate with utility owners to refine this information, identifying and evaluating all known facilities within the footprint during future design phases. The Authority will also be meeting with local districts, municipalities, and other entities (e.g., Kinder Morgan) to develop MOUs that will define terms and conditions to resolve utility conflicts, including funding by the Authority to reimburse costs incurred as a result of the HST Project. As necessary, the Authority will coordinate with the appropriate state agencies (e.g., the California Department of Conservation) to facilitate oversight of these activities.

Comment Summary	Response
BIOLOGICAL RESOURCES	**MF-Response-BIO-1: Vernal Pools and Seasonal Wetlands-Methods and Findings**
Commenters expressed concern that the BNSF Alternative alignment traverses designated vernal pool critical habitat and the Madera Vernal Pool Recovery Plan. Commenters stated that the HST will adversely affect thousands of acres of pristine vernal pool wetlands and habitat for vernal pool fairy shrimp, as well as California tiger salamander, Western spadefoot toad, Western burrowing owl, and San Joaquin kit fox. One commenter expressed concern that the EIR/EIS does not adequately address impacts on wetlands that could result from the Authority's effort to avoid safety and operational problems due to overlapping or close alignments. One commenter indicated that the HST will take their entire 40-acre parcel, which contains vernal pools. One commenter expressed concern for potential impacts on the Mariposa Creek waterway. A commenter indicated that Appendix 3.7-B identifies acreage of habitat impact for Western pond turtle and expressed concern that the species requires permanent pools of water, but there is no mention of pools or ponds in the EIR/EIS. The commenter questioned if the acreage of potential impact would be the loss of acreage in water pools or surrounding upland habitat where the species nests. One commenter expressed opposition to the BNSF Alternative, indicating that the Le Grand bypass would pass through Mariposa Creek, destroying wetlands and wildlife resources. A commenter expressed concern with the 1,200-acre ecology preserve just north of their property – the commenter sent Jodi Ketelsen a publication on vernal pools in the area in 2009.	Vernal pools and seasonal wetlands are present along portions of all of the HST alternatives. As part of both the CEQA/NEPA analysis and the permitting requirement under Section 404 of the Clean Water Act, wetlands and waters of the U.S. were delineated using a combination of field surveys and aerial imagery mapping. Wetland delineation field surveys were conducted on four occasions: in April and May 2010 and in January and February 2011. Field delineations were conducted on parcels of land where access had been granted to the wetland study area. Surveys only included those parcels where suitable habitat was present and where right-of-entry was granted. Potential waters and wetland features that were visible on printed aerial imagery within the wetland resource study area were identified and digitized using GIS technology. More detailed information regarding the mapping of the extent of these features can be found in the *Merced to Fresno Section Wetlands Delineation Report* (Authority and FRA 2011), which is available online**.** Information from the wetland delineation was used to obtain a preliminary jurisdictional delineation from the USACE (obtained on November 3, 2011). Wetland delineations were supplemented with the use of the California Rapid Assessment Method (CRAM) to assess the health of wetlands and riparian habitats. CRAM field work was completed in September 2011. The report will be used to provide a standardized assessment of the ambient status of wetland condition, which will in turn be used to determine appropriate mitigation measures for affected wetlands as part of the Section 404 permitting process. A description of the potential impacts on vernal pools and seasonal wetlands is presented in the EIR/EIS (see Section 3.7.5, Environmental Consequences) and the acreages of impact are categorized for the construction and project periods. As stated above, vernal pools and seasonal wetlands are affected by each project alternative, although the BNSF Alternative would directly and indirectly impact the largest acreages and the UPRR/SR 99 Alternative would impact the least. Ranges of permanent and temporary impacts on vernal pools and seasonal wetlands: UPRR/SR 99, 1.31 to 1.73 acres / 0.68 to 0.76 acre; BNSF, 8.91 to 13.85 acres / 0.99 to 2.37 acres; Hybrid, 4.61 to 4.77 acres / 0.45 to 0.83 acre. Indirect effects outside the construction footprint could occur through changes in local micro-watersheds, which maintain suitable inundation levels for the lifecycles of vernal pool fauna. In addition to considering permanent, temporary, direct, and indirect impacts, in terms of total acreages, the quality of the habitat is considered for mitigation. Vernal pools along the BNSF corridor provide higher quality habitat than those along the UPRR/SR 99 and Hybrid alternatives because the adjacent land uses are rural and subject to less intensive agriculture (e.g., grazing rather than vineyards). The BNSF Alternative would result in the greatest impact on vernal pools compared to the UPRR/SR 99 and Hybrid alternatives because it would affect more acres of higher quality wetlands. All temporary and permanent impacts on vernal pools require mitigation (see Section 3.7.6 of the EIR/EIS) for both the construction and project periods. The overall mitigation program will be developed in coordination with regulatory agencies and in conjunction with permit approvals required under the federal Clean Water Act, federal and California Endangered Species Acts, California Fish and Game Code, and Porter Cologne Act. A Compensatory Mitigation Plan (CMP) is being prepared (e.g., see standard response Record No. 319) as part of the Section 404 permitting process. These CMPs address resources, including special-status species, both plants and wildlife, streambed/riparian communities, other wetlands such as vernal pool/seasonal wetlands, and wildlife movement corridors. The estimates of affected areas as described in the EIR/EIS are worst case amounts, based on a 15% design level. However, the actual amount of land affected by the project will be within the area studied by the EIR/EIS and continues to be refined as project design progresses.

Comment Summary	Response
BIOLOGICAL RESOURCES	**MF-Response-BIO-2: Wildlife Habitat and Wildlife Movement Corridors**
A commenter expressed opposition to the UPRR/SR 99 East Chowchilla design option based on impacts on rare and endangered plant and animal species and the habitat that supports them. Commenters expressed concern that the BNSF (often referred to as the A-1 Alternative) alignment traverses the designated vernal pool critical habitat and the Madera Vernal Pool Recovery Plan. Commenters stated that the HST will adversely affect thousands of acres of pristine vernal pool wetlands and habitat for vernal pool fairy shrimp, as well as California tiger salamander, Western spadefoot toad, Western burrowing owl, and San Joaquin kit fox and their corridors. One commenter expressed opposition to the BNSF alignment, indicating that the alignment runs through their property and fragments endangered species. The commenter expressed that they have had a bio survey done on their property and encountered fairy shrimp, California tiger salamander, Western spadefoot toad, burrowing owl, kit fox, and owl's clover. Commenters expressed concern with endangered species, such as kit fox, California tiger salamander, and Swainson's hawk. A commenter expressed concern with the 1,200-acre ecology preserve just north of their property – the commenter sent Jodi Ketelsen a publication on vernal pools in the area in 2009. One commenter indicated that, due to the high speed nature of the train, there are bound to be temporary shifts in air, which will cause disturbances to local wildlife. The commenter expressed concern that a temporary shift in air, coupled with an EMF effect, could have an impact on migratory birds traveling through the Central Valley on	All HST alternatives would have both direct and indirect effects on wildlife habitat as well as associated special-status species of plants and wildlife. The potential effects would be either direct during site preparation and construction or indirect through runoff, noise, motion, startle, and ongoing facility operation. During site preparation, the plant communities that comprise the primary habitat elements would be removed from the construction area (i.e., areas where track would be laid) prior to heavy construction activities. It is during this phase of the project that wildlife would be displaced or otherwise affected through the clearing, scraping, and removal of vegetation. The displacement of wildlife into the adjoining habitat would create increased pressures for survival as other individuals compete for finite resources, which would generally reduce the local populations due to the habitat reduction. The BNSF Alternative would have the greatest direct and indirect effect on special-status species as it contains the largest significant acreages of suitable habitat within the construction footprint. The BNSF Alternative habitat mix also includes more water-dependent species in habitats such as vernal pools. The UPRR/SR 99 and Hybrid alternatives have less acreage of similar riparian and wetland communities, though both would have the same impacts on special-status species habitat. A Biological Resources and Wetlands Technical Report was prepared for the HST Project in August 20112011.. The report was designed to be stand-alone and included a summary of the project description and alternatives, study methods, and the environmental setting, focusing on the biological resources present, including terrestrial and aquatic habitats and land cover types, habitats of concern, mitigation banks, special-status species, wildlife movement corridors, critical habitat, essential fish habitat, and jurisdictional waters. The assessments of the habitat study area were conducted on properties where access had been granted and, to the extent possible, from publicly accessible roadways where property access had not been granted. In addition, the report included results that quantified and discussed impacts and presented mitigation measures. The document included a range of effects to address NEPA and CEQA analysis requirements. Wildlife movement was discussed in the report, which addressed movement corridors, linkages, connectivity areas, modeled wildlife corridors, and the constraints that occur within these locations. Watercourse crossings were identified that occur within these corridors and summarized as to the location of bridges, culverts, and canals that provide movement opportunities, particularly those that are aligned with other linear infrastructure such as the UPRR and SR 99. The hydraulic features were assessed for their utility for wildlife movement within the corridor locations. The findings of that report were summarized in the EIR/EIS. The EIR/EIS acknowledges the HST's potential to disrupt wildlife passages that are already hindered with existing obstacles. The EIR/EIS concludes that a significant impact under CEQA would occur for the Eastman Lake-Bear Creek ECA and the modeled wildlife corridors after mitigation is in place. This is discussed in EIR/EIS Section 3.7.5 Consequences, subsection 3.7.5.3, under direct and indirect effects for the construction-period impacts and project impacts in the Wildlife Movement Corridor subsections. As stated in the EIR/EIS, ECAs delineate lands that are likely important to wildlife movement between large, mostly natural areas at the statewide scale based on available data and assumptions provided in the California Essential Habitat Connectivity Project Report (Spencer et al. 2010).

Comment Summary	Response
BIOLOGICAL RESOURCES	**MF-Response-BIO-2: Wildlife Habitat and Wildlife Movement Corridors**
the Pacific flyway. The commenter also expressed concern for potential impacts on riparian habitat during HST construction and use. One commenter expressed concern for species both native and domestic, in particular the HST collision potential for migrating native and endangered species. Commenters expressed concern that the EIR/EIS does not adequately speak to the impact on the wildlife of Ash Slough. A commenter expressed concern for endangered and other species living in and around Owens Creek, in particular kit fox, owls, crawdads, and red-tailed and American kestrel hawks. Commenters expressed opposition to the West Chowchilla design option, indicating that it runs **through** the San Joaquin Valley Raptor Center, as well as habitat used by migrating Canada geese. One commenter expressed concern for the local owl population. One commenter indicated that the EIR/EIS fails to adequately address impacts on Duck Slough, which provides habitat to a variety of birds and animals, some endangered. One commenter expressed concern that the EIR/EIS does not adequately address impacts on natural resources (such as sensitive species) and habitat that could result from the Authority's effort to avoid safety and operational problems due to overlapping or close alignments. One commenter expressed concern that the EIR/EIS does not provide an adequate assessment of impacts on aquatic resources. One commenter indicated that there is a need for more sufficient project-level details in order for the EIR/EIS to meet the requirements of CEQA/NEPA. One commenter indicated that the EIR/EIS fails to consider	The Essential Habitat Connectivity Project was commissioned by the California Department of Transportation (Caltrans) and the CDFG in response to Assembly Bill 2785, which required CDFG to investigate, study, and identify those areas in the state that are most essential as wildlife corridors and habitat linkages (A.B. 2785 2008). The Essential Habitat Connectivity Project documentation notes that land use within the California Central Valley ecoregion, including the San Joaquin Valley, has largely been converted to agriculture and urban land covers. In general, features identified that facilitated wildlife movement within linkages included riparian corridors or waterways, contiguous or semi-contiguous habitat patches, and culvert/bridge underpasses. The EIR/EIS focused the evaluation on the ECA and the riparian corridors since they have been documented as having limited but important permeability and were assessed for each of the Merced to Fresno project alternatives. The approach integrated water features, including streambed crossings, canals, and culverts, as suggested in the study. Many of these crossings line up with adjacent facilities such as the UPRR and SR 99 where there are similar crossings that line up and would facilitate movement. EIR/EIS Table 3.7-28 includes a summary of wildlife crossings with the ECA and modeled wildlife corridors by alternative. The crossings are shown for the riparian corridors and the linear water features. The table summarizes the number of crossing opportunities by alternative in combination with the total linear distance across the ECA and modeled wildlife corridors. More detailed technical information regarding the spacing of the crossings is illustrated in Figures 5-3 through 5-10 in the Biological Resources and Wetlands Technical Report (an appendix to the EIR/EIS). These include man-made waterways, as the comment acknowledges, such as single and multi-span bridges, culverts, canals, and other linear hydraulic features. All of these features may provide for some wildlife movement; however, the crossings do have various utility and were assessed for their potential crossing value. As stated in the Technical Report in Section 5.3.3, the Wildlife Movement Corridors subsection, these values were assessed qualitatively based on their apparent openness factor (“see through factor” as comment references), which would be reflected in the design treatment. The locations of the crossings are all associated with water features, inside and outside the ECA and modeled corridors. The emphasis of the assessment in the Technical Report was on those crossings inside the ECA and modeled wildlife corridors since these areas were identified as having potential landscape permeability. The assessment incorporated the findings of the Essential Habitat Connectivity Project as well as the Wildlife Linkages –San Joaquin Valley Project, which identified those areas with remaining permeability, albeit with constraints. Thus, the locations of the crossings were assessed in these areas, although there are hydraulic crossings throughout the project. Within the project 4-mile stretch across the Eastman Lake – Bear Creek ECA, there are two existing wildlife bridge crossings. These two locations are the hydraulic crossings associated with Deadman Creek and Dutchman Creek, which are approximately 2.7 miles apart. These bridge crossings are aligned at a strategic and complementary location that would accommodate existing wildlife movement throughout the landscape. There are few significant impediments along these linear riparian features both upstream and downstream for several miles once beyond the project and UPRR and SR 99 to the east and to the west. In addition, the HST Project provides multiple undercrossing opportunities based on hydraulic locations within the ECA and modeled wildlife corridors. The HST Project offers up to two high-valued crossings in the ECA, where the bridges are planned, and offers up to eight lower-valued crossings in the modeled wildlife corridors to the south.

Comment Summary	Response
BIOLOGICAL RESOURCES	**MF-Response-BIO-2: Wildlife Habitat and Wildlife Movement Corridors**
compliance with Section 1602 of the California Fish and Game Code, the analysis of impacts on biological resources relies on incomplete baseline data, the analysis of impacts on biological resources is not sufficiently specific/clear, the analysis of impacts on protected wildlife species is deficient, the EIR/EIS fails to disclose FRA's consultation and potential permit under the Endangered Species Act. One commenter expressed that the EIR/EIS requires more detail on impacts on waters of the U.S. One commenter expressed concern that the HST Project may result in a substantial impact on wildlife movement, but the NEPA conclusion is a moderate impact. The commenter also expressed concern that the EIR/EIS does not clearly explain the issue of whether or not safety fencing will be installed to prevent animal collisions.	These crossing opportunities are appropriate due to their location within the corridors and in the case of the bridges provide a suitable openness factor at locations with contiguous open space. The project is not promoting tunnels or vegetated overpasses. Other factors considered by the Technical Report and reflected in the EIR/EIS as establishing the value of crossings included the landscape cover leading to the crossing (such as the riparian canopy, scrub/shrub component, or intermittent shrub cover that provides hiding places, escape cover, or prey opportunities depending on the species). The Technical Report ranked crossings for low, moderate, and high value. This technical data were summarized in the EIR/EIS.

