3.17 Cultural Resources

3.17.1 Introduction

Cultural Resources

Recognizing the importance of historic and archaeological resources is a priority for the federal government, as indicated by the numerous statutes and regulations that address these resources. Federal regulations require that the project identify and consider environmental impacts of this federal action, including impacts on cultural resources. Additionally, this analysis considers the proposed project's effects, as defined by Section 106 of the NHPA, on cultural resources that are listed, or that are eligible for listing, in the NRHP.

This section describes impacts on cultural resources that would result from implementation of the Palmdale to Burbank Project Section. Cultural resources include prehistoric and historic-era archaeological resources; architectural and built-environment resources; and traditional cultural properties (TCP) that are listed in or found eligible for the National Register of Historic Places (NRHP) and/or the California Register of Historic Resources (CRHR). Prehistoric archaeological sites are places where Native Americans lived or carried out activities during the period before European contact (as late as 1769 A.D.) that may contain artifacts, cultural features, subsistence remains, and human burials. Historic-era archaeological sites are post-European contact sites that may include remains of early settlements, with features such as wells, privies, and foundations. Historic architectural and built-environment resources include buildings, structures, objects, landscapes, districts, and linear features. TCPs are places important to Native Americans or other communities and ethnic groups. This section identifies cultural resources, assesses effects of the Palmdale to Burbank Project Section on cultural resources, and identifies mitigation measures to reduce or eliminate effects on those resources.

This section begins by describing the regulatory framework governing cultural resources in the context of the California High-Speed Rail (HSR) System construction and operations. Next, this section reviews the methods used to identify cultural resources in the resource study area of the six Build Alternatives (the Refined SR14, SR14A, E1, E1A, E2, and E2A Build Alternatives), which is the archaeological and historic built area of potential effects (APE).[1] The types of resources within the APE are then described, along with a description of the area's sensitivity for previously unidentified archaeological resources. Finally, this section evaluates the anticipated effects of the Palmdale to Burbank Project Section on cultural resources, followed by the identification of mitigation that would be implemented to avoid or lessen those effects.

The terms "historic property" and "historical resource" also are used in this chapter. These terms have specific meanings under the National Historic Preservation Act of 1966 (NHPA) and the California Environmental Quality Act (CEQA), respectively:

- Historic property, as defined in regulations issued under Section 106 of the NHPA, means "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places." (36 Code of Federal Regulations (C.F.R.) 800.16).
- Historical resources, as defined in the CEQA Guidelines, include but are not limited to, resources listed in or determined eligible for listing in the California Register of Historic Resources (CEQA Guidelines, California Code of Regulations, Title 14, Section 15064.5).

This chapter relies on technical studies prepared consistent with Section 106 of the NHPA, as amended, which requires that effects on historic properties be taken into consideration in any federal undertaking.[2] These studies include the results of background literature and records

[1] The APE is the geographic area or areas within which a project may affect historic properties. The APE is utilized to identify impacts of the Palmdale to Burbank Project Section on archaeological APE and historic built resources. See Section 3.17.5.1, which defines and discusses the specifications of the APE in detail.

[2] "Undertaking" is the Section 106 term for "project." For consistency, "project" will be used throughout this chapter.

research; pedestrian field surveys; and consultations with the Native American community, the State Historic Preservation Officer (SHPO), and other interested parties; and consultation with local, State of California, and federal agencies to-date.

The implementing regulations for Section 106, 36 C.F.R. 800.14, allow for programmatic alternatives to the implementation of Section 106 if the review of the undertaking is governed by a federal agency program alternative established under 36 C.F.R. 800.14. Accordingly, the Federal Railroad Administration (FRA) and the California High-Speed Rail Authority (Authority) consulted with SHPO and the Advisory Council on Historic Preservation (ACHP) in the drafting of an agreement identifying programmatic alternatives for conducting Section 106 for the statewide HSR program. The *Programmatic Agreement Among the FRA, the ACHP, the SHPO, and the Authority Regarding Compliance with Section 106 of the NHPA, as it Pertains to the California High-Speed Train Project* was executed in 2011 (FRA et al. 2011). While the studies conducted for this Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) primarily follow the Section 106 process as well as industry standards, programmatic alternatives as agreed upon in the Programmatic Agreement (PA) and pursuant to 36 C.F.R. 800.14 include:

- The exemption of certain properties deemed to have little or no potential to be eligible for the NRHP.
- Streamlined documentation of significantly altered resources that have reached 50 years of age, a requirement to prepare a Memorandum of Agreement (MOA) for each project section that adversely affects, or has the potential to affect historic properties.
- A requirement to prepare treatment plans—one for historic built properties and one for archaeological properties—that tier off the MOA.

The following resource sections in this Draft EIR/EIS provide additional information related to cultural resources:

- Section 3.4, Noise and Vibration, evaluates impacts on cultural resources resulting from damage caused by noise-induced vibration and disturbance.
- Section 3.9, Geology, Soils, Seismicity, and Paleontological Resources, discusses paleontological resources.
- Chapter 4, Section 4(f) and Section 6(f) Evaluations, evaluates impacts on historic properties that may be protected under Section 4(f) and Section 6(f).

In addition, the following technical reports provide more detailed information:

- *Palmdale to Burbank Project Section Archaeological Survey Report* (ASR), identifies and evaluates archaeological properties within the archaeological APE.
- *Palmdale to Burbank Project Section Historic Architectural Survey Report* (HASR), identifies and evaluates built resources in the historic built resources APE.
- *Palmdale to Burbank Project Section Finding of Effect* (FOE), evaluates impacts of the HSR Preferred Alternative to cultural resources.

In addition, the following appendices provide more detailed information:

- Appendix 2-H, Regional and Local Policy Consistency Analysis provides a Regional and Local Policy Consistency Table, which lists the applicable cultural resource protection goals and policies and notes the Build Alternatives' consistency or inconsistency with each.
- Appendix 2-E, Impact Avoidance and Minimization Features (IAMFs), lists IAMFs included in this environmental impact analysis for each of the Build Alternatives, as applicable.
- Appendix 3.1-B, United States Forest Service (USFS) Policy Consistency Analysis, assesses the consistency of the Palmdale to Burbank Project Section with applicable laws, regulations, plans, and policies governing proposed uses and activities within the Angeles National Forest (ANF) and the San Gabriel Mountains National Monument (SGMNM).

During stakeholder outreach efforts, concern was expressed about cultural resource issues, including impacts on archaeological and Native American sites associated with implementation of the Palmdale to Burbank Project Section. These impacts are addressed in Section 3.17.7.5.

3.17.2 Laws, Regulations, and Orders

The primary federal and state laws and regulations protecting cultural resources are (1) Section 106; (2) the National Environmental Policy Act (NEPA) of 1969; (3) Section 4(f) of the Department of Transportation Act of 1966; (4) CEQA; and (5) California Public Resources Code (Cal. Public Res. Code) Sections 5024.1 and 21084.1. These and other federal and state laws and regulations that pertain to cultural resources are described below, as are regional and local plans and ordinances.

State and federal laws exempt from disclosure information regarding the location of Native American archaeological sites and other culturally sensitive sites. Therefore, the locations of such sites are not included in this chapter. Specifically, the California Public Records Act exempts from public disclosure the records of Native American graves, cemeteries, sacred places, features, and objects described in Cal. Public Res. Code Sections 5097.9 and 5097.933 (Government Code [Gov. Code] 6254, subd.[r]). The act also exempts from public disclosure records that relate to archaeological site information and reports maintained by or in the possession of the California Department of Parks and Recreation (DPR), the State Historical Resources Commission, the California State Lands Commission (CSLC), the Native American Heritage Commission (NAHC), other state agencies, or local agencies, including the records that agencies obtain through a consultation process with a California Native American tribe (Gov. Code 6254.10). In addition, CEQA Guidelines prohibit inclusion of information about the location of archaeological sites and Sacred Lands in an EIR (CEQA Guidelines 15120, subd. [d]). Federal law also exempts from disclosure information pertaining to sensitive cultural resource information (54 United States Code [U.S.C.] 307103).

Information and analysis of consistency with laws, regulations, plans, and policies relative on lands managed by the USFS, including the ANF and SGMNM, are discussed in Section 3.17.11 and in Volume 2, Appendix 3.1-B, USFS Policy Consistency Analysis.

3.17.2.1 Federal

National Environmental Policy Act

NEPA, as amended, establishes the federal policy of protecting important historic, cultural, and natural aspects of our national heritage during federal project planning. Federal or federally assisted projects requiring action pursuant to Section 102 of NEPA must take into account the effects on cultural resources. According to the NEPA regulations, in considering whether an action may “significantly affect the quality of the human environment,” an agency must consider, among other things, unique characteristics of the geographic area such as proximity to historic or cultural resources (40 C.F.R. 1508.27(b)(3)), and the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for the NRHP.

NEPA also require that, to the fullest extent possible, agencies shall prepare a draft EIS concurrently with and integrated with environmental impact analyses and related surveys and studies required by the NHPA. When Section 106 of the NHPA and NEPA are integrated, project impacts that cause adverse effects under Section 106 are described in the EIS.

Federal Railroad Administration, Procedures for Considering Environmental Impacts (64 Federal Register [Fed. Reg.] 28545

On May 26, 1999, FRA released the *Procedures for Considering Environmental Impacts* (FRA 1999). These FRA procedures supplemented the Council on Environmental Quality regulations (40 C.F.R. 1500 et seq.) and described FRA’s process for assessing the environmental impacts of actions and legislation proposed by the agency and for the preparation of associated documents (42 U.S. C. 4321 et seq.). FRA’s *Procedures for Considering Environmental Impacts* stated that “the EIS should identify any significant changes likely to occur in the natural landscape

and in the developed environment." The EIS should also discuss the consideration given to design quality, art, and architecture in project planning and development as required by U.S. Department of Transportation Order 5610.4. These FRA procedures stated that an EIS should consider possible impacts on cultural resources.

National Historic Preservation Act (54 U.S.C. 300101 et seq., including Section 106 of the National Historic Preservation Act, 54 U.S.C. 306108)

The NHPA establishes the federal government policy on historic preservation and the programs, including the NRHP, through which this policy is implemented. Under the NHPA, significant cultural resources—referred to as "historic properties"—include any prehistoric or historic district, site, building, structure, or object included in or determined eligible for the NRHP. Historic properties also include resources determined to be National Historic Landmarks. National Historic Landmarks are nationally significant historic places designated by the Secretary of the Interior (SOI) because they possess exceptional value or quality in illustrating or interpreting United States heritage. A property is considered historically significant if it meets one or more of the NRHP criteria and retains sufficient historic integrity to convey its significance. This act also established the ACHP, an independent federal agency that administers Section 106 by developing procedures to protect cultural resources included in, or eligible for inclusion in, the NRHP. Regulations are published in 36 C.F.R. 60, 63, and 800.

36 C.F.R. Part 800 – Implementing Regulations for Section 106 of the National Historic Preservation Act

Section 106 requires that effects on historic properties be taken into consideration in any federal project. The process has five steps: (1) initiating the Section 106 process, which includes initiating consultation with SHPO, Native American tribes, local governments, and other interested parties; (2) identifying historic properties; (3) assessing adverse effects; (4) resolving adverse effects; and (5) implementing stipulations in an agreement document.

Section 106 affords the ACHP and the SHPO, as well as other consulting parties, a reasonable opportunity to comment on any project that would adversely affect historic properties. SHPOs administer the national historic preservation program at the state level, review NRHP nominations, maintain data on historic properties that have been identified but not nominated, and consult with federal agencies during Section 106 review.

The NRHP eligibility criteria (36 C.F.R. 60.4) were used to evaluate the significance of historic resources within the APE. The criteria for evaluating properties are as follows:

- Was the property associated with events that have made a significant contribution to the broad patterns of our history; or
- Was the property associated with the lives of persons significant to our past; or
- Does the property embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Has the property yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting one or more of these criteria, NRHP eligibility requires that a resource retain sufficient integrity to convey its significance. Integrity is evaluated through consideration of characteristics that existed during a resource's period of significance. Integrity is evaluated based on the retention of seven aspects: location, design, setting, materials, workmanship, feeling, and association.

Section 101(d)(6)(A) of the NHPA allows properties of traditional religious and cultural importance to a Native American tribe to be determined eligible for NRHP inclusion. In addition, a broader range of TCPs may be listed in or determined eligible for the NRHP because of their association with cultural practices or beliefs of living communities that (1) are rooted in that community's history; and (2) are important in maintaining the continuing cultural identity of the community.

In the NRHP programs, "culture" is understood to mean the traditions, beliefs, practices, customary ways of life, arts, crafts, and social institutions of any community—be it a Native American tribe, a local ethnic group, or the nation as a whole.

The HSR program-wide approach to Section 106 has been defined in the PA among the FRA, the ACHP, the SHPO, and the Authority regarding compliance with Section 106 as it pertains to the California HSR System (FRA et al. 2011). The PA provides an overall framework for conducting this project's Section 106 process, including guidance for establishing the archaeological and historic built APE, interested party and tribal consultation, survey, and evaluation; it also outlines the approach for the treatment of historic properties, and includes guidance on developing MOAs and treatment plans (archaeological and built resources) to address the resolution of adverse effects for each section of the California HSR System.

Section 4(f) of the Department of Transportation Act (49 U.S.C. 303)

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, prohibits use of a publicly owned park, recreation area, wildlife or waterfowl refuge, or publicly or privately owned historic site of national, state, or local significance for a transportation project unless the Secretary of Transportation has determined that there is no feasible and prudent alternative to such use and the project includes all possible planning to minimize harm to the property resulting in such use.

"Use" in Section 4(f) is when the transportation project requires a physical taking or other direct control of the land for the purposes of a project. Section 4(f) use also includes adverse effects or "constructive use" when impacts substantially impair or diminish the activities, features, or attributes of the resources that contribute to its significance. The federal transportation agency can determine that the project impacts on a Section 4(f) protected property is *de minimis*, or subject to a minor use, without having to make a finding that there are no prudent and feasible avoidance alternatives. A determination of a "*de minimis*" impact on a Section 4(f) historic property is when there is a Section 106 finding of no adverse effect on a historic property.

Archaeological and Historic Preservation Act (54 U.S.C. 312501–312508)

This act provides for preserving significant historic or archaeological data that may otherwise be irreparably lost or destroyed by construction of a project by a federal agency or under a federally licensed activity or program. This includes relics and specimens.

Antiquities Act (54 U.S.C. 320301–320303)

The Antiquities Act authorizes the President to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated on land owned or controlled by the federal government to be national monuments and prohibit appropriation, excavation, injury, or destruction of "any historic or prehistoric ruin or monument, or any object of antiquity" located on national monument land. The act also establishes penalties for such actions and sets forth a permit requirement for collection of antiquities on federally owned lands.

American Indian Religious Freedom Act (42 U.S.C. 1996)

The American Indian Religious Freedom Act protects and preserves the traditional religious rights and cultural practices of American Indians, Eskimos, Aleuts, and Native Hawaiians. The act requires policies of all governmental agencies to respect the free exercise of native religion and to accommodate access to and use of religious sites to the extent that the use is practicable and is not inconsistent with an agency's essential functions. If a place of religious importance to American Indians may be affected by a project, the American Indian Religious Freedom Act

promotes consultation with Indian religious practitioners, which may be coordinated with Section 106 consultation.

Archaeological Resources Protection Act (16 U.S.C. 470)

This statute was enacted to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites that are on federally owned lands and Indian lands. It was also enacted to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals (Sec.2 (4)(b)).

Native American Grave Protection and Repatriation Act (25 U.S.C. 3001–3013)

The Native American Grave Protection and Repatriation Act describes the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations with respect to the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, referred to collectively in the statutes as cultural items, with which they can show a relationship of lineal descent or cultural affiliation. One purpose of the statute is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on federal and tribal lands.

Presidential Memorandum, Government-to-Government Relations with Native American Tribal Governments (April 29, 1994)

Directed to the heads of executive departments and agencies, this memorandum outlines the principles that are to be followed in interactions with the governments of federally recognized Native American tribes. It includes provisions for government-to-government relations, consultation, and requires assessment of the impact of federal government plans, projects, programs, and activities on tribal trust resources and assurance that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities.

Executive Order 13175, Consultation with Indian Tribal Governments

This order establishes regular and meaningful consultation and collaboration with officials of federally recognized Indian tribes in the development of federal policies that have tribal implications, to strengthen the government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes. It sets forth guiding principles for government-to-government relations with Indian tribes, along with criteria for formulating and implementing policies that have tribal implications.

United States Department of Transportation Tribal Consultation Plan (U.S. Department of Transportation Order 5301.1)

In response to Executive Order 13175, this plan states that as an executive agency, the U.S. Department of Transportation has a responsibility and is committed to working with the governments of federally recognized Native American tribes in a unique relationship, respecting tribal sovereignty and self-determination. The plan identifies specific goals, including establishing direct contact with Native American tribal governments at reservations and tribal communities and seeking tribal government representation in meetings, conferences, summits, advisory committees, and review boards concerning issues with tribal implications.

United States Forest Service Authorities

Cultural resources within the ANF, including the SGMNM, are protected by several federal laws and their implementing regulations as well as policies, plans, and orders. The primary laws governing cultural resources are the Federal Land Policy and Management Act (FLPMA), the National Forest Management Act (NFMA) and the Antiquities Act of 1906. Appendix 3-1B provides an analysis of the consistency of the six Build Alternatives with these laws, regulations, policies, plans, and orders.

3.17.2.2 State

California Environmental Quality Act (Cal. Public Res. Code 21083.2)/CEQA Guidelines 15064.5

CEQA requires the lead agency to consider the effects of a project on historical resources. CEQA Guidelines Section 15064.5 provides specific guidance for determining the significance of impacts on historical resources (CEQA Guidelines 15064.5(b)) and unique archaeological resources (CEQA Guidelines 15064.5(b) and Cal. Public Res. Code 21083.2). Under CEQA, these resources are called "historical resources," whether they are of historic or prehistoric age. Cal. Public Res. Code Section 21084.1 defines historical resources as those listed in or eligible for the CRHR, or those listed in the historical register of a local jurisdiction (county or city) unless the preponderance of evidence demonstrates that the resource is not historically or culturally significant. "Historic properties" listed in or determined eligible for listing in the NRHP that are located in California are considered historical resources for the purposes of CEQA and are also listed in the CRHR. The CRHR criteria for listing such resources are based on, and are very similar to, the NRHP criteria. Cal. Public Res. Code Section 21083.2 and CEQA Guidelines Section 15064.5(c) provide further definitions and guidance for archaeological sites and their treatment.

Different legal rules apply to the two different categories of cultural resources, though the two categories sometimes overlap where a "unique archaeological resource" also qualifies as a "historical resource." In such an instance, the more stringent rules for the protection of archaeological resources that are historical resources apply.

CEQA Guidelines Section 15064.5 also prescribes a process and procedures for addressing the existence of, or probable likelihood, of Native American human remains, as well as the unexpected discovery of human remains during implementation of a project. This includes consultations with appropriate Native American tribes.

Guidelines for the CEQA implementation define procedures, types of activities, persons, and public agencies required to comply with CEQA. Section 15064.5(b) prescribes that project effects that would "cause a substantial adverse change in the significance of a historical resource" are significant effects on the environment. Substantial adverse changes include physical changes to both the historical resource and its immediate surroundings. Section 15126.4(a)(1) states that an EIR shall describe feasible measures that could minimize significant impacts. Section 15126.5(b) describes mitigation measures related to impacts on historical resources.

California Register of Historical Resources (Cal. Public Res. Code 5024.1 and 14 California Code of Regulations [Cal. Code Regs.] 4850)

Cal. Public Res. Code Section 5024.1 establishes the CRHR. The register lists all California properties considered to be significant historical resources. The CRHR also includes all properties listed in or determined eligible for the NRHP, including properties evaluated and determined eligible under Section 106. The criteria for listing resources on the CRHR—criteria 1 through 4—are similar to those of the NRHP, as follows:

1) Was the property associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; or
2) Was the property associated with the lives of persons important in our past; or
3) Does the property embody the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value; or
4) Has the property yielded or may be likely to yield information important in prehistory or history

The CRHR regulations govern the nomination of resources to the CRHR (14 Cal. Code Reg. 4850). The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

California Native American Graves Protection and Repatriation Act (California Health and Safety Code 8010 et seq.)

The California Native American Graves Protection and Repatriation Act establishes a state repatriation policy that is consistent with and facilitates implementation of the federal Native American Graves Protection and Repatriation Act. The act strives to ensure that California Native American human remains and cultural items are treated with dignity and respect, and asserts intent for the State to provide mechanisms for aiding California Native American tribes, including non-federally recognized tribes, in repatriating remains.

Executive Order B-10-11, Consultation with California Indian Tribes

Executive Order B-10-11 established that state agency and departments subject to the regulation shall encourage communication and consultation with California Indian Tribes. Agencies and departments shall permit elected officials and other representatives of tribal governments to provide meaningful input into the development of legislation, regulations, rules, and policies on matters that may affect tribal communities.

3.17.2.3 Regional and Local

Each of the Build Alternatives would pass through several local government jurisdictions in Los Angeles County, including the cities of Palmdale, Santa Clarita, Los Angeles, and Burbank. The six Build Alternatives would also pass through extensive unincorporated areas, including the communities of Acton and Agua Duce, as well as the ANF including the SGMNM.

Regional entities and local jurisdictions in the Palmdale to Burbank Project Section have adopted plans, goals, policies, and ordinances related to cultural resources. Most of these goals and policies are outlined within the counties' and cities' general and community plans. The general plans for Palmdale (City of Palmdale 1993), Los Angeles County (Los Angeles County Department of Regional Planning 2015), and Burbank (City of Burbank 1997) contain goals and policies associated with cultural resources. Table 3.17-1 lists and describes regional and local plans and policies relevant to the analysis of cultural resources in this Draft EIR/EIS.

Table 3.17-1 Regional and Local Plans

Plan	Applicable Subsections	Summary
Regional Plans		
Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)	All Subsections (all six Build Alternatives)	This plan applies to large portions of Southern California and focuses on the movement of people, goods, and information. The purpose of the plan is to enhance economic growth and productivity, while also improving the quality of life for citizens within each economic sector. The RTP/SCS includes a discussion of cultural resources and mitigation measures to minimize impacts on historical and archaeological features. Mitigation measures include coordination with local governments and consultation with the Office of Historic Preservation; application of design measures to avoid historic resources; compliance with Section 106 when there is a federal nexus; compliance with the California Health and Safety Code Section 7050; and compliance with the California Health and Safety Code Sections 18950–18961 in the event of discovery of human remains.

Plan	Applicable Subsections	Summary
County/Municipal General and Community Plans		
City of Palmdale		
City of Palmdale General Plan—Environmental Resources Element—Policies ER7.1.1 through ER7.1.6, ER7.1.8	Central Subsection (all six Build Alternatives)	The Environmental Resources Element of the *Palmdale General Plan* is intended to provide a basis to evaluate existing resources and plan for their protection. The goal of this Element is to improve the long-term quality of life for Palmdale residents through the rational management of natural resources and open space lands. Specifically, policies ER7.1.1 through ER7.1.6, and ER7.1.8 aim to promote the identification and preservation of historic structures, historic sites, archaeological sites, and paleontological resources in the city.
City of Palmdale General Plan—Circulation Element	Central Subsection (all six Build Alternatives)	The Circulation Element of the *Palmdale General Plan* discusses the need to protect cultural resources during the construction of future circulation system improvements.
City of Burbank		
City of Burbank 2035 General Plan Open Space and Conservation Element—Policies 1.2, 6.2	Burbank Subsection (all six Build Alternatives)	The Open Space and Conservation Element of the *Burbank 2035 General Plan* contains goals and policies that further the protection and maintenance of natural resources in Burbank. The plan includes Policy 1.2: Involve community groups in the identification, acquisition, and management of natural resource areas, recreation facilities, historical and cultural sites, and aesthetic and beautification programs and Policy 6.1: Recognize and maintain cultural, historical, archaeological, and paleontological structures and sites essential for community life and identity.
Los Angeles County		
Los Angeles County General Plan 2035 Conservation and Natural Resources Element—Policies 14.1 through 14.6, Goal C/NR 14	All Subsections (all six Build Alternatives)	The *Los Angeles County General Plan 2035* Conservation and Natural Resources element guides the long-term conservation of natural resources and preservation of available open space areas. Goal C/NR-14 intends to protect historic, cultural, and paleontological resources. Policies 14.1 through 14.6 outline specific actions to preserve cultural resources in Los Angeles County.

Plan	Applicable Subsections	Summary
Los Angeles County Zoning Code, Historic Preservation Ordinance— Policies LU-2.2.2, LU-6.4, LU-6.4.3, CO-5.1.2, CO-5.1.3, CO-5.3.1, CO-5.3.2, CO-5.3.3, Objective CO-5.3	All Subsections (all six Build Alternatives)	The Los Angeles County Zoning Code, Historic Preservation Ordinance intends to enhance and preserve the County's distinctive historic, architectural, and landscape characteristics that are part of the County's cultural, social, economic, political, and architectural history. Policy LU-2.2.2 ensures that sites and areas with historical or cultural value to the community are identified and that uses in or adjacent to these areas will not affect their historical integrity. Objective LU-6.4 and Policy LU-6.4.3 intend to protect and maintain the Santa Clarita Valley's significant historical and cultural resources, such as the areas around Vasquez Rocks, Elsmere Canyon, and along the Santa Clara River. Policy CO-5.1.2 and Policy CO-5.1.3 identify protection measures that would be applied in the case of future changes, such as proposed alterations and new information. Objective CO-5.3, Policy CO-5.3.1, Policy CO-5.3.2, and Policy CO-5.3.3 encourage conservation and preservation of Native American cultural places throughout all stages of the planning and development process.
City of Los Angeles		
Sylmar Community Plan—Policies LU 3.1, LU 5.2, Goal LU 24, Policy 24.1, 24.5	Central Subsection (all six Build Alternatives)	The purpose of the *Sylmar Community Plan* is to shape positive community change, foster sustainable land use patterns, and balance the unique character of the community with citywide policies and regional initiatives. The Land Use and Design section of the Community Plan guides growth in a manner that helps preserve, protect, and enhance existing natural, historic, architecture, and cultural resources. Goal LU 24 envisions a community with distinct and historically significant character, which values and preserves its historic resources and cultural amenities. Policies LU 24.1 and LU 24.5 serve to protect, preserve, and enhance identified cultural and historical resources, and promote the restoration and reuse of existing buildings as a key component of the city's sustainability policies.
Sun Valley-La Tuna Canyon Community Plan—Objective 1-4, Policy 1-4.1, Goal 17, Objective 17-1, Policy 17-1.1	Central Subsection (all six Build Alternatives)	This plan contains goals, objectives, and policies to preserve and enhance neighborhoods with historic character. Objective 1-4 and Policy 1-4.1 preserve and enhance neighborhoods with a distinctive and significant historical character. Goal 17, Objective 17-1, and Policy 17-1.1 consist of provisions to preserve and restore cultural resources, neighborhoods, and landmarks which have historical and/or cultural significance.

Plan	Applicable Subsections	Summary
Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon Community Plan—Land Use Policies and Programs Section and Historic and Cultural Resources Section— Objective 1.4, Policy 1-4.1, Goal 16, Objective 16-1, Policy 16-1.1	Central Subsection (all six Build Alternatives)	The *Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon Community Plan,* Land Use Policies and Programs section contains policies that consider existing land use patterns, including the presence of architectural features and historical resources. Objective 1-4 outlines the need for perseveration and the need to enhance structures that have a distinctive and significant historical character. This is further outlined in Policy 1-4.1 which encourages reuse of the area's historic resources. The Historic and Cultural Resources section provides a basis for preserving, enhancing, and maintaining sites and structures which have been deemed architecturally and historically significant. Policy 16-4.1 encourages the preservation, maintenance, enhancement, and reuse of existing historically significant buildings and the restoration of original facades.
Los Angeles Municipal Code	Central Subsection (all six Build Alternatives)	The City of Los Angeles Municipal Code prioritizes the restoration, protection, and rehabilitation of the properties, monuments, or elements that are of cultural, historical, or architectural value.

Sources: Southern California Association of Governments, 2016; Authority, 2016, 2017a, 2019c, 2019e, 2019f; 2011; City of Burbank, 2012, 2013; City of Los Angeles, 1996, 1997a, 1997b, 1999, 2010, 2012; City of Palmdale, 1993, 1998, 2007; Los Angeles County, 2015b; 2019b

3.17.3 Consistency with Plans and Laws

As indicated in Section 3.1.4.3, Consistency with Plans and Laws, CEQA and Council on Environmental Quality (CEQ) regulations require a discussion of inconsistencies or conflicts between a proposed undertaking and federal, state, regional, or local plans and laws. As such, this Draft EIR/EIS evaluates inconsistencies between the six Build Alternatives and federal, state, regional, and local plans and laws to provide planning context.

The Authority, as the lead state and federal agency proposing to construct and operate the California HSR System, is required to comply with all federal and state laws and regulations and to secure all applicable federal and state permits prior to initiating construction on the selected Build Alternative. Therefore, there would be no inconsistencies between the six Build Alternatives and these federal and state laws and regulations.

The Authority is a state agency and therefore is not required to comply with local land use and zoning regulations; however, it has endeavored to design and construct the HSR project so that it is consistent with land use and zoning regulations. For example, the proposed six Build Alternatives would incorporate IAMFs that require the contractor to perform additional resource surveys and assessments, develop monitoring plans, and implement protection and/or stabilization measures for protecting cultural resources from construction activities.

Appendix 2-H provides a Regional and Local Policy Consistency Table that lists goals and policies applicable to cultural resources within the Palmdale to Burbank Project Section APE and notes the Build Alternatives consistency or inconsistency with each. The Authority reviewed 10 plans and identified 32 relevant policies. Each of the six Build Alternatives would be consistent with 31 policies and potentially inconsistent with one policy considered. The potential inconsistency is discussed below.

The Refined SR14 and SR14A Build Alternatives would be partially inconsistent with Objective LU-6.4 of the Los Angeles County Zoning Code, Historic Preservation Ordinance (2019). This policy does not apply to the E1, E1A, E2, and E2A Build Alternatives because they would not be

constructed through the Santa Clarita Valley area. This policy is to protect the Santa Clarita Valley's significant historical and cultural resources in a scenic setting through appropriate land use designations. Construction and operations of the Refined SR14 and SR14A Build Alternatives would introduce transportation infrastructure to an otherwise rural area within the Santa Clarity Valley, altering the visual setting of the environment. Implementation of the Refined SR14 and SR14A Build Alternatives may alter the visual setting of existing resources during construction and/or once the project is operational.

With implementation of CUL-IAMF#6, pre-construction conditions assessments will be prepared for historic built resources that may result in the identification of changes to the visual setting associated with construction or operations of the Palmdale to Burbank Project Section (see Section 3.17.5.3 for a list of the IAMFs). Where impacts cannot be avoided, the project would comply with the stipulations regarding the treatment of historic built resources in the MOA and applicable treatment plans.

Despite the inconsistency listed above, the project is still "consistent" overall. Although it may not be possible to meet all cultural resources goals and policies as outlined in Table 3.17-1, IAMFs and mitigation measures will generally minimize impacts and would ultimately meet the overall objectives of the local policies.

3.17.4 Coordination of Section 106 Process with NEPA and CEQA Compliance

The ACHP advises federal agencies to coordinate compliance with Section 106 of the NHPA and the procedures in the regulations implementing Section 106 with steps taken to meet the requirements of NEPA so that they can meet the purposes and requirements of both statutes in a timely and efficient manner. When NEPA review and Section 106 are integrated, ways to avoid, minimize, or mitigate adverse effects while identifying alternatives and preparing NEPA documentation can be assessed. Similarly, both NEPA regulations and CEQA Guidelines encourage the preparation of joint documents as a way to avoid duplication and delay and to coordinate measures to avoid, minimize, or mitigate impacts on historic resources. 36 C.F.R. Part 800 defines the Section 106 process and documentation requirements, which substantially satisfies the requirements to comply with both NEPA and CEQA. Such measures are binding commitments documented in the Draft EIR/EIS, as well as in compliance with Section 106 by the preparation of a MOA. There are some specific NEPA and CEQA requirements that diverge from the Section 106 process; these exceptions are addressed in Section 3.17.5.1.

A PA was executed in July 2011 to satisfy the requirements of Section 106 for the California HSR System (FRA et al. 2011). A PA is a document that records the terms and conditions agreed upon to resolve the potential adverse effects of a complex project, in accordance with Section 106 Part 800.14(b). The signatories of the PA include FRA, the Authority, the ACHP, and the SHPO.

The PA provides an overall framework for how the Authority will achieve compliance with Section 106, and includes stipulations regarding the identification, evaluation, and treatment of historic properties; delineation of the archaeological and historic built APE; consultations with tribal governments, local agencies and interested parties; and standards for technical documentation.

3.17.4.1 Section 106 Technical Studies Prepared for the Project

Table 3.17-2 lists the technical studies that were prepared to comply with Section 106 requirements. These studies are further described below.

Table 3.17-2 Section 106 Technical Reports and Concurrence Dates

Report Title	Report Date	SHPO Concurrence Date
Palmdale to Burbank Project Section Archaeological Survey Report[1]	April 2019	April 22, 2019
Palmdale to Burbank Project Section Historic Architecture Survey Report	July 2019	August 30, 2019
Palmdale to Burbank Project Section Finding of Effect	May 2021	September 3, 2021
Memorandum of Agreement	Pending submittal	Pending concurrence

Sources: SHPO, 2019
[1] This document is confidential and not available for public release.
SHPO = State Historic Preservation Officer

The above-listed reports document the Authority's compliance with Section 106. As stated in Section 3.17.4, the Section 106 process and documentation requirements substantially satisfy the requirements to comply with both NEPA and CEQA. In general, the ASR documents research efforts, known archaeological sites, newly discovered archaeological sites, and consultation efforts with Native American tribes. The HASR documents research efforts, known historic built resources, newly identified historic built resources, and consultation efforts with historical interest groups. The FOE documents how the Palmdale to Burbank Project Section Preferred Alternative would affect historic properties, both archaeological and built.[3] These documents inform the findings described in this section.

Stipulation VIII.A of the PA requires that a MOA be developed by the Authority for each project where the Authority determines there would be an adverse effect on historic properties or when phased identification is necessary and adverse effects would occur. The MOA documenting agreement on the treatment of historic properties within the Palmdale to Burbank Project Section will be developed with input from consulting parties (see Section 3.17.4.2), and will be executed concurrently with the completion of the Final EIR/EIS and the Record of Decision (ROD) by the Authority. Following the execution of the MOA, and in accordance with PA Stipulations VIII.B.i and VIII.B.ii, treatment plans—one for archaeological resources and one for historic built resources—will be developed by the Authority to detail the treatment measures negotiated for historic properties within the Palmdale to Burbank Project Section. The Archaeological Treatment Plan (ATP) and Built-Environment Treatment Plan (BETP) will define the process by which these treatment measures would be applied to each known resource identified in the MOA as being adversely affected, and will also outline measures for the phased identification of historic properties as additional parcel access is obtained and design work is completed. The MOA and treatment plans will provide specific performance standards that ensure each adverse effect would be avoided, minimized, or mitigated. The measures stipulated in the Section 106 consultation process have been coordinated with the measures outlined in this Draft EIR/EIS. These measures will be incorporated into the design and construction documents to ensure they are incorporated into the Palmdale to Burbank Project Section.

3.17.4.2 Agency, Native American, Interested Parties, and Public Outreach Efforts

NEPA, CEQA, and Section 106 each require that outreach regarding cultural resources be conducted to government agencies, Native Americans, and other parties who may have a demonstrated historic preservation interest in a project. To the extent possible, the cultural resources outreach requirements for NEPA, CEQA, and Section 106 have been coordinated to identify interested parties early in the process to achieve maximum participation in identifying cultural resources, addressing impacts on cultural resources, and developing appropriate

[3] The Authority prepared a FOE document pursuant to the requirements of Section 106, which is specific to the Preferred Alternative. The Authority has identified the SR14A Build Alternative as its Preferred Alternative.

mitigation measures. The primary goals of this outreach are to help identify cultural resources of concern to these parties and to provide them an opportunity to become Section 106 consulting parties and participate in the development of significance findings, assessments of effect/impact, and in the development of mitigation measures. For this reason, cultural resources outreach for the Palmdale to Burbank Project Section began in 2009 during the early scoping phase of the process.

