7 OTHER CEQA/NEPA CONSIDERATIONS

Since publication of the Palmdale to Burbank Project Section Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS), no substantive changes have been made to this chapter.

This chapter describes the National Environmental Policy Act (NEPA) unavoidable adverse impacts and California Environmental Quality Act (CEQA) significant and unavoidable impacts resulting from implementing the Palmdale to Burbank Project Section of the proposed California High-Speed Rail (HSR) System. It also describes public benefits and the relationship between short-term uses of the environment and long-term productivity. Lastly, this chapter discusses significant irreversible or irretrievable commitments of resources or foreclosures of future options of their use. This chapter is based on the detailed analysis of environmental resources of concern presented in Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures. Chapter 8, Preferred Alternative and Station Sites, discusses the environmentally superior alternative and environmentally preferable alternative.

7.1 Unavoidable Adverse Effects and Significant and Unavoidable Impacts

Chapter 2, Alternatives, describes the efforts the agencies have made through the tiered project development and environmental review process to design the California HSR System and the Palmdale to Burbank Project Section in a manner that avoids and minimizes impacts. Chapter 2, Alternatives, presents the specific impact avoidance and minimization features to avoid or reduce potential adverse impacts (see Appendix 2-E for descriptions of each IAMF identified). Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures, describes the potential environmental consequences of project construction and operations. Table 7-1 summarizes significant and unavoidable impacts under CEQA for the six Build Alternatives. In most cases, the methodology used to identify significant CEQA impacts also identified adverse effects pursuant to NEPA. Therefore—unless otherwise noted—a significant and unavoidable CEQA impact is also considered to be an unavoidable adverse NEPA effect for the six Build Alternatives of the Palmdale to Burbank Project Section.

Table 7-1 NEPA and CEQA Significant and Unavoidable Impacts

Environmental Resource	Impact Description
Transportation	**Spoils Hauling Effects on Roadway Segments –** Spoils hauling associated with the construction of all six Build Alternatives would increase truck traffic at roadway segments throughout the spoils hauling resource study area. This would be an adverse effect (Impact TRA#1).
Transportation	**Spoils Hauling Effects on Intersections –** Spoils hauling associated with the construction of all six Build Alternatives would increase truck traffic at intersections throughout the spoils hauling resource study area. This would be an adverse effect (Impact TRA#2).
Transportation	**Spoils Hauling Effects on Freeway Segments –** Spoils hauling associated with the construction of all six Build Alternatives would increase truck traffic at freeway segments throughout the spoils hauling resource study area. This would be an adverse effect (Impact TRA#4).
Air Quality and Global Climate Change*	**Regional Air Quality Impacts during Construction—** Construction of all six Build Alternatives would result in construction-period emissions that exceed the annual applicable de minimis General Conformity threshold(s) and the applicable SCAQMD and AVAQMD CEQA threshold(s). This would be a significant and unavoidable impact (Impact AQ#2).