Comment Summary	Response
BIOLOGICAL RESOURCES	**MF-Response-BIO-3: Mitigation Measures (Resources, Details and Phasing, Responsibilities and Future Planning)**
One commenter indicated that Mitigation Measure No. 5 (MM#5) references the creation of a Biological Resources Management Plan (BRMP) that will make provisions for monitoring assignments, scheduling, and responsibility. The commenter suggested that the BRMP define entities other than the City of Merced as responsible for the biological resources mitigation measures. One commenter expressed concern that the mitigation measures are written in a way that implies that they are optional. One commenter expressed concern that the EIR/EIS fails to identify mitigation measures that will be applied to mitigate impacts on each biological resource that would potentially be affected by the segment. The commenter also expressed concern that the EIR/EIS fails to specify requirements for measures designed to avoid or reduce impacts on biological resources.	CEQA requires a lead or public agency that approves or carries out a project for which an environmental impact report has been certified which identifies one or more significant adverse environmental effects and where findings with respect to changes or alterations in the project have been made, to adopt a "…reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment" (CEQA, Public resources code sections 21081, 21081.6). A Mitigation Monitoring and Reporting Program (MMRP) is required to ensure that adopted project design features (PDFs) and mitigation measures are successfully implemented. The CHSRA is the lead agency for the proposed project and is responsible for implementation of the MMRP. The MMRP will be active through all phases of the project, including design, construction, and operation. The project will be developed in phases and may include permits required for implementation of project components. There are mitigation measures that must be continuously implemented throughout the development and operation of the HST Project. The MMRP identifies those mitigation measures required by the CHSRA to mitigate or avoid significant adverse impacts associated with the implementation of the proposed project, entity responsible for monitoring, timing of implementation, phase the measure applies to, timing of implementation and completion verification. The MMRP will help ensure the measures are implemented, their effectiveness monitored and documentation provided. As individual mitigation measures are completed, the compliance monitor will sign and date the MMRP, indicating that the required mitigation measure has been completed for the subject period. The compliance monitor will also note the documentation (title of the monitoring report) that was submitted for each mitigation measure. Although the MMRP is specifically required by CEQA and mitigation measures in the FEIR, often times the monitoring effort is appropriately expanded to include the permit conditions associated with the Federal Clean Water Act, Porter Cologne Act, State Fish and Game Code, Federal and State Endangered Species Acts and any requirements beyond CEQA required by the State Historic Preservation Office. These other regulatory requirements will result in obtaining various permits that will include often times more specific terms and conditions that may be treated as mitigation measures and tracked through similar procedures as the MMRP. In many instances they are all combined into one tracking program. The Compensatory Mitigation Plan (CMP) has a more focused and specific role than the MMRP and is the beginning of the mitigation strategy. A CMP is being prepared (e.g., see standard response Record No. 319) as part of the Section 404 permitting process under the requirements of the USACE, EPA, and USFWS, and in accordance with the MOU between the Authority and these agencies. The CMP provides the methods and a foundation for the mitigation options that are available to offset the loss of sensitive natural resources within the Merced to Fresno Section. Compensatory mitigation includes purchase of mitigation bank credits; fee-title acquisition; conservation easements; in-lieu fee payments; and conservation projects to create, restore, or enhance habitats. These compensatory mitigation programs address resources, including special-status species, both plants and wildlife, streambed/riparian communities, other wetlands such as vernal pool/seasonal wetlands, and wildlife movement corridors.

Comment Summary	Response
BIOLOGICAL RESOURCES	**MF-Response-BIO-3: Mitigation Measures (Resources, Details and Phasing, Responsibilities and Future Planning)**
	The methods for reducing, avoiding, or compensating for potential impacts discussed in the CMP include a watershed-based approach, site selection criteria, the use of the CRAM to document wetlands, mitigation by resource, long-term management, financing, and monitoring. In addition, the CMP provides an inventory of banks and projects in the area that may provide compensatory mitigation for offsetting effects. While the CMP is not part of the EIR/EIS, it will incorporate and/or complement many of the mitigation measures identified in Section 3.6.6. As part of the Section 404 process, all proposed compensatory mitigation will be prepared under federal agency oversight. Only mitigation projects and programs with USACE and EPA approval will be used to fulfill mitigation requirements. The Mitigation Strategy and Implementation Plan (MSIP) builds upon information presented in the CMP. The MSIP will present the mitigation proposal for mitigating impacts on sensitive habitats, plants, and wildlife resulting from construction of the Preferred Alternative, and will provide a proposal detailing the locations where mitigation is proposed to occur and the strategy proposed to implement mitigation to meet the requirements and standards of the various environmental regulatory agencies with jurisdiction over the project. The MSIP will specify the quantity of acres/credits used to offset project effects, by resource, as specified by the mitigation ratios described in the CMP. The MSIP will include all elements necessary to satisfy related federal and state permit requirements for compensatory mitigation. The overall mitigation strategy will consider the structural requirements of the agencies, use of umbrella species to provide mitigation for other species with similar habitat requirements, and the EIR/EIS mitigation commitments. The MSIP will also use land acquisition strategies that consider watershed-level impacts when proposing mitigation, giving priority to areas that provide habitat connectivity and those areas with upland and wetland restoration and creation potential. This strategy is designed to meet the requirements and standards of the various environmental regulatory agencies with jurisdiction over the project. The MSIP will specify the quantity of acres/credits used to offset project effects, by resource, as specified by the mitigation ratios described in the CMP. The MSIP will include all elements necessary to satisfy related federal and state permit requirements for compensatory mitigation. The overall mitigation strategy will consider the structural requirements of the agencies, use of umbrella species to provide mitigation for other species with similar habitat requirements, and the EIR/EIS mitigation commitments. The MSIP will also use land acquisition strategies that consider watershed-level impacts when proposing mitigation, giving priority to areas that provide habitat connectivity and those areas with upland and wetland restoration and creation potential.

Comment Summary	Response
BIOLOGICAL RESOURCES	**MF-Response-BIO-4: Special Status Plants**
One commenter expressed concern that the analysis of impacts on biological resources and special-status species relied on incomplete baseline data, the analysis of impacts fails to provide information sufficient to compare alternatives, and the analysis of impacts on several protected wildlife species is deficient.	In addition to the analysis already conducted in the EIR/EIS to identify the potential presence of special status plants, an extensive set of mitigation measures have been developed to minimize HST effects on biological resources such as special-status plants in the Merced to Fresno area (refer to Section 3.7.6 of the EIR/EIS). Prior to ground-disturbing activities, preconstruction surveys will be conducted for special-status plants within the acquisition footprint as well as a 100-foot buffer zone. Where feasible, all special-status plant populations within the 100-foot buffer will be marked as an environmentally restricted area. If populations of special-status plants cannot be avoided, they will be treated consistent with the salvage and relocation program as defined in mitigation measure Bio-MM# 18 (refer to Section 3.7.6.1 of the EIR/EIS). The implementation of mitigation measures would reduce construction period impacts and project impacts on special-status plants to negligible under NEPA and less than significant under CEQA. In addition to the extensive CEQA/NEPA mitigation measures identified in the EIR/EIS, as part of the Section 404 permitting process**, a** detailed CMP is being developed by the Authority and FRA to address any potential adverse impacts on sensitive special-status plants and other natural resources.

Comment Summary	Response
BIOLOGICAL RESOURCES	**MF-Response-BIO-5: Preconstruction Surveys**
One commenter expressed concern that focused surveys were not conducted for special-status wildlife species. One commenter indicated that mitigation measures that require preconstruction surveys for special-status plants and wildlife and their habitat do not provide adequate baseline information and impact analysis. One commenter expressed concern that field studies were only completed for a portion of the study area for impacts.	In addition to the analysis already conducted in the EIR/EIS to identify the potential presence of or habitat for protected wildlife species, prior to ground-disturbing activities, preconstruction surveys will be conducted for state and federal listed species within the construction footprint as well as buffers defined for specific special-status species. Preconstruction surveys will focus on potentially suitable habitat identified for each special-status species reported to occur within the region (refer to Section 3.7.4.4 of the EIR/EIS). Preconstruction surveys will be conducted in concurrence with species-specific biological requirements as defined in Mitigation Measures Bio-MM# 19, 25, 28, 29, 31, 34, 36, 39, and 41 (refer to Section 3.7.6.2 of the EIR/EIS). Where feasible, all sensitive occupied habitat for special-status species within the buffer zones will be marked as an environmentally restricted area. In addition to the extensive CEQA/NEPA mitigation measures identified in the EIR/EIS, as part of the Section 404 permitting process, a detailed CMP is being developed by the Authority and FRA to address any potential adverse impacts on sensitive special-status species and other natural resources.

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	**MF-Response-WATER-1: Water System Impacts – District**
Many commenters discussed potential impacts on water delivery from district facilities (in contrast to on-farm irrigation systems, addressed under Agriculture). These comments came both from the districts themselves and from individuals who expressed concerns about interruptions to water deliveries. District commenters also discussed other types of impacts, especially loss of revenue.	Several local districts and municipalities wrote letters describing site-specific characteristics of their water distribution, flood control, and drainage systems, and discussed several means by which their operations could be financially affected by the HST Project. All site-specific information, including water systems, has been shared with the project engineers so that the designers can address utility relocations and retrofits in the HST design plans and cost estimates. Most of this information was already collected as part of early utility investigations and is incorporated into the preliminary design and EIR/EIS (e.g., see EIR/EIS Section 3.6, Public Utilities and Energy). Prior to construction, the Authority would positively locate public utilities within the potential impact area. This would be done by probing, potholing, using electronic detection, reviewing as-built designs, or other means. The EIR/EIS provides complete information on project impacts on public utilities and energy (refer to Section 3.6.5.3). Additionally, the discussion in the Conflicts with Existing Utilities subsection provides information on what the Authority would do to relocate utilities or protect them in place. Project cost estimates include the estimated cost of utility relocations. These costs will be refined as the project design progresses. At this time, the Authority (working through the Project Management Team) is meeting with local districts, municipalities, and other entities (e.g., pipeline owners) to develop Master Utility Agreements (MUAs). These MUAs (focusing at this time on the construction phase between Herndon Avenue and the Fresno Station) will define terms and conditions whereby the Authority would work with local agencies to resolve utility conflicts, including funding contributions by the Authority to reimburse costs incurred as a result of the HST Project (also see MF-Response-AGRICULTURE-2 regarding access severance). As indicated by several of the commenters, the HST alignment could reduce revenues. However, changes in district revenues as a result of the project are highly speculative and in the CEQA/NEPA context, are not impacts to the natural or human environment and do not need to be analyzed in the EIR/EIS. Districts would not be compensated for loss of property tax revenues resulting from the acquisition of land for a public purpose. Specific meetings held with project-area water districts are as follows. • Merced Irrigation District: October 7, 2011. • Le Grand Water District: September 29, 2011. • Chowchilla Water District: February 15, 2012. • Madera Irrigation District: September 21, 2011. • Fresno Irrigation District: September 12, 2011, October 27, 2011, January 5, 2012, and March 30, 2012. Fresno Metropolitan Flood Control District: September 13, 2011, January 23, 2012, February 23, 2012, March 15, 2012, and March 29, 2012.

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	**MF-Response-WATER-2: Site-Specific Drainage Impacts**
Several comments addressed the issue of the HST berm affecting on-farm drainage systems and/or causing ponding that would affect their operations.	Several commenters raised concerns about changes in local drainage patterns, for example the potential for ponding caused by severance of on-farm drainage systems. The analysis in the EIR/EIS was based on the preliminary level of design—sufficient to understand the basic project features, including the alignment plan and profile, roadway-crossing footprints, and basic estimates of construction means and methods. Typical HST alignment cross sections provide for drainage swales or culverts along the alignment (e.g., see Figure 2-6 in the EIR/EIS), which would be sized to accommodate project runoff. The EIR/EIS was further informed by a project-wide Hydraulics and Floodplain Technical Report (Authority and FRA 2012) and Stormwater Management Plan, available on the project website. These reports address basic approaches to minimizing drainage impacts, including floodplain management and stormwater quality control consistent with the following laws, regulations, and design standards. • Executive Order 11988 – Floodplain Management (U.S. Department of Transportation Order 5650.2 • Caltrans Highway Design Manual (see Chapter 820, Cross Drainage) • Federal Highway Administration Hydraulic Engineering Circular No. 22 (Urban Drainage Design Manual) • AREMA Manual for Railway Engineering • AASHTO Highway Drainage Guidelines The Authority is in the process of refining its design information, and has prepared plans with guidance for addressing drainage impacts (e.g., Stormwater Management Plan). Detailed grading and drainage plans will be prepared by the design-build contractor based on the guidance in these plans. In addition, the right-of-way acquisition process will include parcel-specific (farm-by-farm) negotiations. Engineers participating in the acquisition process will ensure that site-specific drainage impacts to neighboring properties are not created.

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	**MF-Response-WATER-3: H&H/Floodplain Impacts - Inadequate Detail**
Several commenters criticized the lack of detailed hydrologic and hydraulic, as well as floodplain, technical studies, and one commenter (Central Valley Flood Protection Board) suggested that those studies should be completed to inform the selection of the Preferred Alternative.	In addition to the analysis provided in EIR/EIS Section 3.8.5, various regulations, administered through permits, are intended to protect existing flood capacity when a project crosses or modifies a natural or man-made flood-bearing channel or a flood-control project. Examples of permits that may be required to encroach on a floodplain include Section 408 Permits issued by the USACE, Encroachment Permits issued by Central Valley Flood Protection Board, and local development permits issued by the jurisdictional municipality or county that participates in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP). Each of these regulatory permits sets performance standards intended to ensure that impacts on existing flood capacity are less than significant, demonstrated through site-specific hydraulic analyses. These performance standards are summarized in the Hydraulics and Floodplain Technical Report available on the project website (Authority and FRA 2012). Because there are clear, enforceable standards, impacts to flood capacity are not expected to be a

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	**MF-Response-WATER-3: H&H/Floodplain Impacts - Inadequate Detail**
	significant differentiator among HST alternatives. Final HST design and construction will occur consistent with the following laws, regulations, and design standards. • Use of Harbor or River Improvements (33 U.S.C. Section 408) – *BNSF with Mission Ave design options only* • Local Flood Protection Works (Title 33 CFR Section 208.10) • Central Valley Flood Protection Board (CCR Title 23, Div. 1) • Executive Order 11988 – Floodplain Management (U.S. Department of Transportation Order 5650.2 • HST Merced to Fresno Section Hydraulics and Floodplains Technical Report • HST Procurement Package 1 Floodplain Impacts Assessment and Hydrology & Hydraulics Report *(applicable south of Herndon Avenue)* • Caltrans Highway Design Manual: o Chapter 810 – Hydrology o Chapter 820 – Cross Drainage • FHWA Hydraulic Design Series: o HDS-1 – Hydraulics of Bridge Waterways o HDS-5 –Hydraulic Design of Highway Culverts • AREMA Manual for Railway Engineering AASHTO Highway Drainage Guidelines

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	**MF-Response-WATER-4: Regional Water Supply Impacts**
Several commenters noted the general water supply conditions affecting the San Joaquin Valley (e.g., cutbacks in Delta water exports, groundwater overdraft) and expressed concern that the HST Project would worsen these conditions.	As described in the EIR/EIS, the project would result in an overall net reduction in water use. The primary reason is that water-intensive farmland would be replaced by a rail alignment with zero water use. This is explained in the EIR/EIS section *Increased Demand for Water Supply* (as subsection of Section 3.6.5.3), which is based heavily on the technical memorandum *Final Draft Water Use Analysis for the CHST Merced to Fresno Section* (as cited in the EIR/EIS) (Authority 2011). Key conclusions are as follows: • Along the rail corridor, existing water use is estimated to range from 4,892 acre-feet per year (afy) to 6,073 afy. This would decrease to zero with conversion to the rail corridor. • At the Downtown Merced HST Station, existing water use of 47 afy would decrease to 15 afy with station development. • At the Downtown Fresno HST Station, existing water use of 32 afy would increase to 47 afy with station development. This increase (roughly equivalent to 30 single-family homes) would easily be met by the City of Fresno water system. • Water use also would be reduced for each of the HMF options. HMF sites are expected to use approximately 50 afy, compared to the existing water use at the HMF alternatives that range from 69 afy (Castle Commerce Center) to 568 afy (Kojima Development). Overall, project water use is estimated to be 1.5% of the existing water use within the construction footprint. The Authority is not claiming this to be a project benefit, but the EIR/EIS clearly demonstrates that water use will be reduced. For this reason, the EIR/EIS does not discuss existing water supply conditions in the San Joaquin Valley in great detail. Regional groundwater conditions are described in the EIR/EIS (see *Groundwater* in Section 3.8.4.3), including the general overdraft conditions in Merced and Madera counties. Notwithstanding the overall net water use reduction, the EIR/EIS addresses the loss of recharge capacity in the section *Common Groundwater Impacts* in Section 3.8.5.3. Recharge capacity would be reduced because farmland (with high infiltration) would be replaced by the rail corridor. The central part of the rail corridor – approximately 40 feet wide – would consist of ballast and tie or slab track bed over a dense sub-ballast and sub-grade. This portion of the rail corridor would be impermeable, or nearly so. A 40-foot-wide band of impermeable surface (less wide than a 4-lane road) would not be meaningful for recharge in the context of the regional groundwater basin. The remainder of the rail alignment (up to 60 feet) would be graded for surface drainage. This peripheral area would be more permeable than the central rail corridor, and would continue to provide infiltration. In addition, some detention and/or retention features would be provided within this drainage area as described in the Stormwater Management Plan. With the infiltration provided in the drainage areas and by using detention basins, it is likely that most of the current infiltration capacity of the rail corridor would be retained. Locally, one of the HMF sites, Fagundes HMF, would experience a relatively small net increase in groundwater withdrawal of about 45 afy if water to this HMF were supplied entirely by wells. Analysis shows that the local aquifer drawdown would be only about 0.1 foot.