Guiding documents include the PA, which describes the process for consulting with Native Americans and other interested parties. Specifically, Stipulation V.A. of the PA states that "the public and consulting parties will have an opportunity to comment and have concerns taken into account on findings identified in Section 106 survey and effects documented via attendance at public meetings where they can submit comments on the information presented, as well as access to the Section 106 documents via email requests to the Authority's website." Furthermore, Stipulation V.C specifies that tribal consulting parties shall be consulted at key milestones in the Section 106 and NEPA processes to gain input from the tribal governments. Consultation with the Section 106 consulting parties has remained ongoing throughout the environmental document preparation process and will continue through the construction phase of the Palmdale to Burbank Project Section during implementation of the MOA and treatment plans.

Agency and Interested Party Outreach

Consultation with local, state, and federal agencies and other interested parties has been ongoing throughout the California HSR System planning process. Table 3.17-3 provides the names of potentially interested parties and includes local government planning departments, historic preservation organizations, historical societies, libraries, and museums.

Table 3.17-3 also summarizes the outreach to federal, state, regional, and local agencies that may have responsibilities for historic properties and may want to review reports and findings within their jurisdiction, as well as outreach to other potentially interested parties and individuals.

Table 3.17-3 Summary of Outreach Efforts to Government Agencies, Historical Societies, and Other Interested Consulting Parties

Entity	Action and Date	Summary
Federal, State, Regional, or Local Agencies		
Acton Town Council	1/18/2017 site visit; 3/27/2017 email submitted	4/3/2017: Voted to become a consulting party.
Advisory Council on Historic Preservation	Coordination is ongoing	Finding of Effects will be provided, and the Advisory Council will be invited to participate in the MOA.
U.S. Department of the Interior, Bureau of Land Management	Coordination is ongoing	Section 106 documentation will be provided for review and comment. The cooperating agency will participate in development of the MOA.
Surface Transportation Board	Coordination is ongoing	Section 106 documentation will be provided for review and comment. The cooperating agency will participate in development of the MOA.
Angeles National Forest	Letter submitted 6/3/2016	6/26/2016: Reaffirmation to continue participation/consultation.
California Department of Transportation District 7 office	Letter submitted 6/3/2016	No response received.
Los Angeles County Department of Parks and Recreation	Letter submitted 1/19/2017	2/2/2017: Confirmed as a consulting party.

Entity	Action and Date	Summary
Los Angeles County Department of Regional Planning	Letter submitted 6/3/2016	6/17/2016: Confirmed as a consulting party; requested GIS files of proposed alignments.
Southern California Association of Governments—Transportation Planning	Letter submitted 6/3/2016	6/27/2016: Confirmed a consulting party.
City of Burbank City Council	Letter submitted 6/3/2016	No response received.
City of Burbank—Planning and Transportation Division (Historic Preservation Program)	Letter submitted 6/3/2016	No response received.
City of Los Angeles City Council	Letter submitted 6/3/2016	No response received.
City of Los Angeles—Planning Department—Office of Historic Resources	Letter submitted 6/3/2016	3/8/2017: Confirmed as a consulting party.
City of Palmdale City Council	Letter submitted 6/3/2016	No response received.
City of Palmdale—Planning Department	Letter submitted 6/3/2016	No response received.
City of San Fernando City Council	Letter submitted 6/3/2016	No response received.
City of San Fernando—Community Development/Planning	Letter submitted 6/3/2016	No response received.
City of Santa Clarita	Letter submitted 6/3/2016	6/24/2016: Provided information on previously recorded cultural resources.
Los Angeles County Historic Landmarks and Records Commission	Letter submitted 6/3/2016	No response received.
State Historic Preservation Officer	Coordination is ongoing	Section 106 documentation will be provided for review and comment. The cooperating agency will participate in development of the MOA.
Historic Preservation Interest Groups or Individuals		
Antelope Valley Archaeological Society	Letter submitted 6/3/2016	No response received.
Archaeological Information Center UCLA Institute of Archaeology	Letter submitted 6/3/2016	No response received.
California Preservation Foundation	Letter submitted 6/3/2016	No response received.
Haramokngna American Indian Cultural Center	Letter submitted 6/3/2016	No response received.

Entity	Action and Date	Summary
Los Angeles Conservancy	Letter submitted 6/3/2016	7/15/2016: Confirmed as a consulting party.
Los Angeles Forum for Architecture and Urban Design	Letter submitted 6/3/2016	No response received.
Mexican Cultural Institute	Letter submitted 6/3/2016	No response received.
Modern Committee of the Los Angeles Conservancy	Letter submitted 6/3/2016	No response received.
Mural Conservancy of Los Angeles	Letter submitted 6/3/2016	No response received.
National Trust for Historic Preservation	Letter submitted 6/3/2016	No response received.
Pacific Coast Archaeological Society	Letter submitted 6/3/2016	No response received.
Pacific Crest Trail Association	Letter submitted 6/3/2016	No response received.
San Gabriel Mountains Regional Conservancy	Letter submitted 6/3/2016	No response received.
Society for California Archaeology	Letter submitted 6/3/2016	No response received.
Society of Architectural Historians, Southern California Chapter	Letter submitted 6/3/2016	No response received.
Southern California Institute of Architecture	Letter submitted 6/3/2016	No response received.
Vietnamese American Cultural and Social Council	Letter submitted 6/3/2016	No response received.
Area Museums		
Academy of Motion Picture Arts and Sciences Museum	Letter submitted 6/3/2016	No response received.
California African American Museum	Letter submitted 6/3/2016	No response received.
California Heritage Museum	Letter submitted 6/3/2016	No response received.
California State Railroad Museum	Letter submitted 6/3/2016	No response received.
Los Angeles Fire Department Historical Society/Hollywood Museum	Letter submitted 6/3/2016	No response received.
Los Angeles Police Museum	Letter submitted 6/3/2016	No response received.

Entity	Action and Date	Summary
Mission San Fernando	Letter submitted 6/3/2016	No response received.
Natural History Museum of Los Angeles County, Seaver Center for Western History	Letter submitted 6/3/2016	No response received.
Sons of the Revolution Library and Museum	Letter submitted 6/3/2016	No response received.
Southern California Historical Aviation Foundation Western Museum of Flight	Letter submitted 6/3/2016	No response received.
The Antelope Valley Indian Museum	Letter submitted 6/3/2016	No response received.
The Fowler Museum of Cultural History, UCLA	Letter submitted 6/3/2016	No response received.
William S. Hart County Park and Museum	Letter submitted 6/3/2016	No response received.
Local Historical Societies		
American Historical Association, Pacific Coast Branch	Letter submitted 6/3/2016	No response received.
American Irish Historical Society, California Branch	Letter submitted 6/3/2016	No response received.
Associated Historical Societies of Los Angeles County	Letter submitted 6/3/2016	No response received.
Burbank Historical Society	Letter submitted 6/3/2016	No response received.
California Historic Cemetery Alliance	Letter submitted 6/3/2016	No response received.
California Historical Society	Letter submitted 6/3/2016	No response received.
Chatsworth Historical Society	Letter submitted 6/3/2016	No response received.
Chinese Historical Society of Southern California	Letter submitted 6/3/2016	No response received.
Filipino-American National Historical Society, Los Angeles Chapter	Letter submitted 6/3/2016	No response received.
Hamazkayin Western USA Regional Executive Armenian Educational and Cultural Society	Letter submitted 6/3/2016	No response received.
Historical Society of Southern California	Letter submitted 6/3/2016	No response received.

Entity	Action and Date	Summary
Jewish Historical Society of Southern California	Letter submitted 6/3/2016	No response received.
Los Angeles City Historical Society	Letter submitted 6/3/2016	No response received.
Los Angeles Schwaben Verein (German-American)	Letter submitted 6/3/2016	No response received.
Pacific Railroad Society	Letter submitted 6/3/2016	No response received.
Preserve Burbank	Letter submitted 6/3/2016	No response received.
Railway and Locomotive Historical Society, Southern California Chapter	Letter submitted 6/3/2016	No response received.
San Fernando Valley Historical Society	Letter submitted 6/3/2016	No response received.
Santa Clarita Valley Historical Society	Letter submitted 6/3/2016	No response received.
Southern Pacific Historical & Technical Society	Letter submitted 6/3/2016	No response received.
The Electric Railway Historical Association of Southern California	Letter submitted 6/3/2016	No response received.
West Antelope Valley Historical Society	Letter submitted 6/3/2016	No response received.
Western States Folklore Society	Letter submitted 6/3/2016	No response received.
Additional Organizations		
Burbank Public Library (Central)	Letter submitted 6/3/2016	No response received.
City of Santa Clarita Public Library, Canyon Country Jo Anne Darcy Library	Letter submitted 6/3/2016	No response received.
Los Angeles County Public Library, Acton Agua Dulce Library	Letter submitted 6/3/2016	No response received.
Los Angeles County Public Library, San Fernando Library	Letter submitted 6/3/2016	No response received.
Los Angeles Public Library (Central)	Letter submitted 6/3/2016	No response received.

Source: Authority, 2019b
GIS = geographic information system; MOA = Memorandum of Agreement; TBD = to be determined; UCLA = University of California, Los Angeles; U.S. = United States

Native American Outreach and Consultation

The Authority seeks to engage tribal governments in the early stages of California HSR System development and during the preparation of cultural resources studies by affording them the opportunity to participate in the cultural resources investigations throughout the project delivery process. Cal. Public Res. Code Section 21080.3.1 requires a lead state agency to consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed Palmdale to Burbank Project Section. Cal. Public Res. Code Section 21080.3.2 requires that, as part of the consultation, the parties may propose mitigation measures capable of avoiding or substantially lessening significant impacts on a tribal cultural resource. Additionally, Cal. Public Res. Code Section 21082.3 requires that mitigation measures agreed upon through this consultation shall be included in the environmental document. In accordance with 36 C.F.R. 800.2(c)(2) and the PA, federally recognized Native American tribes are to be given the opportunity to identify their concerns about historic properties, advise on the identification and evaluation of historic properties, articulate their views on the undertaking's effects on such properties, and participate in the resolution of adverse effects.

The Authority and FRA relied on the NAHC to identify Native American tribal governments with whom it is most appropriate to consult for a given geographical area. These include both federally recognized and non-federally recognized tribes. A revised and updated list of local tribes is regularly obtained from the NAHC to validate that the most current tribal contact information is used when communicating with tribal representatives. The USFS was also consulted regarding tribal consultation and provided their list of tribes, groups and individuals, which was included in the consultation conducted by the Authority. The tribes identified as having interest in the Palmdale to Burbank Project Section have been consulted early and throughout the environmental review process to ensure they are kept informed and engaged about project changes and advances and to seek tribal input regarding concerns about effects on important tribal cultural resources. Consultation with interested tribes include tribal contributions to the identification of resources and culturally sensitive areas, participation in Palmdale to Burbank Project Section alignment tours, and participation in pedestrian archaeological field surveys. Tribes also contribute to, review, and may comment on cultural resources technical reports, and assist in the development of MOAs and treatment plans.

Table 3.17-4 summarizes the outreach with Native Americans undertaken to date. The Authority will continue to consult with Native American tribes and individuals after the ROD, as the previously inaccessible parcels are acquired, accessed, and surveyed. With qualified archaeologists, tribal members may participate in monitoring construction activities in archaeologically sensitive areas. The MOA will include provisions for phased identification of archaeological resources because of limited access to perform pedestrian archaeological surveys.

FRA initiated project-level government-to-government outreach in 2009 and 2010. The NAHC provided the Authority with a list of Native American tribes and representatives on September 10, 2009; October 26, 2011; February 9, 2014; March 3, 2014; August 11, 2014; February 9, 2015; January 24, 2017; and July 16, 2018. The following tribes and tribal representatives identified for the Palmdale to Burbank Project Section were contacted to provide them with information and updates about the project section and to seek tribal input regarding concerns about effects on important tribal cultural resources:

- Richard Angulo (Chumash; no tribe affiliation)
- Barbareño/Ventureño Band of Mission Indians
- Beverly Salazar Folkes (Chumash, Tataviam, Fernandeño; no tribe affiliation)
- Carol A. Pulido (Chumash; no tribe affiliation)
- Coastal Band of the Chumash Nation
- Fernandeño Tataviam Band of Mission Indians
- Frank Arredondo (Chumash; no tribe affiliation)
- Gabrieleño Band of Mission Indians Kizh Nation
- Gabrielino/Tongva Indians of California Tribal Council

- Gabrielino/Tongva Nation
- Gabrielino/Tongva San Gabriel Band of Mission Indians
- Gabrieleño Tribe
- Kern Valley Indian Council
- Kitanemuk and Yowlumne Tejon Indians
- Los Angeles City/County Native American Indian Commission
- Melissa M. Parra-Hernandez (Chumash; no tribe affiliation)
- Owl Clan
- Peu Yoko Perez (Chumash; no tribe affiliation)
- Randy Guzman-Folkes (Chumash, Fernandeño, Tataviam, Shoshone Paiute, Yaqui; no tribe affiliation)
- San Fernando Band of Mission Indians
- San Luis Obispo County Chumash Council
- San Manuel Band of Mission Indians
- Santa Ynez Tribal Elders Council
- Tongva Ancestral Territorial Tribal Nation

The NAHC searches have identified Native American cultural resources within 0.5-mile of the archaeological APE in the Acton, Newhall, and Ritter Ridge U.S. Geological Survey (USGS) quadrangles. No sacred lands have been identified in the archaeological APE.

Table 3.17-4 Summary of Outreach Efforts to Identify Native American Consulting/Concurring Parties

Communication Type	Date	Tribal Representative	Summary
Letter	3/2009	All California tribes	In March 2009, project fact sheets and invitations to attend a scoping meeting were sent.
Letter	9/15/2009	Fernandeño Tataviam Band of Mission Indians; San Fernando Band of Mission Indians; Los Angeles City/County Native American Commission; Tongva Ancestral Territorial Tribal Nation; other individuals with no tribal affiliation.	Outreach letters mailed to tribes.
Email; Letter	9/11/2009	Tongva Ancestral Territorial Tribal Nation	Tribe stated opposition to the California HSR System.
Letter	9/17/2009	All California tribes	A consultation request letter was mailed to tribes listed in the tribal consultation plan.
Letter	10/1/2009	All California tribes	In October 2009, letters were sent to individual contacts provided by NAHC.
Email; Meeting	10/21/2009	San Fernando Band of Mission Indians	Tribe Chairman requested NAHC coordination regarding sensitive areas along with other project information, requested copy of information to be emailed to them. Section-specific project information was emailed to them on 9/21/2009.
Phone Call	11/1/2009	All California tribes	In November 2009, a phone call and a follow-up call were placed to each contact provided by the NAHC requesting comment or information.
Letter	11/23/2009	Fernandeño Tataviam Band of Mission Indians	Tribe requested alignment tour/site visit and offered monitoring services.
Letter	2/25/2010	Los Angeles City/County Native American Commission; Fernandeño Tataviam Band of Mission Indians; San Fernando Band of Mission Indians; San Manuel Band of Mission Indians; Soboba Band of Luiseno Indians; and another individual with no tribal affiliation	FRA sent letters to initiate government-to-government consultation pursuant to Section 106.
Email	3/2/2010	Tongva Ancestral Territorial Tribal Nation	Re-initiation of tribal consultation.

Communication Type	Date	Tribal Representative	Summary
Letter	3/8/2010	Fernandeño Tataviam Band of Mission Indians	Tribe responded to letter that initiated government-to-government consultation that was mailed from FRA to California federally recognized tribes on 2/25/2018. The Tribe requested to participate.
Letter	3/8/2010	Fernandeño Tataviam Band of Mission Indians	Tribe requested to participate, provided fee schedule of monitors, map of traditional tribal territory.
Letter	5/17/2010	Gabrielino/Tongva Nation	Authority acknowledged Tribe's interest in serving as a consulting party under Section 106.
Letter	12/6/2010	All California federally recognized tribes	Follow-ups to initial request for government-to-government coordination and invitation for federally recognized tribes to participate in a 12/15/2010 teleconference.
Teleconference; Phone Call	12/15/2010	Pechanga Band of Luiseno Indians; Santa Rosa Tachi Yokut Tribe; Soboba Band of Luiseno Indians	Informal meeting to discuss the Section 106 approach and solicit input from tribes. Teleconference included FRA, ACHP, SHPO. All California federally recognized tribes were invited; however, only Pechanga Band of Luiseno Indians, Santa Rosa Tachi Yokut Tribe, and Soboba Band of Luiseno Indians participated.
Teleconference	1/19/2011	All California tribes	FRA hosted an informal tribal teleconference to discuss comments on the draft PA and next steps.
Teleconference	2/24/2011	Soboba Band of Luiseno Indians	Tribe responded to FRA's letter summarizing the 12/15/2010 teleconference and invitation to attend next teleconference planned for 1/19/2011.
Letter	3/8/2011	Soboba Band of Luiseno Indians	Tribe responded to letter initiating government-to-government consultation that was mailed from FRA to federally recognized tribes on 2/25/2010.
Letter	3/21/2011	San Manuel Band of Mission Indians	Tribe responded to letter initiating government-to-government consultation that was mailed from FRA to California federally recognized tribes on 2/25/2010.
Letter	5/27/2011	All California federally recognized tribes	Letter sent from FRA to California federally recognized tribes inviting them to consult with FRA about the California HSR System; meeting to be held between 6/20/2011 and 6/24/2011.

Communication Type	Date	Tribal Representative	Summary
Fax; Letter	10/26/2011	Counties in Palmdale to Los Angeles Union Station Build Alternatives	NAHC sent URS Corporation updated contact list and Sacred Lands File search results.
Letter	12/28/2011	All California federally recognized tribes	Letter from FRA to federally recognized tribes summarized the 12/15/2010 conference call and issued an invitation to a second telephone conference planned for 1/19/2011.
Letter; Email	2/16/2012	Tongva Ancestral Territorial Tribal Nation; San Manuel Band of Mission Indians; Gabrielino/Tongva San Gabriel Band of Mission Indians; San Fernando Band of Mission Indians; Kitanemuk and Yowlumne Tejon Indians; Los Angeles City/County Native American Commission; Fernandeño Tataviam Band of Mission Indians; other individuals with no tribal affiliation	Consultant sent outreach letter soliciting comments and/or information from tribes.
Phone Call	3/2/2012	Individuals with no tribal affiliation	Response to 2/16/2012 letter. An individual with no tribal affiliation was concerned with the area between Palmdale and Santa Clarita and requested that both archaeological and Native American monitors be present during construction. Another individual wanted to have Native American monitors present throughout all stages of construction, either on site or on call. They mentioned that there are a few sites in the area and that they would like to be involved in the process; can provide Native American monitors if needed.
Presentation; Meeting	5/16/2012	Caltrans Native American Advisory Committee	Quarterly meeting held in Woodland; an overview of the California HSR System and tribal participation was presented to NAAC meeting members.
Meeting	6/13/2012	NAHC	NAHC quarterly meeting; overview and status of the HSR program and tribal involvement were presented to the commissioners and public participants at the meeting.
Presentation; Meeting	8/1/2012	Caltrans Native American Advisory Committee	Quarterly meeting hosted; presentation by the Authority, held in Los Angeles.
Letter	8/13/2012	All California tribes	Updated NAHC contact list obtained for purposes of statewide tribal outreach.

Communication Type	Date	Tribal Representative	Summary
Letter	8/20/2012	All California tribes	Letter prepared collaboratively by of the Authority and the NAHC. The purpose of the letter was to heighten awareness and encourage tribal participation in the HSR program. NAHC sent the letter on its letterhead to bolster participation.
Letter; Phone Call	8/28/2012	Barbareño-Ventureño Band of Mission Indians	Authority sent a copy of the PA with portions highlighted that specifically address tribal involvement.
Presentation	3/20/2013 and 5/8/2013	Caltrans Native American Advisory Committee	Presentation at the quarterly Caltrans NAAC meeting in Woodland, providing an update and status of the California HSR System to NAAC participants.
Presentation; Conference	6/12/2013	Bureau of Indian Affairs	Bureau of Indian Affairs, Central California Tribal Leadership Conference; a representative of CalSTA gave a brief presentation about the California HSR System on behalf of the Authority.
Presentation	7/31/2013	Caltrans Native American Advisory Committee	Presentation at the quarterly Caltrans NAAC meeting in Valley Center (Southern California), providing an update and status of the California HSR System to NAAC members who represent tribal governments statewide.
Email	8/7/2013	Caltrans Native American Advisory Committee	The Authority sent NAAC members information about the Authority's Small/DBE program.
Meeting	9/3/2013	All California tribes invited	CalSTA Tribal Consultation Policy Listening Forum.
Presentation; Meeting	10/23/2013	Caltrans Native American Advisory Committee	The California HSR System status and update presentation made to members of the NAAC.
Presentation	1/17/2014	NAHC	NAHC quarterly meeting.
Fax	2/19/2014 and 3/3/2014	NAHC	NAHC conducted Sacred Land File search and provided contact list for Los Angeles County tribes.
Meeting	3/12/2014	Caltrans Native American Advisory Committee	The Authority provided an update and status of the California HSR System for the NAAC membership.

Communication Type	Date	Tribal Representative	Summary
Email	5/13/2014	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; Gabrielino/Tongva San Gabriel Band of Mission Indians; Gabrielino Tongva Indians of California Tribal Council; Gabrielino/Tongva Nation; Gabrielino-Tongva Tribe; Kern Valley Indian Community; Kitanemuk and Yowlumne Tejon Indians; Los Angeles City/County Native American Commission; San Fernando Band of Mission Indians; San Manuel Band of Mission Indians; Tongva Ancestral Territorial Tribal Nation	Notification to members of the local tribal community regarding upcoming community open house meetings taking place for the Palmdale to Los Angeles Project Section.
Meeting	5/28/2014	Caltrans Native American Advisory Committee	The Authority provided an update/status of the California HSR System.
Email	7/25/2014	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; Gabrielino-Tongva Tribe; Gabrielino/Tongva San Gabriel Band of Mission Indians; Gabrielino/Tongva Nation; Kern Valley Indian Community; San Manuel Band of Mission Indians; San Fernando Band of Mission Indians; Tongva Ancestral Territorial Tribal Nation; Los Angeles City/County Native American Commission; Kitanemuk and Yowlumne Tejon Indians; Gabrielino Tongva Indians of California Tribal Council	Notification to members of the local tribal community regarding the publication of the NOI and NOP for the Palmdale to Burbank Project Section.
Email	8/11/2014	NAHC	NAHC provided a contact list for Los Angeles County tribes.
Letter; Email	8/26/2014	Barbareño-Ventureño Band of Mission Indians; Coastal Band of the Chumash Nation; Gabrielino Tongva Indians of California Tribal Council; Gabrielino/Tongva San Gabriel Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; Fernandeño Tataviam Band of Mission Indians; Kern Valley Indian Community; Kitanemuk and Yowlumne Tejon Indians; Los Angeles City/County Native American Commission; Owl Clan; San Manuel Band of Mission Indians; San Fernando Band of Mission Indians; Santa Ynez Band of Chumash Indians/Santa Ynez Elders Council; Tongva Ancestral Territorial Tribal Nation; Gabrielino-Tongva Tribe; Gabrielino/Tongva Nation; other individuals with no tribal affiliation	Letter invitation to an Authority-hosted tribal information meeting (for tribal representatives, by invitation only) to discuss matters of cultural resources concern for the Palmdale to Burbank and Burbank and Los Angeles Project Sections.

Communication Type	Date	Tribal Representative	Summary
Meeting	8/27/2014	Caltrans Native American Advisory Committee	Authority staff gave an overview and update of the California HSR System to NAAC members at quarterly meeting, which included representatives from tribes statewide.
Letter; Email	9/12/2014	Caltrans Native American Advisory Committee	Email/letter sent to Committee Chairman (copied to all NAAC members) addressing HSR small business goals and employment opportunities for tribes.
Meeting; Teleconference	9/25/2014	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; San Manuel Band of Mission Indians; Gabrielino/Tongva Nation; Tongva Ancestral Territorial Tribal Nation; other individuals with no tribal affiliation	Authority-hosted tribal information meeting (for tribal representatives, by invitation-only) to discuss matters of cultural resources concern for the Palmdale to Burbank and Burbank to Los Angeles Project Sections.
Email	10/1/2014	Barbareño-Ventureño Band of Mission Indians	Authority and the Tribe exchanged emails regarding the meeting in Sylmar on 9/25/2014 and about ways the Tribe can participate.
Email	10/7/2014	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; San Manuel Band of Mission Indians; Gabrielino/Tongva Nation; Tongva Ancestral Territorial Tribal Nation; other individuals with no tribal affiliation	The Authority provided a summary of the tribal information meeting that took place on 9/25/2014.
Email	10/9/2014	Statewide	Notification to tribes statewide that CalSTA will be hosting a tribal consultation meeting to discuss matters of concern to the tribal community.
Presentation	10/17/2014	NAHC	Presentation to the commissioners of the NAHC during the public session of its quarterly meeting.
Email	10/27/2014	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; Gabrielino Tongva Indians of California Tribal Council; Gabrielino/Tongva San Gabriel Band of Mission Indians; Barbareño-Ventureño Band of Mission Indians; San Fernando Band of Mission Indians; San Manuel Band of Mission Indians; Tongva Ancestral Territorial Tribal Nation; other individuals with no tribal affiliation	Email outreach to the Palmdale to Los Angeles Project Section tribal representatives, reiterating that the Authority is moving forward with planning efforts to identify suitable Build Alternatives.

Communication Type	Date	Tribal Representative	Summary
Presentation	11/12/2014	Caltrans Native American Advisory Committee	Authority staff gave an overview and update of the California HSR System to NAAC members at its quarter meeting, which included representatives from tribes statewide.
Email	11/12/2014	Fernandeño Tataviam Band of Mission Indians	The Tribe responded to email sent as a follow-up to the 9/25/2014 meeting. The Authority provided tribal consulting party information.
Meeting	11/20/2014	Statewide	The Governor's quarterly agency/department tribal liaison meeting involved updates and information from the Office of the Governor's Tribal Liaison regarding consultation policies, legislative updates, and training opportunities.
Email	12/3/2014	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; San Manuel Band of Mission Indians; Gabrielino/Tongva Nation; Tongva Ancestral Territorial Tribal Nation; other individuals with no tribal affiliation	Tribal representatives for the Palmdale to Burbank Project Section. Email notification to tribes regarding the upcoming community open house meetings scheduled for the Palmdale to Burbank Project Section.
Email	12/7/2014 and 12/8/2014	Gabrieleño Band of Mission Indians Kizh Nation	Email exchange with Chairman, who expressed interest in becoming a Section 106 consulting party.
Phone Call; Email	12/10/2014	Gabrielino Tongva Indians of California Tribal Council	Phone call and email exchange with Chairman regarding the status of the Palmdale to Burbank and Burbank to Los Angeles Project Sections.
Email	12/16/2014	Fernandeño Tataviam Band of Mission Indians	Emails exchanged to follow up on 12/8/2014 teleconference. The Authority and the Tribe discussed a time to meet.
Letter; Email	1/6/2015	Fernandeño Tataviam Band of Mission Indians	Tribe signed and sent consulting party form on 1/6/15. On 1/23/2015, the Authority confirmed receipt and stated that it cannot reimburse for Section 106 consultation.
Email	1/9/2015	Gabrieleño Band of Mission Indians Kizh Nation	Authority confirmed receipt of the tribe's consulting party form. Tribe becomes a consulting party.
Email	1/26/2015	Barbareño-Ventureño Band of Mission Indians	The Authority and the Tribe exchanged emails regarding tribal consulting party paperwork.

Communication Type	Date	Tribal Representative	Summary
Fax	2/10/2015	NAHC	NAHC conducted Sacred Land File search and provided contact list for Los Angeles County tribes.
Presentation; Meeting	2/18/2015	Caltrans Native American Advisory Committee	Authority staff gave an overview and update of the California HSR System to NAAC members at its quarterly meeting, which included representatives from tribes statewide.
Email	5/8/2015	Barbareño-Ventureño Band of Mission Indians; Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; Gabrielino/Tongva San Gabriel Band of Mission Indians; Gabrielino Tongva Indians of California Tribal Council; San Fernando Band of Mission Indians; San Manuel Band of Mission Indians; Tongva Ancestral Territorial Tribal Nation; other individuals with no tribal affiliation	Email from Authority Tribal Liaison to tribes, notifying them of the May/June public open house meeting series for the Palmdale to Burbank Project Section.
Email	5/12/2015	Gabrielino Tongva Indians of California Tribal Council	Email follow-up to a phone call received from the Tribal Council's Chairman regarding the Palmdale to Burbank Project Section.
Conference Call	5/13/2015	Caltrans Native American Advisory Committee	Authority staff gave an overview and update of the California HSR System to NAAC members at its quarterly meeting, which included representatives from tribes statewide.
Letter	6/4/2015	Soboba Band of Luiseno Indians	The Tribe requested government-to-government consultation in response to the 5/29/2015 outreach letter. The Authority responded to the Tribe on 06/16/2015.
Letter; Email	6/17/2015	Fernandeño Tataviam Band of Mission Indians	Email with attached letter stating that the Fernandeño Tataviam Tribe opposes the Refined SR14 alignment and favors the E1 and E2 Build Alternatives through the ANF.
Presentation/ Discussion	6/18/2015	Statewide	CalSTA hosted an annual tribal consultation meeting to which all California tribal leaders and representatives were invited. Tribal leaders had the opportunity to discuss statewide transportation issues.
Letter	6/18/2015	San Manuel Band of Mission Indians	Received letter from Tribe requesting formal notification about the California HSR System under AB 52. The Authority responded to the Tribe's letter on 06/30/2015.

Communication Type	Date	Tribal Representative	Summary
Email	7/23/2015	Gabrieleño Band of Mission Indians Kizh Nation	Tribe formally requested consultation/notification under AB 52 (Tribe is a consulting party under Section 106; see 1/9/2015).
Presentation/ Discussion	8/12/2015	Statewide	NAAC members and agency representatives. Authority staff gave an overview and update of the HSR program to NAAC members at its quarterly meeting, which included representatives from tribes statewide.
Email	11/17/2015	Tongva Ancestral Territorial Tribal Nation	Tribe requested formal consultation under AB 52.
Meeting	11/18/2015	Caltrans Native American Advisory Committee	Authority provided project status and updates to the committee to help keep the tribal community informed, raise awareness, encourage tribal participation, and lay the groundwork for future consultations with tribes.
Meeting	2/24/2016	Fernandeño Tataviam Band of Mission Indians	Focused meeting with Tribe to discuss Bakersfield to Palmdale Project Section; PL.P2K (Palmdale to Burbank); and PL.K2L (Burbank to L.A. Union Station). The Authority sent the Tribe a summary of the consultation meeting of 2/24/2016. The Authority also sent tribal monitor designation form.
Email	3/3/2016	Gabrieleño Band of Mission Indians Kizh Nation	Tribe sent the Authority signed designated monitor forms. Tribe selected designated monitors.
Teleconference	3/8/2016	Gabrieleño Band of Mission Indians Kizh Nation	Phone meeting with members of the Gabrieleño Kizh Tribe to discuss their concerns, involvement in the project, and opportunities to participate.
Meeting; Presentation	3/9/2016	Caltrans Native American Advisory Committee	The Authority gave a presentation about the California HSR System, including an overview and status/schedule of the various project sections.
Meeting; Presentation	3/25/2016	All tribes statewide were invited. Pechanga Band of Luiseno Indians attended the meeting.	The second of three statewide tribal listening sessions aimed at reaching out to California tribes that may be interested in the cultural resources investigations for the California HSR System. Tribes statewide were invited to attend. Meeting held in San Diego. The Pechanga Band of Mission Indians was the only attendee.

Communication Type	Date	Tribal Representative	Summary
Email	3/29/2016	Tribes statewide were invited to attend. Table Mountain Rancheria; Santa Ynez Band of Chumash Indians/Santa Ynez Elders Council; Agua Caliente Band of Cahuilla; Big Sandy Rancheria of Western Mono Indians of California; Susanville Indian Rancheria; Wuksache Indian Tribe/Eshom Valley Band	The third and final of three statewide tribal listening sessions aimed at reaching out to California tribes that may be interested in the cultural resource investigations for the California HSR System.
Email	3/30/2016	Tongva Ancestral Territorial Tribal Nation	Authority provided section-specific project updates and inquired whether the Tribe is interested in becoming a consulting party.
Email	5/4/2016	Fernandeño Tataviam Band of Mission Indians	Authority confirmed that the Tribe is a consulting party for the Bakersfield to Palmdale, Palmdale to Burbank, and Burbank to Los Angeles Project Sections. Tribe provided the Authority with an ethnographic article.
Email	5/4/2016	Gabrieleño Band of Mission Indians Kizh Nation	The Authority followed up regarding the Tribe's desire to contribute to ethnography for sections it is consulting on.
Phone Call; Email	5/13/2016 and 6/1/2016	Gabrieleño Band of Mission Indians Kizh Nation	The Tribe will be preparing its ethnographic contributions to the cultural technical reports for the sections on which the Tribe is consulting.
Email	5/23/2016	Fernandeño Tataviam Band of Mission Indians	Email exchange between the Authority and the Tribe regarding section-specific project consultation and an invitation to the 6/2/2016 meeting.
Teleconference	6/2/2016	Fernandeño Tataviam Band of Mission Indians	Topics of the teleconference included contact information for tribal monitors and tribal authorship of ethnography section for technical documents.
Email; Phone Call	6/3/2016	San Manuel Band of Mission Indians	Tribe has attended information meetings and intends to participate as a consulting party.
Email	6/9/2016	Fernandeño Tataviam Band of Mission Indians	This confirms that the Fernandeño Tataviam Band of Mission Indians is a consulting party for the following Project Sections: (1) Bakersfield to Palmdale; (2) Palmdale to Burbank; and (3) Burbank to Los Angeles.
Email	6/27/2016	Gabrieleño Band of Mission Indians Kizh Nation	Tribe provided the Authority with DBE and MBE certification.

Communication Type	Date	Tribal Representative	Summary
Email	7/5/2016	San Manuel Band of Mission Indians	The Authority sent the new Cultural Resources Director background info on the California HSR System.
Email	7/29/2016	Fernandeño Tataviam Band of Mission Indians	Tribe indicated a desire to contribute ethnography to the ASR.
Email	8/16/2016	Gabrieleño Band of Mission Indians Kizh Nation	Tribe reached out to the Authority to provide a reference for the tribe's past participation with a different rail project.
Email; GIS	8/29/2016	Gabrieleño Band of Mission Indians Kizh Nation	Email exchange between the Authority and the Tribe regarding village locations in relation to the alignments.
Email	9/1/2016	Gabrieleño Band of Mission Indians Kizh Nation	Tribe received invitation to community open house and asked for more information.
Email	9/12/2016 9/20/2016	San Manuel Band of Mission Indians	The Authority reached out to the Tribe to continue outreach efforts with the tribe.
Email	9/26/2016	Gabrieleño Band of Mission Indians Kizh Nation	Tribe added a monitor to the tribe's designated monitor list.
Email	9/29/2016	Fernandeño Tataviam Band of Mission Indians	Tribe sent the Authority an updated tribal monitor designation form. The Tribe designated the main contact for tribal monitor recruitment.
Email	10/6/2016	Fernandeño Tataviam Band of Mission Indians	The Authority confirmed receipt of the tribe's tribal monitor designation forms. The Authority sent the Tribe site record for the Chavez Site (19-000902).
Email	10/18/2016 10/26/2016	San Manuel Band of Mission Indians	The Authority and the Tribe continued their dialogue regarding the Tribe's continued interest in participation.
Email	10/19/2016	Gabrieleño Band of Mission Indians Kizh Nation	The Authority updated the Tribe on the status of project section ASRs and inquired if the tribe were still interested in contributing its ethnohistory.
Email	10/19/2016	Fernandeño Tataviam Band of Mission Indians	The Authority confirmed receipt of tribal ethnohistory and asked permission to use it for the Palmdale to Burbank Project Section. The Tribe granted permission to use the ethnohistory for the Palmdale to Burbank Project Section.

Communication Type	Date	Tribal Representative	Summary
Email	10/25/2016	San Manuel Band of Mission Indians	Email chain between San Manuel USFS regarding fill during construction of the Palmdale to Burbank Project Section in the Una Lake area.
Email	10/27/2016 10/28/2016 11/10/2016	San Manuel Band of Mission Indians	Section-specific teleconference meeting for the San Manuel Tribe and additional follow-up conversations via email.
Email	11/14/2016	Fernandeño Tataviam Band of Mission Indians	The Authority provided the tribes with maps and a copy of the site record for the Chavez Site.
Email	11/15/2016	San Manuel Band of Mission Indians	Tribe plans to review the ethnography section in the Palmdale to Burbank Project Section ASR for accuracy.
Meeting	11/16/2016	Caltrans Native American Advisory Committee	The Authority participated in the quarterly meeting of the Caltrans NAAC to provide status updates on the California HSR System to NAAC members.
Email	11/21/2016	San Manuel Band of Mission Indians	Tribe transmitted a letter signed by Chairwoman, confirming the Tribe's consulting party status.
Phone Call	11/26/2016	Fernandeño Tataviam Band of Mission Indians	The Authority attempted to call the Tribe to discuss the Chavez Site and a potential tour of the Palmdale to Burbank alignment.
Email	11/28/2016	San Manuel Band of Mission Indians	Transmittal of GIS files for HSR alignments and cultural data.
Phone Call; Email	11/29/2016	Fernandeño Tataviam Band of Mission Indians	Tribe confirmed receipt of Chavez Site record. The Authority proposed dates for the upcoming tour of the Palmdale to Burbank alignment to be held in January 2017.
Letter; CD	12/5/2016	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; San Manuel Band of Mission Indians	Transmittal of records search and GIS data to tribes.
Letter; CD	12/5/2016	Fernandeño Tataviam Band of Mission Indians	Request for review and comment on the findings presented in the Bakersfield to Palmdale draft ASR in November 2016. This transmittal included the records search and GIS files for the Bakersfield to Palmdale and Palmdale to Burbank Project Sections.