Environmental Resource	Impact Description
Air Quality and Global Climate Change*	**Compliance with Air Quality Plans during Construction—**Construction activities would result in the exceedance of General Conformity *de minimis* thresholds during construction. Within the SCAQMD, construction of the Refined SR14, SR14A, and E2A Build Alternatives would result in exceedance of NOx and CO thresholds, while construction of the E1, E1A, and E2 Build Alternatives would result in exceedance of the NOx threshold. Within the AVAQMD, only construction of the E2A Build Alternative would result in exceedance of the NOx threshold. This would be a significant and unavoidable impact (Impact AQ#3).
Air Quality and Global Climate Change*	**Localized Construction Effects—**Construction activities would expose sensitive receptors to substantial pollutant concentrations of NO_2 and PM_{10} that would exceed the applicable NAAQS and CAAQS within certain construction areas. This would be a significant and unavoidable impact (Impact AQ#5).
Noise and Vibration*	**Construction Noise Impacts on Sensitive Receivers—**Construction activities would exceed the recommended FRA construction noise criteria of 80 dBA Leq during daytime hours and 70 dBA Leq during nighttime hours. This would be a significant and unavoidable impact (Impact N&V#1).
Noise and Vibration*	**Spoils Haul Route Noise Impacts on Sensitive Receivers—**Noise impacts from truck traffic along spoils haul routes would temporarily or periodically substantially increase ambient noise levels in the project vicinity above levels existing without the project. Due to the Refined SR14, E1, E1A, E2, and E2A Build Alternatives' proximity to sensitive receivers, some receivers may still experience noise exceeding noise limits. This would be a significant and unavoidable impact (Impact N&V#2).
Noise and Vibration*	**Operational Traffic Noise Impacts on Sensitive Receivers**—Operational traffic would permanently and substantially increase ambient noise levels in the vicinity of Sierra Highway from East Avenue S to Soledad Siphon above levels existing without the project. This location would not meet the criteria to implement noise barriers because there would be less than 10 severe impacts. It is unlikely that mitigation measures would completely reduce noise below thresholds. This would be a significant and unavoidable impact (Impact N&V#4).
Noise and Vibration*	**Operational Train Noise Impacts—**Construction of the six Build Alternatives would result in increased operational train noise if proposed noise barriers are rejected by the community. Other noise reducing measures discussed in Mitigation Measures N&V-MM#3, such as sound insulation and noise easements, could also reduce impacts but may not completely reduce noise below thresholds. Additionally, noise barriers are not feasible to implement to reduce impacts to all sensitive receivers along the six Build Alternative alignments. This would be a significant and unavoidable impact (Impact N&V#6).
Paleontological Resources*	**Surface Excavation and Subsurface Tunneling Could Destroy Unique Paleontological Resources—**Bored tunnel construction would destroy paleontological resources encountered beneath the ground surface, resulting in a significant and unavoidable impact (Impact GSSP #15).

Environmental Resource	Impact Description
Aesthetics and Visual Quality*	**Permanent Construction Impacts on Visual Quality—**Construction of each of the six Build Alternatives would affect visual quality within Landscape Unit 1, within the Central Subsection, resulting in a significant and unavoidable impact (Impact AVR#4).
Cultural Resources*	**Effects to Historic Built Resources Caused by Construction Activities—** Construction of E1, E1A, E2, and E2A Build Alternatives would affect historic built resources, resulting in a significant and unavoidable impact (Impact CUL#4).

*Indicates a significant and unavoidable impact at the project and cumulative conditions.
CAAQS = California Ambient Air Quality Standards; dBA = A-weighted decibels; FRA = Federal Railroad Administration; HSR = high-speed rail; I = Interstate; Leq = equivalent sound level; NAAQS = National Ambient Air Quality Standards; SR = State Route

7.2 Public Benefits of the High-Speed Rail System to Los Angeles County

The California HSR System would provide numerous environmental, economic, and social benefits to Los Angeles County. Among the public benefits that the California HSR System would provide are the following:

- **Increasing mobility options**—Using current modes of travel between San Francisco and Los Angeles takes between 4.5 and 11.5 hours. The completion of Phase 1 of the HSR system, which would provide service between San Francisco and Los Angeles, would provide travel times between the two cities of less than 3 hours (Authority 2020).
- **Contributing to a cleaner environment**—The projected population growth in the region will result in an increase in vehicle miles traveled, and thus in the volume of pollutants emitted by motor vehicles. As described in Section 1.2.4.4, Air Quality and Greenhouse Gas Emissions, the electric-powered California HSR System would reduce vehicle miles traveled in support of the California State Implementation Plan, thereby contributing to a decrease in the emissions of harmful air pollutants, such as particulate matter, carbon monoxide, and nitrogen oxide. The average annual greenhouse gas emissions savings provided by the California HSR System, which would equate to over 1 million metric tons of carbon dioxide equivalents (Authority 2016), is equal to taking 285,000 passenger vehicles off the road every year.
- **Stimulating economic activity and creating jobs**—The investment in the California HSR System has, over the 11-year period from 2006 to 2017, generated between $5 billion and $6 billion in total economic activity in the state (Authority 2018). Over the last 2 years, the Authority, working with partner agencies, was allocated and received authorization from the California Department of Finance to use nearly $700 million in Proposition 1A bond funds for improvements to existing rail lines within certain sections of the California HSR System to allow HSR to "blend" operations with other users. The Authority's 2018 Business Plan establishes a goal of investing these Proposition 1A bond funds within the resource study area.
- **Minimizing open space conversion**—The California HSR System would increase intercity travel capacity, which is presently stressed by heavy use of the interstate and state highway systems and commercial airports. This increased capacity would reduce the need for new freeways and airport facilities, thereby advancing local plans' goals of focusing development to urban infill and protecting open spaces.
- **Improving safety and security**—The Palmdale to Burbank Project Section would be built according to international safety guidelines and would include several key safety mechanisms, such as positive train control, perimeter fencing, and grade-separated crossings. These improvements are expected to integrate the California HSR System into the local transit system safely and securely.