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	**MF-Response-WATER-5: Water Pollution Control**
Several commenters talked about various means by which the HST Project would affect water quality, primarily from discharge of pollutants during construction.	The EIR/EIS acknowledges that project construction could result in water pollution impacts. These impacts are discussed in the Temporary Water Quality Impacts subsection of Section 3.8.5.3 of the EIR/EIS, and methods for avoiding and/or minimizing these impacts are discussed in Section 3.8.6, Project Design Features. As part of Section 3.8.6, the subsection Construction Stormwater Pollution Prevention Plan discusses how an existing regulatory program mandates the use of erosion and sediment control measures to minimize water pollution impacts. Anticipated BMPs are listed in this subsection as part of the Stormwater Pollution Prevention Plan, though the construction contractor has discretion to select the final measures based on site conditions and the specific construction methods and materials to be used. In addition, the subsection Project Design Features for Stormwater Management and Treatment includes additional measures that would help ensure protection of water quality after the completion of construction. These measures could include structural features, such as grassy swales, for filtering sediment and infiltrating runoff prior to discharging into surface waters. Additional details about the range of expected methods of water pollution control are presented in the Stormwater Management Plan available on the project website. Final HST design and construction will occur consistent with the following laws, regulations, and design standards. • Federal Clean Water Act (Section 402) and State Porter-Cologne Water Quality Act: o General Construction Stormwater Permit o General Industrial Stormwater Permit o Caltrans General Permit o Municipal Stormwater Permits (Merced and Fresno urban areas only) • Stormwater Pollution Prevention Plan: o Post-Construction Controls • HST Merced to Fresno Section Stormwater Management Plan • HST Procurement Package 1 Stormwater Management Report *(applicable south of Herndon Avenue)* • Caltrans Storm Water Quality Handbook: o Project Planning and Design Guide o Stormwater Pollution Prevention Plan and Water Pollution Control Program Preparation Manual AASHTO Highway Drainage Guidelines

Comment Summary	Response
HAZARDOUS MATERIALS AND WASTES	**MF-Response-HAZ-1: Less than Significant Impact to Schools**
The Authority and FRA are coordinating with local school districts that have schools within 0.25-mile of the proposed HST alignments in compliance with California Public Resources Code Section 21151.4, which requires the lead agency to consult about potential impacts to schools if the project might reasonably be anticipated to emit hazardous air emissions, or handle an extremely hazardous substance or a mixture containing an extremely hazardous substance. Several school districts, including the Madera Unified School District, Central Unified School District, and Fresno Unified School District, commented that they support the conclusions reached in the EIR/EIS that there would be a less than significant impact on schools within their districts.	The Authority and the FRA have reviewed the commenters' conclusions regarding the potential for the HST to impact existing or proposed schools. As discussed in Section 3.10, Hazardous Materials and Wastes, no extremely hazardous substance (as defined in California Public Resources Code Section 21151.4) or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (j) of Section 25532 of the Health and Safety Code, would be handled within 0.25 mile of a school as a result of implementing the HST Project. Based on the commenters' reviews and support of the mitigation proposed in the EIS/EIR, no modifications will be made to the analysis or mitigation proposed therein. Also see Appendix 3.12-C, Children's Health and Safety Risk Assessment, which describes the potential environmental health and safety risks to children in the project, and explains that there would be no significant impacts related to hazardous materials.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-1: Vehicle/School Bus Routes**
Several commenters were concerned that road closures would require substantially longer bus routes, requiring funding to purchase additional school buses and pay additional drivers.	HSR policy is to provide roadway overpasses approximately every 2 miles, resulting in no more than 1 mile of out-of-direction travel for vehicles, including school buses, to cross the HST tracks. In most locations in the Merced to Fresno Section, roadway overpasses would be provided more frequently, approximately every mile or less, because of the existing roadway infrastructure. While school bus routes are not specifically analyzed in the EIR/EIS, the frequency of roadway overpasses would minimize rerouting and limit out-of-direction travel to approximately one-half mile in nearly all locations in the project area. Also see MF-Response-Traffic-2. Figures 2-30 through 2-33, 2-47 through 2-51, and 2-53 through 2-56 in Chapter 2, Section 2.4, Alignment, Station, and Heavy Maintenance Facility Alternatives Evaluated in this Project EIR/EIS, of the EIR/EIS provide illustrations of the locations of road closures, overcrossings, undercrossings, and modifications. Appendix 2-A of the EIR/EIS lists the roadway modifications.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-2: Overcrossings, Fog**
Commenters were concerned that crossing roadway overpasses during tule fog will be dangerous, particularly for school buses carrying children.	The EIR/EIS provides information on the roadway overpasses, such as width and clearance for the HST Project. The width of roadway overpasses would accommodate farm equipment on the overpasses, and would therefore accommodate school buses (which are narrower than farm equipment) traveling in opposite lanes. The clearance below the overpasses would range from 16.5 feet over roadways to 27 feet over railroad tracks. See Sections 2.2.4, Infrastructure Components, and 2.2.5, Grade Separations, in Chapter 2 of the EIR/EIS for more detail on roadway overcrossings. Driving conditions in fog on modified roadways and overpasses would be the same as existing conditions in fog on existing roads and bridges. In some locations, new roadway overcrossings would deviate from the existing roadway alignment so that the overcrossing could be constructed while maintaining traffic on the existing road. Offline overpasses would be designed in accordance with design standards, which account for driver expectations (for example, roadway curves would not be abrupt) and safety standards (for example, guard rails and crash barriers would be installed on bridges). Such design features would reduce the potential for safety concerns during fog conditions. In addition, the HST would operate on an access-controlled, grade-separated right-of-way. Because there is no potential for other vehicles, including buses, to be on the track, there is no increase in existing risk.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-3: Emergency Response Times/Routes**
Commenters were concerned that road closures will increase emergency response times throughout the project area, affecting safety.	HSR policy is to provide roadway overpasses approximately every 2 miles, resulting in no more than 1 mile of out-of-direction travel for vehicles to cross the HST tracks. In most locations in the Merced to Fresno Section, roadway overpasses would be provided more frequently, approximately every mile or less, because of the existing roadway infrastructure. Consequently, out-of-direction travel would be limited to approximately 1 mile in nearly all locations in the project area. EIR/EIS Section 3.11.5 explains that the project design would include coordination with emergency responders to incorporate roadway modifications that maintain existing traffic patterns and fulfill response route needs, resulting in negligible effects on response times by service providers. Section 3.11.5, Safety and Security Environmental Consequences, of the EIR/EIS provides additional detail regarding emergency response time during HST operations.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-4: Derailment and Intrusion Concerns**
Commenters expressed concern that the protection of the HST tracks and UPRR/BNSF tracks from derailed trains is not adequate. They also indicated that the required separation between the tracks is not great enough to keep trains that derail at high speeds from intruding into the other train system's trackway; and that in places where the required separation cannot be met, an intrusion wall must be provided.	The HST System would operate on a fully grade-separated and access-controlled guideway with intrusion detection and monitoring systems where required. The HST infrastructure would be designed to prevent access by unauthorized vehicles, persons, animals, and objects. Section 3.11.5, Safety and Security Environmental Consequences, provides information about project design features that would prevent train accidents, including derailments and collisions with trains and other vehicles. To prevent conventional passenger or freight trains from entering the HST trackway in the event of derailment, there would be either (1) a minimum separation between the HST tracks and the adjacent UPRR or BNSF tracks or (2) a barrier, such as a physical barrier or an earthen berm, where the minimum separation cannot be achieved. These conditions are illustrated in Figures 2-29 and 2-45 in Chapter 2**.** The minimum separation distance (i.e., 102 feet between centerlines of tracks) includes the distance of the maximum practical excursion of the longest U.S. freight rail car from the center of track, plus an allowance for overhead catenary system (OCS) masts. A car body length of 89 feet for the freight rail car displacement plus an allowance of 12.5 feet to include an OCS mast foundation results in a minimum separation distance, without an intrusion protection barrier, of 101.5 feet, rounded to 102 feet. These separation requirements, described in Technical Memorandum 2.1.7 - Rolling Stock and Vehicle Intrusion Protection for High-Speed Rail and Adjacent Transportation Systems (Authority 2008), were developed specifically for the HST and do not directly adopt existing criteria for separation requirements. The guidance for intrusion protection generally follows the recommended practices described in the American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual and the design standards developed specifically for the construction and operation of HSTs, based on international practices. This includes technical guidance from National French Railways for separation between HST system and roadway infrastructure and International Union of Railways Codes for Structures Built over Railway Lines. For intrusion from highways/roadways and protection of highway motorists, the design guidance follows FRA recommendations and was revised to be compliant with Caltrans Highway Design Manual, which was updated in 2011 to specifically address separation requirements for HST facilities adjacent to the state highway system. Specific locations of barriers between the HST and adjacent rail lines have been added to Section 3.11.5, Safety and Security Environmental Consequences in the Final EIR/EIS. For the Preferred Alternative, the project would construct barriers in

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-4: Derailment and Intrusion Concerns**
	Madera Acres between Avenue 19 and Avenue 18 and in Fresno from approximately Carnegie Avenue to N State Street and from approximately Shaw Avenue to a 0.25 mile south of SR 180. Additionally, under the Ave 21 Wye, the project would construct a barrier in Fairmead between Avenue 22¾ and Avenue 22. Major earthquakes result in only minor train movement during a derailment because of sensors that automatically cut power supply to the train in the event of seismic movement and because of the physical elements, such as containment parapets and guard rails, on each side of the trackway. These types of project features would prevent HST trains from leaving the HST corridor in the rare event of derailment resulting from a seismic event.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-5: Child Safety Impacts**
Commenters expressed concern that the proximity of HST operations to locations where children live, play, and attend school would create safety risks in the event of accident or derailment.	It is expected that children would not experience safety risks as a result of the HST System. The HST trains would operate on a fully grade-separated and access-controlled guideway with intrusion detection and monitoring systems where required. The HST infrastructure would include a fence designed to prevent access by unauthorized vehicles, persons, animals, and objects. In the rare event of derailment, physical elements such as containment parapets and guard rails on each side of the trackway would prevent HST trains from leaving the HST corridor, as illustrated in Figure 3.11-8 in Section 3.11, Safety and Security, of the EIR/EIS.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-6: Information on Increased Demand on Emergency Providers**
Commenters expressed concern that the EIR/EIS did not adequately analyze the impact of stations and HMFs on increased service demands on emergency response providers. They request that the analysis include a more detailed discussion of what level of increased service would be required.	Section 3.11.5, Safety and Security Environmental Consequences, of the EIR/EIS states that stations and HMF sites could increase fire and ambulance emergency response demands. However, the Section also states that both facilities would have onsite security patrols, resulting in no increased demand for police response. The impacts analysis has been revised to clarify the difference between direct and indirect impacts on emergency response demands in station areas and to clarify that additional property and sales tax revenue spurred by station area activity and redevelopment would help offset costs for emergency responders. Mitigation Measure S&S-MM#2 has been refined to clarify that the Authority will provide a fair share of the cost of additional emergency services necessitated by the stations, through an agreement with the pertinent city. The impact analysis concludes that the impact to emergency response around station areas and HMFs could be moderate under NEPA and significant under CEQA.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-7: Revision of Mitigation Measure #2**
Commenters expressed concern that the EIR/EIS improperly deferred mitigation to address increased service demands on emergency response providers. They request that the analysis include a more detailed discussion of what level of increased service would be required and determine what the fair share impact fee would be for these impacts.	Mitigation Measure S&S-MM#2 has been revised to state that the Authority will provide a fair share of the cost of service based on monitoring of local fire, rescue, and emergency service providers to incidents at the stations and HMF before and after construction, as follows: "S&S-MM#2: Monitor response of local fire, rescue, and emergency service providers to incidents at stations and the HMF and provide a fair share of cost of service." Upon approval of the Merced to Fresno Section, the Authority would monitor service levels in the vicinity of the Merced and Fresno stations and, at such time as an HMF site is selected, at the HMF site, in order to determine baseline service demands. "Service levels" consist of the monthly volume of calls for fire and police protection, as well as city- or fire protection district-funded EMT/ambulance calls that occur within the station and HMF site service areas. Prior to operation of the stations for HST service, the Authority would enter into an agreement with the public service providers of fire, police, and emergency services to fund the Authority's fair share of services above the average baseline service demand level for the station and HMF service areas (as established during the monitoring period). The fair share would be based on projected passenger use for the first year of operations, with a growth factor for the first 5 years of operation. This cost-sharing agreement would include provisions for ongoing monitoring and future negotiated amendments as the stations are expanded or passenger use increases. Such amendments would be made on a regular basis for the first 5 years of station operation, as would be provided in the agreement. To make sure that services are made available, impact fees would not constitute the sole funding mechanism, although impact fees may be used to fund capital improvements or fixtures (i.e., police substation, additional fire vehicle, on-site defibrillators, etc.) necessary to service delivery. After the first 5 years of operation, the Authority would enter into a new or revised agreement with the public service providers of fire, police, and emergency services to fund the Authority's fair share of services. The fair share would take into account the volume of ridership, past record and trends in service demand at the stations and HMF site, new local revenues derived from station area development, and any services that the Authority may be providing at the station.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-8: Truck Bomb/Security Concerns**
Commenters expressed concern that the Authority should consider the possibility of terrorist attacks, such as truck bombs, and ensure that security measures are in place to minimize or prevent damage from such attacks.	As detailed in Section 3.11.6, Safety and Security Project Design Features, in the EIR/EIS, project design would incorporate system safety and security plans and design features to address the potential for criminal and terrorist acts. Preliminary Hazard Analyses, Threat and Vulnerability Analyses, and System Security Plans would provide the necessary information and provisions to detect and deter criminal and terrorist acts at rail facilities and on system operations. As described in Section 3.11.5, Safety and Security Environmental Consequences, of the EIR/EIS, access control and security monitoring systems, such as sensors on perimeter fencing, closed-circuit television, and security lighting where appropriate, would deter such acts and facilitate early detection.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-9: Emergency Response to HST Accidents**
Commenters questioned how emergency response to HST accidents and emergencies would occur.	Project design features minimize the potential for train accidents; therefore, local response to accidents is not expected to be required, as any incident would be extremely rare. However, for emergency preparedness, the Authority would collaborate with local responders to develop a Fire and Life Safety Program for emergency response in case of an accident or other emergency. Additionally, a System Safety Program Plan, including a Safety and Security Certification Program, would be developed during the final design and construction phases to address safety, security, and emergency response to the HST tracks and other facilities. Design standards and guidelines require emergency walkways on both sides of the tracks for both elevated and at-grade sections. Adequate space would be present along at-grade sections of the alignment to allow for emergency response access. Section 3.11, Safety and Security, of the EIR/EIS provides further details regarding emergency response.

Comment Summary	Response
SAFETY AND SECURITY	**MF-Response-S&S-10: Security Screening Procedures**
Commenters asked whether security screening at HST stations be similar to airline security screening.	Security screening at HST stations would be subject to the requirements of the Transportation Security Administration (TSA). Those requirements have not been determined at this time, and may change over time as TSA policies evolve.