Communication Type	Date	Tribal Representative	Summary
Email	12/23/2016	San Manuel Band of Mission Indians	Email exchanges regarding GIS and zipped keyhole markup language files. The Authority tribal liaison refers the Tribe to another member of the Authority for further assistance with GIS.
Tour; Face-to-Face Meeting	1/18/2017	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; San Manuel Band of Mission Indians	Tour participants met at the USFS station in Acton, traveled south with stops to Lake View Terrace, and ended at the Vasquez Rocks Natural Area. Along the way, USFS archaeologists and Los Angeles County Parks and Recreation staff participated.
Email	1/20/2017	Gabrieleño Band of Mission Indians Kizh Nation; San Manuel Band of Mission Indians	Authority received "thank you" emails regarding the Palmdale to Burbank alignment tour and coordination for future meetings.
Letter; Email	1/24/2017	NAHC	NAHC provided a contact list for Southern California project sections, including Palmdale to Burbank.
Letter; Email; CDs	1/27/2017	San Manuel Band of Mission Indians	The Authority mailed cultural resource data on CDs to the Tribe.
Email	2/6/2017	San Manuel Band of Mission Indians	The Authority and the Tribe coordinated time to have a post-alignment tour follow-up meeting.
Email	3/8/2017	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; San Manuel Band of Mission Indians	ICF contacted consulting parties for an opportunity to survey the Una Lake area (near Palmdale) on 3/9/2017.
Email	3/8/2017	San Manuel Band of Mission Indians	Tribe responded to the opportunity to participate on a field survey of Una Lake.
Email	3/10/2017	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; San Manuel Band of Mission Indians	The Authority sent tribes an update on the results of the 3/9/2017 field survey in the Una Lake area.
Email; Phone Call	3/27/2017	Santa Barbara Chumash	Tribe inquired about the best way to comment on proposed routes through the San Gabriel Mountains. The Authority provided the link to comment on the project and information on tribal participation.
Email	3/28/2017	Barbareño Band of Chumash Indians	Tribe submitted resume; The Authority provided tribal participation factsheet and small business information.

Communication Type	Date	Tribal Representative	Summary
Email	4/20/2017	San Manuel Band of Mission Indians	Tribe submitted comments regarding Una Lake and the Chavez Site.
Email	4/27/2017	Fernandeño Tataviam Band of Mission Indians	Tribe submitted comments regarding Una Lake and the Chavez Site with the request that comments remain confidential.
Email	7/3/2017	Gabrieleño Band of Mission Indians Kizh Nation; Gabrielino/Tongva Nation	The Authority tribal liaison sent tribal consulting parties a farewell email and section update pending their departure from the California HSR System.
Email	7/6/2017	San Manuel Band of Mission Indians	The Authority tribal liaison sent the San Manuel cultural resources department a farewell email and project status update.
Email	7/6/2017	Gabrielino/Tongva Nation	Tribe responded to the Authority tribal liaison farewell email, requesting to become a consulting party. See also 8/30/2017.
Letter	7/14/2017	San Manuel Band of Mission Indians	Request for consultation under AB 52. (See also prior request 6/18/2015 from former program director.)
Letter; Email	8/8/2017	San Manuel Band of Mission Indians	Confirmation receipt for AB 52 request letter dated 7/14/2017. AB 52 does not apply to these sections; NOPs issued before July 1, 2015. Tribe can still be a consulting party under Section 106.
Letter	8/10/2017	Gabrielino/Tongva San Gabriel Band of Mission Indians	Response to AB 52 request for consultation letter. All four project sections in the Los Angeles basin have NOPs issued prior to July 1, 2015. Participation and monitoring factsheets included.
Email	8/30/2017	Gabrielino/Tongva Nation	The Authority followed up with the Tribe regarding request to become a consulting party.
Email	9/26/2017	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; San Manuel Band of Mission Indians	Palmdale to Burbank Project Section September e-update forwarded to tribes consulting on that project section.
Email	10/5/2017	Gabrielino/Tongva Nation	The Authority followed up with the Tribe regarding consulting party forms sent 8/30/2017.
Email	10/8/2017	Gabrielino/Tongva Nation	Gabrielino/Tongva Nation signed and sent consulting party forms (Authority received 10/12/2017).

Communication Type	Date	Tribal Representative	Summary
Letter; Email	1/8/2018	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; Gabrielino/Tongva Nation; San Manuel Band of Mission Indians	Notice regarding the Authority's participation in FRA's NEPA Assignment Program. For this project section, only San Manuel Band of Mission Indians, responded (on 3/5/2018)—with a question regarding the availability of submitting comments online.
Email, Phone call	3/5/2018	San Manuel Band of Mission Indians	In response to notice regarding the Authority's participation in FRA's NEPA Assignment Program, the Tribe responded with a question regarding the availability of submitting comments online.
Email	4/10/2018	Fernandeño Tataviam Band of Mission Indians	The Authority and the Tribe discuss Authority's tribal monitoring policy. Monitoring is standard on project sections in areas determined to be sensitive for cultural resources.
Email	4/12/2018	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; Gabrielino/Tongva Nation; San Manuel Band of Mission Indians	Transmittal of the Palmdale to Burbank Project Section ASR to tribal consulting parties with request to review and comment.
Letter; email	4/23/2018	Gabrieleño Band of Mission Indians Kizh Nation	Tribe submits comments on the Palmdale to Burbank Project Section ASR, the Authority revised the ASR accordingly and provided a formal response to comments on 6/11/2018.
Phone call	6/20/2018	San Manuel Band of Mission Indians	The Authority and Tribe discuss FRA's NEPA Assignment Program.
Email	4/8/2019	Fernandeño Tataviam Band of Mission Indians; Gabrieleño Band of Mission Indians Kizh Nation; Gabrielino/Tongva Nation; San Manuel Band of Mission Indians	Transmittal of the Final Palmdale to Burbank Project Section ASR, revised in response to comments received last year (4/23/2018), and associated APE Modification to tribal consulting parties.
Phone call	4/9/2019	Gabrielino/Tongva Nation	Tribe called the Authority to discuss the Palmdale to Burbank Project Section and the draft ASR. The tribal representative expressed the tribe's support of the project and interest in participating in tribal monitoring/survey work.
Meeting	5/2/2019	San Manuel Band of Mission Indians	Members of the Authority met with Tribe to provide updates on project sections the tribe is consulting on and to discuss the Palmdale to Burbank Project Section ASR, particularly Una Lake; meeting minutes sent to tribe 5/13/2019.

Communication Type	Date	Tribal Representative	Summary
Email	7/30/2019	San Manuel Band of Mission Indians	Notification to Tribe of Authority's participation in FRA's NEPA Assignment Program. On July 23, 2019, Governor Newsom signed and made effective the final MOU.
Email	8/1/2019	Fernandeño Tataviam Band of Mission Indians; Gabrielino/Tongva Nation; Gabrieleño Band of Mission Indians Kizh Nation	Notification to tribe of Authority's participation in FRA's NEPA Assignment Program. On July 23, 2019, Governor Newsom signed and made effective the final MOU.
Meeting	8/29/2019	Fernandeño Tataviam Band of Mission Indians	Meeting per tribe's request to provide program status update and additional information regarding NEPA assignment. Discussed selection of Palmdale to Burbank route that avoids Blum Ranch and additional measures underway to address Una Lake.
Email	9/18/2019	Fernandeño Tataviam Band of Mission Indians	Tribe had no comment on the meeting minutes from the August 29, 2019 meeting.

Source: Authority, 2019a
AB = Assembly Bill
ACHP = Advisory Council on Historic Preservation
ANF = Angeles National Forest
ASR = Archaeological Survey Report
Authority = California High-Speed Rail Authority
CalSTA = California State Transportation Agency
Caltrans = California Department of Transportation
CD = compact disk
DBE = Disadvantaged Business Enterprise
FRA = Federal Railroad Administration
GIS = geographic information system
HSR = high-speed rail
MBE = Minority Business Enterprise
MOU = Memorandum of Understanding
NAAC = Native American Advisory Committee
NAHC = Native American Heritage Commission
NEPA = National Environmental Policy Act
NOI = Notice of Intent
NOP = Notice of Preparation
PA = Programmatic Agreement
SHPO = State Historic Preservation Officer
USFS = United States Fish and Wildlife Service

For the Palmdale to Burbank Project Section, tribal outreach regarding concerns about sensitive Native American cultural resources was first initiated in September 2009. As detailed below, outreach efforts have been ongoing as project planning efforts progress. FRA conducted statewide outreach to tribal governments to initiate government-to-government consultation for each of the individual California HSR System project sections in February 2010. Tribal outreach letters were sent to local tribal governments listed with the NAHC in 2012. Follow-up phone calls and/or emails also were sent to solicit input for the Palmdale to Burbank Project Section. During the early outreach in 2009 and 2012, responses were received from some tribal representatives indicating that they considered the project area sensitive and wished to be involved. More active project planning efforts for the Palmdale to Burbank Project Section began in 2014, at which time tribal outreach was reinitiated. Tribal representatives were contacted in May 2014 to inform them of a series of upcoming community open house meetings regarding the Palmdale to Burbank Project Section that they could attend and learn more about the project. Tribes were contacted again in July 2014 to inform them about a series of public scoping meetings where they could learn more about the project and provide feedback.

In August 2014, the Authority invited 24 tribal governments/representatives to participate in an invitation-only tribal information meeting for the Palmdale to Burbank and Burbank to Los Angeles Project Sections. The tribal information meeting was held on September 25, 2014. The purpose of the tribal information meeting was to provide local tribal representatives who were interested in consulting under Section 106 with an overview of the California HSR System, as well as specific details about the project sections. This meeting was also intended to provide information about the project environmental review process and the corresponding cultural resources investigations for the project to facilitate tribal participation and lay the groundwork for future consultations on the project. The status and results of the cultural resources investigations to date for the Palmdale to Burbank and Burbank to Los Angeles Project Sections were presented at this meeting.

Tribal representatives who attended the tribal information meeting included the following:

- Sam Dunlap, Cultural Resources Director, Gabrielino/Tongva Nation
- John Tommy Rosas, Tongva Ancestral Territorial Tribal Nation
- Beverly Folkes, Chumash/Tataviam
- Rudy Ortega, Vice President, Fernandeño Tataviam Band of Mission Indians
- Kimia Fatehi, Tribal Historic Preservation, Fernandeño Tataviam Band of Mission Indians
- Caitlin Gulley, Tribal Historic Preservation, Fernandeño Tataviam Band of Mission Indians
- Daniel McCarthy, Cultural Resources Management Director, San Manuel Band of Mission Indians
- Tim Poyorena-Miguel, Media Relations, Gabrieleño Band of Mission Indians Kizh Nation
- Andrew Salas, Chairman, Gabrieleño Band of Mission Indians Kizh Nation
- Ernie Salas, Chief, Gabrieleño Band of Mission Indians Kizh Nation
- Martha Gonzalez, Gabrieleño Band of Mission Indians Kizh Nation
- Matthew Teutimez, Tribe Member, Gabrieleño Band of Mission Indians Kizh Nation
- Frank Lemos, Tribe Member, Gabrieleño Band of Mission Indians Kizh Nation

The Authority provided a follow-up meeting summary to all the meeting invitees on October 7, 2014. The Authority and FRA sent formal consulting party invitations to all tribes who attended the tribal information meeting or who had otherwise expressed some interest in being involved in the project. To date, the Authority has confirmed via email communication that four tribes have opted to engage in formal consultation. The following tribes became formal consulting parties on January 9, 2015; June 9, 2016; November 21, 2016; and October 12, 2017, respectively:

- Gabrieleño Band of Mission Indians Kizh Nation
- Fernandeño Tataviam Band of Mission Indians
- San Manuel Band of Mission Indians
- Gabrielino/Tongva Nation

Tribal representatives from the Gabrieleño Band of Mission Indians Kizh Nation and the Fernandeño Tataviam Band of Mission have not only consulted with the Authority, but also have participated in the archaeological surveys completed on U.S. Department of the Interior, Bureau of Land Management (BLM) lands and ANF including SGMNM lands for the Palmdale to Burbank Project Section. Tribal representatives from all four of the consulting parties will continue to participate in all surveys once access is granted. Tribal representatives from the consulting parties would also monitor during construction in archaeologically sensitive areas associated with the Palmdale to Burbank Project Section.

In January 2017, the Authority hosted a chartered bus tour of the Palmdale to Burbank Project Section specifically for the consulting party tribes. The intent of the tour was to provide the tribal stakeholders an opportunity to view the landscape in which the six Build Alternatives are proposed and to learn more about the proposed engineering features for each of the Build Alternatives. Mapbooks of the alignments were provided to help orient the participants during the tour, and stops were made at key locations along each of the routes. The tour had 27 participants, including representatives from each of the consulting tribes, as well as representatives from FRA, the Authority, the Regional Consultant team, and archaeologists with the ANF including the SGMNM. Following the alignment tour, the Authority and FRA held follow-up focused meetings with each of the consulting tribes in March 2017 to seek further input regarding cultural resource concerns along the alignments and to collaborate on strategies to avoid and minimize effects on tribal cultural resources. Consultation with tribal stakeholders regarding the Palmdale to Burbank Project Section is ongoing and iterative.

An updated Sacred Lands File search was requested of the NAHC on the recommendation of the ANF in July 2018. Results of the file search have been and will be shared through continuing consultation with tribal representatives. As a minimum, the Authority will continue to consult with participating tribes at key milestones of the Section 106, NEPA, and CEQA processes in accordance with the framework provided in Attachment E of the Section 106 PA. Such efforts will include providing opportunities to author tribal ethnographies, review and comment on draft cultural resources technical reports prior to finalization, participate in pedestrian field surveys, monitor ground-disturbing activities in culturally sensitive areas, and help develop treatment and mitigation for effects on significant cultural resources. The Authority will continue to consult with the tribal consulting parties for the Palmdale to Burbank Project Section, and input from the tribes will be taken into account as part of the Palmdale to Burbank Project Section planning process.

Consulting Parties

Several entities have elected to become Section 106 consulting parties for the cultural resources investigation and the preparation of the MOA (Authority 2019a). The Section 106 consulting parties consist of:

- Acton Town Council
- Advisory Council on Historic Preservation (consulting party; may not participate in MOA)
- Angeles National Forest
- Bureau of Land Management
- City of Los Angeles – Planning Department – Office of Historic Resources
- Los Angeles County Department of Regional Planning
- Los Angeles County Department of Parks and Recreation
- Fernandeño Tataviam Band of Mission Indians
- Gabrieleño Band of Mission Indians Kizh Nation
- Gabrielino/Tongva Nation
- Los Angeles Conservancy
- San Manuel Band of Mission Indians
- Southern California Association of Governments – Transportation Planning
- State Historic Preservation Officer

3.17.5 Methods for Evaluating Impacts

The evaluation of impacts on cultural resources is a requirement of NEPA and CEQA. The following sections summarize the cultural resource study areas and the methods used to analyze cultural resources. Methods for identifying and evaluating the significance of historic properties and historical resources and for assessing impacts on these properties and resources for the Palmdale to Burbank Project Section were in accordance with the PA, as well as the Environmental Methodology Guidelines, Version 5 (Authority 2020). Together, these documents provide an overall framework for conducting the Section 106 process, including outreach and consultation efforts, delineation of the archaeological and historic built APE, historic properties identification procedures, assessment of adverse effects and treatment of historic properties, documentation standards, and state and federal agency oversight in compliance with the NHPA, as well as NEPA and CEQA. The FOE report documents the assessment of known and adverse effects on historic properties resulting from construction and operations of the SR14A Build Alternative within the Palmdale to Burbank Project Section. The methodology for identifying resources within portions of the APE that include the Palmdale Subsection and Maintenance Facility are included for informational purposes, however, the facilities proposed within these areas were evaluated in the Bakersfield to Palmdale Project Section EIR/EIS.

3.17.5.1 Definition of Resource Study Area

As defined in Section 3.1, Introduction, resource study areas are the geographic boundaries in which the environmental investigations specific to each resource topic were conducted. The Section 106 process uses the term “area of potential effects” for the resource study area established for cultural resources surveys and analyses. Regulations implementing Section 106 require that an APE be established by the lead agency for federal projects (36 C.F.R. 800.4(a)(1)). The APE is the geographic area or areas within which a project may cause alterations in the character or use of historic properties, if such properties exist. The APE is influenced by the scale and nature of a project and may be different for different effects caused by the project. (36 C.F.R. 800.13 (d)).

The APE was delineated for the purposes of the Palmdale to Burbank Project Section to consider both construction-related effects as well as operational effects on archaeological and historic built resources. The APE incorporates subsections within the Palmdale to Burbank Project Section. The APE was established following guidelines provided for in Attachment B of the PA. The survey and impacts analysis under CEQA also used this APE. Prior to establishing the APE, during the early stages of project design, a resource study area was delineated to initiate pre-survey studies. These studies included a records search at the South-Central Coastal Information Center (SCCIC), part of the California Historical Resources Information System, and preliminary archival research.

Archaeological Area of Potential Effects

The APE for archaeological properties was established in accordance with Attachment B and Stipulation VI.A of the Section 106 PA. The archaeological APE is the area of ground proposed to be disturbed before, during, and after construction as well as during operations. Ground-disturbing activities may include but are not limited to excavation for the vertical and horizontal profiles of the alignment; station location footprints; geotechnical drilling; grading; cut-and-fill; use of easements; staging/laydown areas; utility relocation; borrow sites; spoils areas; temporary or permanent road construction; infrastructure demolition; biological mitigation areas; adit and window construction; and all permanent rights-of-way (i.e., each of the six Build Alternative footprints). The Palmdale to Burbank Project Section footprint used as the baseline for defining the archaeological APE for this study was based on the design plans and archaeological site information obtained from cultural resources records searches and ANF heritage records searches.

Based on this guidance, the archaeological APE was established with careful consideration of the potential for ground disturbance beyond the immediate footprint. As such, it includes all pre-construction, construction, and operations activities that may involve ground disturbance. The

horizontal aspects of the APE were broadly considered to include areas of potential staging, access roads, and whole parcels that would ultimately be purchased. In areas of larger proposed construction (such as large overcrossings), additional APE was included on both sides of the proposed rail line to allow for flexibility for contractor needs, such as access and staging. In addition, the footprint of water crossings was expanded to include possible temporary diversion areas (while new crossings are being constructed) and utility relocation areas. The horizontal archaeological APE includes the footprint for each alignment, encompassing an area of 5,655 acres. In areas planned for parking and stations, the horizontal APE includes newly acquired land. In locations with known archaeological resources, only those portions of the site that fall within the Palmdale to Burbank Project Section footprint are included in the APE.

The vertical archaeological APE was delineated in coordination with project engineers and includes maximum depth of ground disturbance for various features of the Palmdale to Burbank Project Section. The vertical APE extends from the existing ground surface to the final depth necessary for the railbed, footings, or foundations of structural components. For waterway crossings or footings, depths range from a few feet to more than 20 feet. For cut-and-cover tunnels, depths range up to 100 feet below ground surface. Underground bored tunnels are proposed for all alternatives. For the Refined SR14 Build Alternative, the vertical APE for tunnel boring would range from at-grade tunnel portals to 2,081 feet below ground surface. For the E1 Build Alternative, the vertical APE would have a maximum depth of 2,063 feet below ground surface. For the E2 Build Alternative, the vertical APE would have a maximum depth of 2,674 feet below ground surface. For the SR14A, E1A, and E2A Build Alternatives, the vertical APE would have a maximum depth of 2,500 feet below ground surface. At such great depths, if no work would occur at the surface, the Palmdale to Burbank Project Section in these areas would be unlikely to affect archaeological sites. Even so, this analysis considers archaeological resources within the horizontal APE in tunnel boring areas should surface construction activity be proposed in the future.

Historic Built Resources Area of Potential Effects

The historic built resources APE for the Palmdale to Burbank Project Section includes all legal parcels intersected by the proposed HSR right-of-way for all alternatives considered in this Draft EIR/EIS—including proposed ancillary features such as grade separations, stations, maintenance facilities, adits and adit windows, and construction staging areas. The built resources APE is larger than the archaeological APE or the Build Alternative footprint. This methodology for establishing the historic built resources APE follows standard practices for the discipline. Attachment B of the PA and the Authority's Cultural Resources Technical Guidance Memorandum #1 (Authority 2013) provide guidance in the delineation of the APE. Also, in compliance with the PA, the APE includes the following:

- All legal parcels within the proposed right-of-way, footprint of proposed ancillary features (such as grade separations or maintenance facilities), and construction staging areas. If built resources exist on a large rural parcel within 150 feet (46 meters) of the proposed rail centerline for each alternative, or if it was determined that the resources on that parcel were otherwise potentially affected by the Palmdale to Burbank Project Section, the entire legal parcel was included in the historic built APE. The APE for elevated structures such as viaducts was widened or narrowed as appropriate, depending on the terrain and the nature of the immediate neighborhood (whether urban or suburban, rural or agricultural, industrial or commercial), as well as the height or massing of surrounding structures. Where proposed utility easements and access would utilize existing linear thoroughfares, the APE was narrowed to the Palmdale to Burbank Project Section footprint.
- Properties where historic materials or associated landscape features would be demolished, moved, or altered by construction.
- Properties near the Palmdale to Burbank Project Section where railroad materials, features, and activities *have not* been part of the historic setting and where the introduction of visual or audible elements may affect the use or characteristics of those properties that would be the basis for their eligibility for listing in the NRHP.

- Properties near the Palmdale to Burbank Project Section that were either used by a railroad or served by a railroad, or where railroad materials, features, and activities have long been part of their historic setting—but only in cases where the project would result in a substantial change from the historic use, access, or noise and vibration levels that were present 50 years ago, or during the period of significance of a property if different.
- Parcels that would be included when delineating an APE, even if they are empty or would otherwise be exempt per Attachment D of the PA. This provides a record of which properties were exempted; no other documentation of such properties is required.

In June 2019, the ACHP issued guidance in response to a court decision involving the issue of whether visual and noise effects should be characterized as "direct" or "indirect" effects for purposes of the NHPA. The analysis considers both direct and indirect impacts on cultural resources that would result from construction and operations of the six Build Alternatives. For purposes of this analysis, a direct effect includes those involving physical encroachment (temporary or permanent) within the boundary of the historic property, as well as those that may not physically affect the historic property but introduce visual or audible impacts that alter its character-defining features. An indirect effect is an effect caused by the project that is later in time (e.g., effects resulting from induced growth) or farther removed in distance. See https://www.achp.gov/news/court-rules-definitions-informs-agencies-determining-effects. This recent guidance has been incorporated into the Section 106 analysis.

Cultural Resources Data Sources

Cultural resources records searches were conducted at the SCCIC of the California Historical Resources Information System in January, February, June, August, and December 2016. Information obtained from the records searches included topographic maps with the plotted locations of cultural resources previously recorded for the search area. The records search area for the archaeological and historic built APE was developed by reviewing the Palmdale to Burbank Project Section footprint and all potential ground disturbance that would constitute the APE for the six proposed alignments, plus a 0.5-mile buffer beyond the APE limits. The buffer assumption around the alignment footprint was determined to allow flexibility for potential design modifications that would require amended records searches. A heritage records search at the ANF was conducted in May 2016. A cultural resources records search at the BLM Palm Springs–South Coast Field Office was conducted on August 3, 2016. In addition to the records searches, a search of the Sacred Land File at the NAHC was requested on September 10, 2009, and July 11, 2018.

Additional efforts to identify other potential cultural, archaeological, historical, and architectural resources include the following:

- California Historic Landmarks and Points of Interest Publications
- NRHP, NRHP National Park Service online website, CRHR, local listings, and published/digital version of the U.S. Census Bureau information (1850–1940) (NPS 2020; OHP 2020)
- Previous cultural resources reports, historic period maps, Sanborn Company fire insurance maps, aerial photography, and various newspaper and journal articles (Authority 2019b)
- Consultation with interested parties and Native American tribes associated with the Palmdale to Burbank Project Section geographic area (Authority 2019b)
- California Department of Transportation Historic Highway Bridge Inventory (Caltrans 2015)
- Previous environmental studies within the APE (Authority 2019b)
- Los Angeles County Assessor
- City of Los Angeles Department of Building and Safety

- City of Los Angeles Office of Historical Resources
- Los Angeles Public Library, Central Library, Palmdale City Library, Burbank Public Library
- South San Joaquin Valley Information Center and the Los Angeles Information Center (Authority 2019b)
- Los Angeles County Landmarks List (*Los Angeles County General Plan 2035*; Los Angeles County 2015b)
- City of Los Angeles Historic-Cultural Monuments
- SurveyLA – historic resources information (City of Los Angeles 2007)
- City of Palmdale General Plan (City of Palmdale 1993)
- City of Burbank Historic Preservation Plan (City of Burbank 1999)
- Historic USGS quadrangles (Authority 2019b)

3.17.5.2 Methods for Resource Identification

The approach to resource identification differs between archaeological resources and historic built or architectural resources. While both identification efforts are initiated by a records search and general research to identify known historic resources and past studies, followed by field surveys, the process generally diverges at this point, as further described below.

Although an archaeological or historic built resource may not be listed in or determined to be eligible for the NRHP, the CRHR, or a local register of historic resources (pursuant to Cal. Public Res. Code Section 5020.1[k]), or identified in a historic resources survey (meeting the criteria in Cal. Public Res. Code Section 5024.1[g]), a lead agency may determine it to be a historic resource as defined in Cal. Public Res. Code Sections 5020.1(j) or 5024.1 for the purposes of CEQA, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant.

Archaeology Methods

All surveys were conducted by archaeologists meeting the professional qualification standards as required in Stipulation III of the PA and the SOI's Professional Qualification Standards (48 Fed. Reg. 44738–44739) (Appendix A to 36 C.F.R. Part 61); they are referred to as qualified investigators in the PA.

A total of 646 previous cultural resources technical studies dating from 1973 to 2014 have been conducted within 0.5-mile of the archaeological APE. Of these, 269 studies overlapped with, or included, a portion of the APE. Overall, these studies covered 2,813.71 acres (or approximately 50 percent) of the total 5,655-acre APE.

A total of 437 archaeological resources have been previously recorded within 0.5-mile of the archaeological APE. Of these sites, 65 are mapped within the APE. The previously recorded resources within the APE consist of 35 prehistoric sites and isolates that include lithic scatters, rock shelters, rock features, temporary camps, and isolated artifacts. Additionally, resources within the APE consist of 30 historic-period sites that include refuse deposits and structural remains.

Records Searches and Literature Review

As outlined in Section 3.17.5, the prehistory, ethnography, and history of the Western Mojave Desert, Santa Clarita Valley, San Fernando Valley, and ANF including SGMNM was researched to develop a broad context of the cultural, natural, and physiographic setting.

South Central Coastal Information Center Records Search

In January, February, May, August, and December 2016, cultural resources records searches were conducted at the SCCIC of the California Historical Resources Information System. On June 4, 2020, an additional cultural resources records search was conducted covering expanded portions of the SR14A, E1A, and E2A Build Alternative alignments, plus a 0.5-mile buffer. Information obtained from the records searches included the plotted locations of all previously recorded cultural resources within the archaeological APE, the corresponding archaeological site records, and a list of previous cultural resources investigations conducted within the APE.

Historic Topographic Map Research

Archaeologists reviewed historical USGS topographic maps of the proposed archaeological APE to assess historical archaeological potential. Based on the amount and extent of development presented on each map, the APE was sectioned into five categories of development—undeveloped, rural farms/homesteads, small-community commercial and residential, urban commercial/industrial, and urban residential.

Sanborn Map Research

In addition to the USGS maps provided by the SCCIC, Sanborn Company fire insurance maps (Sanborn maps) were reviewed. Sanborn maps are available for portions of the archaeological APE in the cities of Palmdale and Burbank. Although Sanborn maps exist for other portions of Los Angeles County, these do not cover the APE. Areas that Sanborn maps do not cover indicate that physical development was too sparse to warrant inspection by the insurance industry in the late 19th and early 20th centuries.

Angeles National Forest Heritage Records Review

In May 2016, cultural resources staff conducted a heritage records search at the USFS ANF cultural resources archive in Arcadia, California. ANF cultural resources staff assisted with and guided the heritage records search and provided GIS data for studies and cultural resources in the APE.

Bureau of Land Management Records Review

On August 3, 2016, a BLM archaeologist conducted a cultural resources records search of BLM parcels in the Palmdale to Burbank Project Section. No resources had been previously identified in the parcels. However, the BLM archaeologist advised that these parcels had been recently acquired by the BLM and appeared to have the potential for archaeological sensitivity.

Field Methods

In addition to archival research and tribal outreach and consultation, intensive pedestrian archaeological surveys were conducted, where parcel access was granted. Prior to commencing pedestrian surveys, archaeologists identified parcels that did not warrant survey (e.g., paved or heavily landscaped parcels), to focus requests for permission to enter on parcels that could provide adequate visibility for effective pedestrian surveys.

Stipulation VI.E of the PA provides for phased identification in situations where identification of historic properties cannot be completed—e.g., when private property owners deny permission to enter. In such cases, the development and implementation of a post-review identification and evaluation effort will be stipulated in a MOA to ensure that the historic properties identification effort is completed once the properties become accessible and prior to construction.

The field procedures that guided the identification of archaeological sites encountered during the field investigation adhered to the PA, as well as the standards of professional practice of archaeology (see Section 110 of the NHPA and the SOI's Standards and Guidelines for Identification of Historic Properties [48 Fed. Reg. 44716]). The overarching approach to assessing the resources encountered in the field for the Palmdale to Burbank Project Section and the guidance for establishing historic property exemptions were defined in the PA. The criteria for what constitutes an "isolate" and a "site," and the process for the initial evaluation of a given resource are the implementation of the criteria for exemption provided by Attachment D of the PA.

Resources encountered that qualified as exempt were reviewed under CEQA criteria and were found not to be historical resources or unique archaeological resources as defined by the CEQA Guidelines. Field inventory completed after the ROD would follow the requirements in the MOA and ATP and would be completed for the selected alternative when access has been granted and/or the parcels have been acquired.

Table 3.17-5 summarizes the archaeological surveys conducted as further described below. The archaeologists did not collect artifacts during the field visits. No excavation was included as part of the survey effort.

Archaeological Survey on Bureau of Land Management Parcels

The archaeological APE crosses a total of 79.2 acres of land managed by BLM. Two noncontiguous parcels compose BLM land in the historic built APE. An intensive pedestrian survey of BLM-managed lands was conducted within the APE in August 2016.

The pedestrian survey consisted of walking parallel transects, where possible, and inspecting the ground surface for the presence of cultural resources. In some instances, pedestrian survey was curtailed for the safety of the field crew. In these instances, the unsurveyed areas were visually inspected from locations with more stable terrain. Global positioning system receivers were used throughout the survey to maintain transect spacing and record transect coverage.

Table 3.17-5 Summary of Archaeological Survey for Accessible Portions of the Area of Potential Effects

Acreage Type	Acres
Surveyed Acreage	
Bureau of Land Management	57.90
Angeles National Forest	242.50
Privately Owned Parcels (Blum Ranch, Una Lake, other)	225.68
Total Surveyed Acreage	**526.08**
Unsurveyed Acreage	
Bureau of Land Management	21.30
Angeles National Forest	603.91
Privately Owned Parcels	4,503.71
Total Unsurveyed Acreage	**5,128.92**

Source: Authority, 2019a

In instances where possible artifacts, features, or infrastructure were identified, the pedestrian survey halted at the location of the discovery and the surrounding area was systematically inspected until no additional artifacts, features, or infrastructure were identified. One isolated artifact, 19-101405, was identified during the archaeological survey of BLM lands in the archaeological APE. No other cultural resources were observed during the survey.

Archaeological Survey of the Angeles National Forest

From September 26 through September 30, 2016, four qualified archaeologists conducted an archaeological survey of the California HSR System aboveground Build Alternative footprint on ANF including SGMNM lands. The survey was limited to areas with less than a 25-degree slope. Steep slopes were not surveyed due to safety concerns; additionally, slopes greater than 25 degrees generally lack the potential for cultural resources. Within accessible areas, intensive pedestrian survey using transects was conducted. A total of 242.5 acres (out of the 846.41 acres) of the APE within the ANF including SGMNM was surveyed.

The survey of the proposed aboveground archaeological APE footprint within the ANF including SGMNM confirmed the location of 13 previously recorded archaeological resources. In addition to the 13 previously recorded resources, 3 newly identified resources were identified during the survey.

Archaeological Survey of Blum Ranch

The Blum Ranch is a previously unsurveyed area with very high cultural resources sensitivity. A site visit and survey were conducted in November 2016. The survey focused on areas with the densest concentrations of artifacts and features within the archaeological APE. A total of 33.4 acres of the 65.65-acre archaeological APE within Blum Ranch was surveyed. While agricultural fields contain previously disturbed soil, it is possible that those areas contain cultural resources below the layer of disturbed soil. Agricultural fields and steep slopes in excess of 25 degrees were not surveyed.

The survey resulted in the identification of three newly recorded archaeological resources (19-004778, 19-101401, and 19-004779). These three archaeological resources, however, are located outside the boundaries of the historic district and rural historic landscape of Blum Ranch.

Archaeological Survey of Una Lake Area

In March 2017, archaeologists conducted an intensive pedestrian survey of the archaeological APE surrounding Una Lake in Palmdale, California. The archaeological survey covered 21 acres, representing 80.8 percent of the APE.

The pedestrian survey consisted of walking parallel transects and inspecting the ground surface for the presence of cultural resources. Excluding Una Lake itself, all portions of the survey area within the APE were inspected.

No prehistoric resources were identified within the archaeological APE on the Una Lake parcel. Most of the survey area showed signs of earth-moving activities in the form of grading, push piles, and depressions as well as a network of dirt roads.

Other Archaeological Surveys

Archaeological pedestrian surveys and site recordation of portions of the archaeological APE near the Maintenance Facility in Lancaster were conducted in May 2012 and December 2015. A total of 171.28 acres was surveyed. No artifacts were collected, and no excavation was included as part of this survey effort.

Geoarchaeological Assessment

The geoarchaeological assessment considers the potential to encounter as-of-yet undocumented prehistoric archaeological sites based on physical environmental attributes. It is not designed to consider the potential for encountering historical archaeological sites, because this function is better served through historic documentary research, as described above.

This study used geologic, hydrologic, and slope data to consider two distinct classes of archaeological sensitivity, which is defined in this study as an area's likelihood for containing archaeological sites. These classes of archaeological sensitivity include whether portions of the APE have the capacity to contain buried archaeological sites (i.e., buried site sensitivity) and whether portions of the APE have elevated potential to contain archaeological sites in general (i.e., general site sensitivity).

Buried site sensitivity refers to the area's potential to contain buried archaeological resources based on the age and environment in which a landform was created. This has direct bearing on whether the site became accessible for human use. Landforms tend to be useful analytical tools to determine archaeological sensitivity. General site sensitivity refers to the area's potential to contain surface-exposed or buried archaeological resources based on the proximity to water and topographic slope. These factors have been spatially associated with human use.

Using these factors and assumptions, the geoarchaeological models assign sensitivity projections for the archaeological APE.

Historic Architectural/Built Resources Methods

The methods used to identify and evaluate historic-era resources included background literature review, records search, survey methods, and streamlining implementation.

Surveys were conducted by architectural historians and/or historians meeting the professional qualification standards as required in Stipulation III of the PA, and the SOI's Professional Qualification Standards (48 Fed. Reg. 44738–44739) (Appendix A to 36 C.F.R. Part 61).

As with the records search results discussed above, the locations of previously surveyed historic architectural resources were geo-referenced using GIS to identify parcels and known resources within the historic built resources APE.