7.3 Relationship between Short-term Use of the Environment and the Enhancement of Long-term Productivity

Construction of the Palmdale to Burbank Project Section would require an investment of materials to create new transportation infrastructure. This investment of materials is expected to include natural resources, such as rock and aggregate (e.g., for alignment and other facility foundations), steel (e.g., for rail and catenary structures), other building materials, and the various structural components of the HSR trains. Project construction would consume fossil fuels. In addition, the Burbank to Palmdale Project Section would require conversion of land to accommodate the new transportation infrastructure. In many cases, the land required is already being put to economic use for urban and rural structures (including homes, businesses, and parks), local roads, and state highways. The consequences of these land conversions are described in Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures.

As indicated in Chapter 1, Project Purpose, Need, and Objectives, the capacity of California's intercity transportation system, including between Palmdale and Burbank, is insufficient to meet existing and future travel demand. The current and projected future congestion of the system will continue to result in deteriorating air quality, reduced reliability, and increased travel times. The Palmdale to Burbank Project Section would provide benefits (such as increased safety, reduced pollutant emissions, and reduced greenhouse gases) and accessibility improvements (such as transit linkages between the Bay Area and Southern California in Phase 1, and Sacramento and San Diego in Phase 2). Because the California HSR System would provide a new alternative to regional transportation options that consume fossil fuels (e.g., automotive trips and commercial air travel), and because the California High-Speed Rail Authority has committed to using 100 percent renewable energy resources (e.g., solar, wind, geothermal, bioenergy) to power the California HSR System, the Palmdale to Burbank Project Section would make an important contribution to greenhouse gas reduction efforts.

As described in Section 3.18, Regional Growth, the proposed California HSR System would provide direct and indirect economic benefits, including short- and long-term employment benefits. The California HSR System would improve accessibility to labor and customer markets and induce regional job growth by providing a more attractive market for commercial and office development. The new connectivity to the San Francisco and Los Angeles metropolitan regions provided by the California HSR System could increase the regional work force and require the construction of new housing, provide new community services, and generally increase land consumption. Additionally, the development of HSR stations in Palmdale and Burbank would provide an opportunity for transit-oriented planning and infill development near station areas, creating employment opportunities that would encourage diversification of each city's economic base. The benefits of the California HSR System are described in more detail in Chapter 1, Project Purpose, Need, and Objectives.

7.4 Significant Irreversible Environmental Changes that Would Result from the Project if Implemented

Section 15126.2(c) of the CEQA Guidelines requires that an environmental impact report address any significant irreversible environmental changes associated with a project. Similarly, NEPA regulations require that the discussion of environmental consequences include "any irreversible or irretrievable commitment of resources which would be involved in the proposal should it be implemented" (40 Code of Federal Regulations 1502.16).

The Palmdale to Burbank Project Section would require the commitment of material and energy for construction and operations and the commitment of land for HSR facilities. The Palmdale to Burbank Project Section would require an investment of materials such as rock, aggregate, steel, and other building materials. In addition, construction of the Palmdale to Burbank project section would require the consumption of fossil fuels as well as the conversion of lands within the Angeles National Forest and San Gabriel Mountains National Monument, to accommodate the new transportation infrastructure. Most of this conversion would occur below ground to facilitate HSR tunnels, with some conversion above ground within the Angeles National Forest.

Construction of the Palmdale to Burbank Project Section would result in the fragmentation of mineral resource zones relatively undeveloped areas that contain valuable mineral resources. In addition, bored tunnel construction could destroy paleontological resources encountered beneath the ground surface. The potential destruction of paleontological resources would be significant and irreversible. The significance of these impacts is evaluated throughout Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures. Overall, it is expected that residents and businesses in the region would benefit from the improved quality of the transportation system (e.g., improved accessibility, increased capacity, energy savings), which would outweigh the irreversible commitment of resources.

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