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Response-SOCIAL-1-: Acquisitions, Displacements, and Relocations**
Commenters expressed concern over the alternatives impacting their residence or business and what would occur when the property is taken. A few commenters were concerned with how property acquisition would occur related to the recent downturn in the housing market. Other commenters were concerned with the impacts on their residence located within a mobile home park.	The Authority has adjusted alternatives during conceptual design to avoid or minimize impacts, including property acquisitions, to the extent possible. This alternative refinement process would continue throughout final design. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. sec. 4601 et seq.) (Uniform Act) and Implementing Regulations (49 C.F.R. Part 24). The Uniform Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For all acquisition of real property, the Uniform Act requirements include the following: • Appraisal of the property before negotiation begins; • An invitation to the property owner to be present for the appraisal; • A written offer of just compensation and a summary of what is being acquired; • Payment for property before taking possession of it; • Offer to acquire uneconomic remnants; and • Reimbursement for expenses resulting from the transfer of title. The Authority will negotiate with property owners whose land would be impacted by the HST System. The Authority has the power of eminent domain, allowing it to condemn the property of unwilling sellers, with payment of just compensation (i.e., fair market value) to the property owner. Eminent domain would be viewed as a last resort used to carry out the will of the voters of the state in developing a statewide HST system. Just compensation is an amount paid to a property owner for property acquired for public purposes that is not less than the fair market value of the property acquired, including damages or benefits to the remaining property. Compensation would include any measurable loss in value to the remaining property as a result of a partial acquisition. The Uniform Act also ensures relocation assistance is provided to displaced persons to reduce the emotional and financial impact of displacement. When residential property is acquired, the Uniform Act's relocation assistance requirements include: • Relocation advisory assistance for displaced tenants and owner-occupants; • A minimum 90-day written notice to vacate before requiring possession; • Reimbursement of moving expenses; and • Payment for the added cost of renting or purchasing comparable replacement housing. When displacement results from the acquisition of non-residential properties, such as businesses and farms, the Uniform Act's provisions for relocation assistance include: • Relocation advisory services; • A minimum 90-day written notice to vacate before taking possession;

Comment Summary	Response
	• Reimbursement for moving and reestablishment expenses. The California Relocation Assistance Act (CRAA) essentially mirrors the Uniform Act. and also ensures consistent and fair treatment of owners, expedited acquisition of property by agreement to avoid litigation, and promotion of confidence in the public land acquisitions process. However, if there is federal funding on the project, the Uniform Act is followed. A property owner may also claim a loss of business goodwill under California Code of Civil Procedure 1263.510 et seq. Goodwill is defined as the benefits that accrue to a business because of its location; reputation for dependability, skill or quality; and any other circumstances resulting in probable retention of old or acquisition of new patronage. Loss of Goodwill is paid as an acquisition expense, but some of the items considered in calculating loss of goodwill may also be covered as a relocation expense. In addition, owners who believe they have suffered a loss of property value as a result of the project may file a claim with the State of California's Government Claims Board. More information about that claims process may be obtained online at: www.vcgcb.ca.gov/claims. In general, anyone who wishes to file a lawsuit against the State or its employees for damages must first pursue an administrative remedy through the GCP claims process. Consistent with the requirements of the Uniform Act and CRAA, the Authority is committed to working closely and proactively with residents and businesses to help them plan ahead for relocation, find new homes or sites, and solve problems as they may occur. While relocation assistance would mitigate the displacement, relocation could still represent an inconvenience or hardship to some property owners. The Authority's relocation assistance and advisory services would include, but not be limited to, measures, facilities, or services that may be necessary or appropriate to determine the relocation needs and preferences of each household, business, farm, and nonprofit organization to be displaced. The Authority would provide current information on the availability, purchase prices, and rental costs of comparable replacement dwellings. Other benefits and compensation may include payment of residential moving expenses and replacement housing payments, nonresidential moving expenses, and reestablishment expenses. The Authority's relocation assistance documents in Appendix 3.12-A outline compensation and acquisition procedures in detail. For any properties acquired for the project, including any community facilities identified in Section 3.12.5, Environmental Consequences, the Authority would comply with appropriate provisions of the federal Uniform Relocation Act. Property owners whose entire or partial property would be acquired by the Authority would receive just compensation for their land and improvements. Just compensation is an amount paid to a property owner for property acquired for public purposes that is not less than the fair market value of the property acquired, including damages or benefits to the remaining property. Compensation would include any measurable loss in value to the remaining property as a result of a partial acquisition. The Authority would negotiate with property owners whose land would be impacted by the HST System. The Authority has the power of eminent domain, allowing it to condemn the property of unwilling sellers, with payment of just compensation (i.e., fair market value) to the property owner. Eminent domain would be viewed as a last resort used to carry out the will of the voters of the state in developing a statewide HST system. Information on the eminent domain process is available on the Authority's website at www.cahighspeedrail.ca.gov/rightofway.aspx. Under the Uniform Act requirements, eligible mobile home owners e will be provided relocation benefits. just compensation if the mobile home is purchased by the Authority. If the mobile home is not purchased and would be moved, the Authority would provide compensation for moving and relocation expenses for the mobile home. Mobile home occupants (regardless of

Comment Summary	Response
	whether or not they are the owner) may be eligible for payment to move their personal property and a replacement housing payment. The Authority will consider the effects of severance during the valuation, acquisition, and compensation process. The Authority is committed to working with agricultural property owners to address property acquisitions that result in the division of farmlands and related restriction of access at the individual farm level. The Hybrid Alternative would sever approximately 80 +/- large farm parcels (see Section 3.14.5.3). Typically, these remnants would be located between road rights-of-way or adjoining parcels and the HST alignment. The number of severed parcels that will no longer be farmed is not known, because if they adjoin other agricultural parcels they could be obtained by the adjoining property owner and made a part of that farm. Parcel-specific analysis of severed parcels will take place during the appraisal process that will occur before property acquisition. If the property adjoining the severed property is considered part of the "larger parcel" (i.e., same use, same owner and contiguous) then impacts as a remaining parcel would be considered in the appraisal valuation. There may also be other considerations to be determined on a case-by-case basis. The EIR/EIS estimates that small remnant parcels rendered uneconomic for farming operations would result from HST right-of-way acquisition in some areas. The determination of any loss in value of the remainder property would include lost revenue and would take into consideration factors such as added cost of operation and/or reduced productivity of the remaining land. The Authority would mitigate this impact through the creation of a farmland consolidation program to sell these non-economic remnant parcels to neighboring landowners (see Section 3.14.6, Ag-MM #2). In cases where access to individual farms is restricted, the Authority will preserve access across the right-of-way by creation of overcrossings or undercrossings at reasonable intervals (see Section 3.12.7, Mitigation Measure SO-MM#8). This may include the design of grade-separated crossings to allow stock and farm equipment continued access to bisected land holdings. Where the project would eliminate access across the right-of-way, the Authority will consider providing a grade-separated crossing. However, if the cost of such a crossing would exceed the value of the affected remainder lands, the Authority would acquire the affected lands or otherwise compensate the farm owner for the loss in value rather than provide a crossing. Farm owners would be compensated consistent with the Uniform Act and CRAA to provide full functionality for the remaining agricultural operation. Specific opportunities to restore functionality during and after construction will be analyzed on case-by-case bases in the valuation process. The appraisal will include temporary and permanent losses of property value. The Authority would compensate farm owners for the value of crops that are lost as a result of the project's disruption to farm infrastructure. In scenarios where construction would temporarily displace or interrupt access to farm infrastructure, the Authority would compensate property owners for loss of infrastructure and the owner would be able to replace infrastructure functionality before project construction begins. In cases where construction would commence before infrastructure can be restored, the farm owner would be compensated for the loss of agricultural production resulting from the disruption. Additional information about acquisition, compensation, and relocation assistance, and the Uniform Act , is also available in Appendix 3.12-A of the EIR/EIS, and at the Authority's website: http://www.cahighspeedrail.ca.gov/rightofway.aspx

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Response-SOCIAL-2: Property Values – HST Project Lower Property Values Due to a Nearby Station or HST Alignment that Generates Noise/Visual Impact**
Commenters were concerned with the potential for loss of property value due to being located in close proximity to the HST alignment. Comments were received from both residential and business property owners.	Studies indicate that residential and commercial property values near transit stations typically increase and are valued higher than similar properties not in the vicinity of transit stations. This effect is likely to occur in both downtown Merced and Fresno. Section 3.12.5 discusses both the potential positive and negative economic impacts, including property value impacts, of the proposed project. There is also the possibility of reductions in property values in areas that are not near the HST stations, because of the impacts associated with the HST (e.g., noise and visual impacts). Property values may decrease in areas that are farther from the HST stations, but decrease in property values is more likely for those close to the HST guideway, particularly residences close to elevated sections of the guideway. In the communities of Le Grand, Madera, and Fairmead, there is also the potential for physical deterioration caused by potential noise and visual impacts. However, the communities that built up around the existing rail corridors have already experienced areas of degraded buildings and underutilized land as the communities expanded beyond the rail corridors. Additionally, because a large portion of the alternatives are located in rural areas associated with agriculture, the potential for any decreased value of those properties is low, as the activities (i.e. agriculture) are not likely to be affected by visual impacts. Refer to Section 3.12.5 for additional information on these potential impacts and to Section 3.12.7 for mitigation related to physical deterioration. Owners who believe they have suffered a loss of property value as a result of the project may file a claim with the State of California's Government Claims Board. More information may be obtained online at www.vcgcb.ca.gov/claims/.

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Responses-SOCIAL-3: Business Impacts – Construction/Operation Would Create Too Many Impacts on Businesses**
Commenters were concerned with the potential for negative impacts on businesses during construction and operation and the potential for loss of jobs. Some commenters noted the potential for business impacts in areas not in close proximity to a station.	Project construction requires the acquisition and relocation of a number of businesses. Relocation assistance would be provided to businesses as appropriate and it is anticipated that many of the jobs at these businesses would follow the relocation. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Act (42 U.S.C. Ch. 61). The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see Section 3.12 of the EIR/EIS and MF-Response-SOCIAL-1. The project must also adhere California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available at the Authority's website: http://www.cahighspeedrail.ca.gov/rightofway.aspx. It is anticipated that many of the jobs at these businesses would be relocated and not lost. Section 3.12.5 provides information on the property acquisition impacts on businesses. The construction-related impacts to property, and mitigation for those impacts, is a factor considered within the environmental review process. Each of the resource chapters in the Final EIR/EIS (Sections 3.2, Transportation; 3.3, Air Quality and Global Climate Change; 3.4, Noise and Vibration; etc.) includes a description of the affected environment, the project's construction impacts on that environment, and feasible means of reducing or avoiding those impacts. There may be situations where impacts cannot be fully avoided and in these situations, measures would be implemented as appropriate and necessary to minimize or mitigate these impacts. For example, where noise impacts on sensitive receptors would occur during project construction, temporary sound barriers would be installed, nighttime construction activity would be limited, and/or other measures would be implemented. During construction, business impacts could include noise, vibration, dust, loss of parking, and traffic congestion in the areas of construction activities. Depending on the location of the construction activities and nature of the activities, the impacts on businesses would vary. Business-related impacts are more likely to occur near surface construction activities. Businesses that tend to rely on drive-by traffic to attract customers would experience the greatest impacts; however, it is also possible that some of these businesses may have positive business impacts, as construction workers buy goods and services in addition to any regular customers. As described in Section 3.12.7, mitigation measures have been identified that will minimize the impacts on businesses during construction, including signage, maintaining access as much as possible, and providing a community ombudsman. In addition, other sections of the EIR/EIS identify mitigation measures related to traffic (Section 3.2.7), dust (Section 3.3.6), and noise (Section 3.4.7). Operation may also result in positive business impacts related to TOD in those areas where growth and higher densities are encouraged, including Downtown Merced and Fresno. The HST stations can act as a catalyst for TOD. Sections 3.12.5 and 3.13.5 provide additional information on the positive benefits for businesses. For areas without a station, no negative impacts would be anticipated on the local businesses. The HST is within its own guideway and is grade-separated, thereby preserving access to the businesses in the other areas. Any required mitigation for noise or visual impacts is identified in Sections 3.4.7 and 3.16.7.

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Response-SOCIAL-4: Neighborhood Impacts – HST Project Results in Impacts on Neighborhoods**
Commenters were concerned about the impacts on neighborhoods in close proximity to the HST alignment. Concerns included increased noise, bisecting the neighborhood, physical deterioration, and mitigation to address any impacts. There were some commenters who were concerned about the neighborhood impacts including noise, parking, and safety because of the HST stations.	None of the HST alternatives would result in significant impacts on community interaction or community facilities, as identified in Section 3.12.5. The project would not bisect any neighborhoods as it predominantly travels along or adjacent to existing major transportation facilities within the urban areas and maintains through access. As described in Section 3.12.4, many of the communities in the study area developed around the railroad, which may have been the draw for the development originally, but has also served as a division within communities. Because the HST System is a grade-separated system, it would not worsen this situation. Within the rural areas there are no communities that would be bisected, as the alignments generally parallel existing transportation corridors. While some residences would have visual impacts resulting from vegetation removal or the presence of the HST structures, and/or changes in roadway system, especially where the alternatives are at-grade, these impacts would only affect residences adjacent to the project elements and not the overall neighborhood quality or social interaction. There is the potential for physical deterioration, primarily from the elevated guideways in urban areas. The FRA and Authority are working together and with the local communities to minimize and avoid effects leading to physical deterioration. Refer to Section 3.12.5 for complete information and to Section 3.12.7 for additional mitigation details. The project would require property acquisitions on the border of some neighborhoods, but these acquisitions would not affect the overall neighborhood cohesiveness. The project also requires the acquisition of community facilities, which would be relocated prior to building demolition, as specified in SO-MM#4 in Section 3.12.7, Socioeconomics, Communities, and Environmental Justice. After mitigation, impacts on these neighborhoods are expected to be minimal. The exception is the construction of the Castle Commerce Center HMF if it is eventually selected as the preferred site for the HMF. The lead tracks to this facility would divide the Franklin-Beachwood community in Merced County, including the Merced Mobile Home Park. The guideway would require the acquisition of more than half the homes in the mobile home park, an elementary school, and community facilities in Downtown Merced, resulting in adverse impacts. Refer to Section 3.12.5 for complete information on what impact the project would have on the neighborhoods and to Section 3.12.7 for mitigation to address the impacts. Even after mitigation the impacts to the Franklin-Beachwood community and the mobile home park would still be substantial. Around the HST stations, the uses are predominantly commercial and industrial; however, there are residential uses in close proximity which could be affected by station activities. Limits on parking in neighborhoods or business districts adjacent to stations would be the responsibility of the city with jurisdiction where the station lies. Parking is expected to be developed over time in phases as demand increases and would be responsive to development around the stations, such as TODs, as well as future expansion of local transit links at multi-modal stations, that may reduce actual demand. Section 2.5.3 explains how the Authority would have a flexible approach to providing the necessary parking at stations. Refer to Sections 3.2, Transportation; 3.3, Air Quality and Global Climate Change; 3.4, Noise and Vibration; and 3.11, Safety and Security for additional information on potential impacts in the station area and mitigation measures to reduce or avoid the impacts. The construction-related impacts to property, and mitigation for those impacts, is a factor considered within the environmental review process. Not all construction impacts can be fully avoided. In these situations, measures will be implemented as appropriate and necessary to minimize or mitigate these impacts. For example, where noise impacts on sensitive receptors would occur during project construction, temporary sound barriers will be installed, nighttime construction activity will be limited, and/or other measures will be implemented. During construction, neighborhoods could experience

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Response-SOCIAL-4: Neighborhood Impacts – HST Project Results in Impacts on Neighborhoods**
	impacts related to noise, dust, and traffic congestion. Depending on the location of construction activities, impacts on the neighborhoods would vary, as would the amount of time. Each of the resource chapters in the EIR/EIS (refer to Sections 3.2, Transportation; 3.3, Air Quality and Global Climate Change; 3.4, Noise and Vibration; etc.) includes a description of the affected environment, the project's construction impacts on that environment, and feasible means of reducing or avoiding those impacts. Measures will be implemented to address these impacts that are identified and referenced in Section 3.12.7. Refer to Section 2.8 in Chapter 2, Alternatives, for information on the construction approach for the alternatives.