The term *historic properties* is used to refer to resources listed in, or determined eligible for listing in, the NRHP, and *historical resources* refer to those eligible for listing in the CRHR or other definition of historical resources set forth in Section 15064.5(a) of the CEQA Guidelines unless the preponderance of evidence finds the resource not to be historically or culturally significant. Resources that were constructed in 1966 or before and have been determined not eligible for listing in either the NRHP or CRHR are referred to as *ineligible properties.* Analyzed properties, eligible or not, can exist singly as buildings, structures, or objects, or as part of a district or grouping, historic cultural landscape, or traditional cultural property.

Records Searches and Literature Review

The records searches performed for the Maintenance Facility and the Palmdale Subsection were conducted at the South San Joaquin Valley Information Center and the Los Angeles Information Center in March 2015. In January 2016, a background records search was completed at the SCCIC for the Central and Burbank Subsections, and again in July 2020 for the Central Subsection to address the SR14A, E1A, and E2A Build Alternatives. Information obtained from the records searches included topographic maps with the plotted locations of cultural resources previously recorded within the alignment footprint for the six Build Alternatives, plus a 0.5-mile buffer. In March 2016, each USGS quadrangle within the historic built APE was geo-referenced to real-world coordinates and placed in a GIS environment to allow for accurate digitization of the individual resources recorded on the maps. Additional records searches were conducted in March, June, and August 2016 to take into account changes to the six Build Alternatives' footprints and the APE. On May 11, 2016, a heritage records search was conducted at the ANF.

Qualified investigators collected additional information about built environment and historic architectural resources from the sources identified in Section 3.17.5.1.

Detailed historic contexts, regional property typologies, and property-specific research were based on a wide range of primary and secondary materials. Research on the historic themes and potential resources was conducted in both archival and published records. Research also included published and digital versions of U.S. Census Bureau information, including population schedules (1850–1940) and agricultural schedules (1850–1880) (Authority 2019b). In addition, research included review of previous cultural resources reports, historic period maps, local- and state level historical resources lists, city directories, and various newspaper and journal articles.

Field Methods

Once the historic built APE was defined, fieldwork began with built resources surveys (reconnaissance-level surveys). Surveys of the Bakersfield to Palmdale Project Section Maintenance Facility and the Palmdale Subsection occurred between 2011 and 2016. Surveys for the Central and Burbank Subsections occurred in 2016 between June 13 through June 15, July 11 through July 14, and on August 10. Multiple surveys were completed to account for all potentially historic architectural resources within the APE. Permission was given by the Blum Ranch landowner to conduct a site visit and survey on November 14, 2016.

Consistent with the PA, qualified investigators conducted a survey of known historic properties and historic-era resources within the historic built APE. The reconnaissance survey included known resources to determine if they had been altered subsequent to their original recordation,

and identified resources that would likely require evaluation in compliance with the PA. The reconnaissance-level survey identified 352 historic-era resources (built, or appear to have been built, in 1966 or earlier). Four of these properties had been previously listed in or determined eligible for listing in the NRHP and CRHR and received SHPO concurrence. The remaining historic-era resources required study in compliance with the PA.

Each historic-era resource in the APE (any parcel that contained a building or structure that was constructed in 1966 or earlier—except those identified as exempt from evaluation per Attachment D of the PA) was field-evaluated to determine whether it qualifies as a historical resource for CEQA analysis or as a historic property for Section 106 analysis.

The parcels in the APE vary substantially in size, from standard residential parcels to large agricultural parcels that consist of several acres. As part of the survey methodology, the qualified investigators identified all legal parcels in the APE that contained buildings or structures 50 years old or older at the time of survey. Resources on these parcels were subject to intensive-level surveys and subsequent DPR 523 form recordation, or were determined by the qualified investigator to meet the PA criteria for streamlined documentation.

Once potential resources were identified, research efforts were refined to confirm specific resource construction dates and to refine estimated dates. This research was conducted through an online commercial database to review current county assessor property data, as well as a thorough review of Sanborn maps, railroad plat maps, USGS topographic quadrangle maps, county assessor records, historic aerial photographs, and other pertinent documents. This research further refined the pool of potential resources to those resources built in or before 1966.

Of the resources surveyed, 12 within the Central Subsection are eligible for listing or previously listed in the NRHP and CRHR, leaving 336 that are ineligible for the NRHP and CRHR. Of the 336 ineligible resources, two had been found not eligible in a previous study, with SHPO concurrence; 14 were documented on DPR 523 forms; and 320 were subject to “streamlined” documentation in accordance with Attachment D of the PA and Cultural Resources Technical Guidance Memorandum #7 (Authority 2016) and required no further study per the PA. The 14 resources documented on DPR 523 forms and 320 streamlined resources were determined ineligible for listing in the NRHP, with SHPO concurrence.

Within the Palmdale Subsection, Burbank Subsection, and Maintenance Facility, no built-environment resources are listed on the NRHP or CRHP, and none were determined eligible for listing. Within the Palmdale Subsection and Maintenance Facility, a streamlined review was done on 264 built-environment resources within the APE. As the six Build Alternatives’ footprints were further refined, the APE was also refined before the completion of the HASR. See the HASR for full details of the survey and resource descriptions (Authority 2019b).

Most surveys were conducted from the public right-of-way. However, because of this limited access, not all properties could be observed for adequate documentation and evaluation. Stipulation VI.E of the PA allows for phased identification of historic properties because permission to enter may not be granted until later project stages.

Consideration of the Presence of Traditional Cultural Properties

Both the historic built resources survey and archaeological survey included consideration of the presence of TCPs. These are properties that can be defined generally as those that are eligible for inclusion in the NRHP because of their association with cultural practices or beliefs of a living community that are (1) rooted in that community’s history; and (2) important in maintaining the continuing cultural identity of the community. “Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices. No TCPs were identified in the historic built APE.

Methods for Identifying Resources of Importance to Native Americans and Other Interested Parties

As described in Section 3.17.4.2, the Authority has consulted with Native Americans and other interested parties to obtain information regarding cultural resources of importance.

Table 3.17-4 summarizes the outreach efforts with Native Americans undertaken to date for the Palmdale to Burbank Project Section. The Authority has presented several opportunities for Native Americans to assist in the identification of sensitive sites located within the Palmdale to Burbank Project Section. Such opportunities have included but are not limited to email, phone, in-person meetings, participation in Palmdale to Burbank Project Section alignment tours, and participation in pedestrian archaeological field surveys. Four tribes have become formal consulting parties for the project and have participated in the resource identification process.

3.17.5.3 Impact Avoidance and Minimization Features

IAMFs are project features the Authority has incorporated into each of the six Build Alternatives for purposes of the environmental impact analysis. The full text of the IAMFs that are applicable to the Palmdale to Burbank Project Section is provided in Volume 2, Appendix 2-E, Impact Avoidance and Minimization Features.

The following is a list of the IAMFs that were incorporated into the cultural resources analysis:

- **CUL-IAMF#1**: Geospatial Data Layer and Archaeological Sensitivity Map—This IAMF describes the Authority's commitment to developing detailed mapping for identification. Prior to construction (ground-disturbing activities) and staging of materials and equipment, the contractor's archaeologist or geo-archaeologist will prepare a geospatial data layer identifying the locations of all known archaeological resources and historic built resources that require avoidance or protection, and areas of archaeological sensitivity that require monitoring within the APE.
- **CUL-IAMF#2**: Worker Environmental Awareness Program Training Session—This IAMF describes the Authority's commitment to conducting a Worker Environmental Awareness Program (WEAP). Prior to construction (ground-disturbing activity), construction contractor personnel who work on site will attend a WEAP training session provided by the contractor. The WEAP will include cultural resources awareness training performed by the contractor's archaeologist who meets the SOI's Professional Qualification Standards provided in 36 C.F.R. Part 61.
- **CUL-IAMF#3**: Pre-construction Cultural Resource Surveys—This IAMF describes the Authority's commitment to conducting further cultural resource surveys. Prior to construction (any ground-disturbing activities in areas not yet surveyed) and the staging of materials and equipment, the contractor will conduct pre-construction cultural resource surveys.
- **CUL-IAMF#5**: Archaeological Monitoring Plan and Implementation—This IAMF describes the Authority's commitment to monitoring archaeological resources. Prior to construction, the contractor's professionally qualified archaeologist, as defined in the PA, will prepare a monitoring plan based on the results of the geospatial data layer and archaeological sensitivity map.
- **CUL-IAMF#6**: Pre-construction Conditions Assessment, Plan for Protection of Historic Built Resources, and Repair of Inadvertent Damage—This IAMF describes the Authority's commitment to protecting historic built resources during construction. Prior to construction (any ground-disturbing activities that are within 1,000 feet of a historic built property), the contractor may be required to assess the condition of construction-adjacent historic properties, and prepare a Plan for the Protection of Historic Built Resources and Repair of Inadvertent Damage. The MOA and BETP will stipulate for which properties the plan is to be prepared. MOA signatories and consulting parties may comment on the adequacy of the assessments.

- **CUL-IAMF#7**: Built-Environment Monitoring Plan—This IAMF describes the Authority's commitment to monitoring the status of built historic resources during construction. Prior to construction (ground-disturbing activities within 1,000 feet of a historic property or resource), the contractor will prepare a built-environment monitoring plan (BEMP). Draft and final BEMPs will be prepared describing the properties that will require monitoring, the type of activities or resources that will require full-time monitoring or spot checks, the required number of monitors for each construction activity, and the parameters that will influence the level of effort for monitoring.
- **CUL-IAMF#8**: Implement Protection and/or Stabilization Measures—This IAMF describes the Authority's commitment to protect and/or stabilize built historic resources during construction. The contractor will implement the plan described in the Plan for Protection of Historic Resources and Repair of Inadvertent Damage and in the BETP. Such protection measures will include, but will not be limited to, vibration monitoring of construction in the vicinity of historic properties; cordoning off of resources from construction activities (e.g., traffic, equipment storage, personnel); shielding of resources from dust or debris; and stabilization of buildings adjacent to construction.

3.17.5.4 Methods for NEPA and CEQA Impact Analysis

Overview of Impact Analysis

This section describes the sources and methods the Authority used to analyze the cultural resource impacts of each of the six Build Alternatives. These methods apply to both NEPA and CEQA analyses unless otherwise indicated. Refer to Section 3.1.4.4, Methods for Evaluating Impacts, for a description of the general framework for evaluating impacts under NEPA and CEQA. Refer to the HASR for more information regarding the methods, evaluation criteria, and data sources used in this analysis. Section 3.4, Noise and Vibration, and Section 3.16, Aesthetics and Visual Quality, describe the methods used to analyze impacts on cultural resources from damage caused by vibration, disturbance caused by noise, or a change in visual context and setting. Laws, regulations, and orders (see Section 3.17.2) that regulate cultural resources were also considered in the evaluation of impacts on archaeological resources and historic built resources.

The analysis considers both direct and indirect impacts on cultural resources that would result from construction and operations of the six Build Alternatives. Section 3.17.5.1 describes the geographic area in which these impacts were considered. The analysis also considers the permanent impacts from implementing the six Build Alternatives and the temporary impacts of construction activities.

As stated earlier, the ACHP advises federal agencies to coordinate compliance with Section 106, and the procedures in the regulations implementing Section 106, with steps taken to meet the requirements of NEPA. Consequently, the NRHP criteria for adverse effect, no adverse effect, or no effect on historic properties (36 C.F.R. 800.5) were used to evaluate effects on historic properties in the APE. Properties that are listed in the NRHP or found eligible for the NRHP are listed in the CRHR and considered historical resources for the purposes of CEQA. The findings for the Preferred Alternative are documented in a FOE report; impacts on CEQA-only historical resources are also analyzed and presented in the FOE. This analysis substantially satisfies the compliance requirements of both NEPA and CEQA; however, there are some specific NEPA and CEQA impact analyses that diverge from the Section 106 process (see Section 3.17.5.2).

Definition of Construction Impacts

Adverse construction impacts are impacts that physically destroy or damage a historic property or a portion of a historic property, which would alter the historic property in a manner inconsistent with the SOI's Standards, remove the historic property from its historic location, change the character of the historic property's use or features, or introduce visual or temporary construction-related noise and vibration that would diminish the integrity of the resource.

Definition of Operations Impacts

Routine operations and maintenance are not expected to cause further disturbance. Operational impacts on historic built resources would occur if project operations would physically damage a historical resource or introduce audible or atmospheric elements that diminish integrity, or neglect of a property that causes deterioration.

3.17.5.5 Method for Evaluating Impacts under NEPA

In considering whether an action may "significantly affect the quality of the human environment" under NEPA, an agency must consider, among other things, the unique characteristics of the geographic area. Such considerations include proximity of the project to historic or cultural resources (40 C.F.R. 1508.27(b)(3)), and the degree to which the action may adversely affect districts, sites, highways, buildings, structures, or objects listed in or eligible for the NRHP, and if the project may cause loss or destruction of significant scientific, cultural, or historical resources (40 C.F.R. 1508.27(b)(8)).

Pursuant to NEPA regulations (40 C.F.R. Parts 1500–1508), project effects are evaluated based on the criteria of context and intensity. "Context" is defined as the affected environment in which a proposed project occurs. "Intensity" refers to the severity of the effect, which is examined in terms of the type, quality, and sensitivity of the resource involved; location and extent of the effect; duration of the effect (short- or long-term); and other considerations of context. Beneficial effects are also considered. When no measurable effect exists, no impact is found to occur. For the purposes of NEPA compliance, the same methods used to identify and evaluate historic properties are applied to aspects of the cultural environment that are not considered NRHP-eligible properties.

Cultural resource impact assessment conclusions presented below are consistent with the NHPA criteria for adverse effect, no adverse effect, or no effect on historic properties. Under these regulations, a project would have an effect on a historic property if it alters the NRHP-qualifying characteristics of the property. An effect is considered adverse when it would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration is given to all qualifying characteristics of a historic property during the effects analysis, including those that may have been identified subsequent to the original evaluation of the property's NRHP eligibility. Adverse effects can include indirect effects, which are reasonably foreseeable effects caused by the project that occur later in time, are farther removed in distance, or are cumulative.

Adverse effects on historic properties include, but are not limited to, the following:

- Physical destruction of or damage to all or part of the property
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access that is not consistent with the SOI's Standards for the Treatment of Historic Properties (36 C.F.R. Part 68) and applicable guidelines
- Removal of the property from its historic location
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to a Native American tribe or Native Hawaiian organization
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance

3.17.5.6 Method for Determining Significance under CEQA

The Authority is using the following thresholds to determine if a significant impact on cultural resources would occur because of the project. The NRHP eligibility criteria were used to evaluate cultural resources for the purposes of CEQA compliance. Properties that are listed on local agency registers may be considered historical resources for the purposes of CEQA, even if they are not found to be eligible for the NRHP. NRHP criteria informs the CRHR eligibility criteria. Once the lead state agency determines a property to be eligible for the NRHP and the CRHR, the potential for the project to affect the property must be analyzed.

The CEQA Guidelines use the following definitions to analyze impacts on historical or archaeological resources:

- Substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (Section 15064.5[b][1]).
- The significance of a historical resource would be materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics that convey its historic significance or justify its inclusion in, or eligibility for, the NRHP, CRHR, or local registers (Section 15064.5[b][2][A–C]).

Cal. Public Res. Code Section 21084.2 states that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. A significant impact is one that would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
- Disturb any human remains, including those interred outside of formal cemeteries

3.17.6 Affected Environment

In accordance with Attachment C of the PA, HSR Program Documentation and Format Guidelines, the methodology for identification of historic properties includes the development of historic themes and contexts. Such contexts characterize the historical environment of the project's archaeological and historic built APE and provide the baseline against which archaeological and historic built resources are evaluated for historic significance and integrity. The following historic contexts and resource typologies are summaries of those included in the Section 106 technical documents. The NRHP eligibility criteria were used to evaluate historic significance of resources within the APE, as described earlier in this chapter, for the purposes of NEPA and CEQA compliance. The portions of the APE that include the Palmdale Subsection and Maintenance Facility are included for the identification of resources for informational purposes, however, the facilities proposed within these areas were evaluated in the Bakersfield to Palmdale Project Section EIR/EIS.

3.17.6.1 Overview of Archaeological Resources

Prehistoric Archaeological Resources

Prehistoric archaeological sites in California are places where Native Americans lived or carried out activities during the prehistoric period before the point of European contact in 1769 A.D. Prehistoric sites contain artifacts, features, and subsistence remains, and they may contain human burials. *Artifacts* are objects made by people for an intended use and include items such as stone, bone, and wood tools; vessels; decorative or ceremonial items; and clothing. *Archaeological features* are physical structures or elements that are made or altered by humans and are not portable and cannot be removed from a site, such as house pits and rock art.

Subsistence remains include the inedible portions of foods, such as animal bone and shell, and edible parts that were lost and not consumed, such as charred seeds. The following is a summary of the prehistory of Southern California.

Precontact Context

The following is a summary discussing the prehistoric setting of the Palmdale to Burbank Project Section area (Western Mojave Desert, Santa Clarita Valley, San Fernando Valley, ANF, and Los Angeles region).

Western Mojave Desert, Santa Clarita Valley, San Fernando Valley, and Angeles National Forest Prehistoric Setting

Over the past century, archaeologists have generally divided the prehistory of the Western Mojave Desert into distinct periods or sequences distinguished by specific material (i.e., technological) or cultural traits. “Before Present” (BP) refers to the time before practical radiocarbon dating was used to date artifacts (standardized as January 1, 1950), and “Contact” refers to the point of European contact in 1769.

1. Pleistocene (before 10,000 BP to 8000 BP)
2. Early Holocene (ca. 8000 BP to 6000 BP)
3. Middle Holocene (ca. 7000 BP to 3000 BP)
4. Late Holocene (ca. 3000 BP to Contact)

Archaeologists tend to interpret the available data as evidence of a highly mobile, sparsely populated, hunting society that occupied temporary camps near permanent Pleistocene water sources. The earliest cultural complex recognized in the Mojave Desert is Clovis.

Two archaeological patterns are recognized during the Early Holocene: (1) the Lake Mojave Complex (sometimes referred to as the Western Pluvial Lakes Tradition); and (2) the Pinto Complex. During this period, the Lake Mojave complex utilized more extensive foraging ranges, as indicated by an increased frequency in extra-local materials. The Pinto Complex is the primary cultural complex in the Mojave Desert during the Middle Holocene. The most distinguishing characteristic of the Pinto Complex is the prevalence of ground-stone tools, which are abundant in nearly all identified Pinto Complex sites.

The Late Holocene in the greater Southern California region is characterized by increases in population, higher degrees of sedentism, expanding spheres of influence, and greater degrees of cultural complexity. In the Mojave Desert, the Late Holocene is divided into several cultural complexes: The Gypsum Complex (ca. 3950 BP to 1750 BP), Rose Spring Complex (ca. 1750 BP to 850 BP), and Late Prehistoric Complex (ca. 850 BP to contact).

San Fernando and Los Angeles Prehistoric Setting

Two regional chronologies are widely cited in the archaeological literature for the prehistory of the coastal regions of Southern California. For the desert regions of Southern California, emphasis was placed on a chronology that utilizes projectile points as period markers and radiocarbon assays to provide absolute dates, developed for the Amargosa-Mojave Basin BLM Planning Units. Based on these studies, the five major cultural intervals for this area include:

1. Early Cultures (before 12,000 BP)
2. Terminal Pleistocene and Early Holocene Period (12,000 BP to 7500 BP)
3. The Middle Holocene Period (7500 BP to 5000 BP)
4. The Middle to Late Holocene Period (5000 to 1500 BP)
5. The Late Holocene (Post-1500 BP)

Most sites of purported great antiquity are centered in the Mojave and Colorado Deserts of eastern California or in coastal Southern California. Perhaps the most widely publicized of these sites is the Calico Early Man Site in the desert portion of San Bernardino County. Few sites of great antiquity have been identified in the vicinity of Los Angeles County.

Both coastal and desert region designations for the early Holocene refer to a long period of human adaptation to environmental changes brought about by the transition from the late Pleistocene to the early Holocene geologic periods. Human populations responded to changing environmental conditions by focusing their subsistence efforts on the procurement of a wider variety of faunal and floral resources. Sites dating from this interval generally are found around early Holocene marshes, lakes, and streams, which dominated much of the landscape. These early occupants of Southern California are believed to have been nomadic large-game hunters.

Perhaps the earliest evidence of human occupation in the region in the city of Los Angeles is represented at the tar pits of Rancho La Brea. In 1914, the partial skeleton of a young woman was discovered in association with a grinding stone, or *mano*. Additional evidence of early occupation of the Los Angeles Basin has been documented at the Del Rey Bluffs immediately south of Ballona Lagoon at the former mouth of the Los Angeles River.

The technological advancement of the mortar and pestle indicate the use of acorns, an important storable subsistence resource during the Middle to Late Holocene. Within the Los Angeles Basin, few sites have been identified that can be placed within this interval of prehistory. Components at a known prehistoric site in Topanga Canyon are dated to this period. In addition, several sites south of Ballona Lagoon on the Del Rey bluffs confirm a rather well-developed Intermediate Horizon presence.

During the Late Holocene, prehistoric coastal sites are numerous. The Late Prehistoric Horizon appears to represent increases in population size, economic complexity, social complexity, and the appearance of social ranking. One site that has been investigated is the Arroyo Sequit Site. It is believed that Late Prehistoric occupation of this site first occurred approximately 2,000 years ago and persisted until the Mission Period (ca. 1800 to 1830 A.D.). Probably one of the richest sites in coastal Southern California, the Malibu Site near Malibu Creek also was occupied during this period. At Malaga Cove near Santa Monica Bay, the upper two levels of a stratified midden deposit represent late prehistoric occupation in Los Angeles County. Deposits contained large mortars and long pestles, *Haliotis sp.* shell fishhooks, tarring pebbles, and steatite vessels. This assemblage occurs also in the uppermost soil layers, but with the addition of arrow points, basket hopper mortars, painted pebbles, glass beads, and flexed burials attributable to the Gabrieleño linguistic group.

Historic Archaeological Resources

Historic archaeological sites in California are places where human activities were carried out during the historic period, generally defined as beginning with contact in the mid-18th century and ending approximately 50 years ago. Some of these are of Native American origin from the historic period, but most are the result of Spanish, Mexican, Asian, African-American, or Anglo-American activities. Most historic archaeological sites are domestic sites, places where houses formerly stood, and they tend to contain the types of household goods reflecting the economic standing and ethnic identity of their occupants. Remains of ceramic, metal, and glass containers and dishes are most common, together with remains of the materials used in house construction—nails, brick, plate glass. Historical archaeological sites can also be nonresidential, resulting from ranching, farming, mining, transportation, and other commercial and industrial activities. Some historical sites represent a confluence of human activities, including industrial, transportation, and residential. Human burials dating to the historic period may also be considered archaeological resources.

Ethnographic Setting

The following is a summary discussing the ethnographic setting of the project area from modern-day Palmdale to the San Fernando Valley. This discussion focuses on Native American communities at the time of European contact.

At the time of European contact, the archaeological and historic built APE were within an area of cultural territory overlap and a split between three ethnographic groups—the Tataviam, the Gabrieleño, and the Serrano. The territorial boundaries between ethnographic groups are highly debated, and the canyons and valleys along the Santa Clara River were accessible to multiple

groups. The easternmost extent of Tataviam territory is thought to have extended from Soledad Canyon and Ritter Ridge. Territory south of the San Fernando Pass, within the San Fernando Valley proper, is known to have been occupied by the Gabrieleño. The San Gabriel Mountains are known to have been occupied by the Serrano, who centered on the San Bernardino Mountains, but also occupied the eastern portion of the San Gabriel Mountains to the west to the Twentynine Palms area to the east. The Serrano, and specifically the Vanyume and the Kitanemuk groups, are among these other groups whose territories neighbor the Tataviam to the north and encompass, respectively, the Antelope Valley and southern Tehachapi Mountains.

Ethnographic studies have also noted the presence of trade routes or trails that traverse the Santa Clara River Valley and connect the central San Joaquin Valley and the eastern desert regions with the coastal populations of the greater Los Angeles Basin. Accounts by early European explorers appear to indicate that the Tataviam and neighboring groups may have been "middlemen in the trade of Mohave and Southwestern goods into the valley (San Joaquin)" (Authority 2019a).

The Authority has invited tribal consulting parties to document their own tribal ethnohistories for inclusion in the project section ASRs. To date, the Fernandeño Tataviam Band of Mission Indians and the Gabrieleño Band of Mission Indians—Kizh Nation have prepared ethnohistorical narratives for inclusion in the Palmdale to Burbank Project Section ASR.

Tataviam

Ethnographic data identifies the mountainous canyons and valleys of the Santa Clarita Basin and along the Upper Santa Clara River as being within Tataviam territory. The Tataviam people lived in small villages and were semi-nomadic when food was scarce. They were hunter-gatherers who were organized into a series of clans throughout the region.

As described in Table 3.17-6, the Vasquez Rocks National Register District (NRHP-listed District, Site 19-003890) near Agua Dulce, as documented ethnographically and archaeologically, represents a substantial prehistoric and ethnographic settlement attributed to the Tataviam. The NRHP property is north of State Route (SR) 14 near the Refined SR14 and SR14A Build Alternatives and adjacent to the archaeological APE. The boundary of the Vasquez Rocks NRHP District was arbitrarily drawn to match the parcel location. The NRHP-listed Vasquez Rocks National Register District extends farther west than the Vasquez Rocks Natural Area Park boundary, which extends to the east. It is likely that with further research, other temporally related sites in the canyons surrounding the district may be identified that should be considered as part of that district, including archaeological sites in the connecting canyons in the vicinity of the archaeological APE.

Gabrieleño

The Gabrieleño are a Native American people who have long inhabited the area in the Los Angeles Basin. From the point where the proposed Refined SR14 and SR14A Build Alternative corridors exit the San Fernando Pass south of Newhall, it generally crosses into the ethnographic territory of the Gabrieleño. Recorded ethnographic and archaeological sites associated with Gabrieleño settlements are rare. This is directly attributable to the extensive and prolonged urban development of the city of Los Angeles region over the last one and a half centuries. The Gabrieleño consist of a number of smaller bands, some of whom refer to themselves as "Tongva," and others who refer to themselves as "Kizh."

In the 1990s, Kuruvungna Springs, a natural spring on the site of a former Gabrieleño village on the campus of University High School in West Los Angeles, was revitalized due to the efforts of the Gabrieleño Springs Foundation. The spring, which produces 22,000 gallons (83,279 liters) of water each day, is considered by the Gabrieleño to be one of their last remaining sacred sites and is regularly used for ceremonial events.

Serrano

The Serrano are an ethnic nationality that linguists include within the Takic family of the Uto-Aztecan stock of North American languages. Due to Serrano sociopolitical organization and a

lack of reliable data, it is difficult to assign exact boundaries to the various divisions of Serrano territory. However, ethnohistorical data are sufficient to provide an outline of Serrano social organization, and several named historic period villages have been identified. Near the headwaters of the Mojave River, for instance, at least six historic period Serrano Rancherias have been identified. The territory of Serrano villages was divided according to patrilineal clans, and approximately 20 named Serrano clans have been identified.

Kitanemuk

The Kitanemuk belonged to the northern section of the people known as the Serrano. The name, "Serrano," however, is only a generic term meaning "mountaineers" or "those of the Sierras." The Kitanemuk lived on the upper Tejon and Paso Creeks and also held the streams on the rear side of the Tehachapi Mountains, the small creeks draining the rear slope of the Liebre and Sawmill Range, within Antelope Valley, and the westernmost part of the Mojave Desert. The extent of their territorial claim in the desert region is not certain.

Geomorphology of the Project Area

The archaeological and historic built APE runs through three distinct areas of California: The Western Mojave Desert, the San Gabriel Mountains portion of the Transverse Range, and the Los Angeles Plain.

The Western Mojave Desert includes Antelope Valley (including the cities of Lancaster and Palmdale), Fremont Valley, Victor Valley, Lucerne Valley, the Mojave River, and the city of Barstow area. Within the Mojave Desert geomorphic region, identified rock formations include various metamorphosed sedimentary rocks, scattered sedimentary and carbonate rocks, and sandstone and limestone deposits. The oldest identified rock formations in the Mojave Desert geomorphic region consist of various metamorphosed sedimentary rocks—including gneiss, marble, quartzite, mica schist, gabbro, and conglomerates of pre-Cambrian age. The Joshua tree is often used as the common vegetative marker of the Mojave Desert, although the creosote bush is the dominant plant of the region.

The central portion of the Palmdale to Burbank Project Section transects the San Gabriel Mountains, a portion of the Transverse Range geomorphic province. The San Andreas Fault crosses the Transverse Range at an east-southeasterly orientation, in contrast to its northwesterly trend to the north and south, and it separates the San Gabriel Mountains from the San Bernardino Mountains at Cajon Pass. Several major drainage systems are present near the Palmdale to Burbank Project Section corridor, including the Santa Clara River, Kentucky Springs Canyon, Aliso Canyon, Arrastre Canyon, Bootlegger Canyon, Soledad Canyon, and Tujunga Wash. The climate generally resembles a Mediterranean regime in nature, although snow is occasionally recorded at higher elevations. The topography of the province is complex and includes steep slopes, narrow canyons, and wide valleys. The Los Angeles Plain is a broad, level expanse of land comprising more than 800 square miles that extends from Cahuenga Peak south to the Pacific coast, and from Topanga Canyon southeast to the vicinity of Aliso Creek. The Los Angeles plain is traversed by several large watercourses, most notably the Los Angeles, San Gabriel, and Santa Ana Rivers. Marshlands fed by fresh or salt water also once covered many portions of the area. The Los Angeles area is a varied terrain with a mix of rugged steep slopes, relatively flat and level coast, and once had sections of extensive marshlands, mud flats, and sand bars.

Known Archaeological Sites

Table 3.17-6 below provides the list of determined or assumed eligible resources within the archaeological APE for the NRHP for the purposes of Section 106. The table provides the primary resource number, a brief description of the resources, whether it is present in one or more of the six proposed Build Alternatives, and the status of the resource.

Table 3.17-6 Previously Recorded and Determined or Assumed Eligible Resources in the Area of Potential Effects

Primary Number	USFS Number	Description	Refined SR14	SR14A	E1	E1A	E2	E2A	NRHP and CRHR Eligibility
19-000305	N/A	Prehistoric habitation site	X	X	X	X	X	X	Assumed Eligible
19-000360	N/A	Prehistoric complex lithic scatter	X	N/A	N/A	N/A	N/A	N/A	Listed on NRHP as part of Vasquez Rocks Archaeological District—Criterion A, C, D, 1972
19-000541	N/A	Prehistoric habitation site	X	X	N/A	N/A	N/A	N/A	Assumed Eligible
19-000591	N/A	Prehistoric complex lithic scatter	X	X	N/A	N/A	N/A	N/A	Assumed Eligible
19-000595	N/A	Prehistoric midden and lithic scatter	X	N/A	N/A	N/A	N/A	N/A	Assumed Eligible
19-000618	N/A	Prehistoric milling area and complex lithic scatter	X	N/A	N/A	N/A	N/A	N/A	Assumed Eligible
19-000628	N/A	Prehistoric earthen oven and lithic scatter	X	N/A	N/A	N/A	N/A	N/A	Assumed Eligible
19-000800	5015500001	Remains of three historic period German lime kilns—late 19th century (1880s–1890s)	N/A	N/A	N/A	N/A	X	X	Assumed Eligible
19-000902	5015500003	Prehistoric habitation site	N/A	N/A	X	X	X	X	Considered eligible for NRHP under Criterion D by USFS
19-001142	5015500012	Prehistoric lithic scatter	N/A	N/A	N/A	N/A	X	X	Portion of site in APE unevaluated—Assumed Eligible
19-001410	5015500026	Prehistoric portable ground-stone artifacts likely displaced from original location as decoration around a residence	X	N/A	X	X	N/A	N/A	Assumed Eligible
19-001572	5015500104	Prehistoric midden site with lithic tools	N/A	N/A	X	X	X	X	Assumed Eligible
19-001690	5011901690	Prehistoric lithic scatter	N/A	N/A	X	X	X	X	Assumed Eligible
19-001846	N/A	Historic period landfill	X	X	N/A	N/A	N/A	N/A	Assumed Eligible

Primary Number	USFS Number	Description	Refined SR14	SR14A	E1	E1A	E2	E2A	NRHP and CRHR Eligibility
19-001847	N/A	Historic period house foundations, historic debris scatter	X	X	N/A	N/A	N/A	N/A	Assumed Eligible
19-001855	N/A	Prehistoric lithic scatter	X	N/A	N/A	N/A	N/A	N/A	Assumed Eligible
19-001859	N/A	Prehistoric rock shelter with rock art and cultural material mixed in large pack rat nests	X	X	N/A	N/A	N/A	N/A	Assumed Eligible
19-001860	N/A	Prehistoric rock shelter and lithic scatter	X	X	N/A	N/A	N/A	N/A	Assumed Eligible
19-001888	N/A	Prehistoric lithic scatter	X	X	X	X	X	X	Assumed Eligible
19-001889	N/A	Prehistoric quarry with lithic reduction	N/A	N/A	X	N/A	X	N/A	Assumed Eligible
19-001892	N/A	Prehistoric lithic scatter	X	N/A	N/A	N/A	N/A	N/A	Assumed Eligible
19-001894	N/A	Prehistoric lithic scatter	X	N/A	N/A	N/A	N/A	N/A	Assumed Eligible
19-001895	N/A	Prehistoric lithic scatter	X	N/A	N/A	N/A	N/A	N/A	Assumed Eligible
19-001904	N/A	Prehistoric lithic scatter	X	N/A	X	N/A	X	N/A	Assumed Eligible
19-001988	N/A	Prehistoric lithic scatter	N/A	N/A	X	N/A	X	N/A	Assumed Eligible
19-002039	N/A	Historic period foundations/structure pads; refuse scatter, well, fence	X	X	X	X	X	X	Assumed Eligible
19-002415	N/A	Prehistoric midden site	N/A	N/A	X	X	X	X	Assumed Eligible
19-002474	N/A	Historic period household refuse dump 1920s–1930s in ravine	X	N/A	X	N/A	X	N/A	Assumed Eligible
19-003536	N/A	Historic period refuse deposit	X	X	X	X	X	X	Assumed Eligible
19-003890	N/A	Prehistoric Vasquez Rocks Archaeological District	X	X	N/A	N/A	N/A	N/A	Listed on NRHP—Criterion A, C, D, 1972

Primary Number	USFS Number	Description	Refined SR14	SR14A	E1	E1A	E2	E2A	NRHP and CRHR Eligibility
19-004606	N/A	Prehistoric lithic scatter	N/A	X	N/A	N/A	N/A	N/A	Assumed Eligible
19-188397	5015500210	Historic period structural remains	N/A	N/A	X	N/A	N/A	N/A	Assumed Eligible
19-004778	N/A	Prehistoric lithic scatter	N/A	N/A	X	X	X	X	Assumed Eligible
19-101402	5015500300	Prehistoric: Possible hearth feature	N/A	N/A	X	X	N/A	N/A	Assumed Eligible
N/A	5015500126	Prehistoric rock features	N/A	N/A	X	X	X	X	Assumed Eligible
N/A	5015500127	Prehistoric circular rock feature	N/A	N/A	X	X	X	X	Assumed Eligible

Source: Authority, 2019a
APE = area of potential effects
N/A = USFS number not available or resource not applicable to the respective Build Alternative
NRHP = National Register of Historic Places
CRHR = California Register of Historic Resources
USFS = United States Forest Service

Geoarchaeological Study and Modeling

General site sensitivity is based on contextual factors including geological setting, distance to water and topographical slope. Therefore, general site sensitivity is a given area's likelihood to contain surface-exposed or buried archaeological resources. The general site sensitivity analysis indicated that approximately 39 percent of the archaeological APE contained sediments with the potential to contain buried archaeological sites. The Refined SR14 Build Alternative had a 36 percent sensitivity, the E1 Build Alternative had a 34 percent sensitivity, and the E2 Build Alternative had a 39 percent sensitivity. Because of the large overlap between the alignments, the SR14A, E1A, and E2A Build Alternatives percent sensitivities would be identical to the Refined SR14, E1, and E2 Build Alternatives percent sensitivities, respectively.

Buried site sensitivity is the capacity of a given area to contain buried archaeological sites and is based on geologic units. The concept of buried site sensitivity differs slightly from the general site sensitivity discussed above in that a landform may have high archaeological sensitivity but limited buried site potential if the landform formed prior to the period during which humans have occupied North America. The landforms within the archaeological APE that were formed during the period of human occupation of North American were defined as having high buried site sensitivity. The buried site sensitivity analysis indicated that approximately 51 percent of the archaeological APE contained sediments that have the potential to contain buried archaeological sites. The Refined SR14 Build Alternative had a 59 percent sensitivity, the E1 Build Alternative had a 67 percent sensitivity, and the E2 Build Alternative had a 64 percent sensitivity. Because of the large overlap between the alignments, the SR14A, E1A, and E2A Build Alternatives percent sensitivities would be identical to the Refined SR14, E1, and E2 Build Alternatives percent sensitivities, respectively.