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Responses-SOCIAL-5: School District – Funding and Access**
Commenters were concerned about the potential impacts on school districts particularly the loss of students due to property acquisitions and the impact this would have on school district funding.	Project construction would result in the acquisition of properties within a number of the school districts located in the study area and all of the alternatives would require the acquisition of properties. Section 3.12.5, Socioeconomics, Communities, and Environmental Justice, provides information on the residential displacements for the three alternatives. EIR/EIS Section 3.12.5 also provides information indicating that, based upon preliminary information, there are suitable locations for the residential relocations within almost all areas. Because there are suitable locations in almost all areas to accommodate the residential displacement, no long-term effect on school district attendance and related per-pupil funding is expected to occur. Text has been added to Section 3.12.5 of the Final EIR/EIS to address school district funding. See also Appendix 3.12-B, Effects on School District Funding and Transportation Routes**.** The number of people potentially impacted is described as a range reflecting the differences based on the various design options and wyes. The UPRR/SR 99 Alternative has the potential to affect the fewest number of people due to displacement (625 to 747), followed by the Hybrid Alternative (628 to 726), and the BNSF Alternative would affect the greatest (652 to 756), with the ranges reflecting the differences based on the various design options and wyes. The residential displacement information provided is for all populations who would be affected and not just for those who attend school. The EIR/EIS Section 3.12.5 also provides information indicating that, based upon preliminary information, there are suitable locations for the residential relocations within almost all areas. The only school districts where there is the potential that no suitable residential relocations exist are the school district around the unincorporated community of Le Grand (affected by the BNSF Alternative) and the Alview-Dairyland Union Elementary School (affected by all HST alternatives with the connection to the Ave 21 Wye). Although there are not enough properties for sale, there are residential foreclosures and for any larger parcels the residential units could be moved to other locations within the property if applicable. Refer to Section 3.12.7 for information on SO-MM#6: Avoid displacements or consider housing options in Franklin-Beachwood, Le Grand, Fairmead, and rural areas. Refer to Appendix 3.12-B for complete information on impacts related to school district funding including the areas around Le Grand and the Alview-Dairyland Union Elementary School. In sum, because there are suitable locations in almost all areas for the residential displacement, no long-term effect on school district attendance and related per-pupil funding is expected to occur. No issues would be anticipated related to school district

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Responses-SOCIAL-5: School District – Funding and Access**
	bonding either, since any bonds for the school districts require a majority vote. **The HST Project is not anticipated to negatively affect the bonding capacity for any of the school districts. The recent economic downtown has resulted in a decrease in assessed values and the bonding capacity of the school districts is dependent on assessed value. The HST Project would have a positive effect on property values in the stations areas which would be beneficial to school districts by allowing the school districts to have higher limits on the bonds. In the areas not near the stations there is the potential for decreased property values but only near the HST guideway; however, because many of the areas are adjacent to existing rail corridors or in rural areas associated with agricultural uses the potential for decreased property values is low, so there would be no negative effects on bonding capacity. Refer to Section 3.12.5 for additional information on the potential effects on property values.** Private property that is acquired by the Authority for the project would be removed from the local property tax rolls. This would result in a net reduction of local property tax revenues available to school districts. However, this does not mean that the school districts 'per-pupil revenue would decrease. As described in the Public Policy Institute of California's *Funding California Schools – The Revenue Limit System*[4]: "Under [state] revenue limits each district has a base revenue limit, a dollar amount per pupil. A district's revenue limit entitlement is its base revenue limit multiplied by the number of students attending its schools. The number of students is measured by the district's average daily attendance (ADA). The revenue limit entitlement is funded by local property taxes and state aid. A percentage of the property tax revenue generated by real property located within a district is assigned to the district; state aid makes up the difference between a district's entitlement and its property tax revenue." (Public Policy Institute of California 2010). In addition, in some areas property tax revenues would be anticipated to increase, primarily in the station areas in the cities of Merced and Fresno as a result of the increased economic vitality that is expected in these station areas. See Section 3.18, Regional Growth, for information regarding economic vitality. For information on potential impacts to existing transportation corridors and overpasses as it relates to school district transportation services, please see S&S-1.

[4] New Reference: Public Policy Institute of California. 2010. *Funding California Schools – The Revenue Limit System*. Available at: http://www.ppic.org/content/pubs/report/R_310MWR.pdf. Sacramento, CA. March 2010.

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Responses-SOCIAL-6: Agricultural Economic – Farm Acquisitions**
Commenters were concerned with the potential impacts related to property acquisitions as well as the loss of access and the removal of equipment and irrigation that would negatively affect operations. Some comments addressed the difficult in reestablishing their farming operation because of the permitting process.	The issues are covered under MF-Response GENERAL-4: Impacts to agricultural lands and the agricultural economy**.**

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Response-SOCIAL-7: Environmental Justice/Outreach**
Commenters were concerned about the impacts to the environmental justice populations that were not addressed in the EIR/EIS and that there was no mitigation related to environmental justice. Commenters also noted that not enough outreach to environmental justice populations was conducted.	Executive Order (EO) 12898 requires all federal agencies to address, to the greatest extent practicable and permitted by law, the potentially disproportionately high and adverse human health and environmental impact of their programs, policies, and activities on minority and low-income populations. EIR/EIS Section 3.12.3 describes the methodology used to identify the communities and disadvantaged persons that would be affected by the construction and operation of the HST Project. As described in Section 3.12.5, which addresses EO 12898 and environmental justice, the HST Project is anticipated to result in disproportionately high and adverse impacts on communities of concern. The impacts are related to property acquisition and visual impacts. None of the other environmental elements would result in any adverse impacts that would disproportionately impact communities of concern.. Section 3.12.7 provides several mitigation measures to reduce impacts of the project on communities of concern, including: SO-MM#1 requiring implementation of a construction management plan to address community impacts, maintain access during construction, and maintain local transit; SO-MM#2 requiring a relocation mitigation plan to provide counseling and help in applying for assistance and addressing indirect social and psychological impacts; SO-MM#3 and SO-MM#4 implementing measures to reduce impacts associated with dividing and relocating existing communities, respectively; SO-MM#5 continuing outreach to environmental justice communities to obtain their input to refine the alternatives during design and to develop special recruitment, training, and job set-aside programs so that these communities can benefit from jobs created by the project; and SO-MM#6 requiring additional consideration of impacts on selected communities. In addition to these measures, additional measures are identified in other sections of the EIR/EIS (including Sections 3.2, Transportation, 3.3, Air Quality and Global Climate Change; and 3.4, Noise and Vibration) that would

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Response-SOCIAL-7: Environmental Justice/Outreach**
	minimize impacts to all populations, including communities of concern. In order to understand the potential impacts and develop the appropriate mitigation, there have been a number of opportunities for public involvement throughout the HST Project, and outreach to communities of concern will continue throughout the HST Project to ensure that communities of concern have the opportunity to comment on the project as described in SO-MM#5 in Section 3.12.7. Chapter 8, Public and Agency Involvement, includes detailed information on the numerous opportunities for participation available that have occurred starting with the scoping meetings held in 2009. Other opportunities include city council meetings, Technical Working Group, public information meetings, and opportunities to comment during the public hearings as part of the Draft EIR/EIS. Specific environmental justice outreach efforts include providing meeting notices to environmental justice interest groups, listing advertisements in Spanish-language newspapers, posting meeting notices (in English and Spanish) at community facilities that serve low-income and minority populations, providing a telephone number to call for information in Spanish, and providing Spanish interpreters at public hearings and meetings. In addition, interpreters for the Lao/Hmong community were at the public hearings, if required. All meeting materials provided contact information for those with special needs, allowing them to make necessary arrangements. Public meetings were typically from 3:00 PM to 7:00 PM or from 4:00 PM to 8:00 PM. People working more than one job and in-between work shifts would likely be able to attend during these 4-hour meeting windows. The Authority has also contacted groups with interest in environmental and economic social justice issues, including the Great Valley Center and Merced Area Agency on Aging, and Latino and Laotian civic and group leaders. In addition, there have been a number of meetings with organizations (i.e., Save Our Heritage, Merced Lao Family Community, Inc., and Merced County Farm Bureau) and businesses in the project area to discuss the project and the alternatives.

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Responses-SOCIAL-8: Loss of Property and Sales Tax Revenues**
Commenters were concerned over effect the loss of property and sales tax revenues would have on local governments.	Private property that is acquired by the Authority as part of the project would be removed from the local property tax rolls. Similarly, acquired property would no longer yield sales tax revenues. This will result in a reduction of local tax revenues available to cities, counties, and special districts. Property tax revenues are likely to decrease whether or not the residential property or business owner relocates within the same jurisdiction. This is because the project would result in a net decrease in the number of properties on the pertinent County's tax roll. The property tax is collected by the County Tax Assessor and distributed to the county, its cities, schools, and other special districts. Accordingly, any revenue reductions would affect cities, counties, and other special districts that rely on property taxes (the limited effect on schools is described in MF-Responses-SOCIAL-5: School District – Funding and Access). Property taxes are "general taxes" that accrue to the general fund of the pertinent city, county, or special district. As such,

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	**MF-Responses-SOCIAL-8: Loss of Property and Sales Tax Revenues**
	they can be used for any expenditure of the jurisdiction. There is no simple replacement for property taxes. For example, impact fees are limited to capital improvements, can only be collected once (as opposed to yearly property tax assessments), and cannot be used to fund operations and maintenance. Special assessments can be imposed only upon approval of the voters and are limited to financing only the special benefit received by each property being assessed. Special taxes are limited to financing some specific expenditure and are not available for general revenue purposes. Property owners displaced by governmental acquisition or eminent domain proceedings are granted property tax relief, allowing them to retain the assessed valuation of the property from which they were displaced (see Revenue and Taxation Code 68). Residential property taxes are limited by Proposition 13 (1978) to 1% of the property's assessed value at the time of purchase (subject to minor annual increases). For property owners buying a new property with their proceeds from acquisition or eminent domain, the adjusted base year value of the property that they acquire would be the lower of the fair market value of the property acquired or the value that is the sum of the following: (a) The adjusted base year value of the property from which the person was displaced. (b) The amount, if any, by which the full cash value of the property acquired exceeds 120% of the amount received by the person for the property from which the person was displaced. Thus, only in limited circumstances would the displaced property owners be subject to a larger property tax obligation than on their original property. The impact of property tax revenue reductions is estimated to range from 1.3% of the FY2009/2010 county general fund in Merced County, to 0.1% in Madera County, to 0.6% in Fresno County (see Section 3.12.5.3, Table 3.12-16). This impact was found to be moderate under NEPA; therefore, no mitigation is required. In most cases, the reduction in sales tax revenues would be temporary. Relocation efforts would largely ensure that affected businesses that are currently sales tax generators would continue in business, albeit in a different location, and continue to generate sales taxes. In some instances, the sales tax revenue loss would be permanent. Permanent losses would occur where a business decides not to re-establish itself, or where it re-establishes outside the original city or county. Sales tax revenues are assigned to the city or county in which the sales tax is generated. As a result, if a business relocates outside the jurisdiction in which it is currently located, the sales tax revenue would then go to the city or county to which the business has re-located. That city or county would see an increase in sales tax revenues from this change. During construction of the HST, construction-related purchases are expected to temporarily increase sales tax revenues in the area. In the Cities of Merced and Fresno, station area development is expected to increase economic vitality in the downtown areas. There, the sales and property tax revenue losses would be somewhat counterbalanced by long-term increases in property value related to new commercial, residential, and mixed-use development in the station areas, as well as long-term increases in sales tax revenues from new commercial growth in the station areas. These increases would be dependent upon the type and rate of development in the areas around the stations.

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	**MF-Response-LAND USE -1: Regional Growth/Land Use – Urban Sprawl**
Commenters were concerned about the potential for sprawl that would be induced with the HST Project resulting in impacts to cities in the project area. Commenters were also concerned about the potential for increased numbers of commuters and the potential for new induced development not consistent with land uses. There were also comments related to type of development in the station areas and the use of the land with the station areas.	These issues are covered in MF-Response GENERAL-3: HST and growth in the San Joaquin Valley – measures to realize densification benefits of HST – role of local governments/station area cities and counties in making it happen. There is no requirement to analyze multiple growth scenarios or provide a range of impacts from growth. The EIR/EIS provides a reasonable growth scenario based on the research and projections of a firm (Cambridge Systematics, Inc.) that specializes in such work. While neither the Authority nor local government entities can directly control future growth within the region or guarantee the absolute accuracy of growth projections, the HST project will indirectly change the real estate market by providing an economic driver for revitalization and new investment in areas near the stations.

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	**MF-Response-LAND USE-2: Land Use – Conversion/Consistency**
Commenters expressed concern that the area to be converted was larger than indicated. Commenters were also concerned about land use adjacent to the HST alignment and the potential for changes in the use. Other commenters addressed the conversion of agricultural lands due to conversion to a transportation related use and parcels being severed by the alignment.	The HST Project would convert only the amount of land required for a transportation related use for the alignment and other components of the HST System. The land use conversion would not extend beyond the construction footprint, which is generally no more than 100 feet in width where at-grade and 50 feet in width where elevated. Additional land would be required at overcrossings and for the HMF. The land use impacts related to conversion to a transportation related use do not extend beyond these boundaries. Refer to sections of the EIR/EIS, including Sections 3.2, Transportation; 3.3, Air Quality and Global Climate Change; 3.4, Noise and Vibration; 3.12, Socioeconomics, Communities, and Environment; and 3.14 Agricultural Lands for information on any impacts and mitigation beyond the HST corridor. The Authority does not regulate local land use. Section 3.13.5 and Appendix 3.13-A provide information on the various land use plans and how the goals and policies identified are consistent and have been updated with the latest information on the plans. The use of the land adjacent to the HST alignment is not expected to change except in the station areas where the station can act as an economic catalyst for TOD and in agricultural areas where agricultural uses would be displaced and parcel severance may remove from production some land that is currently in agricultural use. Refer to Section 3.13, Station Planning, Land Use, and Development, for complete information on TOD and for information on the policies and local regulations that are currently in place in the station areas. For areas outside the station area, remaining land or reduced parcel sizes would be returned to uses consistent with local land use plans at the discretion of the local cities and counties. Such uses would likely

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	**MF-Response-LAND USE-2: Land Use – Conversion/Consistency**
	be influenced by the amount of remaining land and the allowed uses under the current zoning for each jurisdiction. The HST Project is generally consistent with the planning objectives of the local jurisdictions. More detail on consistency with Land Use Plans is available in Section 3.13.5. The cities of Merced and Fresno are currently updating their land use plans to specifically address development in the proposed station areas. The project's impacts on agricultural lands as a result of conversion and parcel severance would be significant (see Section 3.14.5). Mitigation measures Ag-MM#1 (preserve farmland), Ag-MM#2 (consolidating remnant parcels), and SO-MM#8 (providing access to farmland) will reduce these impacts, but not below the level of significance.

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	**MF Response LAND USE-3 – Significance of Land Use Impacts**
The analysis is not specific enough regarding impacts to existing and planned land uses along the route.	For the HST Project, direct land use impacts would occur when the project permanently converts the existing land uses to a transportation related use and precludes future planned uses (as identified in the local general plan, specific plan, or zoning classification). This impact would reduce the area available within the jurisdictions for those uses. The analysts used quantitative analysis and GIS tools to determine direct impacts related to the conversion of land uses to a transportation-related use as a result of the required property acquisitions for the project. The HST alternative alignments generally require about 50 feet where elevated and 100 feet where at-grade; this is the area that would be permanently converted to a transportation related use. The station areas would require additional areas because of the station footprint and associated facilities. As described in Section 3.13.5, Station Planning, Land Use, and Development, the conversion to a transportation related use represents less than 0.05% of the total area in the three counties. Land uses for the counties and cities were generalized into the dominant land use categories (e.g., residential, commercial, and industrial) so that the land use could be presented consistently among the areas to the extent possible. The impact analysis looked at the zoning (future use) that would be converted in the various jurisdictions. In addition to the permanent conversion of land use, indirect impacts on land use could occur, negatively affecting the nearby existing and future land uses as a result of increases in noise, loss of access, and/or visual impacts. Those impacts were analyzed and disclosed in the respective EIR/EIS sections on Transportation, Noise and Vibration, and Aesthetics and Visual Resources. Growth inducing impacts were analyzed and disclosed in Section 3.18, Regional Growth. The analysts reviewed local plans and zoning to determine indirect impacts. For the land use analysis, under CEQA, a significant impact on land use and development occurs if the following occurs: • Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. • Cause a substantial change in pattern or intensity of land use incompatible with adjacent land uses. Because the HST Project is a state project, consistency with local plans and policies is not required by law. Nonetheless, in