The vertical extent of the archaeological APE for at-grade construction extends from the existing ground surface to the final depth necessary for the railbed and for footings or foundations of structural components; this can range from a few feet to more than 20 feet. The vertical APE for cut-and-cover tunnels ranges from at grade to no more than 100 feet below ground surface. Underground tunnel boring would range from depths of 50 to 100 feet near tunnel portals to over 2,000 feet below the ground surface. At such great depths, archaeological sites (which are typically found closer to the ground surface) are highly unlikely to be encountered. Activities with a deeper disturbance footprint, like the installation of footings for bridges or foundations, have greater potential for encountering buried and undisturbed archaeological resources.

3.17.6.2 Overview of Historic Built Resources

Historic Built Resources

Historic properties and historical resources are elements of the built environment that are listed in or eligible for the NRHP or CRHR or are considered historical resources for the purposes of CEQA. These elements reflect important aspects of local, state, or national history. They can be buildings, structures, objects, sites (including landscapes), or districts. Examples of the types of historic properties (per NRHP) or historical resources (per CRHR) within the historic, built APE include a church, roads, and an aqueduct, as further described in Table 3.17-7 and Table 3.17-8.

In addition to being significant under one or more of the criteria to be eligible for the NRHP, a historic property must retain adequate historic integrity to convey its significance. To retain historic integrity, a property will possess several, and usually most, of the aspects of integrity; these include location, design, setting, materials, workmanship, feeling, and association.

Historic Context

A summary of the historic context of the region is provided below. Section 7 of the HASR (Authority 2019b) includes more details regarding the historic context of the historic built APE.

One of the prominent natural historic resources within all six Build Alternative alignments (the Refined SR14, SR14A, E1, E1A, E2, and E2A) is the ANF. The ANF is in Los Angeles County and encompasses the San Gabriel Mountains, small parts of the eastern Mount San Antonio ("Mount Baldy") area, and parts of the western Lake Piru area. The SGMNM is within the ANF.

The Pacific Crest National Scenic Trail is the principal trail through the ANF, the route of which includes SGMNM. The origins of the Pacific Crest National Scenic Trail date to the early 1930s and are associated with the advent of a national advocacy movement for the preservation and appreciation of the nation's wilderness. Additional linear resources within the ANF, such as trails, roads, and transmission corridors, are associated with homesteading and early settlement, mining, recreation, public access, forest management, and science/technology.

During the Spanish and Mexican periods, the mountain areas saw little development, as they were not typically included in the rancho lands. Natural passages, such as the Cajon Pass, were utilized first by the Spanish traveling between Northern and Southern California, and later by trapping expeditions and settlers moving into the San Bernardino Valley. The forest was utilized for lumber and other building materials, game hunting, and the construction of ditches and canals to bring water to the mission lands. Gold was discovered in the mountains in the eastern portion of the present-day ANF during the early 1840s. Several water-related issues led to the establishment of the San Gabriel Timberland Reserve. Beginning in 1905, supervision of the reserve was transferred from the Department of the Interior to the Department of Agriculture to the USFS.

The period from the late-18th century through the mid-19th century in California was characterized by Spanish colonial settlement along the California coast in the form of missions and pueblos, the establishment of the Spanish and Mexican rancho systems, and the first trickle of American settlers to the area. During this early period, only scattered communities were founded in Southern California. Yet with the start of the Gold Rush in 1848 and establishment of California as a State in 1850, California's population and economy experienced an unprecedented boom, during which many towns and industries were established that persisted long after the initial rush ended.

The development of a transportation system, spanning from the early historic roads and railroads of the 19th century to the interstates of the mid-20th century, provided the means for economic growth and settlement in Los Angeles County. Advancements in irrigation and agriculture technology transformed the environmentally advantageous but sparsely inhabited region into a prosperous area in the late 19th century. Subsequent events and developments beginning at the turn of the 20th century spurred continued growth in Los Angeles County. These include the rise of the motion picture industry; a focus on developing community infrastructure, including construction of education and government facilities; the rise in tourism; and the widespread adoption of the automobile and ensuing highway construction that permitted post-World War II suburban residential development. The major themes of influence in the region spanned the late-18th century through the 19th century and into the 20th century. The development of Palmdale, Acton, Santa Clarita, Sylmar, San Fernando, and Burbank were influenced in one way or another by these major themes of development of Los Angeles County.

Prospectors after 1848 discovered an increasing number of "oil seeps" (oil seeping to the surface). In Southern California, large seeps were found in Ventura, Santa Barbara, Kern, and Los Angeles Counties. Interest in oil and gas seeps was stirred in the 1850s and 1860s and became widespread after the 1859 commercial discovery of oil in Pennsylvania. In conjunction with the California oil boom was the California power boom. The first electric plant in Los Angeles was built in 1882 by the California Electric Light Company (later the Los Angeles Electric Company) to provide electricity for the city's new streetlights that the company also installed. In the early 20th century, power companies throughout Los Angeles County installed many overhead and underground transmission lines, transmission towers, power lines, and communication lines. One such line is the Southern California Edison approximately 18.7-mile-long linear arrangement of steel lattice transmission towers extending generally southward through the ANF from the vicinity of Southern California Edison's Vincent Substation, near Acton, to Pasadena.

Table 3.17-7 Previously Identified Historic Built Resources within the Area of Potential Effects[1]

Primary Number	Map ID	APN/ Address	Historic Name	Refined SR14	SR14A	E1	E1A	E2	E2A	City	Year Built	Current OHP Code	NRHP and CRHR Criteria
P-19001534	3480	N/A	Palmdale Ditch	X	X	X	X	X	X	Palmdale Vicinity	1895–1896	2S2	A/1
19-004154	3421	N/A	East Branch of the California Aqueduct	X	X	X	X	X	X	Palmdale Vicinity	1966–1973	2S2	A/1 and C/3, Consideration G
N/A	3862	N/A	Big Creek Hydroelectric System Historic District—Vincent Transmission Line	X	X	X	X	X	X	Multiple	1927	1D	A/1 and C/3
No P#; HAER No. CA-56	152	N/A; Forest Road 3N 17	Los Pinetos Nike Missile Site	X	X	N/A	N/A	N/A	N/A	N/A	1955–1956	2S2	A/1 and C/3

Source: Authority, 2018a
[1] Eligible for listing on the NRHP
1D = Contributor to a district or multiple resource property listed in the NRHP by the Keeper and listed in the CRHR
2D2 = Contributor to a district determined eligible for NRHP by consensus through Section 106 process. Listed in the CRHR
2S2 = Individual property determined eligible for the NRHP by consensus through the Section 106 process and listed in the CRHR
APN = Assessor's Parcel Number
CRHR = California Register of Historical Resources
HAER = Historic American Engineering Record
ID = identification
N/A = Number not available or resource not applicable to the respective Build Alternative
NRHP = National Register of Historic Places
OHP = Office of Historic Preservation

Table 3.17-8 Newly Identified Historic Built Resources within the Area of Potential Effects[1]

Temporary or Primary Number	Map ID	APN/Address	Historic Name	Refined SR14	SR14A	E1	E1A	E2	E2A	City	Year Built	Current OHP Code	NRHP and CRHR Criteria
N/A	2947	Portions of 3058006015; 3058007010; 3058010900; 31880 Aliso Canyon Road	Blum Ranch	N/A	N/A	X	X	X	X	Acton Vicinity	1891–ca. 1924	2S2	A/1 and C/3
N/A	3768	3058006015; 31880 Aliso Canyon Road	Blum Ranch Farmhouse	N/A	N/A	X	X	X	X	Acton Vicinity	1916	2S2; 2D2	C/3
19-188484	2920	N/A; FS 05-01-55-216	1890s Acton Ford Road	N/A	N/A	X	X	X	X	Angeles National Forest	Circa 1890s	2D2	A/1
19-186545	2990/3000/3002	N/A; FS 05-01-55-116, FS 05-01-55-158, FS: 05-01-55-189	Monte Cristo Wagon Road System (including Monte Cristo Mining District Road, Aliso Creek Wagon Road, Forest Road 4N32—Aliso Arrastre Cutoff)	N/A	N/A	X	X	X	X	Angeles National Forest	Late 19th C.	2D2	A/1
19-150047; HAER No. NV-27-M	2500	N/A—resource is multistate	LADWP Boulder Transmission Line 3	N/A	N/A	X	X	X	X	N/A—resource is multistate	1939–1940	2D2	A/1 and C/3
N/A	1504	2542010015; 10004 Clybourn Avenue	N/A Residence	N/A	N/A	N/A	N/A	X	X	Los Angeles	Circa 1922	2S2	C/3

Temporary or Primary Number	Map ID	APN/Address	Historic Name	Refined SR14	SR14A	E1	E1A	E2	E2A	City	Year Built	Current OHP Code	NRHP and CRHR Criteria
N/A	1044	2629007003; 2629007004;945—9475 San Fernando Road	Pink Motel and Café	X	X	X	X	N/A	N/A	Los Angeles	1946 and 1949	2S2	A/1 and C/3
P-19-002-009	2593	N/A; FS 05-01-55-45	Eagle and Last Chance Mine Road	N/A	N/A	X	X	X	X	Angeles National Forest	Circa 1880s	2D2	A/1, B/2; C/3

Source: Authority, 2017
[1] Eligible for listing on the NRHP
2B = Determined eligible for the NRHP as an individual property and as a contributor to an eligible district in a federal regulatory process and listed in the CRHR
2D2 = Contributor to a district determined eligible for NRHP by consensus through Section 106 process and listed in the CRHR
2S2 = Individual property determined eligible for the NRHP by consensus through the Section 106 process and listed in the CRHR
3D = Appears eligible for the NRHP as contributor to a NRHP eligible district through survey evaluation
APN = Assessor's Parcel Number
CRHR = California Register of Historical Resources
HAER = Historic American Engineering Record
ID = identification
LADWP = Los Angeles Department of Water and Power
N/A = Number not available or resource not applicable to the respective Build Alternative
NRHP = National Register of Historic Places
OHP = Office of Historic Preservation

The transportation system underwent transformation as well. Prior to the arrival of the railroads in the 1870s, travelers in Southern California relied on existing trails and roads—El Camino Real and El Camino Viejo, in particular—supplemented by a few wagon and stagecoach roads built during the mid-19th century. The completion of the Southern Pacific Railroad through Southern California in 1876 improved passenger and freight transport, and drastically changed the speed at which goods and people could travel. Paved automobile routes became increasingly common with the onset of the automobile age in the 1920s, which culminated in the federal interstate system of the 1950s, and the transition of rail travel to primarily freight routes.

The earliest Spanish settlements in semi-arid Southern California operated an aqueduct system that brought water to the adobe homes and agricultural crops at the Pueblo of Los Angeles. The City of Los Angeles formulated plans to construct the first publicly owned water system in the state. The Los Angeles Department of Water and Power (LADWP) was also created to oversee the construction. The Los Angeles Aqueduct, also known as the Owens Valley Aqueduct, was constructed in 1913. However, due to lack of proper management, the aqueduct dried up by 1927. Water development was critical to the establishment and growth of Palmdale. To address this issue, the Southern Antelope Valley Irrigation Company built the Palmdale Ditch to convey Little Rock Creek water to Harold Reservoir (Lake Palmdale), created as a result of the construction of an earthen dam. After the ditch and the dam dried up, the Palmdale Water Company arranged to construct Little Rock Dam and Reservoir to supply water for the Little Rock and Palmdale Irrigation Districts. When completed in 1924, Little Rock Dam was the second largest concrete arch dam in the world. That year Harold Reservoir (Lake Palmdale) was also rehabilitated to receive water from Little Rock Reservoir via ditch and flume.

After the devastating floods of 1914, the California State Legislature authorized creation of the Los Angeles County Flood Control District to undertake construction of upstream mountain flood-control dams, as well as levees and dams nearer to population centers. Present today, although altered, a new concrete bridge was constructed to carry San Fernando Road traffic over Pacoima Wash in 1926.

In 1929 at the recommendation of the Los Angeles County Flood Control District, Pacoima Dam was created and in 1931 Big Tujunga Dam was constructed for flood control measures on the Tujunga and Pacoima watersheds. Later in 1940, Hansen Dam was constructed, which became an iconic feature of the eastern San Fernando Valley landscape.

Los Angeles County became known as an important agricultural center by the 1950s with agricultural production of fruits, vegetables, and flowers—particularly in the Antelope Valley. However, urban development after World War II converted much of the agricultural land to urban development.

Palmdale is in the Antelope Valley, a 3,000-square-mile high-desert closed basin that is part of the Mojave Desert. Permanent European settlement of the area occurred after the early discovery of gold in 1842 in the Santa Clarita Valley, which propelled mineral exploration of the Antelope Valley to the east. Palmenthal, the first settlement associated with Palmdale, was established in 1886, and a U.S. Post Office was opened in 1888. The settlers of Palmenthal mainly farmed alfalfa and fruits, yet agriculture was challenging given the area's desert and drought-prone climate. In 1895, the South Antelope Valley Irrigation Company constructed the Harold Reservoir, now known as Palmdale Lake, to alleviate the effects of regular droughts interrupting the supply of water to farms. However, Palmenthal was largely abandoned by 1899 due to a devastating drought and dubious land deals. Residents of Palmenthal relocated to the nearby town of Harold. The settlers of Harold and Palmenthal formed the City of Palmdale at a location closer to the Southern Pacific Railroad's new station. Agriculture drove the early success and growth of Palmdale, as irrigation and dry farming techniques allowed farmers to produce crops such as alfalfa, pears, and apples that helped the community flourish. Irrigation structures, such as the Palmdale Ditch, supported the agricultural industry as well. Agriculture remained the primary economic force in the Palmdale area until defense contractors and the U.S. military came to the area in the years leading up to World War II. Between 1933 and 1940, Muroc Army Airfield (now Edwards Air Force Base) and U.S. Air Force Plant 42 were built, which led to rapid growth of the city's population. Palmdale was incorporated as a city in 1962. The region experienced the

completion of the Antelope Valley Freeway (southern portion of SR 14) in 1964, directly linking Palmdale to Los Angeles, and development of the Los Angeles/Palmdale Regional Airport in 1965, leading to the continued growth of the city through the 1980s and 1990s.

The unincorporated Los Angeles County communities of Acton, Alpine, Agua Dulce, and Kagel Canyon, and the city of Los Angeles neighborhoods of Sylmar, Lake View Terrace, Arleta, Pacoima, Sunland-Tujunga, Sun Valley, and Shadow Hills were largely driven by the development of the Southern Pacific Railroad in the 1880s and promising mining activities. Settlements predominantly consisted of ranches and small farms, some of which remain standing today. The onset of World War II brought about drastic changes to the physical and economic environment of these communities.

Burbank occupies land within the Spanish land grant of Rancho San Rafael. Spanish Governor Pedro Fages awarded the 36,403-acre parcel to Corporal Jose Maria Verdugo in 1784. The family then sold 4,603 acres of the property to Jonathan R. Scott, who later sold property to Dr. David Burbank in 1866. From 1872 to 1873, Burbank sold the right-of-way of San Fernando Road to the Southern Pacific Railway to construct a new rail line to downtown Los Angeles. In 1886, Burbank sold his entire 9,200 acres to the Providencia Land, Water, and Development Company, which plotted a business district and surrounding residential areas. The new rail line vastly influenced population growth in the area. The residential areas were predominantly purchased by famers, who then grew peaches, melons, and alfalfa. The City of Burbank was incorporated in 1911 and became a hub for the aerospace industry and the entertainment industry. By 1930, the city had developed United Airport (now the Hollywood Burbank Airport), Warner Brothers Studio, First National Pictures, and Columbia Studios. By 1950, the city's population reached 78,577. Through the late 1980s, the city's downtown area was revitalized, opening several shops, restaurants, and the Golden Mall, which allowed traffic to flow along San Fernando Boulevard.

Types of Historic Built Resources

Four previously recorded built-environment resources that are eligible for listing on the NRHP were identified within the historic built APE. These resources are summarized in Table 3.17-7 and in Figure 3.17-1 through Figure 3.17-7. Such resources include, but are not limited to, the East Branch of the California Aqueduct (EBA) and the Palmdale Ditch. In addition, eight newly identified resources within the APE are eligible for the NRHP, as summarized in Table 3.17-8.

Approximately 2,430 parcels within the historic built APE were considered exempt from evaluation because they were vacant and agricultural land, contained buildings constructed after 1966 (not yet 50 years of age at the time of the survey), or met one of the criteria in Attachment D of the Section 106 PA, Properties Exempt from Evaluation.

Eight newly identified properties required additional research or re-evaluation to determine their NRHP eligibility status. These properties include multiple linear resources that were recorded within the ANF including SGMNM. In August 2019, SHPO concurred that these eight newly identified resources are eligible for listing for the NRHP. There are three primary types of linear resources in the ANF including SGMNM: trails, roads, and transmission corridors. *Trails* are defined as simple hand-constructed dirt treads, while *truck trails* and *roads* are defined as paved two-lane roads. Some are only accessible to hikers, horses, or off-road vehicles.

Transmission corridors are usually associated with service roads that were created during transmission line construction; some are on private in-holdings within the ANF and some are integrated into public access roads.

These types of linear resources have been individually recorded by USFS over the past 40 years, but there has been no comprehensive survey and documentation of all roads and trails within the ANF including SGMNM. As a result, those linear resources were evaluated in accordance with the methodology discussed in the HASR (Authority 2019b).

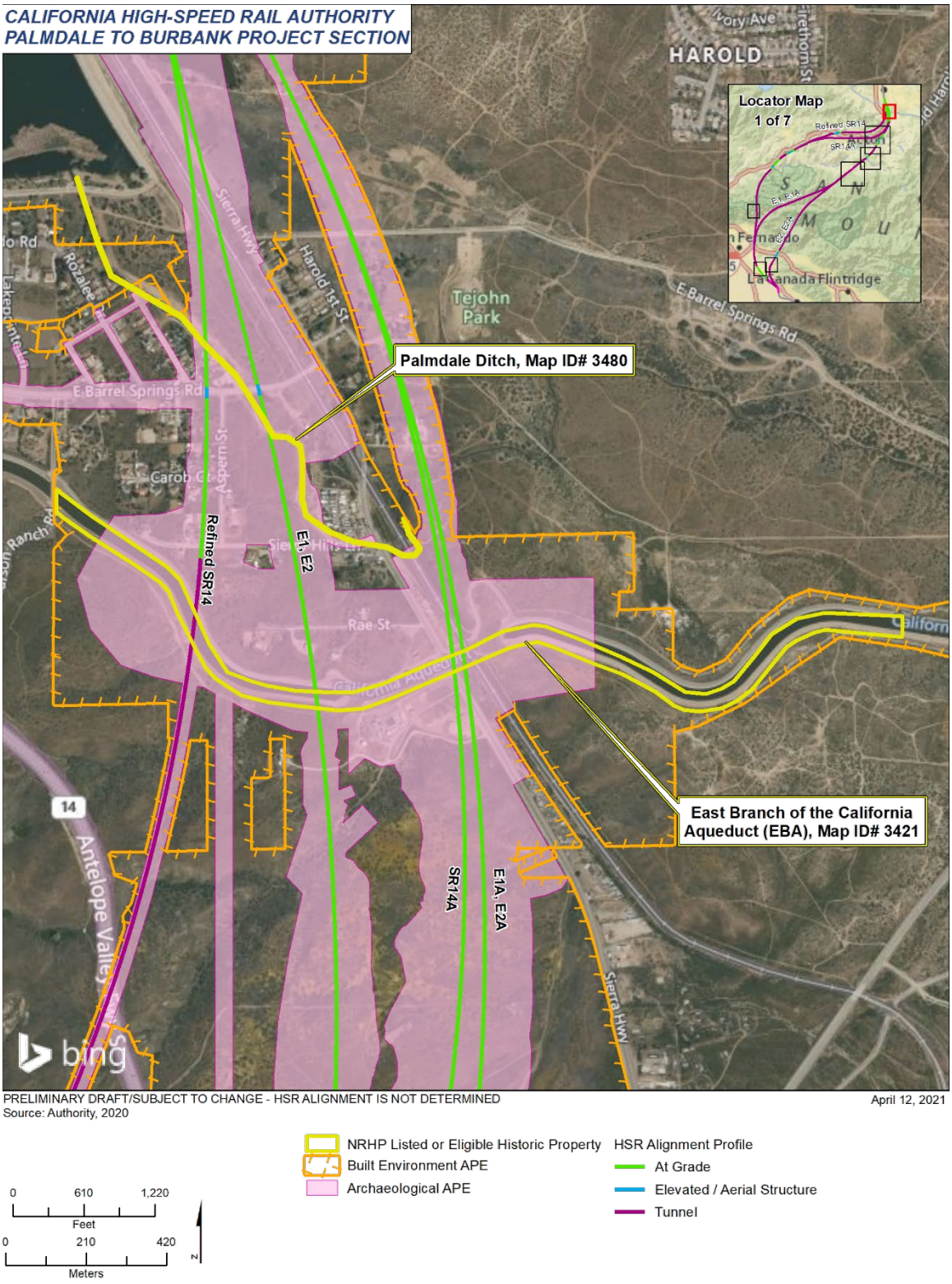

Figure 3.17-1 Cultural Resources within the Area of Potential Effects (Map 1 of 7)

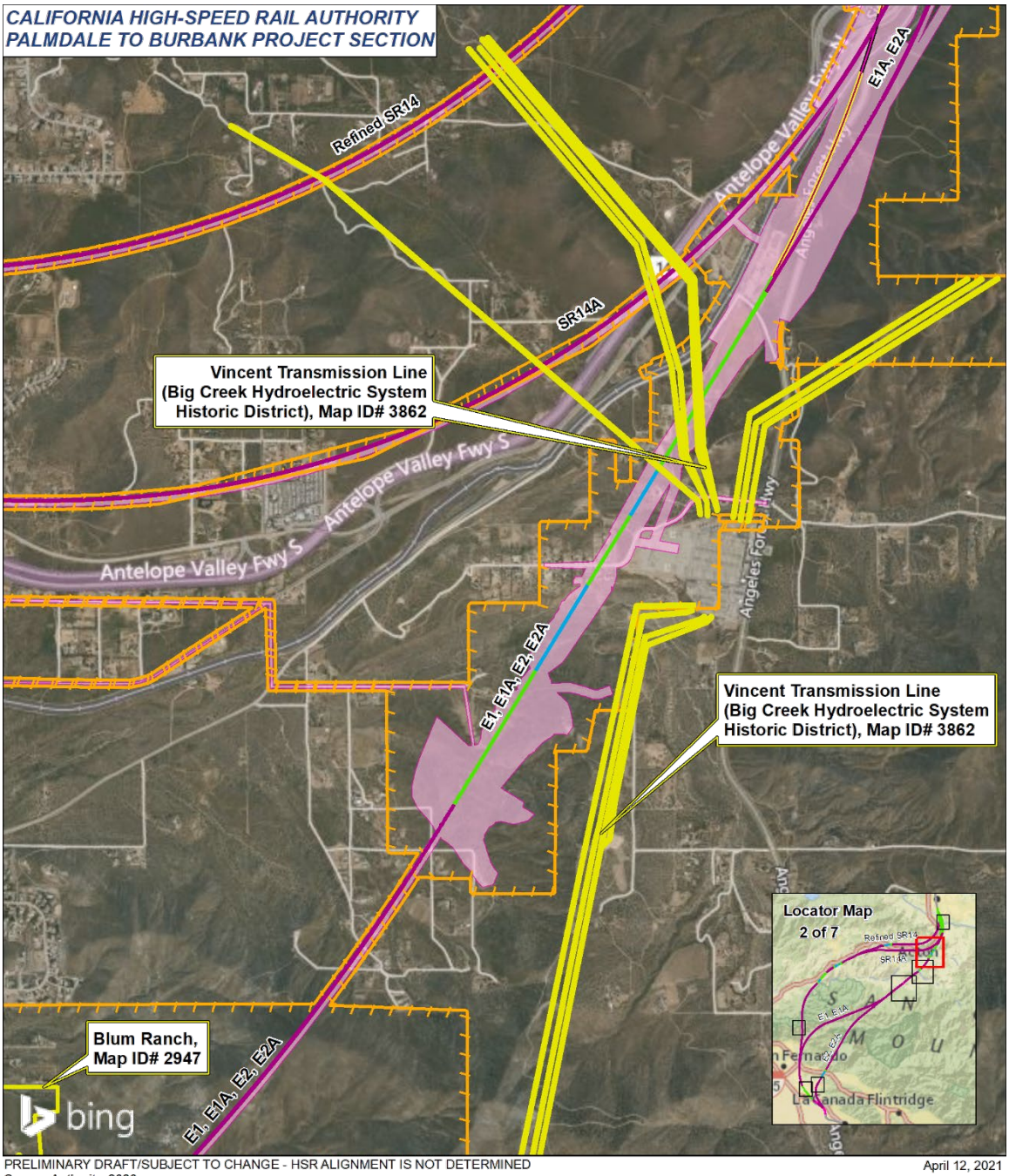

Figure 3.17-2 Cultural Resources within the Area of Potential Effects (Map 2 of 7)

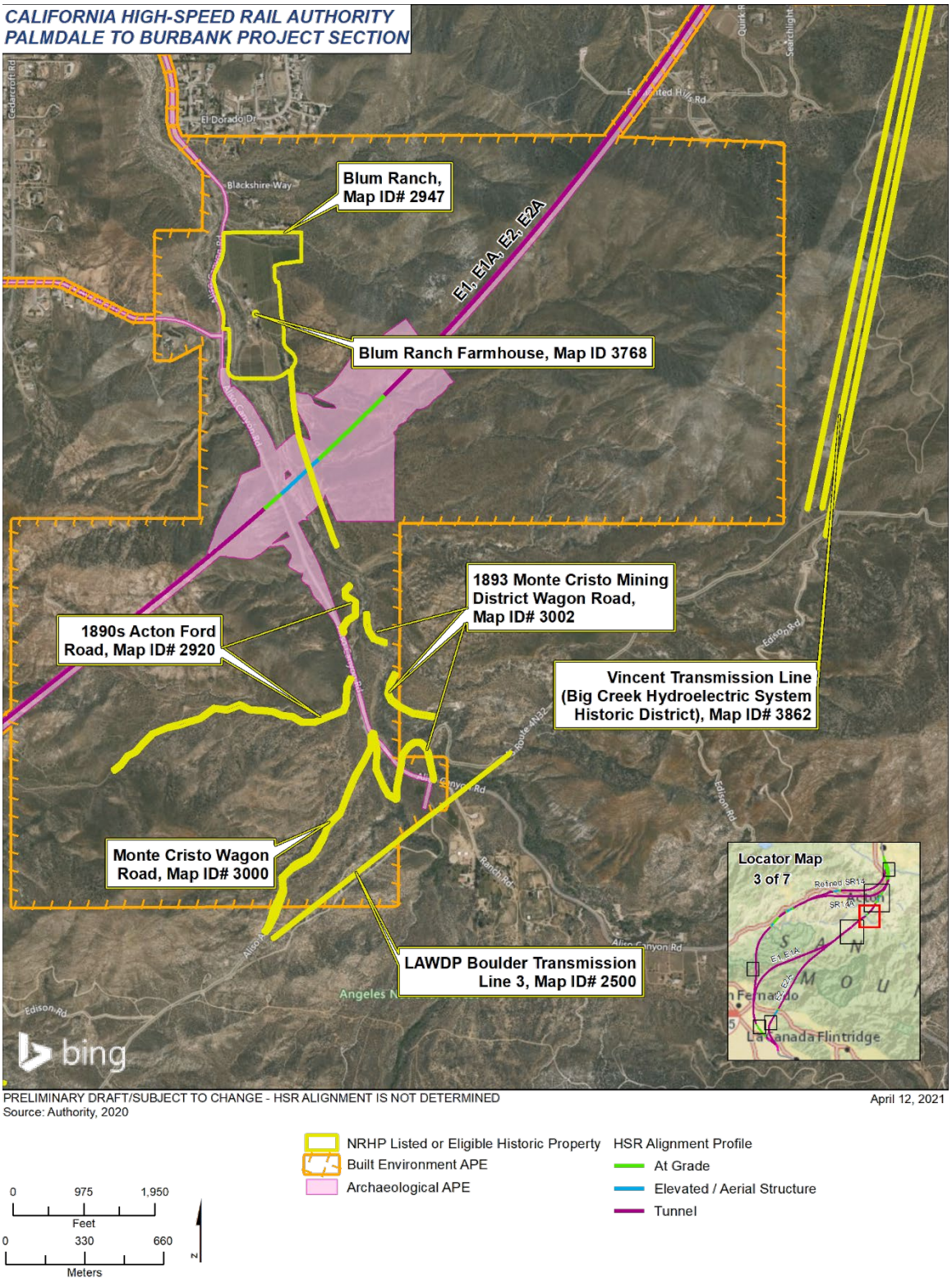

Figure 3.17-3 Cultural Resources within the Area of Potential Effects (Map 3 of 7)

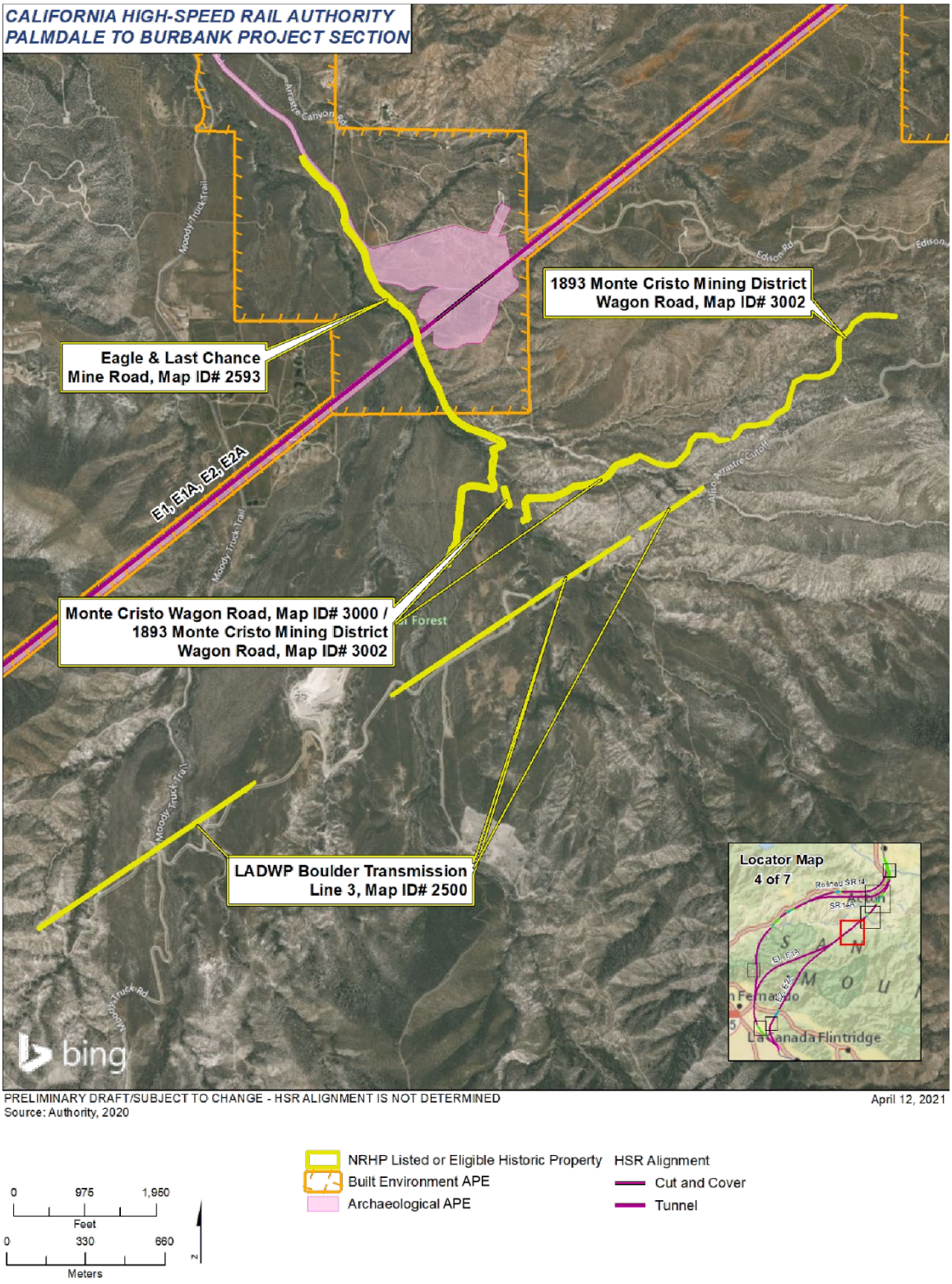

Figure 3.17-4 Cultural Resources within the Area of Potential Effects (Map 4 of 7)

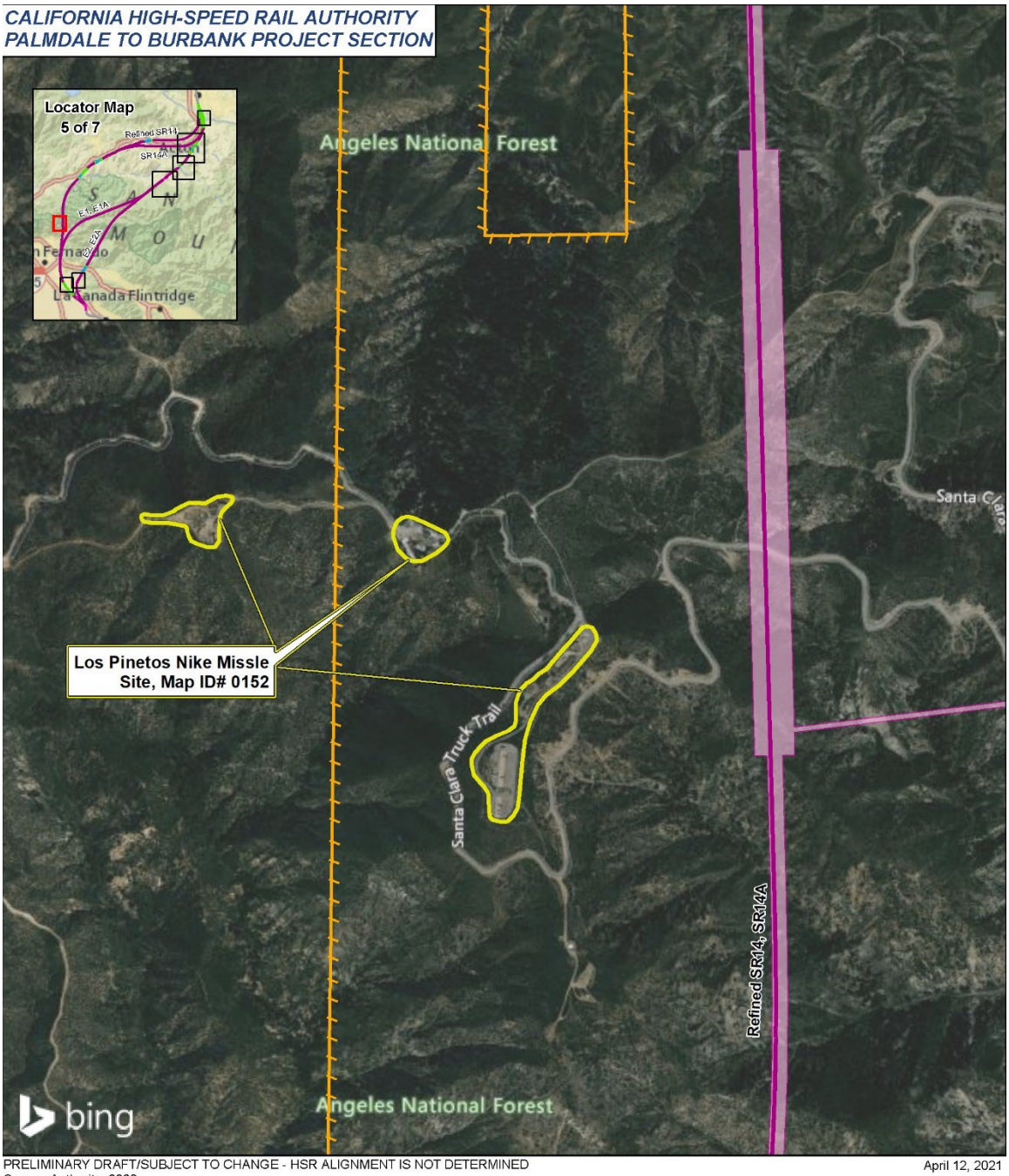

Figure 3.17-5 Cultural Resources within the Area of Potential Effects (Map 5 of 7)

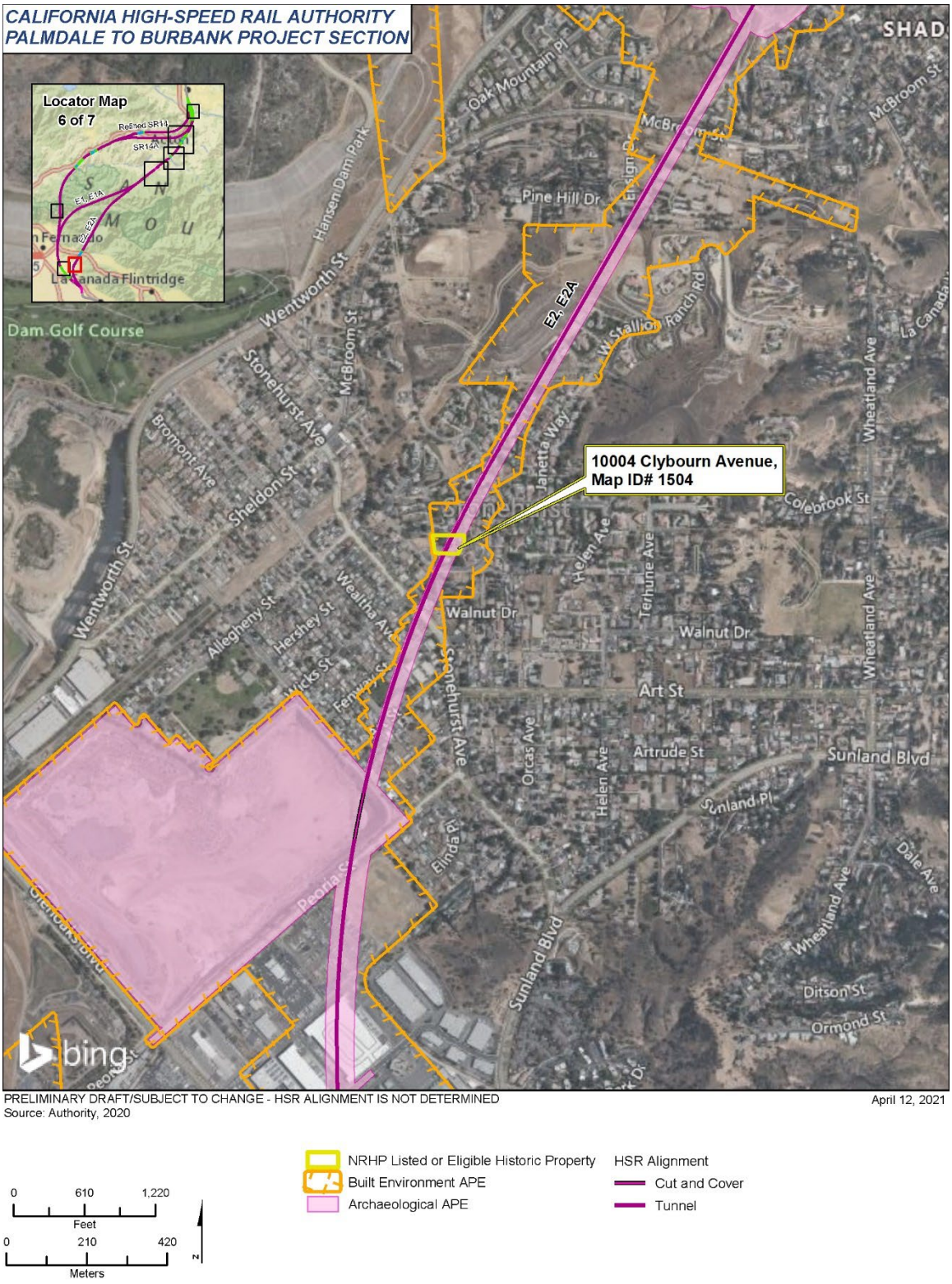

Figure 3.17-6 Cultural Resources within the Area of Potential Effects (Map 6 of 7)

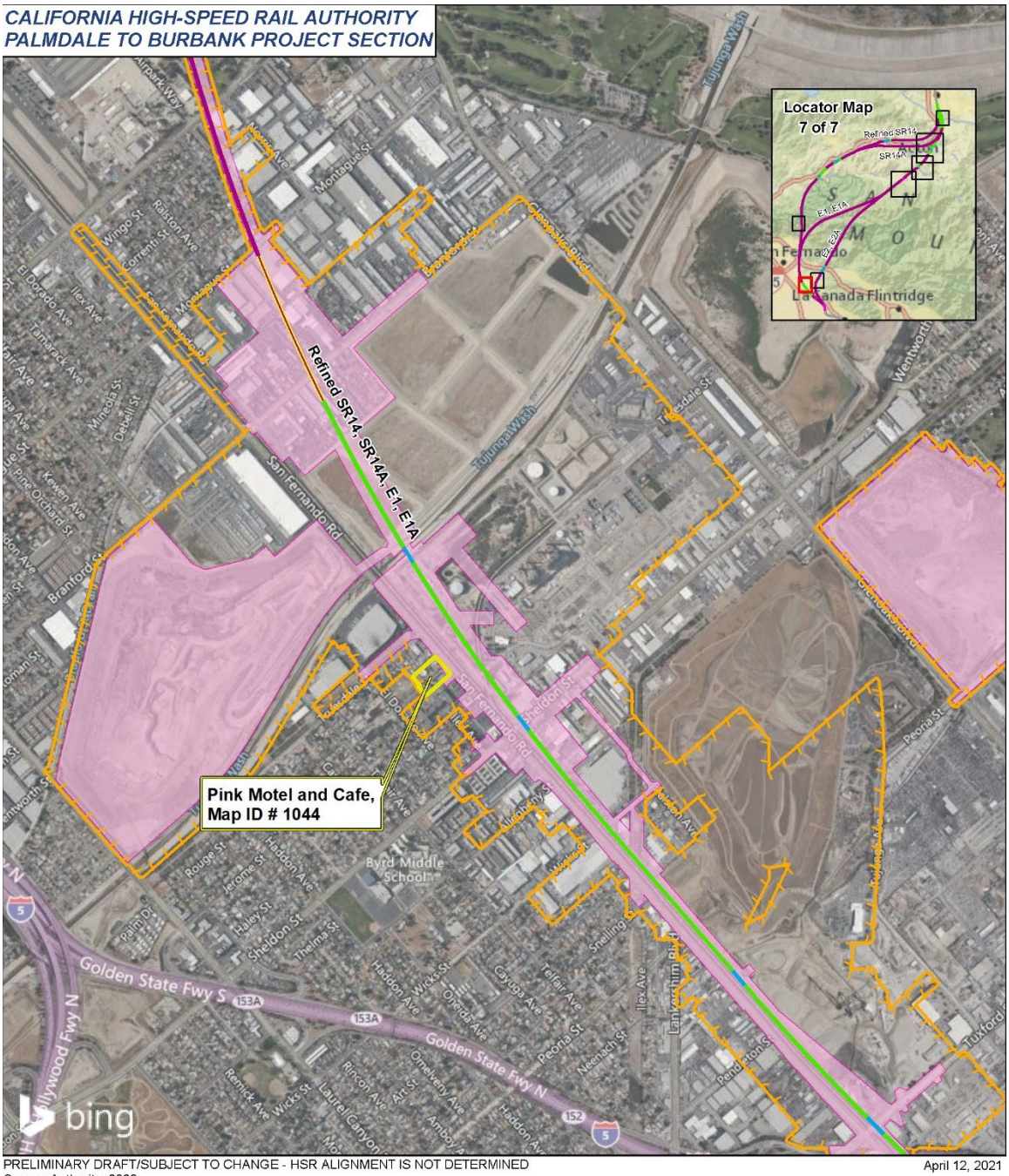

Figure 3.17-7 Cultural Resources within the Area of Potential Effects (Map 7 of 7)

Description of Historic Built Resources in the Area of Potential Effects

As stated above, the portions of the APE that include the Palmdale Subsection and Maintenance Facility are included in this section for resource identification for informational purposes only. The California HSR System facilities proposed within these areas were evaluated in the Bakersfield to Palmdale Project Section EIR/EIS.

The surveys conducted in the Palmdale to Burbank Project Section identified 617 built-environment resources in the historic built APE that were 50 years old or more at the time of the 2016 survey and were evaluated using the NRHP and CRHR significance criteria and in compliance with the PA, its attachments and subsequent guidance. The evaluation of these resources can be found in the HASR (Authority 2019b) as required by the Section 106 PA. Properties that did not require recordation because they were exempt were divided into two subsequent categories: (1) vacant and agricultural; and (2) modern and exempt.

Additionally, Attachment C of the PA and the Cultural Resources Technical Guidance Memorandum #7 (Authority 2016) afford the possibility that various non-exempt properties within the APE may have streamlined documentation: a summary evaluation completed in lieu of the DPR Series 523 forms typically used to evaluate a property that is 50 years old or older for historic significance. Streamlining is applied to non-exempt properties possessing various degrees of alterations, a low likelihood of historic significance under any criteria, or a combination of both. No properties listed, previously determined, or presently determined eligible under NRHP, CRHR, or municipal criteria underwent a streamlined evaluation.

At the time of the survey conducted in 2016, 336 built-environment resources were located within the historic built APE in the Central Subsection that were at least 50 years old. All 336 resources were determined ineligible for listing in the NRHP or CRHR, with SHPO concurrence at different points in time. Two of the 336 built-environment resources were determined to be ineligible for listing in the NRHP with SHPO concurrence in a different study. Thus, 334 resources were reviewed as a part of this study and were determined ineligible for listing in the NRHP with SHPO concurrence in 2019. These resources are not addressed in the Draft EIR/EIS.

Twelve built-environment resources within the Central Subsection are listed or determined eligible for listing in the NRHP or the CRHR. Four have been previously determined eligible for listing on the NRHP and CRHR, with SHPO concurrence, and eight newly identified resources have been determined to be eligible for the NRHP and CRHR as a result of this study. Previously listed or previously determined eligible properties were field verified to check their current level of historic integrity and to document changes since they were originally recorded. No previously listed or previously determined eligible properties lost integrity.

Within the Palmdale Subsection, Burbank Subsection, and Maintenance Facility, 264 resources underwent streamlined review. No built-environment resources within the APE are listed or determined eligible for listing in the NRHP or CRHR within the Palmdale Subsection, Burbank Subsection, and Maintenance Facility. The HASR provides further details (Authority 2019b).

Previously Identified Built Resources within the Area of Potential Effects (Eligible for Listing/Listed on the National Register of Historic Places)

Sections of this Draft EIR/EIS use a “subsection” approach. The Draft EIR/EIS for the Palmdale to Burbank Project Section analyzes environmental resources associated with the Palmdale Transportation Center and Burbank Airport Station, while the environmental consequences of the Palmdale Transportation Center are analyzed in the Bakersfield to Palmdale Project Section EIR/EIS. The subsections referred to in the Draft EIR/EIS encapsulate the station areas plus associated tail tracks and ancillary facilities. No previously determined eligible resources were identified within the historic built APE within the Maintenance Facility, Palmdale Subsection, or Burbank Subsection.

Four previously determined eligible resources were identified within the historic built APE within the Central Subsection. All are considered historical resources for the purposes of CEQA and historic properties under Section 106. These four eligible resources are described below.

Palmdale Ditch (All Six Build Alternatives)

The Palmdale Ditch (Map ID 3480) is an irrigation channel located south of Palmdale that was constructed by the South Antelope Valley Irrigation Company in 1896. The resource carried water 8.6 miles from Littlerock Creek north through the northern edge of the San Gabriel Mountains along Barrel Springs Road toward Sierra Highway, which it crosses before turning north and emptying into Lake Palmdale. The Palmdale Ditch became part of the Palmdale Irrigation District in 1918 and has not significantly changed from its period of significance (1896 through 1924), and as such, has maintained integrity. Given the resource's association with the development of irrigated farming in the South Antelope Valley Area, and with the development of the Palmdale and Littlerock Creek Irrigation Districts, the Palmdale Ditch is eligible for listing in the NRHP/CRHR under Criterion A/1. The boundary of Palmdale Ditch begins at Littlerock Dam and terminates at Lake Palmdale. Because the resource is earthen, its width and depth vary, and its general path may also change during periods of drought and abundant rain.

The boundary of the Palmdale Ditch within the historic built APE begins just east of the railroad tracks, turning south and then west under the tracks to just north of the junction of Sierra Highway and Sierra Hills Lane. It then follows a generally northern route towards Lake Palmdale. As the ditch turns to travel beneath Barrel Springs Road, it flows through a culvert constructed in 1989. The western terminus of the ditch empties out into Lake Palmdale; a culvert was constructed here between 1994 and 2005. As a result, the ditch crosses the APE in two places. Within the historic built APE, west of the railroad tracks, the ditch is underground; in these places, the ditch's presence below ground can be seen on aerials as it resembles unpaved, dirt road. The rest of the ditch within the APE, east of the railroad tracks, remains earthen and an open water course. The primary character-defining features of the ditch within the historic built APE are its curvilinear alignment and its earthen construction. The culverted portions of the Palmdale Ditch are non-contributing features as they post-date the period of significance.

East Branch of the California Aqueduct, Palmdale Vicinity (All Six Build Alternatives)

The EBA (Map ID 3421) was constructed between 1970 and 1971 as a portion of the larger California Aqueduct, which was constructed as part of the State Water Project. The EBA accounts for 98 miles of the total 444-mile system. The California Aqueduct was evaluated in 2009 and was determined eligible for listing in the NRHP/CRHR under Criterion A/1. The previous finding of eligibility is confirmed given the resource's representation of a comprehensively planned and publicly sanctioned water conveyance public works project. The EBA is also eligible for listing under Criterion C/3 for its complex design necessary to distribute water throughout the state. The EBA meets criteria consideration G and the CRHR special consideration for properties less than 50 years old. The EBA begins at the Tehachapi Afterbay and stretches along the eastern edge of the San Gabriel and San Bernardino Mountains to its terminus at Lake Perris. The historic boundary of the California Aqueduct consists of the unreinforced concrete channel, original engineer-designed roads on either side of the aqueduct, operations bridges/vehicular crossings that were located at 4-mile intervals, dams, and numerous auxiliary power and pumping plants. Contributing features of the East Branch include the canal and unreinforced concrete lining.

Big Creek Hydroelectric System Historic District – Vincent Transmission Line (All Six Build Alternatives)

The Big Creek Hydroelectric System – Vincent Transmission Line (Map ID 3862) was constructed in 1927 as a portion of the larger Big Creek Hydroelectric System. The Historic District was nominated to the NRHP in 2016 under Criterion A/1 for its influential role in the physical development of the state and the hydroelectric generation industry in California during the early part of the 20th century, and under Criterion C/3 as a significant and representative example of early 20th century hydroelectric engineering and development, both at the state level. The period of significance was established as 1927, which is when the portion of the transmission line was constructed in the APE. The historic boundary of this contributing element of the historic district is defined by the parcel, right-of-way, and easement boundary for the line. Character-defining features were identified in the NRHP nomination as "the overall alignment … the original steel

frame towers, and the operations integrity of the line as a transmission feature of the Big Creek Hydroelectric System Historic District." While operationally critical, the insulators, ground wires, and conductor cables are not considered character-defining features as they have been upgraded and replaced over time to maintain the operations integrity of the system.

Los Pinetos Nike Missile Site (Refined SR14 and SR14A Build Alternatives)

The Los Pinetos Nike Site (Map ID 152) was constructed between 1955 and 1956. The resource meets the criteria for listing in the NRHP and the CRHR under Criterion A/1 for its association with the development of the Nike System for the Los Angeles Defense Area from 1955 to 1968, which made a significant contribution both to industrial technology and the policy-making decisions of the American government during the late 1950s and 1960s. The property also meets the criteria for listing in the NRHP under Criterion C, and the CRHR under Criterion 3. In addition, Los Pinetos is considered to be the most intact of the Nike installations in the ANF.

The historic boundary of the Los Pinetos Nike Missile Site consists of three separate sites in the northwest corner of the ANF: 1) Launch Area (or missile launching site), 2) Barracks, and 3) Radar Control Area.

Character-defining features of the Los Pinetos Nike Missile Site include:

- Launch Area: Sentry box, paint and oil storage building, missile assembly and test building, ready room, three underground storage magazine sites (silos), warheading building, sentry control station, water storage tank, and canine kennels.
- Barracks: Two dormitories, water storage tank, pump house, mess hall, and gas station/garage.
- Radar Control Area: Barracks and officer's quarters, sentry box, two radar platforms, mesh helipad, two concrete pads, and towers.

In addition to the three sites containing buildings and structures, the line-of-sight provided by the location of this station is also considered a character-defining feature of the historic property. Particularly from the barracks site, one can view the San Fernando Valley to the southwest, and Canyon Country to the northwest. From the launching area, one can view most of the greater Los Angeles Basin.

Newly Identified Built Resources within the Area of Potential Effects (Eligible for Listing on the National Register of Historic Places)

Within the historic built APE, no newly identified eligible resources were identified within the Palmdale and Burbank Subsections. In addition, no newly identified resources were identified within the Maintenance Facility.

Eight newly identified NRHP-eligible properties are present within the APE within the Central Subsection. All are considered historical resources for the purposes of CEQA and historic properties under Section 106. Table 3.17-8 summarizes these resources and this section presents a short description of each historic property.

Blum Ranch, 31880 Aliso Canyon Road, Acton Vicinity (E1, E1A, E2, and E2A Build Alternatives)

The Blum Ranch (Map ID 2947), located at 31880 Aliso Canyon Road in the Acton area, is eligible for listing in the NRHP and the CRHR at the local level, as a contiguous historic district and as a rural historic landscape.[4] The property is eligible under Criterion A/1 for its association with the early settlement and development of agriculture in northern Los Angeles County. The property is also eligible for listing under Criterion C/3 for the vernacular designs of its buildings, circulation networks, and water conveyance features that date to the farmstead's period of significance (1891 to circa 1924).

[4] As of April 2018, the Blum Ranch property has changed ownership and is now referred to as the Bloom Ranch of Acton.

Under NRHP Criterion C and CRHR Criterion 3, Blum Ranch possesses design and construction significance because its contributing elements embody the distinctive characteristics of buildings and structures influenced by vernacular designs and methods of construction used during the farmstead's historic period. Although only one of the contributing components (the main farmhouse) also qualifies for individual listing in the NRHP and CRHR because of its differentiated design combination of the Craftsman and Swiss-Chalet architectural styles, they share the same method of vernacular construction and the reliance on locally available materials.

The period of significance began with the establishment of the Blum homestead in 1891 and ended in circa 1924, with the completion of the property's water conveyance system, the extension of irrigated agricultural land into APN 3058007010, and the construction of the early 20th century vernacular farm buildings and structures. Although the property has been in continual use as a farm, contribution to the development of local agriculture in a significant way after 1924 has not been confirmed. By the end of 1924, technological developments regarding Blum Ranch's water conveyance system and the transition to an irrigation-based, market-oriented agricultural system were fully realized and no other historically significant events or trends involving technological advances in agriculture occurred on the property after this year. The NRHP and CRHR historic district boundary consists of the perimeter road, former peach orchard, peach orchard, portions of Aliso Creek, pear orchard, flatlands, and the irrigation pipeline in the vicinity of the property.

Blum Ranch Farmhouse, 31880 Aliso Canyon Road, Acton Vicinity (E1, E1A, E2, and E2A Build Alternatives)

The Blum Ranch Farmhouse (Map ID 3768), located at 31880 Aliso Canyon Road in the Acton area, is an excellent example of an early-20th century Craftsman-style dwelling with Swiss-Chalet style influences. Although the farmhouse features the distinctive characteristics of the Craftsman style and Swiss-Chalet style, the stonework on the house is unique as it showcases the skills of Mr. Blum's trade as a stonecutter and his Swiss heritage. As a result, it is also illustrative of a type and period of vernacular construction influenced by the abundance of stone and absence of wood as building materials. The farmhouse retains its historic integrity and distinctive decorative details, including the exposed rafters and decorative false beams, porches with battered piers, and painted finishes on trim. It is located within the Blum Ranch Historic District described above; both the Blum Ranch Historic District and Blum Ranch Farmhouse are considered separate eligible historic resources. Given this, the farmhouse is eligible for listing in the NRHP/CRHR under Criterion C/3. The boundary of the resource is limited to the physical footprint of the farmhouse.

Los Angeles Department of Water and Power Boulder Transmission Line 3 (E1, E1A, E2, and E2A Build Alternatives)

The LADWP Boulder Transmission Line 3 (Map ID 2500) is eligible for listing in the NRHP as a contributing segment of the Los Angeles Bureau of Power and Light Transmission Line Multistate Linear Historic District, which played a crucial role in delivering power to the Los Angeles area during and after World War II. The linear historic district is eligible under NRHP/CRHR Criterion A/1 for its direct association with the economic and industrial development of the Los Angeles region, and for pioneering technology in high-voltage transmission. Furthermore, the linear historic district is eligible for listing in the NRHP/CRHR under Criterion C/1 because long-distance transmission at such high voltages had not been attempted prior to its construction. Consequently, the lines and towers included several important design innovations. The period of significance for the linear historic district is 1933 to 1939, which concludes with the completion of Transmission Line 3. The boundary of the segment of Boulder Dam Transmission Line 3 within the historic built APE consists of the following contributing elements present within the historic built APE; the route and footprint of the line, one tower, and the associated access road, which consists of 1,122 feet of Edison Road paralleling the transmission line to the south between Ranch Road and the Aliso Arrastre Cutoff.

Eagle and Last Chance Mine Road (E1, E1A, E2, and E2A Build Alternatives)

The Eagle and Last Chance Mine Road (Map ID 2593) is a historic dirt wagon road that provided the primary access route to mines on Mt. Gleason. Patented in the 1880s, the Eagle-Last Chance Mining Complex documented by Michael McIntyre in 1996 includes a minimum of 18 mining claims, plus the Eagle & Last Mine Road that served them. The Eagle and Last Chance Mine Road is part of a potential NRHP-eligible district associated with Mt. Gleason mining activities. As a contributor to a potential mining-related historic district, the Eagle and Last Chance Mine Road is significant under Criterion A/1 because, in its role of transporting people and materials to and from the mines on Mt. Gleason, it played an important role in the economy and development of the area according to the previous evaluations. The Eagle and Last Chance Mine Road was considered for eligibility in 1996 and 2000 as a contributor to a potential mining-related historic district, potentially significant under NRHP and CRHR Criterion B/2 due to its association with George Gleason. Neither of these previous evaluations appear to have received SHPO concurrence; however, for purposes of this evaluation, the resource is considered eligible. This linear resource may be significant under Criterion B/2 as it is directly associated with Gleason's important role in the development of mining activity on Mt. Gleason. Noting the location of the Mt. Gleason mines at high elevation, which would have required innovative engineering to access it, McIntyre and Brock also considered the Eagle and Last Chance Mine Road as a contributor to a historic district that is potentially significant under NRHP/CRHR Criterion C/3. For the purposes of this evaluation, the historic boundary of the Eagle and Last Chance Mine Road is defined as the alignment of the existing roadway that remains visible on the landscape within the historic built APE. Character-defining features consist of the alignment, road width, grade, roadcuts, and road surface, which is eroded in some locations and regraded in the northern portions.

Acton Ford Road (E1, E1A, E2, and E2A Build Alternatives)

Located in the ANF including SGMNM, the 1890s Acton Ford Trail (Map ID 2920) is a spur wagon trail that is directly associated with the 16-mile-long Monte Cristo Mining District Wagon Trail developed from the 1860s through 1890s. Based on a 2006 evaluation, the 1890s Acton Ford Trail potentially meets the criteria for listing in the NRHP and the CRHR as a contributor to a potentially NRHP-eligible district associated with the Monte Cristo Mining District Wagon Trail. Although there is no record of formal SHPO concurrence with the 2006 evaluation, the 1890s Acton Ford Trail is treated as having significance for the purposes of this analysis as a contributor to a potential historic district under NRHP/CRHR Criterion A/1. It is directly associated with the Monte Cristo Mine Wagon Road, which linked the gold mining areas in the Upper Big Tujunga Canyon area with the Southern Pacific Railroad and communities in Soledad Canyon. This specific segment served a supportive purpose, allowing access to juniper trees, which contributed to the overall functioning of the area as a mining center. Due to diminished integrity, the 1890s Acton Ford Trail lacks distinction as an individually eligible resource. The boundary of the historic property within the historic built APE is defined by the existing roadway width and length within the historic alignment, 0.15 mile and 12 to 15 feet, respectively. Character-defining features of the roadway include its alignment, width, grade, roadcuts, unpaved wagon-road surface in the eastern segment, and graded surface in the western portion.

Monte Cristo Wagon Road System (including Monte Cristo Mining District Road, Aliso Creek Wagon Road, Forest Road 4N32 – Aliso Arrastre Cutoff) (E1, E1A, E2, and E2A Build Alternatives)

The Monte Cristo Mining District Wagon Road (Map ID 2990/3000/3002) is a wagon road and trail system in the ANF including SGMNM and was associated with mining activity in the Upper Big Tujunga Canyon area. Based upon a 2006 recommendation, this linear feature is eligible for the NRHP at the local level of significance and the CRHR as a contributor to a potential historic district or a potential rural historic landscape. Under NRHP Criterion A and CRHR Criterion 1, the Monte Cristo Mining District Wagon Road is treated as a contributor to a potential historic district associated with gold mining or a rural historic landscape. A full evaluation of this potential historic district is beyond the scope of the current investigation; however, it has been determined that the road served as a vital connection between historically significant gold mining activities in the Upper Big Tujunga Canyon area and communities and the Southern Pacific Railroad in Soledad Canyon. Therefore, it potentially contributes to a larger district expressing the area's gold mining

or rural development history, if such a district existed. The Wagon road segments were confirmed eligible for inclusion to the NRHP as concurred by SHPO in August 2019 (Authority 2019b).

The boundary for this property is defined as the alignment of the existing roadway that is still visible on the landscape within the historic built APE. Character-defining features include the roadway alignment, its width and grade, and roadcuts.

Residence 10004 Clybourn Avenue, Los Angeles (E2 and E2A Build Alternatives)

The single-family residence located at 10004 Clybourn Avenue (Map ID 1504) is eligible at the local level as a superb example of a locally distinctive architectural style, known as Stonemason Vernacular or Arroyo Stone house. Both Stonemason Vernacular and Arroyo Stone houses have been recognized by the City of Los Angeles as locally significant architectural types and styles. Most commonly found in the northeast San Fernando Valley—specifically in the city of Los Angeles neighborhoods of Stonehurst (adjacent to the Shadow Hills neighborhood) and Sunland–Tujunga (east of Interstate Highway 210)—the unique local style and character is referred to in SurveyLA (City of Los Angeles 2007) as "Stonemason Vernacular," a derivative of the Craftsman style of architecture. Character-defining features of eligible examples of this style that are displayed on this residence include: flat or low-sloped roofs with parapets; multipane windows with wood frames, sills, and sashes (casement or hung); stone masonry walls; stone masonry chimneys; deeply recessed window and door openings when stone masonry is present; little if any ornamentation; stone masonry landscape elements such as pathway markers and fences; and deep front yard setbacks with landscape and mature trees. The boundary of the historic property was identified as the current legal parcel; the contributing features within this boundary include the 1922 residence, the curvilinear drive, and the masonry retaining walls along the road, which reflect the adherence to the historic architectural style and provide access between the house and the road.

Pink Motel and Café, 9457-9475 San Fernando Road, Los Angeles (Refined SR14, SR14A, E1, and E1A Build Alternatives)

The Pink Motel and Café (Map ID 1044) are located at 9457–9475 San Fernando Road in Los Angeles. The properties are eligible under NRHP/CRHR Criterion C/3 as rare and outstanding examples of the late-1940s Googie-style roadside architecture. The Pink Motel and Café are among the few remaining examples of post-World War II roadside commercial developments in the San Fernando Valley.

Each building is a rare example of post-World War II roadside architecture in the Los Angeles region, and together they signify a remarkable example of the post-war roadside commercial development. The Pink Motel captures elements of the Googie style, as evidenced by the cantilevered entry, the slender porch support, the flat roof, the distinctive neon sign, and the decorative grilles along the main elevation of the building. The former Pink Café, now Cadillac Jack's, also captures elements of the Googie style, as reflected in the cantilevered entry, the cantilevered roof, and the stacked sign at the southeast corner of the building. Additional character-defining features include the slender porch support, the decorative concrete enclosure, and the flat roof. The historic property consists of the Pink Motel and Café, the swimming pool, and the signs for both the motel and the café. The NRHP-eligible historic property boundary consists of the entire city lots of 9457 and 9475 San Fernando Road (APNs 2629007004 and 2629007003, respectively) that have been historically and are currently associated with the properties.

3.17.6.3 Resources of Importance to Native Americans and Other Interested Parties

Outreach and coordination with the Native American tribes and other interested parties are described in Section 3.17.4.2. These efforts are ongoing, and the tribes continue to be consulted at each key decision point of the Section 106, NEPA, and CEQA processes. To date, the Los Angeles County Department of Regional Planning, City of Santa Clarita, ANF, Southern California Association of Governments, and Los Angeles Conservancy have submitted data or requested information.

As part of its ongoing consultation with Native American tribes and commitment to connecting the tribes more closely with the cultural resources investigations for the California HSR System, the Authority has invited tribal consulting parties to document their own tribal ethnohistories for inclusion in the Palmdale to Burbank Project Section ASRs. To date, the Fernandeño Tataviam Band of Mission Indians and the Gabrieleño Band of Mission Indians—Kizh Nation have prepared ethnohistorical narratives for inclusion in the Palmdale to Burbank Project Section ASR. These tribal ethnohistories represent the individual perspectives of each tribe, which are independent of the conclusions of the project archaeologists who prepared the ASR (Authority 2019a).

As of May 2021, three of the four tribal consulting parties have provided comments on the Palmdale to Burbank Project Section. These comments were submitted to the Authority as part of the Section 106 consultation process and followed the January 18, 2017, tour of the Palmdale to Burbank Project Section and consultation meetings occurring both before and after the tour. Comments received from the Fernandeño Tataviam Band of Mission Indians, the San Manuel Band of Mission Indians Management Department, and the Kizh Nation are summarized below:

- The Fernandeño Tataviam Band of Mission Indians provided confidential formal comments on the Palmdale to Burbank Project Section ASR on April 27, 2017. Over a 2-year period of analysis and extended review by the Tribal Government, Council of Elders, and Tribal Historic and Preservation Department, the Tribe finds that the project places tribal cultural resources at risk and will ultimately affect the land in irreversible ways. Each of the six Build Alternatives is proposed to affect traditional spaces and geographies tied to indigenous peoples and will significantly disrupt the Tribe's relationality to the lands for generations to come.
- The San Manuel Band of Mission Indians Cultural Resources Management Department provided comments on resources in the Palmdale to Burbank Project Section to the Authority on April 21, 2017. The Cultural Resources Management Department expressed concerns about impacts from the Palmdale to Burbank Project Section on the Chavez archaeological site, which they called one of the most unique and complex multicomponent village sites in Serrano ancestral territory. The Tribe also regards the Una Lake area to be culturally sensitive because it is a natural feature, supports culturally important plant and animal resources in the Antelope Valley, and may be related to a number of large village sites and the Chavez Site as a cultural landscape. The comments stated that without additional data it was difficult to discern if the impacts of the Palmdale to Burbank Project Section on Una Lake would be mitigatable.
- On April 12, 2018, the Authority sent the draft ASR to the four consulting tribes and parties for their review and comment. On April 23, 2018, the Authority received comments on the draft ASR from Andrew Salas, Chairman of the Kizh Nation. Chairman Salas' comments included clarification regarding 1) authorship of the Kizh Nation ethnohistorical contribution; 2), the antiquity of Native American occupation in the Los Angeles area; 3), the antiquity of Kizh occupation in their traditional tribal territory; and 4), the tribe's name (Kizh in place of Tongva).

3.17.7 Environmental Consequences

This section describes the impacts on cultural resources resulting from implementation of the six Build Alternatives. Due to limited access for archaeological surveying during the environmental phase, the identification of archaeological sites will be conducted in phases as access to parcels is gained during design-build activities. Therefore, specific impacts on known and as-of-yet unknown archeological sites will be determined during phased investigation.

Construction of the Palmdale to Burbank Project Section would occur in both urbanized and rural/undeveloped areas. As with other sections, the Palmdale to Burbank Project Section would have the greatest significant impacts on historic architectural properties in the urbanized areas, and the greatest significant impacts on undisturbed prehistoric archaeological sites in rural/undeveloped areas. All historic architectural and archaeological resources identified within the APE that were listed in or eligible for the NHRP were determined to also be historical resources for the purpose of CEQA. No CEQA-only resources were identified within the archaeological or historic built APE.

The Authority has incorporated IAMFs into the design of the Palmdale to Burbank Project Section to avoid or minimize impacts on cultural resources (see Section 3.17.5.3). These IAMFs include survey requirements, avoidance measures, monitoring, and recording requirements.

3.17.7.1 Archaeological Resources

Activities that affect archaeological resources are typically associated with construction. Where NRHP- and CRHR-listed/eligible archaeological sites occur within the archaeological APE, construction activities would likely result in adverse effects on those sites; consequently, construction impacts cannot be considered temporary impacts. Soil excavation or compaction resulting from the use of heavy machinery on the construction site itself, in staging areas, and other areas of ground-disturbing activities could affect the integrity of artifact-bearing deposits associated with known and as-of-yet undiscovered archaeological sites. For all six Build Alternatives, unknown or unrecorded archaeological resources may exist. Disturbance or removal of archaeological resources that damage their integrity would result in adverse effects on archaeological resources under Section 106 and could cause substantial adverse changes in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines; this would be an impact under NEPA and a significant impact under CEQA.

Archaeological resources are not typically subject to visual or auditory effects. Because their settings do not generally contribute to their significance, they are not adversely affected by adjacent construction or operations. Exceptions to this are described in Section 3.17.5.2 above. For the purposes of this analysis, tribal cultural resources are considered to be archaeological resources.

3.17.7.2 Historic Built Resources

Architectural resources can be affected if character-defining features are altered. As with archaeological resources, activities that affect architectural resources are typically associated with construction. Activities that can result in adverse effects under Section 106 or substantial adverse changes under CEQA from construction of a project include, but are not limited to, relocation or realignment of resources; demolition, removal of all or portions of buildings, structures, linear features, or landscaping; settlement resulting from adjacent excavation or dewatering; vibration-induced damage; and the alteration of visual character, reducing the feeling and association of the property to its historic setting. Permanent limited access to a historic property can result in its abandonment and eventual demolition.

Construction-period alterations to a setting, such as increased noise levels or materials storage, are considered temporary and as such are not considered a significant impact or a significant change to historic built resources. Adverse effects resulting from the operation of the train would be limited to noise and/or vibration caused by the passing train if an aspect of the historic property's significance is derived from a quiet environment, and introduction of permanent visual elements that diminish the integrity of a historic property's setting and feeling.

3.17.7.3 Overview of Effects of the No Project and Build Alternatives

This section evaluates effects on archaeological and historic built resources for the No Project and Build Alternatives. All six Build Alternatives would generally result in similar types of impacts (listed below) but would vary in the degree of effect and number of resources affected. Therefore, this analysis discusses construction and operations impacts separately for each of the Build Alternatives.

Section 3.17.6 describes the archaeological and historic built resources that are present within the APE. As described above, 65 previously recorded archaeological resources are mapped within the APE. Eight additional archaeological resources were identified in the APE as a result of field surveys conducted for this Draft EIR/EIS. Of the 73 known archaeological resources present within the APE, one site, the Prehistoric Vasquez Rocks Archaeological District, is listed on NRHP. Per the Section 106 PA, the recorded archaeological sites that have not been evaluated for NRHP eligibility will be revisited and will undergo a phased evaluation. Each site will be re-surveyed and recorded. It is possible that site boundaries may be reduced or expanded, and site attributes may be revised. It is also possible that some site boundaries were not accurately depicted when previously recorded and may actually lie outside the archaeological APE; if this is the case, these sites would not be evaluated.

Additionally, archaeological sites identified in this EIR/EIS that have not been evaluated for NRHP eligibility and are not classified as exempt resources per the PA will be evaluated later as part of the phased approach. When evaluated, it may be determined a site is not eligible for listing in the NRHP. Because of this uncertainty, for the purposes of this analysis, archaeological resources within the APE have been treated as eligible. Furthermore, archeological sites within the APE have been evaluated under CEQA as historic resources.