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	**MF Response LAND USE-3 – Significance of Land Use Impacts**
	order to comply with the principles set out in Proposition 1A, the HST Project has been designed to minimize conflicts and to be compatible with future and planned use to the extent possible. To this intent, this analysis does include a review of the goals and policies of the local land use plans, as well as other plans, to identify conflicts that could result in potential environmental impacts. As described in Section 3.12.4, Socioeconomics, Communities, and Environmental Justice, the existing railways were the primary reason for growth in this region of California. Growth was focused around the railway stations. However, most of the railroad stations in the study area are no longer used for passenger service and the areas adjacent to the railways in the urban areas are now associated with industrial and commercial development. Existing and planned industrial and commercial uses are typically not as sensitive to changes in noise or visual quality; therefore, no significant impacts are expected for these uses. Where residences are directly affected, they will be acquired at fair market and relocation assistance will be provided to owners and residents pursuant to federal and state law. In the rural areas, the adjacent land uses are primarily agriculture uses, which would not be significantly affected by noise from the HST trains. Where noise impacts are identified for sensitive receptors, such as residential uses, noise mitigation is planned as part of the HST Project. The HST Project would not directly result in significant changes in the pattern or intensity of land use (although it will indirectly change the land use market near stations by providing an economic driver for revitalization of nearby areas), nor is it incompatible with the adjacent land uses. Land directly impacted by the HST Project will be acquired and just compensation provided. Refer to Section 3.12.6 and Appendix 3.12-A for information on the acquisition and compensation process. The HST Project also includes mitigation measures that will reduce impacts on existing uses and future uses related to access, noise, and visual impacts as well as impacts on agriculture lands. These measures are presented in the respective EIR/EIS sections, including Transportation, Noise and Vibration, Agriculture, and Aesthetics and Visual Resources. Regarding future developments outside of the HST footprint, the HST Project would not mitigate for these uses. Understandably, new development influences the context for future development on adjacent properties. As such, the HST may add some limitations to adjacent land uses, such as changes in noise, but this would result in affecting site development, not changing the existing land use designation or future uses. Refer to Section 3.4.7, Noise and Vibration, under N&V-MM-3: Implement Proposed California High-Speed Train Project Noise and Vibration Mitigation Guidelines for information on the policies regarding noise mitigation. Where the HST alignments are in rural areas, access would be maintained to the adjacent properties through overpasses and other grade-separated points. In other areas, where land is zoned for industrial purposes such as areas within the Sphere of Influence for the City of Madera, the HST would preclude the addition of an at-grade rail spur on the HST side of the rail line. However, other access points would not be affected and these areas can still be serviced by other transportation modes. Therefore, the adjacent future uses would not be indirectly affected by the HST and no significant impacts on land use would be anticipated. Additionally, in areas where the alignment is at-grade, the HST would not preclude the extension of utility services (i.e., water or sewer) which would need to pass perpendicular to and under the HST alignment; and in many locations the existing transportation access is maintained through provision of overpasses and it would not preclude future overpasses as necessary. Because services and access would not be precluded, no significant impacts would be anticipated. Refer to Appendix 3.13-B, Land Use and Communities, for information including existing land use conditions for the communities in the study area adjacent to the HST alternatives. Appendix 3.13-B provides information on the types of land

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	**MF Response LAND USE-3 – Significance of Land Use Impacts**
	uses that would be directly affected by the HST footprint in the various communities and why no significant impacts are anticipated. Appendix 3.13-B also provides information on the potential impacts, if any, to the adjacent land uses. Overall, the adjacent land uses are not anticipated to change as a result of the HST Project. The HST alternatives add incrementally to the dedicated transportation land use corridors (i.e., SR 99, UPRR and BNSF corridors) by adding about 50 feet for the elevated portions of the alignment and 100 feet for the at-grade portions. In the rural areas, the alignments may not be adjacent to the existing transportation corridors and conversion to a transportation related use would not add incrementally to an existing transportation corridor. In these areas, the existing and future land uses are primarily related to agriculture uses and conversion of existing uses to transportation-related uses would not preclude the agricultural use of land adjacent to the right-of-way. The approximate right-of-way widths are about 50 feet for elevated and 100 feet for at-grade and this direct land use conversion in agriculture areas does not signify a significant impact within the regional context of Merced, Madera, and Fresno counties. Access across the HST right-of-way will be provided approximately every 2 miles and the Authority will work with the local jurisdictions to provide access as needed.

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	**MF Response LAND USE–4 – Effects on Future Land Use**
Commenters are concerned about the effects of the HST Project on future land use plans.	The CEQA evaluation for the effects on future land use and the change in land use is based upon the existing conditions only. Where the HST would add incrementally to an existing transportation corridor (such as adjacent to the BNSF, UPRR railroads, and the SR 99 corridor), the HST would not preclude future development. Noise levels are already high in these areas, and the HST would contribute to this situation; however, mitigation has been identified to address noise near sensitive land uses, such as residential areas. Furthermore, noise would not change the land use designation. Except where land is being acquired, the HST Project would not result in substantial changes in the pattern or intensity of land use, nor, as mitigated, would it be incompatible with the adjacent land uses or preclude the ability to develop based on the future uses. Understandably, any new development influences the range of development on adjacent property. As such, the HST may add some limitations (i.e., noise, utility provision, accessibility, visual access) to adjacent land uses, but this would result in affecting how the site would be developed, but would not preclude the development from moving forward. Planned development would have a new context in which to adapt their developments if constructing nearby the HST Project, but this would not preclude use of the land. Future development may need to include noise walls, just as they might consider plantings and walls to divide adjacent areas from agriculture uses to address equipment noise and dust. The HST mitigation measures for noise impacts only address existing buildings and not planned future developments; refer to Section 3.4.7, Noise and Vibration, under N&V-MM-3: Implement Proposed California High-Speed Train Project Noise and Vibration Mitigation Guidelines. Utilities required to service the future land uses would not be precluded from crossing under or parallel and outside the HST right-of-way. Transportation access would also be maintained under the elevated HST profile or with overpasses where the alignments are at-grade. Likewise, the development of new overpasses to provide additional access is also not precluded. The HST may preclude installation of a freight rail spur in some locations; however, the HST has

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	**MF Response LAND USE–4 – Effects on Future Land Use**
	preserved the majority of vehicle access points and therefore such areas could still be accessed by other transportation means and the overall use could be maintained. As described in Section 3.16, Visual and Aesthetic Resources, elevated guideways can result in substantial visual impacts; however, this would not change land use designations and future station development would likely result in aesthetic improvements in the station areas. Outside of the station areas, the elevated guideway could provide some visual barriers to the adjacent land uses. This may affect the context for freeway related land uses. Elevated HST guideway and retained fill areas can be as high as 50 feet above the existing surfaces. In general, because of its open nature, the elevated guideway would not block views, but in areas where the adjacent uses, existing and future, are related to commercial uses, especially highway commercial, the columns and elevated guideway could block views of some signs. However, this would affect the sign height and placement, but would not preclude signs altogether. In addition, often freeway signs are posted well in advance of highway commercial uses, so the flexibility and visibility of sign placement are managed strategically to attract drivers to use a freeway exit. For additional specific land use context, refer to Appendix 3.13-B, Land Use and Communities, for information about existing land use conditions for the communities in the study area adjacent to the HST alternatives. The appendix provides information on what types of land uses would be directly affected by the HST footprint in the various communities and provides information on why no significant impacts on the future uses are anticipated.

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-1: Farmland Impacts – General**
Several commented on how important farmland is for the local area and the nation as a whole and how the project would further impact these valuable resources as well as associated jobs.	**MF-Response-AGRICULTURE-1: Farmland Impacts – General** Over the past 2 years of project planning and analysis, the Authority and FRA have become more informed about the important role of agriculture in the local and regional economy, and how farming is part of the social fabric of the rural San Joaquin Valley. The Authority and FRA, of course, also recognize the importance of food production to the economy. The Authority and FRA have not downplayed the importance of farmland losses, and have determined that loss of farmland (ranging from 1,285 to 1,433 acres under the Preferred Alternative) is a significant impact that cannot be avoided or fully mitigated. It is important to note that the Authority and FRA are including Farmland of Local Importance in the definition of important farmlands – usually important farmlands include only Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. Including Farmland of Local Importance adds about 10 percent (depending on the alternative) to the affected farmland acreage. Mitigation Measure Ag-MM#1 requires that the Authority (in partnership with the California Department of Conservation) acquire conservation easements to protect an equivalent amount of farmland from future conversion. The Authority anticipates working with local, regional, and state organizations and agencies to identify suitable land in the region and willing landowners to establish agricultural conservation easements on an acre-for-acre basis, ensuring permanent protection and long-term stewardship for working agricultural lands. Even with this commitment, the Authority and FRA recognize that the impacts cannot be mitigated to a less-than-significant level. The loss of up to 1,433 acres of farmland in Merced and Madera counties needs to be considered in the context of the existing amount of farmland within these counties (589,600 acres and 362,700 acres, respectively; see Draft EIR/EIS Table 3.14-2). Both Merced and Madera counties are experiencing substantial farmland losses. Between 2006 and 2008, the Department of Conservation estimates that 889 acres of farmland Merced County and Madera County were converted to urban use. The HST Project may help to reverse farmland losses from urban development (see MF-Response-GENERAL-3), and the Authority could work with the municipalities to focus farmland conservation easement locations to areas along established urban growth boundaries. Mitigation Measure Ag-MM#1 has been updated to discuss acquisition of easements in areas used as “greenbelts and urban separators.” With regard to comments recommending an HST alignment along Interstate 5, see MF-Response-GENERAL-2.

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-2: Severance – General Response including Roadway Impacts**
Many commenters discussed the disruptive effects of the new alignment of carefully developed (e.g., assembled over time) farm parcels. This was a general comment, but also was followed by a statement about how farmers would need to drive much greater distances to access their fields on both sides of the alignment. For this reason, the general response is accompanied here by a response regarding the trip inconvenience.	The HST right-of-way would sever parcels. The Authority and FRA have made great efforts to minimize severance through alignment selection and careful project design. Engineering constraints, primarily related to maintaining high-speed curves and the location of the wye connections in this HST Project area, do require deviation from transportation corridors in several areas along the alignment. In addition, alternatives using the BNSF corridor must deviate from that corridor to connect to the preferred station locations, which are along the UPRR corridor in Downtown Merced and Downtown Fresno. These factors all contribute to parcel severance, and in addition support a reduction in community impacts (primarily the City of Madera and the City of Chowchilla). The Authority will consider the effects of severance during the right-of-way acquisition process. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Act (42 U.S.C. Ch. 61). The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see Chapter 12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and MF-Response-SOCIAL-1. The project must also adhere California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available at the Authority's website: http://www.cahighspeedrail.ca.gov/rightofway.aspx. The Authority is committed to working with agricultural property owners to resolve or mitigate, if possible, partial acquisitions that result in the division of farmlands with large, farmable lots on either side of the HST alignment. See Exhibit Ag 2.1 for examples of how severance could affect farm operations. Efforts to minimize these impacts include frequent public road crossings in the project design. For example, most of the new public road overcrossings would be located on intervals of 2 miles or less, with many crossings located on intervals of 1 mile or less. Areas with longer intervals between road crossings would generally occur in areas with no current crossings (i.e., no change from existing conditions). Additional access across the HST right-of-way may be preserved by creation of private overcrossings or undercrossings at reasonable intervals (see mitigation measure SO-MM#8). This may include the construction of grade-separated equipment crossings to allow farm equipment continued access to bisected land holdings. However, if the cost of such a crossing would exceed the value of the affected remainder lands, the Authority would offer to acquire the affected lands or otherwise compensate the farm owner for the loss in value rather than provide a crossing.

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-2: Severance – General Response including Roadway Impacts**

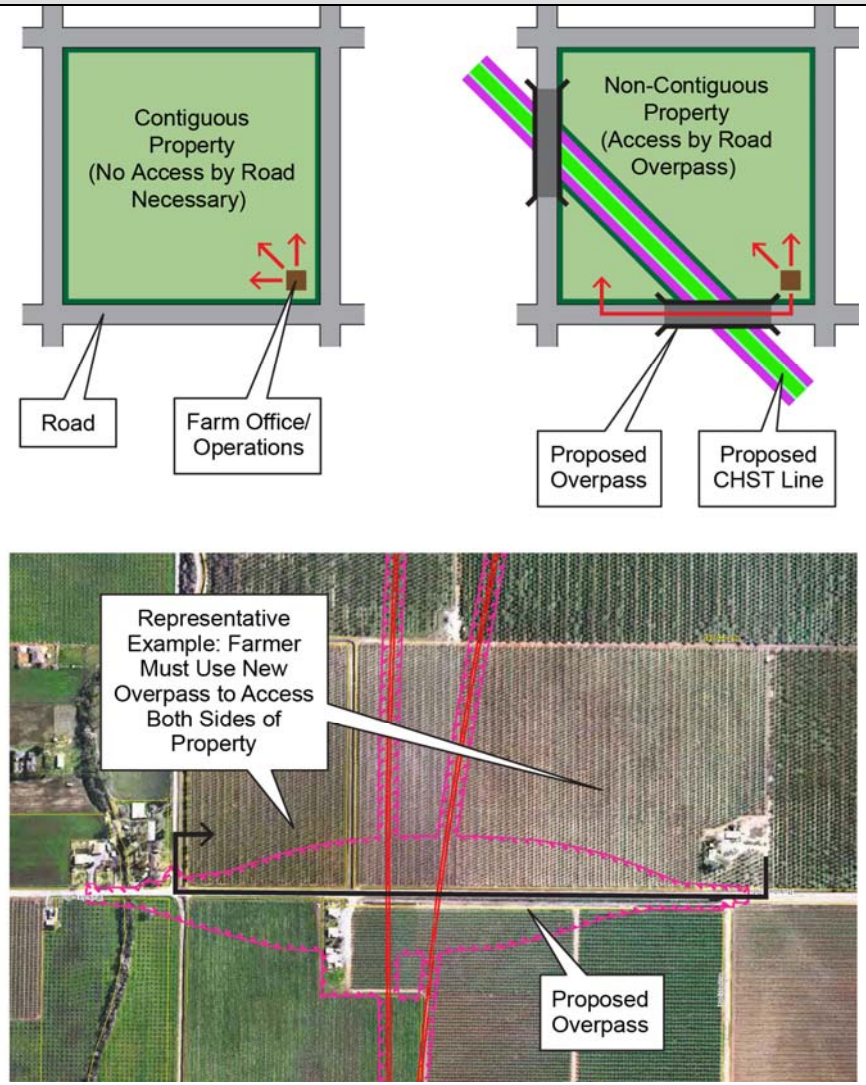
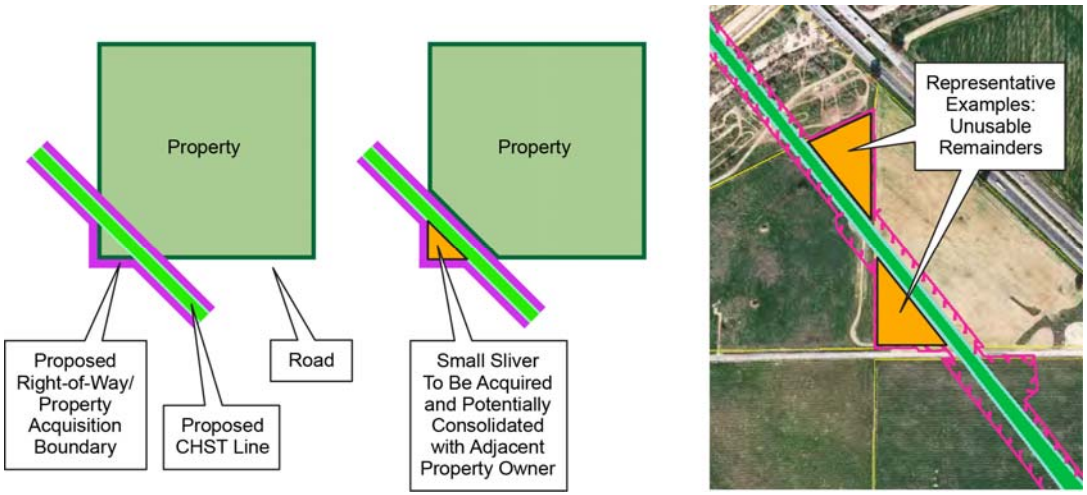


Exhibit Ag 2.1: Road Severance

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-3: Severance – Unusable Remainders**
Commenters mentioned that severance would lead to additional impacts that were not reported in the EIR/EIS. These comments asked for an explanation of the analysis.	The EIR/EIS discusses a subset of severed parcels called *unusable remainders* or *non-economic remainders*. These parcels were included in the project acquisition area, and their acreage counted as part of the direct impact area (the construction *footprint*). The rationale is that there would be no apparent use of these remainders, and so they should be acquired by the Authority even though they would not be needed for any project use (HST alignments, road modifications, etc.). It is possible that these remainders may have some use during construction (e.g., material storage), and would be available for use by the construction contractors. After construction, it is possible that these remainders could be consolidated with other nearby parcels – that is the intent of Ag-MM#2. The proposed consolidation measure is a realistic commitment for mitigating severance impacts, and is consistent with programs used for other linear transportation facilities (e.g., Caltrans projects). Severed parcels with unusable remainders were identified following completion of the design effort, which confirmed the construction footprint including the HST alignments, road modifications, and other project features. Analysts (land use planners, real estate specialists, and GIS operators) conducted a parcel-by-parcel review, looking for remainders with no apparent connection to other farmland. Examples of remainder parcels determined to be unusable are as follows: • Sliver remainders with adjacent roads or rail. • Corner remainders with adjacent roads or rail (see Exhibit Ag 3.1). Because each parcel (and each project impact) is unique, no set criteria were used in this analysis.  Exhibit Ag 3.1: Minor Severance with Unusable Remainders Many severed parcels contain small or irregularly shaped remainders. These parcels were not added to the acquisition area because analysts determined that some use would likely be possible. For example, small parcels could be consolidated with

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-2: Severance – General Response including Roadway Impacts**
	adjacent landowners and larger, irregularly shaped parcels could still be farmed (although with some loss of efficiency). It is important to note that the intent of this analysis was to identify farmland that could be lost to production. Impacts associated with farm efficiency or property transactions (e.g., consolidation) are social and economic effects that do not mean that farmland would be lost. Also see the master response regarding severance (MF-Response-AGRICULTURE-2). It is also important to note that the analysis of parcel severance (including unusable remainders) was conducted for the purpose of describing the nature and extent of the impact to satisfy CEQA and NEPA, focusing on the topics of farmland conversion and social/economic effects. It is not a sufficient basis for the real estate transactions that would occur during the right-of-way acquisition process. Parcel-specific analysis will take place during the appraisal process that will occur before property acquisition, consistent with the Uniform Relocation Act. The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see Chapter 12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and MF-Response-SOCIAL-1. The project must also adhere California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available at the Authority's website: http://www.cahighspeedrail.ca.gov/rightofway.aspx. Following the completion of acquisition and construction, the final tally of unusable remainders would likely be somewhat different than estimated for the EIR/EIS. However, because of the effort undertaken for the EIR/EIS, the final tally would likely be substantially consistent with the initial estimates.