The following archaeological resources within the APE would not be affected and are therefore not discussed further in this section:

- P-19-001142/501555500012 (North Fork Chipping Station)—located in the ANF including SGMNM
- P-19-001892 (Small lithic scatter)
- P-19-001895 (Prehistoric lithic scatter)
- P-19-004606 (Prehistoric lithic scatter)
- 5015500126 (Prehistoric rock features)
- 5015500127 (Prehistoric circular rock feature)—located in the ANF including SGMNM
- 19-101402 (Prehistoric hearth feature)—located in the ANF

Of the 12 historic built resources identified in the APE, the following six would not be affected and are therefore not discussed further in this section:[5]

- Big Creek Hydroelectric System Historic District—Vincent Transmission Line (Map ID 3862)
- Los Pinetos Nike Missile Site (Map ID 152)
- 10004 Clybourn Avenue (Map ID 1504)
- LADWP Boulder Transmission Line 3 (Map ID 2500)
- 1890s Acton Ford Road (Map ID 2920)
- Monte Cristo Wagon Road System (Map ID 2990/3000/3002)

Of the remaining six historic built resources, the Palmdale Ditch, the EBA, the Eagle and Last Chance Mine Road, and the Pink Motel and Café would not be adversely affected by the six Build Alternatives with implementation of CUL-IAMF#6, and CUL-IAMF#8. However, Blum Ranch and the Blum Ranch Farmhouse would be adversely affected by the E1, E1A, E2, and E2A Build Alternatives, as discussed below in Section 3.17.7.5.

Where the potential for adverse effects or impacts on archaeological and historic built resources exists, the impacts are analyzed as either temporary or permanent. While construction activities are temporary in nature, such activities would result in permanent alteration to archaeological and historic built resources.

[5] Of the 12 historic built resources, one is listed on the NRHP, and three have been previously determined eligible for listing on the NRHP and CRHR, with SHPO concurrence. Eight newly identified resources have been determined to be eligible for the NRHP and CHHR as a result of this study and have received SHPO concurrence in August 2019. Please refer to the HASR for further details (Authority 2019b).

3.17.7.4 No Project Alternative

The No Project Alternative assumes that the Palmdale to Burbank Project Section would not be constructed. In assessing future conditions, it was assumed that all currently known, programmed, and funded improvements to the intercity transportation system (highway, rail, and transit) and reasonably foreseeable local development projects (with funding sources already identified) would be developed as planned by 2040. This new urban/suburban development and transportation infrastructure throughout developed areas of the APE would be implemented to accommodate regional population growth.

Because development activities would continue within the APE under the No Project Alternative, the number of cultural resources affected by associated construction and operation would increase overtime. Development under the No Project Alternative would primarily occur within existing urban/suburban communities within the Palmdale to Burbank Project Section area, including Palmdale and the San Fernando Valley, and would generally avoid portions of the San Gabriel Mountains that preclude development due to topographical constraints or protected land designations (such as the ANF including SGMNM).

Projects anticipated to proceed or continue under the No Project Alternative would have the potential to disturb human remains and damage, relocate, or destroy known and as-of-yet undiscovered archaeological resources within urban and suburban areas of the APE. Regional development under No Project Alternative conditions would also have the potential to result in adverse effects on historic built properties within the Central Subsection, including but not limited to; the physical destruction of or damage to all or part of a historic property, alteration of a property in a way that is not consistent with the SOI's Standards, the removal of a property from its historic location, or a change in the character of the property's historic use or of physical features within the property's setting that contribute to its historic significance. However, projects would be required to comply with the following federal and state laws and regulations that protect cultural resources: (1) Section 106; (2) NEPA of 1969; (3) Section 4(f) of the Department of Transportation Act of 1966; (4) CEQA; and (5) Cal. Public Res. Code Sections 5024.1 and 21084.1.

Projects anticipated to proceed or continue within urbanized areas under the No Project Alternative would encounter similar types of impacts on cultural resources as those expected to be encountered by the six Build Alternatives, including damage to known archaeological resources and the introduction of visual or audible elements that diminish the integrity of a property or its historic significance.

Within urban/suburban areas that are expected to experience population growth under the No Project Alternative, new development would require demolition, ground disturbance, and construction activities that could damage or destroy known and as-of-yet undiscovered archaeological resources. Such construction activities would also have the potential to unearth human remains existing within the Palmdale to Burbank Project Section area, or damage or alter historic built resources in a way that diminishes their historic significance. Projects proposed under the No Project Alternative would be subject to federal and state oversight in order to ensure the preservation of cultural resources. Incorporation of best management practices (BMPs), avoidance measures, and coordination with regulatory agencies would reduce potential risks associated with cultural resources throughout the No Project Alternative timeline.

3.17.7.5 Build Alternatives

The Build Alternative impact analysis is organized as follows:

- **Construction Impacts**.
  - Impact CUL#1: Effects on Known Archaeological Resources Caused by Construction Activities
  - Impact CUL#2: Effects on Unknown Archaeological Resources Caused by Construction Activities

  - Impact CUL#3: Effects on Human Remains Discovered during Construction Activities
  - Impact CUL#4: Effects to Historic Built Resources Caused by Construction Activities
- **Operations Impacts**
  - Impact CUL#5: Effects on Archaeological Resources Caused by Operations
  - Impact CUL#6: Effects on Historic Built Resources Caused by Operations

Refined SR14 and SR14A Build Alternatives

Construction Impacts

Impact CUL#1: Effects on Known Archaeological Resources Caused by Construction Activities.

The Refined SR14 Build Alternative would result in impacts on known archaeological resources within the archaeological APE (Table 3.17-9). Not all of the archaeological resources listed in Table 3.17-6 are included in this discussion. See Section 3.17.7.3 for a list of archaeological resources within the APE that would not be affected and are therefore not discussed in this section.

Due to limited access, many of these known archaeological resources have not yet been surveyed for implementation of the six Build Alternatives. Phased identification would occur as access is granted, the selected Build Alternative design is refined, and where adverse effects would be likely to occur. Known archaeological resources that have not yet been evaluated would undergo phased evaluation, if warranted, when access is granted. A detailed analysis of resources within the ANF including SGMNM is included in Section 3.17.11. While many of the known archaeological resources within the APE have not been fully surveyed, the following analysis assumes their significance in order to disclose the latest available information and provide a conservative assessment of potential impacts.

Although construction impacts would vary in severity, IAMFs (Section 3.17.5.3) would be implemented to avoid or minimize these impacts. CUL-IAMF#1 will develop a geospatial layer to identify the locations of all known archaeological and historic architectural resources. CUL-IAMF#2 will minimize construction impacts by ensuring necessary data (such as resource locations) are attained, monitoring efforts are clearly delineated, and educational materials and training sessions are distributed and administered. CUL-IAMF#5 will entail preparation of an archaeological sensitivity monitoring plan that will identify and map areas of archaeological sensitivity and develop a systematic approach to cultural resource monitoring. Sites that cannot be relocated will be considered archaeologically sensitive and will be monitored during construction.

Table 3.17-9 Known Archaeological Resources Affected by Construction of the Refined SR14 and SR14A Build Alternatives

State Site Identifier	Description of Resource	Potential Build Alternative Effects	Applicable IAMFs
Central Subsection			
P-19-000305	Prehistoric habitation site	Minor surface work associated with the construction of overhead electrical infrastructure intersecting the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-000360	Prehistoric complex lithic scatter; part of Vasquez Rocks Site Cluster (Refined SR14 only)	Construction of a temporary water line in a utility easement located within the public right-of-way bisecting the site at grade.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-000541	Prehistoric habitation site	Construction of a temporary water line in a utility easement located within public right-of-way intersecting site at grade.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-000591	Prehistoric complex lithic scatter	Minor surface work associated with connecting the project components to existing overhead electrical infrastructure intersecting the western edge of the site boundary. The Refined SR14 and SR14A Build Alternatives would also entail a construction and staging area that would intersect the site boundary by less than 15 feet. Additionally, construction activities associated with track right-of-way grubbing and grading would intersect the southern portion of the site; however, this portion of the site can be avoided.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-000595	Prehistoric midden and lithic scatter (Refined SR14 only)	Establishment of an access road and associated ground disturbance within the southern portion of the site boundary. Establishment of an access road would result in cutting and grading the embankment within the site boundary and would expose the prehistoric midden and lithic scatter to significant impacts.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-000618	Prehistoric milling area and complex lithic scatter (Refined SR14 only)	Construction of a temporary water line in a utility easement located within public right-of-way intersecting the eastern edge of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5

State Site Identifier	Description of Resource	Potential Build Alternative Effects	Applicable IAMFs
P-19-000628	Prehistoric earthen oven and lithic scatter (Refined SR14 only)	Under the Refined SR14 Build Alternative, minor surface work associated with connecting the project to existing overhead electrical infrastructure that intersects the western edge of the site boundary. In addition, ground disturbance associated with the establishment of a construction and staging area would occur within most of the site boundary. The Refined SR14 Build Alternative would also entail establishment of an access road bisecting the site boundary, which would require grading up to approximately 4 feet deep. Because the SR14A Build Alternative alignment would be underground in bored tunnels over the resource, it would have no effect on this resource.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001410/ 5015500026	Prehistoric ground-stone artifacts possibly displaced from original location as decoration around a residence (Refined SR14 only)	Minor surface work associated with overhead electrical work.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001846	Historic period landfill site	Entail minor surface work associated with connecting the project components to existing overhead electrical infrastructure intersecting the western edge of the site boundary. In addition, ground disturbance associated with the establishment of a construction and staging area would occur within most of the site boundary. The Refined SR14 and SR14A Build Alternatives would also entail establishment of an access road bisecting the site boundary, which would require grading and embankment cutting within the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001847	Historic period foundations, debris scatter	Placement of supports for an aboveground track viaduct.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001855	Prehistoric lithic scatter (Refined SR14 only)	Construction of an access road intersecting the site boundary. Construction would result in ground disturbance associated with grading and cutting embankment above the road up to 40 feet.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001859	Prehistoric rock shelter with rock art and mixed cultural material	Establishment of an access road bisecting the northern edge of the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001860	Prehistoric rock shelter and lithic scatter	Placement of supports for an aboveground track viaduct.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5

State Site Identifier	Description of Resource	Potential Build Alternative Effects	Applicable IAMFs
P-19-001888	Prehistoric lithic scatter	Minor surface work associated with overhead electrical infrastructure intersecting the western portion of the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001894	Prehistoric lithic scatter (Refined SR14 only)	Minor surface work associated with the construction of overhead electrical infrastructure intersecting the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001904	Prehistoric lithic scatter (Refined SR14 only)	Ground disturbance associated with the relocation of a portion of the EBA intersecting the site. Relocation of a portion of the EBA would require construction of a siphon and would feature embankment cutting.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-002039	Historic period homesite remains	Ground disturbance associated with road realignment. Road realignment would require grubbing and grading within the boundary of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-002474	Historic period household refuse dump, 1920s–1930s (Refined SR14 only)	Establishment of a construction staging area intersecting the resource boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-003536	Historic period refuse deposit	Minor surface work associated with the construction of overhead electrical infrastructure intersecting the western portion of the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-003890	Prehistoric Vasquez Rocks Archaeological District	Construction of a temporary water line in a utility easement located within the public right-of-way, intersecting the northern and western edges of the Prehistoric Vasquez Rocks Archaeological District. Effects can be minimized by requiring either locating the water line above ground—resulting in relatively minor surface work within the site boundary—or avoidance (e.g., locating the water line outside the boundary of the site).	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
Burbank Subsection			
There are no known archaeological resources within the Burbank Subsection			

Source: Authority, 2019a

CEQA Conclusion

Although implementation of CUL-IAMF#1, CUL-IAMF#2, and CUL-IAMF#5 will avoid and minimize impacts on known archaeological resources, various resource sites would remain susceptible to construction impacts, with the potential to cause a substantial change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines. For the purposes of this analysis, previously identified resources that could not be surveyed for this Draft EIR/EIS due to inaccessibility are considered eligible for the NRHP and CRHR. Once access is granted, the sites would be surveyed and, if warranted, evaluated. The Prehistoric Vasquez Rocks Archaeological District (P-19-003890) is the only site in the archaeological APE listed on the NRHP for the Refined SR14 and SR14A Build Alternatives.

Implementation of CUL-MM#1 and CUL-MM#4 will ensure that appropriate mitigation measures for each eligible archaeological resource will be determined by consulting with the MOA signatories and tribal consulting parties. CUL-MM#1 will implement policies identified in the ATP for archaeological resources identified during phased identification. These policies include consulting with MOA signatories and concurring parties to determine the preferred treatment of the resources and appropriate mitigation measures, if resources can be preserved in place, and development of a data recovery plan for applicable resources. CUL-MM#4 details that the MOA and ATP may identify resources that may be protected-in-place through application of BMPs that will reduce ground-disturbing activities and mitigate adverse effects. These mitigation measures (listed in Section 3.17.8) would reduce impacts to a less than significant level.

Section 106 Conclusion

The Authority has made a finding of *no adverse effect* on the Prehistoric Vasquez Rocks Archaeological District (P-19-003890) because the SR14A Build Alternative design is expected to avoid disturbance of known archaeological deposits that would diminish the integrity of the district. Effects would be minimized by requiring relocation of a water line above ground—resulting in relatively minor surface work within the site boundary—or avoidance (e.g., locating the water line outside the boundary of the site). Under the Refined SR14 Build Alternative, the Authority anticipates no adverse effect on the Prehistoric Vasquez Rocks Archaeological District.

The Authority has made a finding of no effect on two archaeological sites: P-19-000628 and P-19-004606 under the SR14A Build Alternative only. Per the Section 106 PA, the recorded sites in the archaeological APE that have not been evaluated for NRHP eligibility (such as those listed above that may be affected by construction activities) would be revisited. Currently, all effects discussions on the archaeological sites are preliminary. Each site would be re-surveyed and recorded and, if warranted, evaluated. It is possible that site boundaries may be reduced or expanded, and site constituents may be revised. It is also possible that some site boundaries were not accurately depicted when previously recorded and may actually lie outside the archaeological APE; in this case these sites would not be evaluated as they would be avoided by construction activities. Additionally, unevaluated sites within the APE that are evaluated as part of this undertaking may be determined not eligible for listing in the NRHP.

Impact CUL#2: Effects on Unknown Archaeological Resources Caused by Construction Activities.

Ground disturbance associated with construction of the Refined SR14 and SR14A Build Alternatives may result in impacts on unknown or previously undiscovered archaeological resources located within the APE. Unknown archaeological sites might represent the full range of prehistoric or historic activities conducted over time, including prehistoric lithic scatters and village sites, historic-era homestead remains, and human burials. Unknown or unrecorded archaeological resources that are not observable when conducting standard surface archaeological inspections, including subsurface buried archaeological deposits, may exist in areas surveyed, within the urbanized or rural areas, or areas where permission to enter has not been granted.

Implementation of CUL-IAMF#3 (Section 3.17.5.3) would reduce impacts by ensuring the completion of pre-construction cultural resource surveys in previously inaccessible portions of the archaeological APE. According to archaeological and geoarchaeological analytical results in the *Palmdale to Burbank Project Section Paleontological Technical Report* (Authority 2019f), archaeological sensitivity varies between high and low across the APE.

CEQA Conclusion

Although implementation of CUL-IAMF#3 would avoid or minimize impacts on unknown or previously undiscovered archaeological resources, various resource sites would remain susceptible to construction impacts, with the potential to cause a substantial change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines. The potential to cause a substantial change in the significance of an archaeological resource represents a significant impact. As discussed in Section 3.17.7, CUL-MM#1 and CUL-MM#3 would reduce impacts from ground-disturbing activities during construction by consulting with MOA signatories, concurring parties, and tribal consulting parties to determine the preferred treatment and appropriate mitigation measures and by developing meaningful mitigation measures for effects on as-of-yet-unidentified Native American archaeological resources that cannot be avoided. In addition, the Authority will implement CUL-MM#2, which will halt construction activities and require compliance with 48 Fed. Reg. 44716-42 and 14 Cal. Code Regs. Chapter 3, Article 9, Sections 15120–15132, should there be an unanticipated archaeological discovery. With adherence to the mitigation measures listed above, this impact would be less than significant.

Section 106 Conclusion

In the event of an archaeological site discovery, the Authority will consult with SHPO and consulting parties to develop appropriate mitigation. An MOA and ATP would be prepared that would include procedures regarding unanticipated discoveries.

Impact CUL#3: Effects on Human Remains Discovered during Construction Activities.

Ground disturbance associated with construction of the Refined SR14 and SR14A Build Alternatives may result in impacts on buried human remains located within the archaeological APE. Human burial sites that are not observable when conducting standard surface archaeological inspections, including subsurface buried archaeological deposits, may exist in areas surveyed, within the urbanized or rural areas, or areas where permission to enter has not been granted.

Prior to construction activities, the Authority will develop a geospatial layer to identify the locations of all burial sites, as feasible (CUL-IAMF#1). Survey efforts conducted at this time will inform necessary treatment of identified burial sites. Additionally, the Authority will use the geospatial layer and archaeological sensitivity maps to develop sensitivity mapping for such sites and exercise caution around these areas in order to avoid possible impacts (CUL-IAMF#5).

CEQA Conclusion

Although CUL-IAMF#1 and CUL-IAMF#5 would minimize impacts on undiscovered human remains, ground-disturbing construction activities would have the potential to disturb human remains, including those interred outside of formal cemeteries. The potential to disturb human remains represents a significant impact. As discussed in Section 3.17.7, CUL-MM#1, CUL-MM#2, and CUL-MM#3 would reduce impacts from ground-disturbing activities from construction by consulting with MOA signatories, concurring parties, and tribal consulting parties to determine the preferred treatment and appropriate mitigation measures, and by halting work in the event on an unanticipated discovery. With adherence to the mitigation measures listed above, this impact would be less than significant.

Impact CUL#4: Effects to Historic Built Resources Caused by Construction Activities.

As described above in Section 3.17.7.3, the Big Creek Hydroelectric System – Vincent Transmission Line and the Los Pinetos Nike Missile Site would not be affected by construction of the Refined SR14 and SR14A Build Alternatives and are not discussed further in this section. While the Pink Motel and Café would be affected by operations, construction of the Refined SR14 and SR14A Build Alternatives would not affect this resource.

Construction of the Refined SR14 and SR14A Build Alternatives would result in impacts on the Palmdale Ditch and the EBA (Table 3.17-10). Construction-period impacts would vary between the ditch and the aqueduct. The portion of the Palmdale Ditch that would be affected by construction of the Refined SR14 Build Alternative has been culverted, and no longer contributes to the ditch's historical significance. Additionally, although the EBA would be affected, IAMFs would be implemented to avoid or minimize associated impacts on the EBA (Section 3.17.5.3). Implementation of CUL-IAMF#6 requires preparation of pre-construction condition assessments and the preparation of a plan outlining the protection of the resource and repair of inadvertent damage for certain properties, as stipulated by the MOA and BETP.

Table 3.17-10 Built Resources Affected by Construction of the Refined SR14 and SR14A Build Alternatives

Resource Name	Map ID#	City or County	NRHP and CRHR Criteria
Central Subsection			
Palmdale Ditch	3480	Palmdale Vicinity	A—for its association with the development of irrigated farming in the south Antelope Valley area, and the development of the Palmdale and Littlerock Irrigation Districts
East Branch of the California Aqueduct	3421	Palmdale Vicinity	A—for its association with a comprehensively planned and publicly sanctioned water conveyance project C—for its complex design necessary to redistribute water throughout the state
Burbank Subsection			
No historic properties would be affected by construction impacts			

Source: Authority, 2019c
Note: Resources that would not be affected by the Refined SR14 and SR14A Build Alternatives are not included in this table. These resources are the Big Creek Hydroelectric System Historic District – Vincent Transmission Line and the Los Pinetos Nike Missile Site.
CRHR = California Register of Historical Resources
NRHP = National Register of Historic Places

Palmdale Ditch (Map ID 3480)

The portion of the Palmdale Ditch that would be affected by the Refined SR14 Build Alternative alignment was previously culverted and is no longer a contributing feature of the resource. Implementation of the Refined SR14 Build Alternative would entail lowering East Barrel Springs Road in such a way that the road would pass below proposed at-grade tracks at this location. The Palmdale Ditch would be realigned to the east of the improvements in order to maintain gravity flow. Although construction would lower East Barrel Springs Road and realign the resource, construction impacts would occur where the once-open ditch was covered between 2008 and 2009. As such, the proposed changes would not damage or remove character-defining features contributing to the resource's eligibility.

The portion of the Palmdale Ditch that would be affected by the SR14A Build Alternative alignment is an open, earthen channel. Implementation of the SR14A Build Alternative would entail the construction of an at-grade track over the resource and would include culverting up to 0.06 miles (320 feet) of the Palmdale Ditch alignment. This would occur within a contributing

portion of the historic property. Construction of the SR14A Build Alternative alignment and associated elements would likely not impede the character or use of the Palmdale Ditch as a historic property.

East Branch of the California Aqueduct (Map ID 3421)

Implementation of the Refined SR14 Build Alternative would entail excavation around and under the aqueduct to shore it up during and after construction of the tunneling beneath the property. No temporary or permanent physical damage is anticipated, and the EBA would retain its primary function—the conveyance of water. Prior to ground-disturbing activities that are within 1,000 feet of a historic built property, CUL-IAMF#6 will require pre-construction condition assessments and the preparation of a Plan for the Protection of Historic Built Resources and Repair of Inadvertent Damage to assess the condition of a historic property and repair inadvertent damage resulting from construction. Based on the foregoing, implementation of CUL-IAMF#6 would protect the resource in place and minimize construction impacts.

Implementation of the SR14A Build Alternative would entail construction of an at-grade track alignment over the EBA. Where the SR14A Build Alternative alignment intersects the EBA, the resource is a below-grade covered channel. Because the EBA would be below-grade at the alignment crossing, construction of the SR14A Build Alternative alignment and associated elements would not cause temporary or permanent physical damage to the resource.

CEQA Conclusion

Implementation of CUL-IAMF#6 would minimize construction impacts on the EBA under the Refined SR14 Build Alternative. Under the Refined SR14 Build Alternative, construction impacts on the Palmdale Ditch would exclusively occur where the once-open ditch was covered between 2008 and 2009 and would not affect character-defining features that convey its historic significance for the NRHP or CRHR. The portion of the Palmdale Ditch that is historically significant would not be affected and the EBA would be protected in place. Under the SR14A Build Alternative, construction impacts on the Palmdale Ditch would occur over an open portion of the channel within a contributing portion of the historic property and would include culverting a portion of the resource. However, construction activities would not remove the character-defining features of the Palmdale Ditch. Because the portion of the EBA that would cross under the SR14A Build Alternative alignment is below ground, construction would not affect the resource.

As construction impacts on historic built resources would not cause an adverse change in the significance of a historic built resource as defined in Section 15064.5 of the CEQA Guidelines, impacts would be less than significant under CEQA. Therefore, CEQA does not require any mitigation.

Section 106 Conclusion

Under the Refined SR14 Build Alternative, construction impacts on the Palmdale Ditch would exclusively occur where the once-open ditch was previously covered. Under the SR14A Build Alternative, construction impacts on the Palmdale Ditch would occur over an open portion of the channel within a contributing portion of the historic property and would include culverting a portion of the resource. As the proposed changes would not alter or remove character-defining features contributing to the resource's eligibility, the Authority anticipates no adverse effect on the Palmdale Ditch for either the Refined SR14 or the SR14A Build Alternatives. Construction activities associated with the Refined SR14 Build Alternative would shore up the EBA during and after tunneling beneath the property. Because the portion of the EBA that would cross under the SR14A Build Alternative alignment is below ground, construction would not affect the resource. As no temporary or permanent physical damage is anticipated, the Authority anticipates no adverse effect on the EBA.

Operations Impacts

Impact CUL#5: Effects on Archaeological Resources Caused by Operations.

Operations and maintenance of the Refined SR14 and SR14A Build Alternatives would not disturb previously undisturbed surfaces, and there would be no operations impacts on archaeological resources.

CEQA Conclusion

Operations of the Refined SR14 and SR14A Build Alternatives would not cause a change in the significance of an archaeological resource. No impact would occur. Therefore, CEQA does not require any mitigation.

Section 106 Conclusion

The Authority anticipates that there would be no effect on archaeological resources as there would be no ground disturbance during operations.

Impact CUL#6: Effects on Historic Built Resources Caused by Operations.

As described above in Section 3.17.7.3, the Big Creek Hydroelectric System – Vincent Transmission Line and the Los Pinetos Nike Missile Site would not be affected by operations of the Refined SR14 and SR14A Build Alternatives and are not discussed further in this section. While the Palmdale Ditch and the EBA would be affected by construction, the operations of the Refined SR14 and SR14A Build Alternatives would not affect those resources.

Operations of the Refined SR14 and SR14A Build Alternatives would result in operational noise impacts on the Pink Motel and Café (Table 3.17-11).

Table 3.17-11 Built Resources Affected by Operations of the Refined SR14 and SR14A Build Alternatives

Resource Name	Map ID#	Map Sheet	City or County	NRHP and CRHR Significance Determination
Central Subsection				
Pink Motel and Café	1044	291, 292	Los Angeles	A/1 and C/3
Burbank Subsection				
No additional historic properties would be affected by operations impacts				

Source: Authority, 2019c
NRHP = National Register of Historic Places
CRHR = California Register of Historical Resources

Pink Motel and Café (Map ID 1044)

Implementation of the Refined SR14 and SR14A Build Alternatives would entail operation of the elevated HSR tracks approximately 0.05-mile outside of the historic property boundary. Although the Pink Motel and Café would not experience diminished visual quality, the resource would be vulnerable to noise impacts as analyzed in Section 3.4, Noise and Vibration. However, a quiet setting is not a character-defining feature of the Pink Motel and Café. While the historic built resource would experience noise impacts on site, the vibration levels associated with HSR operations would not exceed the FRA impact criteria and would not pose a threat to the integrity of the Pink Motel and Café.

CEQA Conclusion

The Pink Motel and Café would be susceptible to adverse noise impacts associated with operations of the Refined SR14 and SR14A Build Alternatives. An increase in noise associated with California HSR System operation would not affect the integrity or materially impair the significance of this historical site. Therefore, the effects due to project operations on the Pink Motel and Café would be less than significant. Therefore, CEQA does not require any mitigation.

Section 106 Conclusion

Proposed HSR tracks would be located approximately 0.05-mile from the Pink Motel and Café. Although the resource would be vulnerable to noise impacts associated with operations of the California HSR System, because a quiet setting is not a character-defining feature of the Pink Motel and Café, operational noise would not diminish the historical integrity of the resource. The Authority anticipates no adverse effect on the Pink Motel and Café.

E1 and E1A Build Alternatives

Construction Impacts

Impact CUL#1: Effects on Known Archaeological Resources Caused by Construction Activities.

The E1 Build Alternative would result in impacts on known archaeological resources within the archaeological APE, as listed in Table 3.17-12. Not all of the archaeological resources listed in Table 3.17-6 are included in this discussion. See Section 3.17.7.3 for a list of archaeological resources within the APE that would not be affected and are therefore not discussed in this section.

Due to limited access, many of these known archaeological resources have not yet been surveyed for implementation of the six Build Alternatives. Phased identification would occur as access is granted, the selected Build Alternative design is refined, and where adverse effects are likely to occur. Known archaeological resources that have not yet been evaluated would undergo phased evaluation, if warranted, when access is granted. A detailed analysis of resources within the ANF including SGMNM is included in Section 3.17.11. While many of the known archaeological resources within the APE have not been fully surveyed, the following preliminary effects analysis assumes their significance in order to disclose the latest available information.

Although construction impacts would vary in severity, IAMFs will be implemented to avoid or minimize associated impacts (Section 3.17.5.3). CUL-IAMF#1 will develop a geospatial layer to identify the locations of all known archaeological and historic architectural resources and CUL-IAMF#2 would minimize construction impacts by ensuring necessary data such as resource locations are attained, monitoring efforts are clearly delineated, and educational materials and training sessions are distributed and administered. CUL-IAMF#5 will entail preparation of an archaeological sensitivity monitoring plan that would identify and map areas of archaeological sensitivity and develop a systematic approach to cultural resource monitoring impacts. Sites that cannot be relocated will be considered archaeologically sensitive and would be monitored during construction.

Table 3.17-12 Known Archaeological Resources Affected by Construction of the E1 and E1A Build Alternatives

State Site Identifier	Description of Resource	Potential Build Alternative Effects	Applicable IAMFs
Central Subsection			
P-19-000305	Prehistoric habitation site	Ground disturbance associated with work in the track right-of-way (grubbing, grading) and establishment of drainage basins (grading, embankment cutting), which would occur within the boundary of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
19-000902/ 5015500003	Prehistoric habitation site	Minor surface work associated with connecting the project components to existing overhead electrical infrastructure bisecting the site boundary. The E1 and E1A Build Alternatives would also entail dropping the grade of the existing road bisecting the site boundary to allow it to extend under the elevated rail. Dropping the grade of the existing road would require grading up to approximately 40 feet deep within the site boundary. This resource is located within the ANF including the SGMNM (see Section 3.17.11.2).	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001410/ 5015500026	Prehistoric ground-stone artifacts possibly displaced from original location as decoration around a residence	Minor surface work associated with overhead electrical work.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001572/ 5015500104	Prehistoric midden site with lithic tools	Minor surface work associated with connecting the project components to existing overhead electrical infrastructure intersecting the western edge of the site boundary. This resource is located within the ANF including the SGMNM (see Section 3.17.11.2).	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001690/ 5011901690	Prehistoric lithic scatter	Construction of a temporary water line intersecting the site boundary. The E1 and E1A Build Alternatives would also entail the establishment of a construction and staging area, which would be located within the site boundary. Placement of the construction and staging area would require grading and embankment cutting within the southern boundary of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001888	Prehistoric lithic scatter	Establishment of drainage basins within the track right-of-way. The E1 and E1A Build Alternatives would require grading and embankment cutting within the boundary of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001889	Prehistoric quarry with midden loci (E1 Build Alternative only)	Establishment of drainage basins within the track right-of-way. The E1 Build Alternative would require grubbing and grading within the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5

State Site Identifier	Description of Resource	Potential Build Alternative Effects	Applicable IAMFs
P-19-001904	Prehistoric lithic scatter (E1 Build Alternative only)	Ground disturbance associated with the relocation of a portion of the EBA intersecting the site. Relocation of a portion of the EBA would require construction of a siphon and would feature embankment cutting.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001988	Prehistoric lithic scatter (E1 Build Alternative only)	Establishment of drainage basins within the track right-of-way. The E1 Build Alternative would require grubbing and grading within the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-002039	Historic period homesite remains	Ground disturbance associated with road realignment. Road realignment would require grubbing and grading within the boundary of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-002415	Prehistoric midden site	Minor surface work associated with the construction of overhead electrical infrastructure intersecting the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-002474	Historic period household refuse dump, 1920s-1930s in ravine (E1 Build Alternative only)	Ground disturbance associated with work in the track right-of-way. Efforts would require grubbing and grading within the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-003536	Historic period refuse deposit	Minor surface work associated with the construction of overhead electrical infrastructure intersecting the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-004778	Prehistoric lithic scatter	Minor surface work associated with connecting the project to existing overhead electrical infrastructure within the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-188397/ 5015500210	Historical period structural remains (E1 Build Alternative only)	Construction of a temporary water line in a utility easement intersecting the site. This resource is located within the ANF (see Section 3.17.11.2).	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
Burbank Subsection			
There are no known archaeological resources within the Burbank Subsection			

Source: Authority, 2019c

CEQA Conclusion

Although implementation of CUL-IAMF#1, CUL-IAMF#2, and CUL-IAMF#5 would avoid and minimize impacts on known archaeological resources, various resource sites would remain susceptible to construction impacts, which may cause a substantial change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines. For the purposes of this analysis, previously identified resources that could not be surveyed for this Draft EIR/EIS due to inaccessibility are considered eligible for the NRHP and CRHR. If any of these sites are determined to be eligible once access is granted, the sites would be surveyed and, if warranted, evaluated.

As discussed in Section 3.17.7, CUL-MM#1, CUL-MM#3, and CUL-MM#4 will ensure that appropriate mitigation measures for each eligible archaeological resource would be determined by consulting with the MOA signatories and tribal consulting parties. CUL-MM#1 will implement policies identified in the ATP for archaeological resources identified during phased identification. These policies include consulting with MOA signatories and concurring parties to determine the preferred treatment of the resources and appropriate mitigation measures, if resources can be preserved in place, and development of a data recovery plan for applicable resources. CUL-MM#3 identifies further actions for the identification of mitigation for effects to previously inaccessible archaeological sites. CUL-MM#4 details that the MOA and ATP may identify resources that may be protected-in-place through application of BMPs that will reduce ground-disturbing activities and mitigate adverse effects. The Authority will implement CUL-MM#1, CUL-MM#3, and CUL-MM#4 (discussed above and listed in Section 3.17.8) to reduce impacts to a less than significant level.

Section 106 Conclusion

Per the Section 106 PA, the recorded sites in the archaeological APE that have not been evaluated for NRHP eligibility would be revisited. Each site would be re-surveyed and recorded and, if warranted, evaluated. It is possible that site boundaries may be reduced or expanded, and site constituents may be revised. It is also possible that some site boundaries were not accurately depicted when previously recorded and may actually lay outside the archaeological APE; in this case these sites would not be evaluated as they would be avoided by construction activities. Additionally, unevaluated sites within the APE that are evaluated as part of this undertaking may be determined not eligible for listing in the NRHP.

Impact CUL#2: Effects on Unknown Archaeological Resources Caused by Construction Activities.

Ground disturbance associated with construction of the E1 and E1A Build Alternatives may result in impacts on unknown or previously undiscovered archaeological resources located within the APE. Unknown archaeological sites might represent the full range of prehistoric or historic activities conducted over time, including prehistoric lithic scatters and village sites, historic-era homestead remains, and human burials. Unknown or unrecorded archaeological resources that are not observable when conducting standard surface archaeological inspections, including subsurface buried archaeological deposits, may exist in areas surveyed, within the urbanized or rural areas, or areas where permission to enter has not been granted.

Implementation of CUL-IAMF#3 (Section 3.17.5.3) would reduce impacts by ensuring the completion of pre-construction cultural resource surveys in previously inaccessible portions of the archaeological APE. According to archaeological and geoarchaeological analytical results in the *Palmdale to Burbank Project Section: Paleontological Technical Report* (Authority 2019f), archaeological sensitivity varies between high and low across the APE.

CEQA Conclusion

Although implementation of CUL-IAMF#3 may avoid impacts on unknown or previously undiscovered archaeological resources, various resource sites would remain susceptible to construction impacts, which may cause a substantial change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines. The potential to

cause a substantial change in the significance of an archaeological resource represents a significant impact. As listed in Section 3.17.8, CUL-MM#1, CUL-MM#2, and CUL-MM#3 would reduce impacts from ground-disturbing activities during construction by consulting with MOA signatories, concurring parties, and tribal consulting parties to determine the preferred treatment and appropriate mitigation measures; by halting construction activities and requiring compliance with 48 Fed. Reg. 44716-42 and 14 Cal. Code Regs. Chapter 3, Article 9, Sections 15120–15132, should there be an unanticipated archaeological discovery; and by developing meaningful mitigation measures for effects on as-of-yet-unidentified Native American archaeological resources that cannot be avoided. With adherence to the mitigation measures listed above, this impact would be less than significant.

Section 106 Conclusion

In the event of an archaeological site discovery, the Authority will consult with SHPO and consulting parties to determine appropriate mitigation. An MOA and ATP would be prepared that would include procedures regarding unanticipated discoveries.

Impact CUL#3: Effects on Human Remains Discovered during Construction Activities.

Ground disturbance associated with construction of the E1 and E1A Build Alternatives may result in impacts on buried human remains located within the archaeological APE. Human burial sites that are not observable when conducting standard surface archaeological inspections, including subsurface buried archaeological deposits, may exist in areas surveyed, within the urbanized or rural areas, or areas where permission to enter has not been granted.

Prior to construction activities, the Authority will develop a geospatial layer to identify the locations of all burial sites, as feasible (CUL-IAMF#1). Survey efforts conducted at that time would inform necessary treatment of identified burial sites. Additionally, the Authority will use the geospatial layer and archaeological sensitivity maps to develop sensitivity mapping for such sites and exercise caution around these areas in order to avoid possible impacts (CUL-IAMF#5).

CEQA Conclusion

Although implementation of CUL-IAMF#1 and CUL-IAMF#5 may avoid impacts on undiscovered human remains, ground-disturbing construction activities would have the potential to disturb human remains, including those interred outside of formal cemeteries. The potential to disturb human remains represents a significant impact. As listed in Section 3.17.8, CUL-MM#1, CUL-MM#2, and CUL-MM#3 would reduce impacts from ground-disturbing activities from construction by consulting with MOA signatories, concurring parties, and tribal consulting parties to determine the preferred treatment and appropriate mitigation measures, and by halting work in the event on an unanticipated discovery. With adherence to the mitigation measures listed above, this impact would be less than significant.