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-4: Severance – Farm Infrastructure**
Commenters discussed disruption of on-farm infrastructure, primarily concerned about toward water infrastructure (e.g., wells, irrigation systems). Comments about major water district conveyance systems are addressed in the WATER master responses.	Construction of the HST could result in disruption to existing infrastructure on agricultural lands. These features could include buildings and structures, pumps and wells, reservoirs/tail water ponds, irrigation systems (including distribution lines, canals, and gravity flow systems), power supplies, and access. See Exhibit 4.1 for examples of how severance could affect farm infrastructure. Farm owners would be compensated consistent with federal and state severance damage and relocation assistance laws to provide similar utility as they had before the project for the remaining agricultural operation. Specific opportunities to restore utility will be analyzed on a case-by-case basis in the valuation process.

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-4: Severance – Farm Infrastructure**

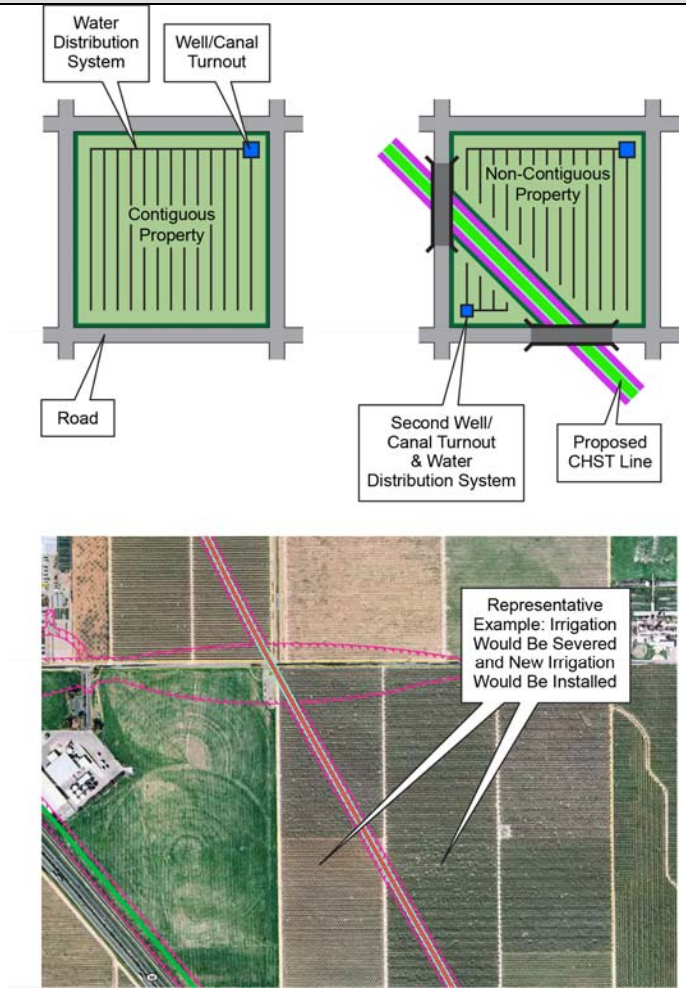


Exhibit 4.1: Irrigation Severance

Compensation for loss of infrastructure (irrigation facilities, wells, etc.) would be paid and the farm owner would have time to restore infrastructure before construction begins **and before the start of the growing season.** However, in those cases where construction would need to occur before infrastructure can be restored **or prior to the growing season**, the farm

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-4: Severance – Farm Infrastructure**
	owner would be compensated for the loss of agricultural production resulting from the disruption. The Authority would compensate farm owners for the value of seasonal crops that cannot be harvested due to the construction schedule. A property owner may also claim a loss of business goodwill under Code of Civil Procedure 1263.510 et seq. For more information on how the acquisition process works, see *Your Property, Your High-Speed Rail Project* pamphlet on the California High Speed Rail Authority's website at http://www.cahighspeedrail.ca.gov/right_of_way.aspx.

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-5: Pesticide Spraying/Dust/Pollination**
Many commenters asked about the related topics of additional losses due to the vortex effect from passing trains. This was mostly in regard to pesticide spraying, but also included comments about bees (pollination interference) and dust. Pesticide spraying comments also addressed interference with crop dusting patterns.	The Authority acknowledges that the HST Project may have indirect effects on adjacent farmland, but these effects would be less-than-significant with regard to farmland loss. Indirect effects from wind-induced effects (e.g., pesticide drift, dust, pollination impacts) and loss of access for aerial pesticide application are discussed in the EIR/EIS (see Section 3.14.5.3), concluding that these effects would not result in additional conversion of farmland to non-farm use. This is not to say that there would be no consequences, just that there would be no farmland conversion as a result. With regard to wind-induced effects, the Authority believes that potential impacts would be mitigated by distance, with the trains moving on guideways located approximately 30 feet from the fenceline, and likely some additional buffer (e.g., turning rows) between the fenceline and the active growing area. Studies supporting the finding of mitigation by distance were cited in the Draft EIR/EIS and in a new Technical Memorandum prepared for the Final EIR/EIS (see Appendix 3.3-A, Potential Impact from Induced Winds). Although the analyses do not prove zero effect, they do support a conclusion that effects appear to be negligible and would not result in additional farmland conversion. Also see MF-Response-AQ-1, which discusses dust impacts in more detail. There is some potential for limitations on pesticide spraying, both from wind-induced effects (discussed above and applicable to both aerial application and ground spraying) and for pilot safety (e.g., new structures). For the reasons discussed in the EIR/EIS, the Authority does not expect that these limitations would result in additional farmland conversion. Wind induced by passing trains (i.e., the *vortex* effect described by commenters) could result in a cessation of pesticide application either directly (i.e., by order of the local Agricultural Commission) or by a chilling effect of applicators concerned about pesticide drift. For the reasons described above, however, the Authority believes that wind-induced effects would be mitigated by distance. As indicated by e-mail correspondence (December 22, 2010) with the California Department of Pesticide Regulation, no new regulations are anticipated, but enforcement authority resides with the local Agricultural Commissioners. Local requirements could change in response to the HST Project, but Agricultural Commissioners in the area have not indicated that any new regulations or enforcement policies would be adopted in response to the HST Project. The Authority does not expect that, in the worst case, additional farmland would be converted. Rather, in the worst case (i.e., distance does not attenuate wind), it would be more difficult (e.g., expensive) or impossible for farmers to conduct normal pesticide spraying operations. Practices would need to change, and some economic losses could occur (e.g., more expensive pest control measures, reduced productivity). Similarly, pilot safety requirements could result in different or constrained aerial application patterns, and some adjustments may be required that could lead to economic losses. However, additional farmland conversion would not occur.

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-6: Confined Animal Facilities**
Concerns about impact on confined animal facilities included the integrated nature of the operations, challenges with permits, and other potential indirect effects from noise and EMF.	The EIR/EIS for the Merced to Fresno Section recognizes that the loss of confined animal facilities is a concern in this region that produces a substantial part of the nation's food and depends upon agriculture for its economic well-being. The Authority will compensate farmers for the loss of their confined animal facilities. It would be left to the individual farmer to decide how they would invest that compensation. Where the project would result in the closure of a facility, there is no certainty that the affected facility would re-open. Dairies are the most common type of confined animal facility in the project area. Fresno, Madera, and Merced counties support a large number of dairies. According to the California Department of Food and Agriculture, in 2010, there were 106 dairies in Fresno County (with 1,118 cows/dairy), 56 dairies in Madera County (with 1,329 cows/dairy), and 258 dairies in Merced County (with 1,040 cows/dairy). The number of dairies operating in these counties varies from year to year. Between 2009 and 2010, Fresno County gained 4 dairies, Madera County gained 1 dairy, and Merced County lost 10 dairies. The dairy industry has been consolidating in recent years. According to the California Department of Food and Agriculture, in 2005, Fresno County had 118 dairies, Madera County had 57 dairies, and Merced County had 327 dairies. The project may affect a limited number of dairies by displacing essential facilities, land necessary for wastewater disposal, or both. Dairy permitting (i.e., obtaining a CUP pursuant to local zoning and a wastewater disposal permit from the Regional Water Quality Control Board) is time-consuming and uncertain. Despite compensation for losses, there are no guarantees that the affected dairy would be able to re-open. Although in Fresno and Merced counties there has been a decline in the number of dairies since 2005, the total number of cows in dairies in each county actually increased over that period. The total production of Grade A milk overall in the three counties has increased during that period as well (although increases in Fresno and Madera counties made up for a similar reduction in Merced County). Although the potential loss of a few dairies is regrettable on an individual level, that loss is not substantial from the point of view of total dairy production in this portion of the San Joaquin Valley. The Authority has committed to maintain a “permit bureau” to help businesses (including confined animal operations) overcome the regulatory disruptions caused by the project. With regard to farm animal noise impacts, the FRA guidance manual High-Speed Ground Transportation Noise and Vibration Impact Assessment (see Chapter 3, Table 3-3) has established a threshold for high-speed train noise effects on livestock of 100 dBA Sound Exposure Level (SEL) (the total A-weighted sound experienced by a receiver during a noise event, normalized to a 1-second interval). An animal would need to be within 100 feet of an at-grade guideway to experience an SEL of 100 dBA. At locations adjoining an elevated guideway, an SEL of 100 dBA would not occur beyond the edge of the elevated structure. The EIR/EIS analysis **concludes** that remaining livestock holding areas (after acquisition of some existing holding areas) would not be located within 100 feet of either side of the track centerline (50 feet from the edge of the right-of-way), and, therefore, no HST noise effects on confined animals would occur (refer to Section 3.14.5.3 and Appendix 3.14-B, Impacts on Confined Animal Agriculture]). Farm animal noise impacts are also addressed in MF-Response-NOISE-1. The Spanish and Belgian systems, with decades of service, have reported no problems or complaints from agriculture interests over noise or vibrations. In their experience, sound peaks produced by passing high-speed trains are quieter than the noise produced by highway vehicles and conventional diesel trains. Some comments indicated concern about the effects of stray currents on livestock (e.g., dairy cows). A study by Amstutz and Miller (1980) appears to be the most appropriate reference for the effects of stray currents and electromagnetic fields on livestock. That study of 11 livestock farms concluded that livestock health, behavior, and performance were not affected by

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-6: Confined Animal Facilities**
	electrical and magnetic fields created by a very large (765 kV) overhead transmission line. The HST system would operate on a much smaller 2x25 kV overhead contact system. Therefore, the Authority and FRA have determined that this is a negligible impact under NEPA and a less-than-significant impact under CEQA. Several commenters addressed poultry facilities affected by the alignment. At the time the Draft EIR/EIS was prepared, the Authority was not aware of any concentrated poultry feeding operations that would be affected by the project. The nearest poultry facility (located on Mariposa Way) was approximately 400 feet south of the proposed alignment. However, during preparation of the Final EIR/EIS, it was discovered that new poultry operations had been constructed at Valley Calf located along the Ave 24 Wye. The analysis has been updated in Section 3.14.5.3 to address impacts to the Valley Calf poultry facilities (this portion of the Valley Calf facilities would be entirely removed with any alternative using the Ave 24 Wye). In addition, road modifications may require very small property acquisitions at two parcels containing poultry facilities, but the poultry facilities themselves would not be affected.

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-7: Williamson Act**
In relation to qualifying for the Williamson Act, some commenters inquired about how many severed remnants would no longer meet the minimum parcel size requirements to remain under contract.	The EIR/EIS describes impacts to lands covered by the California Land Conservation Act of 1965 (Williamson Act, including Farmland Security Zones). Impact acreage and parcel counts are summarized in Draft EIR/EIS Table 3.14-6. Several commenters stated that additional impacts could occur because of severance; specifically, some parcel remainders would no longer meet minimum size requirements for a Williamson Act contract. The Authority and FRA acknowledge this potential impact in the EIR/EIS. As stated in Section 3.14.5.3: "[A] partial acquisition of land protected by Williamson Act or Farmland Security Zone contracts could constrain the potential continued use of that land for farming. This is because (1) the remaining land acreage might be too small to meet the minimum requirements under these programs and (2) the resulting increase in property taxes on the land might affect the financial feasibility of continued farming." Although the EIR/EIS acknowledges these impact mechanisms, it concludes that there would be no **discernible** farmland conversion over and above the direct project impacts (up to 1,433 acres under the Preferred Alternative). Many agricultural lands in the project area do not have Williamson Act or Farmland Security Zone contracts, and many that do are in the non-renewal process. There are many factors that influence a property owner's decision to convert property from agriculture to developed use, not the least of which is basic land use constraint(s) imposed by local zoning requirements. Loss of a Williamson Act contract may influence a land development decision, but any attempt to quantify the project's contribution to additional farmland conversion would be speculative due to the many factors involved. The Draft EIR/EIS did not attempt to count the number of remainder parcels that would no longer meet minimum size requirements. Because of the interest in this question from public comments, however, some additional analysis was performed. The additional analysis was based on a minimum 10-acre size requirement for remainder parcels to maintain their status under the Williamson Act. This is consistent with Merced County's *Rules of Procedure to Implement the California Land Conservation Act of 1965*, and is generally consistent with Madera County standards (with require larger parcel sizes for areas

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-7: Williamson Act**
	not designated as Prime Farmland). For the Preferred Alternative, approximately 8 to 10 parcels would be too small to maintain their status under the Williamson Act. This is within the range of impacts from a low of 6 parcels (UPRR/SR 99 Alternative with Ave 24 Wye and East Chowchilla Design Option) to 13 parcels (BNSF Alternative with Ave 21 Wye and any of the Mission Ave or Mariposa Way Design Options).

Comment Summary	Response
AGRICULTURAL LANDS	**MF-Response-AGRICULTURE-8: Farmland Protection Policy Act**
Several commenters inquired about the Farmland Protection Policy Act scores.	Additional information about the Farmland Protection Policy Act has been added to the Final EIR/EIS in Section 3.14.2.1, including scores from NRCS Form CPA-106 for each of the alternatives. In addition, a new appendix has been added (Appendix 3.14-A, Results and Findings of Land Evaluation and Site Assessment Pursuant to the FPPA containing land evaluation score sheets prepared by the NRCS State Resources Inventory Coordinator and site assessment scores prepared by project staff.

Comment Summary	Response
PARKS, RECREATION, AND OPEN SPACE	
There are no Master Comment Responses for Parks/Section 4(f).	

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	**MF-Response-VISUAL-1: Blocked Views**
Most commenters expressed that the visual analysis did not adequately or accurately address the impacts of blocked scenic views, particularly of the Sierra Nevada Mountains. Some also questioned the impact of blocked views to property values and to businesses.	The Authority recognizes that the view of the San Joaquin Valley's scenery could be impaired by portions of the proposed HST. However, the degree to which views of a visual resource (e.g., a scenic mountain range) are affected by a proposed project is highly dependent upon a number of factors. One factor is the duration of view. For example, when a viewer is stationary, such as in a residence, objects blocking a view can affect the experience of the view to a greater extent than when a viewer is traveling and seeing the view for a short duration of time. Other factors include the location, number, and sensitivity of viewers and any existing obstructions relative to the visual resource being viewed. These factors and the location of the HST relative to them were considered when determining the potential impacts of the HST to aesthetics and visual quality. In addition, views that would be impaired in areas that have high visual quality ratings would be considered to be more impacted than in situations where the visual quality ratings are low. This consideration was used when determining the degree to which the HST might degrade a view. EIR/EIS Section 3.16.4, Affected Environment, includes an analysis of the aesthetics and visual quality of the existing conditions, and in Section 3.16.5, Environmental Consequences, changes that would be incurred by the project. There are areas where the visual quality would be lowered and various mitigation measures would be considered to address the potential impacts of the HST. Opportunities are rare for reducing the area of a visual resource that would be blocked by HST structures in a view. This is because the HST requires guideways that are within narrow ranges of vertical and horizontal alignments, and opportunities for “fine-tuning” their design to reduce blocked views would be limited. Once the centerline and grade of the HST are established, it is very difficult to change them. Reducing the sizes of structures associated with guideways is also problematic. The size of the structures that support elevated guideways, as well as the sizes of the bases that support at-grade guideways, are dictated by the loads these facilities need to support; thus, they are not subject to much, if any, size change. Other facilities such as HST stations, parking structures, HMFs, and traction power distribution stations can also block views. Those other facilities would be designed to be aesthetically and architecturally compatible with their surrounding areas. During the design, areas where views may be blocked will be evaluated and mitigation measures implemented for visual impacts. For example, in areas where support structures might block or impinge on views, the structures will be designed with decorative or ornamental features such as reveals or designs in the concrete to reduce the negative impacts of view obstruction. Vegetative screening of the HST components can also help mitigate for views that are lost, and “soften” views of facilities. Mitigation measures for adverse impacts to aesthetics and visual resources are presented in the EIS/EIR in Section 3.16.6, Mitigation Measures, and in Table 3.16-2, Characteristics of Typical HST Components. Property owners who believe they have suffered a loss of property value as a result of the project may file a claim with the State of California’s Government Claims Board. More information may be obtained online at www.vcgcb.ca.gov/claims/.

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	**MF-Response-VISUAL-2: Community Character**
One commenter did not understand that existing low visual quality did not mean there could be no significant or substantial visual impact. Others expressed that the HST would be a scar on the countryside and the overcrossings are behemoths that in no way could not have significant and substantial impacts.	The Authority recognizes that the character of a community, whether urban or rural, is partially determined by its aesthetic and visual qualities. Community character is directly influenced by the presence and appearance of existing physical features. The analysis of aesthetic and visual quality impacts cannot consider every possible location or view; rather, key viewpoints were selected as representative of existing conditions and were evaluated with the addition of the HST to the view. The evaluation of aesthetics and visual resources does not specifically describe community character, but instead describes how consistent the HST Project would be with the landscape character of the various landscape units, and how the project would change (or not change) visual quality. Both landscape character and visual quality contribute to community character. The landscape character of the various landscape units was described based upon the existence of physical features that influence them. For example, areas that contain crops, orchards, farm houses, and associated structures would be described as having a rural or agricultural landscape character. Areas that contain features such as tall buildings, a street grid, and parks might be described as having an urban landscape character. HST stations and parking structures would be designed or assigned criteria to match surrounding architecture types to help them aesthetically fit with their surroundings. In general, the HST would be consistent with the landscape where located in proximity to other large infrastructure features. Mitigation measures will be applied to improve the visual compatibility of the HST within its landscape setting. For example, the visual mitigation of the HST components can incorporate art, colors, textures, and vegetation consistent with the existing landscape within the community. The Authority will coordinate and collaborate with local jurisdictions to determine the appropriate mitigation measures consistent with local design guidelines. Mitigation measures for adverse impacts to aesthetics and visual resources are presented in the EIR/EIS in Section 3.16.6, Mitigation Measures, and in Table 3.16-2, Characteristics of Typical HST Components. Section 3.16.4, Affected Environment, of the EIR/EIS describes the landscape units, key viewpoints representative of conditions in the landscape unit, and existing visual quality. Section 3.16.5, Environmental Consequences, provides a summary of visual quality changes and impacts at key viewpoints.

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	**MF-Response-VISUAL-3: Mitigate or Minimize**
Most commenters expressed that the impacts of the HST would not be mitigated to an acceptable level, especially tall structures such as overcrossings. One expressed that mitigation measures were not adequately identified and could not be deferred. One commenter noted that Caltrans encourages landscaping in the right-of-way.	The design of the HST presents several opportunities for the Authority to incorporate visual elements and structural modifications that can minimize or mitigate adverse impacts by the HST to aesthetics and visual quality. There is a menu of mitigation measures to address visual impacts to the built and natural environment. The mitigation measures attempt to provide visual compatibility of the project within its landscape setting. The two general tactics of mitigation are to aesthetically block or blend-in the HST-related components that are producing the impacts to the landscape. This can be done with screening (such as through the use of fencing, walls, earthen berms, and vegetation) or incorporating and reflecting features from the nearby landscape (or urban setting) into the design of the HST-related components. Examples include repeating nearby paving patterns, building styles, material colors, vegetation types, etc. The time it would take to establish these measures and the effort it would require to maintain them are two criteria that will be considered in selecting mitigation measures. For example, mitigation would be achieved more quickly when fast-growing species of vegetation are selected and irrigation is applied; mitigation would be maintained for a longer period when the durability and ease of cleaning are factored into construction materials. The selection of native vegetation and use of surface coatings that are resistant to weather and graffiti are specific examples of addressing these criteria. Some areas where the HST would be located also could have beneficial impacts by screening unattractive views, such as blighted areas. Art, lighting, and architectural materials also may be used to lessen the effects of project components, including the possibility of graffiti. Shielding and altering light direction will be used where appropriate to avoid and minimize potential impacts from lighting and shadows during construction and operation of the HST system, while providing adequate lighting for safety and security. The Authority will work with local jurisdictions to develop appropriate visual/aesthetic treatments. These treatments will need to reflect reasonable costs and meet engineering design parameters. Appropriate treatments will vary by location, but will be compatible with the context of areas adjacent to them. The mitigation measures will be part of the final design process and specified to the HST design-build contractor . Section 3.16.6, Mitigation Measures, in the EIR/EIS describes various methods for minimizing and mitigating the impacts of constructing and operating the HST. The EIR/EIS does not defer mitigation, but rather provides an extensive set of mitigation measures and guidelines that will be further reviewed, refined, and applied as design progresses and permits are obtained. The Authority's *Urban Design Guidelines for the California High Speed Train Project* briefly discusses the principles of context-sensitive solutions to guide the design of stations. This approach is equally applicable to elevated guideways and will be employed to mitigate visual impacts through context-sensitive design. *Aesthetic Guidelines for Non-Station Structures* (TM 200-06) will also guide design of the HST components. The Authority will adhere to local jurisdiction construction requirements (if applicable) to minimize construction-related visual/aesthetic disruption.

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	**MF-Response-VISUAL-4: Overpasses and Elevated Guideways**
Most commenters did not like overpasses as opposed to underpasses.	The HST Project would require construction of underpasses, overpasses, trenches below-grade, and elevated guideways on concrete piers or retained fill to provide a grade separation for at-grade roads and railroad tracks. Changes to the natural grade to accommodate the HST, whether by added fill or a cut trench, can break the continuity of the landscape and reduce visual quality. Factors that were considered in determining the potential level of adverse impact from HST grade-separation components were the location, number, and sensitivity of viewers. If the HST would not be readily seen by viewers, and/or the grade separation would be a consistent landscape element in an existing transportation corridor, the potential adverse impacts to aesthetics and visual quality would be reduced. The introduction of an HST structural component to provide a grade-separation would not necessarily result in a significant or substantial adverse impact to aesthetics and visual quality. There are several modifications to the landscape, and choices for structural components, that to an extent may minimize or mitigate the adverse impacts. Section 3.16.6, Mitigation Measures, in the EIR/EIS describes these various methods related to constructing and operating the HST, which would be considered with community input. Because of engineering and structural requirements for safety and performance, opportunities to reduce a blocked view from an overpass or elevated guideway are rare once the centerline and grade of the HST are established. Sometimes an earthen berm can be used to supplement or replace a retaining wall or pier-supported structure; however, this also may increase, not reduce, the size, footprint, and bulk of the constructed grade-separation. HST components can be made more attractive through design. For example, large-scale HST components such as retaining walls, earthen berms, and support structures can be designed to incorporate context-sensitive features such as patterns, landscaping, and color. Such mitigation measures will be determined in coordination and collaboration with local jurisdictions, residents, and community leaders in regard to the applicable local design guidelines and measures that are most context-appropriate.

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	**MF-Response-CULTURAL-1: Text and Graphics Edits**
Commenters requested minor text and graphic edits. Two commenters requested the addition and omission of text in regards to confidentiality of Native American archaeological sites. Commenters also requested adding several previously omitted laws and regulations. One commenter requested the addition of the locations of the tribal consultation meetings to the corresponding section.	Requested text and graphic edits were made in the EIR/EIS, as appropriate and in accordance with Section 106 of the National Historic Preservation Act (NHPA), as well as NEPA, CEQA, and the *Programmatic Agreement among the FRA, the State Historic Preservation Officer, the Advisory Council on Historic Preservation, and the CHSRA regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the California High-Speed Train Project* (PA). The PA is included as Appendix 3.17-A of the EIR/EIS.

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	**MF-Response-CULTURAL-2: Documentation of Existing/Additional Built Environment Resources**
Commenters expressed concern that historic built environment resources were not adequately documented. One commenter stated there were very few significant buildings in Downtown Merced and that those identified in the EIR/EIS would not be affected.	The FRA and the Authority recognize the value of historic and cultural resources to both rural and urban communities. All historic-period built environment resources were identified and evaluated in accordance with Section 106 of the NHPA, as well as NEPA, CEQA, and the PA. The procedures for the identification and treatment of historic properties are described in Section VI (Identification of Historic Properties), Section VII (Assessment of Adverse Effects), and Section VIII (Treatment of Historic Properties) of the PA. The PA is included as Appendix 3.17-A of the EIR/EIS. Detailed information regarding the identified resources is documented in the cultural resources technical reports prepared in support of the EIR/EIS, including the Historic Property Survey Report (HPSR) and the Historic Architectural Survey Report (HASR), which are available on the Authority's website.

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	**MF-Response-CULTURAL-3: Documentation of Existing/Additional Archaeological Resources**
Commenters expressed concern regarding adequate identification and possible destruction of cultural resources, including cultural landscapes and traditional cultural areas. Several of the commenters provided general location information regarding archaeological resources of concern.	The cultural resources identification effort for the proposed project consisted of literature and records research, consultation with knowledgeable individuals (including Native Americans, historical societies, museums, and historic preservation interest groups), and an intensive pedestrian field survey conducted by qualified cultural resources professionals in areas where private property owners granted access. Once access to as-yet-unsurveyed parcels is made available to the cultural resources investigation team, additional intensive field surveys will be completed to confirm the presence or absence of additional cultural resources within the project's Area of Potential Effect (APE). Commenters indicating that they have information regarding the location of archaeological material may be contacted regarding these resources prior to or during these subsequent survey efforts. All cultural resources have been and will continue to be identified and evaluated in accordance with Section 106 of the NHPA, as well as NEPA, CEQA, and the PA. The procedures guiding the identification and treatment of historic properties (including archaeological resources) are described in Section VI (Identification of Historic Properties), Section VII (Assessment of Adverse Effects), and Section VIII (Treatment of Historic Properties) of the PA. The PA is included as Appendix 3.17-A of the EIR/EIS.

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	**MF-Response-CULTURAL-4: Documentation of Belmont Avenue Subway and Belmont Avenue Circle**
Commenters requested additional documentation and more detailed consideration of the Belmont Subway, the railroad bridge passing over the Belmont Subway, and the Belmont Circle.	The Belmont Avenue Subway and Belmont Avenue Circle were surveyed and evaluated and a Department of Parks and Recreation (DPR) 523 Form was included in the HPSR. The structures were assessed and recommended eligible for listing in the National Register of Historic Places (NRHP). The effects of the HST Project on these resources were assessed and results presented in the EIR/EIS in Section 3.17.5.

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	**MF-Response-CULTURAL-5: Mitigation for Forestiere Underground Gardens**
Commenters requested additional studies to ensure protection of Forestiere Underground Gardens from impacts related to construction and operation of the HST. Two commenters recommended Arch-MM#4 (monitoring) be considered.	In response to the adverse effect on Forestiere Underground Garden that was previously assessed in the EIR/EIS and based on the 15% engineering, the Authority made design modifications that would likely result in an anticipated "no adverse effect" status in the 30% engineering. These changes are included in the EIR/EIS in Section 3.17.5. Despite this determination, several protection and stabilization measures are proposed for this resource in the Built Environment Treatment Plan (BETP). Protection and stabilization measures may include monitoring methods to avoid adverse vibration effects, and conditions assessment prior to construction. Additional protection and stabilization measures may be developed during the consultation process.

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	**MF-Response-CULTURAL-6: Mitigation Measures**
The comments addressed several resources, including some that are not eligible (and therefore do not require mitigation) Identified resources of concern include Hobbs Parsons Produce Company Building, Van Ness Gateway, portions of Chinatown and Pacific Railroad corridor, Roeding Park, Azteca Theatre, Southern Pacific Railroad Depot, Bank of Italy (Fulton Mall), Belmont Circle/ Belmont Subway, businesses on Motel Drive, Pacific Coast Seeded Raisin/Del Monte Plant #68, warehouse district south of Downtown Station in Fresno, and Traditional Cultural Properties. Commenters also expressed concern about a lack of detailed mitigation measures in the EIR/EIS.	Mitigation measures are described in Section 3.17.6 of the EIR/EIS and include measures to minimize impacts on historical, archaeological, and paleontological resources. In accordance with the PA, a BETP and an Archaeological Treatment Plan (ATP) will be prepared and implemented, subject to approval of the State Historic Preservation Officer, to resolve any potential adverse effects to NRHP-listed or -eligible historic and archaeological properties or potential impacts to CEQA historical resources (including archaeological resources). These treatment plans describe detailed requirements for the treatment of resources affected by the project, site monitoring during construction, handling of unanticipated discoveries, data recovery, and curation of artifacts, among other things. In accordance with the PA, the mitigation of impacts to historic properties and historical resources is being developed with input from consulting parties, which include local city and county jurisdictions, as well as local Native American representatives. The PA is included as Appendix 3.17-A of the EIR/EIS.

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	**MF-Response-CULTURAL-7: Additional Interested Parties/Consulting Parties**
Commenters suggested additional consulting and interested parties be contacted during the consultation process. Several commenters recommended making contact with additional Native American liaisons. One commenter recommended regular meetings with tribes and lead agencies. Another commenter requested they be consulted in the next design phase, prior to the next public circulation.	Interested and consulting parties, including local Native American tribes, are part of the ongoing consultation process. Cultural resource outreach efforts to date include letters, telephone calls, emails, and meetings. Interested and consulting parties, including Tribal representatives, will continue to be informed and involved as the project moves forward. The consultation process is elaborated upon in the PA, Sections IV (Ongoing Consultation with Native American Tribes) and Section V (Participation of Other Consulting Parties and the Public). The PA is included as Appendix 3.17-A of the EIR/EIS.

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	**MF-Response-CULTURAL-8: Insufficient assessment of impacts**
Commenters requested more detail describing the assessment of impacts. Two commenters requested additional analysis on impacts to Forestiere Underground Gardens. One commenter requested additional information on distances between construction sites and historic buildings for the discussion of vibration impacts.	Direct and indirect adverse effects on NRHP-listed or eligible resources are assessed in accordance with Section 106 of the NHPA, 36 CFR 800.5 (Assessment of Adverse Effects). Effects assessments are presented in the EIR/EIS and discussed in greater detail in the Findings of Effect (FOE) report. The FOE describes the assessment of potential adverse effects on historic properties that would result from the construction or operation of the project and identifies mitigation measures that would eliminate or minimize such effects. These mitigation measures would be incorporated into project design and construction documents.

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	**MF-Response-CULTURAL-9: Incomplete Archaeological Surveys**
Commenters were concerned that the archaeological survey was not completed prior to the Draft EIR/EIS. With the absence of a complete survey, there were also concerns about assessment of impacts and mitigation measures.	Pedestrian cultural resources field surveys were conducted in areas where private property owners granted access. To date, archaeological sites and sensitive areas were identified on all project alternatives. Under Section VI.E (Phased identification) of the PA, phased identification may occur in situations where identification of historic properties cannot be completed, as is currently the case. Once an alignment alternative is selected and access to as-yet-unsurveyed parcels is made available to the cultural resources investigation team, additional intensive field surveys will be completed to confirm the presence or absence of additional cultural resources within the project's APE. The procedures guiding the identification and treatment of historic properties (including archaeological resources) are described in Section VI (Identification of Historic Properties), Section VII (Assessment of Adverse Effects), and Section VIII (Treatment of Historic Properties) of the PA. The PA is included as Appendix 3.17-A of the EIR/EIS.