Impact CUL#4: Effects on Historic Built Resources Caused by Construction Activities.

As described above in Section 3.17.7.3, the Big Creek Hydroelectric System – Vincent Transmission Line, 1890s Acton Ford Road, the Monte Cristo Wagon Road System, and the LADWP Boulder Transmission Line 3 would not be affected by construction of the E1 and E1A Build Alternatives and are not discussed further in this section. While the Pink Motel and Café would be affected by operations, construction of the E1 and E1A Build Alternatives would not affect this resource.

Construction of the E1 and E1A Build Alternatives would result in impacts on the Palmdale Ditch, the EBA, Blum Ranch, the Blum Ranch Farmhouse, and the Eagle and Last Chance Mine Road (Table 3.17-13). Construction impacts would vary between each historic built resource. The portion of the Palmdale Ditch that would be affected by the E1 Build Alternative was previously culverted and no longer contributes to the ditch's historical significance.

Although the EBA and the Eagle and Last Chance Mine Road would be affected, IAMFs will be implemented to avoid or minimize impacts (Section 3.17.5.3). Implementation of CUL-IAMF#6 requires preparation of pre-construction condition assessments and the preparation of a plan

outlining the protection of the EBA and repair of inadvertent damage, as stipulated by the MOA and BETP. Furthermore, implementation of CUL-IAMF#8 will require protection or stabilization measures to ensure plans for rehabilitation of the EBA are prepared and executed in accordance with the SOI's Standards.

Although implementation of CUL-IAMF#6 and CUL-IAMF#8 may avoid impacts, construction activities would have the potential to impact historical architectural resources within the historic build resources APE. The potential to impact historical architectural resources represents a significant impact. Implementation of CUL-IAMF#6 requires preparation of pre-construction condition assessments and the preparation of a plan outlining the protection of the resource and repair of inadvertent damage for certain properties, as stipulated by the MOA and BETP. Furthermore, implementation of CUL-IAMF#8 will require protection or stabilization measures to ensure plans for rehabilitation of the resource are prepared and executed in accordance with the SOI's Standards. As listed in Section 3.17.8, CUL-MM#6 would reduce impacts by covering roadways with geofabric before laying asphalt, which would be removed following construction of the project. With adherence to the mitigation measures listed above, this impact would be less than significant.

Implementation of CUL-IAMF#6 will minimize construction-related visual impacts on Blum Ranch by conducting pre-construction conditions assessments and preserving existing visual conditions of the ranch to the extent feasible. However, the aboveground HSR rail structure would be highly noticeable and would result in visual effects on Blum Ranch and the Blum Ranch Farmhouse.

Palmdale Ditch (Map ID 3480)

The portion of the Palmdale Ditch that would be affected by the E1 Build Alternative was previously culverted and is no longer a contributing feature of the resource. Implementation of the E1 Build Alternative would entail the Palmdale Ditch crossing the historic built APE at two locations. The E1 Build Alternative construction effects would occur at the southern crossing, where the once-open ditch was covered between 2008 and 2009. As such, the proposed changes would not damage or remove character-defining features contributing to the resource's eligibility.

The portion of the Palmdale Ditch that would be affected by the E1A Build Alternative alignment is an open, earthen channel. Implementation of the E1A Build Alternative would entail the construction of an at-grade track over the resource and would include culverting up to 0.06 miles (320 feet) of the Palmdale Ditch alignment. This would occur within a contributing portion of the historic property. Construction of the E1A Build Alternative alignment and associated elements would not impede the character or use of the Palmdale Ditch as a historic property.

Table 3.17-13 Built Resources Affected by Construction of the E1 and E1A Build Alternatives

Resource Name	Map ID#	Location	NRHP and CRHR Criteria
Central Subsection			
Palmdale Ditch	3480	Palmdale Vicinity	A—for its association with the development of irrigated farming in the south Antelope Valley area, and the development of the Palmdale and Littlerock Irrigation Districts
East Branch of the California Aqueduct	3421	Palmdale Vicinity	A—for its association with a comprehensively planned and publicly sanctioned water conveyance project C—for its complex design necessary to redistribute water throughout the state

Resource Name	Map ID#	Location	NRHP and CRHR Criteria
Blum Ranch	2947	Acton	A—for its association with the early settlement and development of agriculture in northern Los Angeles County C—for the vernacular designs of its buildings, circulation networks, and water conveyance features that date to the farmstead's period of significance (1891 to circa 1924)
Blum Ranch Farmhouse	3768	Acton	C—for the vernacular designs of the building that dates to the farmstead's period of significance (1891 to circa 1924)
Eagle and Last Chance Mine Road	2593	Angeles National Forest	A—for its important role in the economy and development of the area B—for its association with Gleason's important role in the development of mining activity on Mt. Gleason C—for its role as a contributor to a historic district that would have required innovative engineering and is potentially significant
Burbank Subsection			
No historic properties would be affected by construction impacts			

Source: Authority, 2019c
CRHR = California Register of Historical Resources
NRHP = National Register of Historic Places

East Branch of the California Aqueduct (Map ID 3421)

Implementation of the E1 Build Alternative would entail the relocation of an approximately 1,500-foot-long portion of the aboveground canal. Although the historic features of the EBA at this location would be removed, the EBA would retain its primary function—the conveyance of water. Since the EBA was built, minor alterations to its infrastructure have been common in order to maintain its function as a water conveyance system. Prior to ground-disturbing activities that are within 1,000 feet of a historic built property, CUL-IAMF#6 may require pre-construction condition assessments and the preparation of a Plan for the Protection of Historic Built Resources and Repair of Inadvertent Damage to assess the condition of a historic property, and repair inadvertent damage resulting from construction. Furthermore, implementation of CUL-IAMF#8 will require protection or stabilization measures to ensure plans for rehabilitation of the EBA are prepared and executed in accordance with the SOI's Standards. Based on the foregoing, implementation of CUL-IAMF#6 and CUL-IAMF#8 will protect the resource in place and minimize construction impacts.

Implementation of the E1A Build Alternative would entail construction of an at-grade track alignment over the EBA. Where the E1A Build Alternative alignment intersects the EBA, the resource is a below-grade covered channel. Because the EBA would be below-grade at the alignment crossing, construction of the E1A Build Alternative alignment and associated elements would not cause temporary or permanent physical damage to the resource.

Blum Ranch (Map ID 2947)

Implementation of the E1 and E1A Build Alternatives would entail construction of the aboveground HSR rail structure outside the historic property boundary, which would be highly noticeable. The Blum Ranch is a rural historic landscape and would be highly sensitive to such large-scale visual changes within its current viewshed, which consists of some scattered development, although it is mostly undeveloped, and is dominated by surrounding hills. Although Blum Ranch itself is not located within the ANF, the Blum Ranch Historic District boundary encompasses the footprint of a buried historic concrete irrigation pipeline that extends approximately 370 feet into the ANF, including the SGMNM.

The elevated trackway would be highly visible from the Blum Ranch property due to its scale and distinct form, color, and texture. As a result, the E1 and E1A Build Alternatives would visually dominate the foreground of views from Blum Ranch. The elevated trackway would be constructed over a water conveyance system, a contributing element to the Blum Ranch Historic District. However, no piers of this structure would be placed within the historic boundary, and, therefore, the alignment would not affect the historic resource.

Implementation of CUL-IAMF#6 would help to minimize construction-related visual impacts by conducting pre-construction conditions assessments and preserving existing visual conditions of the ranch to the extent feasible. Even though the E1 and E1A Build Alternatives would be located outside the boundary of the historic property, it would introduce visual elements that diminish the integrity of the property's setting and feeling. While it is likely that this visual change would not alter the characteristics of the property that qualify it for the NRHP, construction would have an adverse visual effect on Blum Ranch. CUL-IAMF#8 will implement protection measures to ensure that the water conveyance system and other historic features of the Blum Ranch Historic District are shielded from construction activities.

Blum Ranch Farmhouse (Map ID 3768)

Implementation of the E1 and E1A Build Alternatives would entail construction of the aboveground HSR south of the historic farmhouse. While the farmhouse itself is surrounded by tall mature trees, and views from and toward the proposed HSR bridge structure and portal location would likely be partly obstructed, visual impacts would occur. The E1 and E1A Build Alternatives would introduce visual elements that diminish the integrity of the property's setting and feeling. While it is likely this visual change would not alter the characteristics of the property that qualify it for the NRHP, the undertaking would have an adverse visual effect on the Blum Ranch Farmhouse.

Eagle and Last Chance Mine Road (Map ID 2593)

Implementation of the E1 and E1A Build Alternatives would entail the placement of a construction staging area just east of the historic property and may involve temporary (and potentially permanent) utility easements within the road right-of-way. This resource is located in the ANF including the SGMNM. Asphalt would be laid during construction of the E1 and E1A Build Alternatives. Implementation of CUL-IAMF#8 will apply protection measures such as vibration monitoring of construction in the vicinity of the historic property and preventing access of resources from construction activities. Based on the foregoing, CUL-IAMF#8 would protect the resource in place and would minimize construction impacts on the Eagle and Last Chance Mine Road.

CEQA Conclusion

Implementation of CUL-IAMF#6 and CUL-IAMF#8 would minimize construction impacts on the EBA under the E1 Build Alternative. CUL-IAMF#6 and CUL-IAMF#8 will be implemented due to construction impacts of the E1 and E1A Build Alternatives to Blum Ranch. CUL-IAMF#8 would also minimize construction impacts on the Eagle and Last Chance Mine Road under the E1 and E1A Build Alternatives.

Under the E1 Build Alternative, construction impacts on the Palmdale Ditch would occur exclusively where the once-open ditch was covered between 2008 and 2009 and would not affect character-defining features that convey its historic significance for the NRHP or CRHR. Under the E1A Build Alternative, construction impacts on the Palmdale Ditch would occur over an open portion of the channel within a contributing portion of the historic property and would include culverting a portion of the resource. However, construction activities would not remove the character-defining features of the Palmdale Ditch. Because the portion of the EBA that would cross under the SR14A Build Alternative alignment is below ground, construction would not affect the resource. Based on the foregoing, the EBA and the Eagle and Last Chance Mine Road would be protected in place. As stated above, the character-defining features of the Palmdale Ditch would not be affected under the E1 and E1A Build Alternatives.

As construction impacts on historic built resources would not cause an adverse change in the significance of a historic built resource as defined in CEQA Guidelines Section 15064.5, impacts would be less than significant under CEQA. Therefore, CEQA does not require any mitigation.

CUL-IAMF#8 will implement protection measures to ensure that the water conveyance system and other historic features of Blum Ranch are shielded from the physical effects of construction activities. Although implementation of CUL-IAMF#6 would help minimize visual impacts on Blum Ranch and the Blum Ranch Farmhouse, there would be significant and unavoidable visual impacts on Blum Ranch and the Blum Ranch Farmhouse. The E1 and E1A Build Alternatives would result in impacts which may cause a substantial adverse change in the significance of the historic built resources as defined in Section 15064.5 of the CEQA Guidelines. The capacity of the E1 and E1A Build Alternatives to cause a substantial adverse change in the significance of a historical resource represents a significant impact. Implementation of CUL-MM#5 (listed below) will reduce visual impacts on Blum Ranch and the Blum Ranch Farmhouse by incorporating visual protection measures into the final design. However, visual impacts on Blum Ranch and the Blum Ranch Farmhouse would remain significant and unavoidable.

CUL-MM#5 (listed in Section 3.17.8) will require the Authority to consult with SHPO and the owner of Blum Ranch in order to develop protection measures to preserve the visual integrity of the Blum Ranch viewshed and incorporate the subsequent modifications into the final design and construction. Implementation of such visual modifications would reduce the contrast between the HSR structure and its surroundings within Aliso Canyon, and thus, the visual impact on Blum Ranch. CUL-MM#6 will implement further protection measures for the Eagle and Last Chance Mine Road, such as the placement of geofabric prior to laying asphalt, and the removal of all paved asphalt following construction activities in order to restore the roadway's pre-construction conditions.

Section 106 Conclusion

Under the E1 Build Alternative, construction impacts on the Palmdale Ditch would exclusively occur where the once-open ditch was previously covered. Under the E1A Build Alternative, construction impacts on the Palmdale Ditch would occur over an open portion of the channel within a contributing portion of the historic property and would include culverting a portion of the resource. As the proposed changes would not alter or remove character-defining features contributing to the resource's eligibility, the E1 and E1A Build Alternatives is anticipated to have no adverse effect on the Palmdale Ditch.

Under the E1 Build Alternative, construction activities would relocate an approximately 1,500-foot-long portion of the aboveground EBA. Because the portion of the EBA that would cross under the E1A Build Alternative alignment is below ground, construction would not affect the resource. As no temporary or permanent physical damage is anticipated that would alter the character-defining features of the EBA, the Authority anticipates no adverse effect on the EBA.

Construction impacts on the Eagle and Last Chance Mine Road would involve permanent utility easements within the right-of-way, as well as asphalt being laid on the existing dirt road. As geofabric would be used and all pavement placed during construction would be removed, the Authority anticipates no adverse effect on the Eagle and Last Chance Mine Road for the E1 and E1A Build Alternatives. Additionally, proposed utility easements, which may be permanent, would not diminish the integrity of the Eagle and Last Chance Mine Road.

As implementation of the E1 and E1A Build Alternatives would introduce visual elements that diminish the integrity of the property's setting and feeling, the Authority anticipates an adverse effect on Blum Ranch and the Blum Ranch Farmhouse.

Operations Impacts

Impact CUL#5: Effects on Archaeological Resources Caused by Operations.

Operations and maintenance of the E1 and E1A Build Alternatives would not disturb previously undisturbed surfaces, and there would be no operations impacts on archaeological resources.

CEQA Conclusion

Operations of the E1 and E1A Build Alternatives would not cause a change in the significance of an archaeological resources. No impact would occur. Therefore, CEQA does not require any mitigation.

Section 106 Conclusion

The Authority anticipates that there would be no effect on archaeological resources as there would be no ground disturbance during operations.

Impact CUL#6: Effects on Historic Built Resources Caused by Operations.

As described above in Section 3.17.7.3, the Big Creek Hydroelectric System—Vincent Transmission Line, 1890s Acton Ford Road, the Monte Cristo Wagon Road System, and the LADWP Boulder Transmission Line 3 would not be affected by operations of the E1 and E1A Build Alternatives and are not discussed further in this section. While the Palmdale Ditch, the EBA, Blum Ranch, and Eagle and Last Chance Mine Road would be affected by construction, the operations of the E1 and E1A Build Alternatives would not affect those resources.

Operations of the E1 and E1A Build Alternatives would result in noise impacts on the Pink Motel and Café (Table 3.17-14).

Table 3.17-14 Built Resources Affected by Operations of the E1 and E1A Build Alternatives

Resource Name	Map ID#	Map Sheet	City or County	NRHP and CRHR Significance Determination
Central Subsection				
Blum Ranch Farmhouse	3768	132	Acton	C/3
Pink Motel and Café	1044	291, 292	Los Angeles	A/1 and C/3
Burbank Subsection				
No historic properties would be affected by operations impacts				

Source: Authority, 2019c
CRHR = California Register of Historical Resources
NRHP = National Register of Historic Places

Blum Ranch Farmhouse (Map ID 3768)

Implementation of the E1 and E1A Build Alternatives would entail operation of aboveground HSR trains south of the historic farmhouse. Although noise associated with operations of the E1 and E1A Build Alternatives would be audible from the Blum Ranch Farmhouse, a quiet setting is not a character-defining feature of the property and, therefore, would not result in adverse noise impacts on the residence.

Pink Motel and Café (Map ID 1044)

Implementation of the E1 and E1A Build Alternatives would entail operation of elevated HSR tracks approximately 0.05-mile outside of the historic property boundary. Although the Pink Motel and Café would not experience diminished visual quality, the resource would be vulnerable to noise impacts as analyzed Section 3.4, Noise and Vibration. However, a quiet setting is not a character-defining feature of the Pink Motel and Café. While the historic built resource would experience noise impacts on site, the vibration levels associated with HSR operations would not exceed the FRA impact criteria and would not pose a threat to the integrity of the Pink Motel and Café.

CEQA Conclusion

As a quiet setting is not a character-defining feature of the properties, operational noise would not affect the historic integrity or materially impair the significance of the Blum Ranch Farmhouse or

the Pink Motel and Café. Therefore, the effects due to California HSR System operations on these resources would be less than significant, and CEQA does not require mitigation.

Section 106 Conclusion

Although outside of the Blum Ranch historic property boundary, operation of the California HSR System trains would be audible from the Blum Ranch Farmhouse. However, because a quiet setting is not a character-defining feature of the property, operational noise would not affect the historic integrity of the Blum Ranch Farmhouse. Therefore, the Authority anticipates no adverse effect on the Blum Ranch Farmhouse. The E1 and E1A Build Alternatives would be located approximately 0.05-mile from the Pink Motel and Café. Although the resource would be vulnerable to noise impacts associated with operations of the E1 Build Alternative, a quiet setting is not a character-defining feature of the property. Given this, the Authority anticipates no adverse effect on the Pink Motel and Café.

E2 and E2A Build Alternatives

Construction Impacts

Impact CUL#1: Effects on Known Archaeological Resources Caused by Construction Activities.

The E2 and E2A Build Alternatives would result in impacts on known archaeological resources within the archaeological APE (Table 3.17-15). Not all of the archaeological resources listed in Table 3.17-6 are included in this discussion. See Section 3.17.7.3 for a list of archaeological resources within the APE that would not be affected and are therefore not discussed in this section.

Due to limited access, many of these known archaeological resources have not yet been surveyed for implementation of the six Build Alternatives. Phased identification would occur as access is granted, the selected Build Alternative design is refined, and where adverse effects are likely to occur. Known archaeological resources that have not yet been evaluated would undergo a phased evaluation, if warranted, when access is granted. A detailed analysis of resources within the ANF including SGMNM is included in Section 3.17.11. While many of the known archaeological resources within the APE have not been fully surveyed, the following preliminary effects analysis assumes their significance in order to disclose the latest available information.

The preliminary effects analysis described below in Table 3.17-15 is the same as that described under the E1 and E1A Build Alternatives, except for Site 19-000800/5015500001. Although construction impacts would vary in severity, IAMFs will be implemented to avoid or minimize impacts (Section 3.17.5.3). CUL-IAMF#1 will develop a geospatial layer to identify the locations of all known archaeological and historic architectural resources. CUL-IAMF#2 will minimize construction impacts by ensuring necessary data such as resource locations are attained, monitoring efforts are clearly delineated, and educational materials and training sessions are distributed and administered. CUL-IAMF#5 will entail preparation of an archaeological sensitivity monitoring plan that will identify and map areas of archaeological sensitivity and develop a systematic approach to cultural resource monitoring. Sites that cannot be relocated would be considered archaeologically sensitive and will be monitored during construction.

Table 3.17-15 Known Archaeological Resources Affected by Construction of the E2 and E2A Build Alternatives

State Site Identifier	Description of Resource	Potential Build Alternative Effects	Applicable IAMFs
Central Subsection			
P-19-000305	Prehistoric habitation site	Ground disturbance associated with work in the track right-of-way (grubbing, grading) and establishment of drainage basins (grading, embankment cutting), which would occur within the boundary of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-000800/ 5015500001	Remains of historic period German lime kilns (1880s–1890s)	Construction of a temporary water line in a utility easement intersecting the eastern edge of the site boundary. This is unique to the E2 and E2A Build Alternatives and is located within the ANF (see Section 3.17.11.2).	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-000902/ 5015500003	Prehistoric habitation site	Minor surface work associated with connecting the project components to existing overhead electrical infrastructure bisecting the site boundary. The E2 and E2A Build Alternatives would also entail dropping the grade of the existing road bisecting the site boundary to allow it to extend under the elevated rail. Dropping the grade of the existing road would require grading up to approximately 40 feet deep within the site boundary. This resource is located within the ANF including the SGMNM (see Section 3.17.11.2).	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001572/ 5015500104	Prehistoric midden site with lithic tools	Minor surface work associated with connecting the project components to existing overhead electrical infrastructure intersecting the western edge of the site boundary. This resource is located within the ANF including the SGMNM (see Section 3.17.11.2).	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001690/ 5011901690	Prehistoric lithic scatter	Construction of a temporary water line intersecting the site boundary. The E2 and E2A Build Alternatives would also entail the establishment of a construction and staging area, which would be located within the site boundary. Placement of the construction and staging area would require grading and embankment cutting within the boundary of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001888	Prehistoric lithic scatter	Establishment of drainage basins within the track right-of-way. The E2 and E2A Build Alternatives would require grading and embankment cutting within the boundary of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001889	Prehistoric quarry with midden loci (E2 Build Alternative only)	Establishment of drainage basins within the track right-of-way. The E2 Build Alternative would require grubbing and grading within most of the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5

State Site Identifier	Description of Resource	Potential Build Alternative Effects	Applicable IAMFs
P-19-001904	Prehistoric lithic scatter (E2 Build Alternative only)	Ground disturbance associated with the relocation of a portion of the EBA intersecting the site. Relocation of a portion of the EBA would require construction of a siphon and would feature embankment cutting.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-001988	Prehistoric lithic scatter (E2 Build Alternative only)	Establishment of drainage basins within the track right-of-way. The E2 Build Alternative would require grubbing and grading within the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-002039	Historic period homesite remains	Ground disturbance associated with road realignment. Road realignment would require grubbing and grading within the boundary of the site.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-002415	Prehistoric midden site	Minor surface work associated with the construction of overhead electrical infrastructure intersecting the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-002474	Historic period household refuse dump, 1920s–1930s in ravine (E2 Build Alternative only)	Ground disturbance associated with work in the track right-of-way. Efforts would require grubbing and grading across the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-003536	Historic period refuse deposit	Minor surface work associated with the construction of overhead electrical infrastructure intersecting the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
P-19-004778	Prehistoric lithic scatter	Minor surface work associated with connecting the project to existing overhead electrical infrastructure within the site boundary.	CUL-IAMF#1 CUL-IAMF#2 CUL-IAMF#5
Burbank Subsection			
There are no known archaeological resources within the Burbank Subsection			

Source: Authority, 2019c

CEQA Conclusion

Although implementation of CUL-IAMF#1, CUL-IAMF#2, and CUL-IAMF#5 would avoid and minimize impacts on known archaeological resources, various resource sites would remain susceptible to construction impacts, which may cause a substantial change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines. For the purposes of this analysis, previously identified resources that could not be surveyed for this Draft EIR/EIS due to inaccessibility are considered eligible for the NRHP and CRHR. If any of these sites are determined to be eligible once access is granted, the sites would be surveyed and, if warranted, evaluated.

As discussed in Section 3.17.7, CUL-MM#1, CUL-MM#3, and CUL-MM#4 will ensure that appropriate mitigation measures for each eligible archaeological resource will be determined by consulting with the MOA signatories and tribal consulting parties. CUL-MM#1 will implement policies identified in the ATP for archaeological resources identified during phased identification. These policies include consulting with MOA signatories and concurring parties to determine the preferred treatment of the resources and appropriate mitigation measures, if resources can be preserved in place, and development of a data recovery plan for applicable resources. CUL-MM#3 identifies further actions for the identification of mitigation for effects to previously inaccessible archaeological sites. CUL-MM#4 details that the MOA and ATP may identify resources that may be protected-in-place through application of BPMs that will reduce ground-disturbing activities and mitigate adverse effects. The Authority will implement CUL-MM#1, CUL-MM#3, and CUL-MM#4 (listed in Section 3.17.8) to reduce impacts to a less than significant level.

Section 106 Conclusion

Per the Section 106 PA, the recorded sites in the archaeological APE that have not been evaluated for NRHP eligibility would be revisited. Each site would be re-surveyed and recorded and, if warranted, evaluated. It is possible that site boundaries may be reduced or expanded, and site constituents may be revised. It is also possible that some site boundaries were not accurately depicted when previously recorded and may actually lay outside the archaeological APE; in this case these sites would not be evaluated as they would be avoided by construction activities. Additionally, unevaluated sites within the APE that are evaluated as part of this undertaking may be determined not eligible for listing in the NRHP.

Impact CUL#2: Effects on Unknown Archaeological Resources Caused by Construction Activities.

Ground disturbance associated with construction of the E2 and E2A Build Alternatives may result in impacts on unknown or previously undiscovered archaeological resources located within the APE. Unknown archaeological sites might represent the full range of prehistoric or historic activities conducted over time, including prehistoric lithic scatters and village sites, historic-era homestead remains, and human burials. Unknown or unrecorded archaeological resources that are not observable when conducting standard surface archaeological inspections, including subsurface buried archaeological deposits, may exist in areas surveyed, within the urbanized or rural areas, or areas where permission to enter has not been granted.

Implementation of CUL-IAMF#3 (Section 3.17.5.3) would avoid impacts by ensuring the completion of pre-construction cultural resource surveys in previously inaccessible portions of the archaeological APE. According to archaeological and geoarchaeological analytical results in the *Palmdale to Burbank Project Section Paleontological Technical Report* (Authority 2019f), archaeological sensitivity varies between high and low across the APE.

CEQA Conclusion

Although implementation of CUL-IAMF#3 may avoid impacts on unknown or previously undiscovered archaeological resources, various resource sites would remain susceptible to construction impacts that may cause a substantial change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines. The potential to cause a substantial change in the significance of an archaeological resource represents a significant

impact. As discussed in Section 3.17.7, CUL-MM#1, CUL-MM#2, and CUL-MM#3 would reduce construction impacts from ground-disturbing activities by consulting with MOA signatories, concurring parties, and tribal consulting parties to determine the preferred treatment and appropriate mitigation measures; by halting construction activities and requiring compliance with 48 Fed. Reg. 44716-42 and 14 Cal. Code Regs. Chapter 3, Article 9, Sections 15120–15132, should there be an unanticipated archaeological discovery; and by developing meaningful mitigation measures for effects on as-of-yet-unidentified Native American archaeological resources that cannot be avoided. With adherence to the mitigation measures listed above, this impact would be less than significant.

Section 106 Conclusion

In the event of an archaeological site discovery, the Authority will consult with the SHPO and consulting parties to determine appropriate mitigation. An MOA and ATP would be prepared that would include procedures regarding unanticipated discoveries.

Impact CUL#3: Effects on Human Remains Discovered during Construction Activities.

Ground disturbance associated with construction of the E2 and E2A Build Alternatives may result in impacts on buried human remains located within the archaeological APE. Human burial sites that are not observable when conducting standard surface archaeological inspections, including subsurface buried archaeological deposits, may exist in areas surveyed, within the urbanized or rural areas, or areas where permission to enter has not been granted.

Prior to construction activities, the Authority will develop a geospatial layer to identify the locations of all burial sites, as feasible (CUL-IAMF#1). Survey efforts conducted at that time will inform necessary treatment of identified burial sites. Additionally, the Authority will use the geospatial layer and archaeological sensitivity maps to develop sensitivity mapping for such sites and exercise caution around these areas in order to avoid possible impacts (CUL-IAMF#5).

CEQA Conclusion

Although implementation of CUL-IAMF#1 and CUL-IAMF#5 may avoid impacts on undiscovered human remains, ground-disturbing construction activities may disturb human remains, including those interred outside of formal cemeteries. The potential to disturb human remains represents a significant impact. As discussed in Section 3.17.7, CUL-MM#1, CUL-MM#2, and CUL-MM#3 would reduce ground disturbance from construction by consulting with MOA signatories, concurring parties, and tribal consulting parties to determine the preferred treatment and appropriate mitigation measures, and by halting work in the event on an unanticipated discovery. With adherence to the mitigation measures listed above, this impact would be less than significant.

Impact CUL#4: Effects on Historic Built Resources Caused by Construction Activities.

As described above in Section 3.17.7.3, the Big Creek Hydroelectric System—Vincent Transmission Line, 1890s Acton Ford Road, the Monte Cristo Wagon Road System, 10004 Clybourn Avenue, and the LADWP Boulder Transmission Line 3 would not be affected by construction of the E2 and E2A Build Alternatives and are not discussed further in this section.

Construction of the E2 and E2A Build Alternatives would result in impacts on the Palmdale Ditch, the EBA, Blum Ranch, the Blum Ranch Farmhouse, and the Eagle and Last Chance Mine Road (Table 3.17-16). Construction impacts would vary between each historic built resource. The portion of the Palmdale Ditch that would be affected by the E2 Build Alternative was previously culverted and no longer contributes to the ditch's historical significance.

Table 3.17-16 Built Resources Affected by Construction of the E2 and E2A Build Alternatives

Resource Name	Map ID#	Location	NRHP and CRHR Criteria
Central Subsection			
Palmdale Ditch	3480	Palmdale vicinity	A—for its association with the development of irrigated farming in the south Antelope Valley area, and the development of the Palmdale and Littlerock Irrigation Districts
East Branch of the California Aqueduct	3421	Palmdale vicinity	A—for its association with a comprehensively planned and publicly sanctioned water conveyance project C—for its complex design necessary to redistribute water throughout the state
Blum Ranch	2947	Acton	A—for its association with the early settlement and development of agriculture in northern Los Angeles County C—for the vernacular designs of its buildings, circulation networks, and water conveyance features that date to the farmstead's period of significance (1891 to circa 1924)
Blum Ranch Farmhouse	3768	Acton	C—for the vernacular designs of the building that dates to the farmstead's period of significance (1891 to circa 1924)
Eagle and Last Chance Mine Road	2593	Angeles National Forest	A—for its important role in the economy and development of the area B—for its association with Gleason's important role in the development of mining activity on Mt. Gleason C—for its role as a contributor to a historic district that would have required innovative engineering and is potentially significant
Burbank Subsection			
No historic properties would be affected by construction impacts			

Source: Authority, 2019c
CRHR = California Register of Historical Resources
NRHP = National Register of Historic Places

Although implementation of CUL-IAMF#6 and CUL-IAMF#8 may avoid impacts, construction activities would have the potential to impact historical architectural resources within the historic build resources APE. The potential to impact historical architectural resources represents a significant impact.. Implementation of CUL-IAMF#6 may require pre-construction condition assessments and the preparation of a plan outlining the protection of the EBA and repair of inadvertent damage. Furthermore, implementation of CUL-IAMF#8 will require protection or stabilization measures to ensure plans for rehabilitation of the EBA are prepared and executed in accordance with the SOI's Standards. Similarly, impacts on the Eagle and Last Chance Mine Road would be avoided or minimized through implementation of CUL-IAMF#6 and CUL-IAMF#8. Implementation of CUL-IAMF#6 requires preparation of pre-construction condition assessments and the preparation of a plan outlining the protection of the resource and repair of inadvertent damage for certain properties, as stipulated by the MOA and BETP. Furthermore, implementation of CUL-IAMF#8 will require protection or stabilization measures to ensure plans for rehabilitation of the resource are prepared and executed in accordance with the SOI's Standards. As listed in Section 3.17.8, CUL-MM#6 would reduce impacts by covering roadways with geofabric before laying asphalt, which would be removed following construction of the project. With adherence to the mitigation measures listed above, this impact would be less than significant.

Implementation of CUL-IAMF#6 would minimize construction-related visual impacts on the Blum Ranch by conducting pre-construction conditions assessments and preserving existing visual conditions of the ranch to the extent feasible. However, the aboveground HSR rail structure would be highly noticeable and would result in visual effects on the Blum Ranch and the Blum Ranch Farmhouse.

Palmdale Ditch (Map ID 3480)

Impacts experienced under the E2 and E2A Build Alternatives are the same as those discussed under the E1 and E1A Build Alternatives, respectively.

East Branch of the California Aqueduct (Map ID 3421)

Impacts experienced under the E2 and E2A Build Alternatives are the same as those discussed under the E1 and E1A Build Alternatives, respectively.

Blum Ranch (Map ID 2947)

Impacts experienced are the same as those discussed under the E1 and E1A Build Alternatives.

Blum Ranch Farmhouse (Map ID 3768)

Impacts experienced are the same as those discussed under the E1 and E1A Build Alternatives.

Eagle and Last Chance Mine Road (Map ID 2593)

Impacts experienced are the same as those discussed under the E1 and E1A Build Alternatives.

CEQA Conclusion

The CEQA conclusion for the E2 and E2A Build Alternatives is the same as presented above for the E1 and E1A Build Alternatives. Construction of the E2 and E2A Build Alternatives would introduce visual elements that diminish the integrity of the Blum Ranch and Blum Ranch Farmhouse's setting and feeling. Construction impacts on Blum Ranch and the Blum Ranch Farmhouse would cause an adverse change in the significance of a historic built resource as defined in Section 15064.5 of the CEQA Guidelines. This impact would be significant and unavoidable, with consideration of CUL-MM#5 and CUL-MM#6.

Section 106 Conclusion

The Section 106 analysis for the E2 and E2A Build Alternatives would be the same at those described above for the E1 and E1A Build Alternatives. Implementation of the E2 and E2A Build Alternatives would introduce visual elements that diminish the integrity of Blum Ranch and Blum Ranch Farmhouse's setting and feeling. The Authority anticipates an adverse effect for these properties.

Operations Impacts

Impact CUL#5: Effects on Archaeological Resources Caused by Operations.

Operations and maintenance of the E2 and E2A Build Alternatives would not disturb previously undisturbed surfaces, and there would be no operations impacts on archaeological resources.

CEQA Conclusion

Operations of the E2 and E2A Build Alternatives would not cause a change in the significance of an archaeological resource. No impact would occur. Therefore, CEQA does not require any mitigation.

Section 106 Conclusion

The Authority anticipates that there would be no effect on archaeological resources as there would be no ground disturbance during operations.

Impact CUL#6: Effects on Historic Built Resources Caused by Operations.

As described above in Section 3.17.7.3, the Big Creek Hydroelectric System—Vincent Transmission Line, 1890s Acton Ford Road, the Monte Cristo Wagon Road System, 10004 Clybourn Avenue, and the LADWP Boulder Transmission Line 3 would not be affected by construction of the E2 and E2A Build Alternatives and are not discussed further in this section. While the Palmdale Ditch, the EBA, Blum Ranch, and Eagle and Last Chance Mine Road would be affected by construction, the operations of the E2 and E2A Build Alternatives would not affect those resources.

Construction of the E2 and E2A Build Alternatives would result in impacts on the Blum Ranch Farmhouse (Table 3.17-17).

Table 3.17-17 Built Resources Affected by Operations of the E2 and E2A Build Alternatives

Resource Name	Map ID#	Map Sheet	City or County	NRHP and CRHR Significance Determination
Central Subsection				
Blum Ranch Farmhouse	3768	132	Acton	C/3
Burbank Subsection				
No historic properties would be affected by operations impacts.				

Source: Authority, 2019c
CRHR = California Register of Historical Resources
NRHP = National Register of Historic Places

Blum Ranch Farmhouse (Map ID 3768)

Impacts experienced would be the same as those discussed under the E1 and E1A Build Alternatives.

CEQA Conclusion

The CEQA conclusion for the E2 and E2A Build Alternatives is the same as described above for the E1 and E1A Build Alternatives. As a quiet setting is not a character-defining feature of the properties, operational noise would not affect the historic integrity or materially impair the significance of the Blum Ranch Farmhouse. Noise impacts from train operation would be less than significant. Therefore, CEQA does not require any mitigation.

Section 106 Conclusion

The Section 106 analysis for the E2 and E2A Build Alternatives would be the same as described above for the E1 and E1A Build Alternatives. The Authority anticipates no adverse effect on the Blum Ranch Farmhouse.

3.17.8 Mitigation Measures

In compliance with Section 106, mitigation measures are negotiated in consultation that may include federal, state, and local agencies, Native American tribes, and other interested parties. These measures are then memorialized in an MOA; agreed-upon mitigation would be implemented after the MOA is executed. The mitigation measures described below include mitigation measures and commitments that would occur prior to, during, and following construction.

In addition to the mitigation measures below, prior to construction, IAMFs for archaeology and historic built resources will be implemented (see Section 3.17.5.3). These include completion of remaining pedestrian surveys and inventories; protective measures, such as conducting archaeological sensitivity training; and preserving sites in place where feasible. For built resources, these IAMFs include the completion of building conditions assessments or historic

structures reports, determination of safe construction vibration levels, protection and stabilization plans, and the implementation of the protection and stabilization plans. During construction, IAMFs include vibration monitoring for built resources, monitoring for archaeological resources during ground-disturbing activities, and protocols for halting work during construction in the event of a discovery of archaeological resources or damage to historic built resources.

Pre-construction mitigation measures may include moving historic built resources during construction and protecting them should they not be moved to their permanent location until after construction, as described in the MOA. Post-construction mitigation measures may include restoration of affected landscape, buildings, or structures to pre-construction condition following *The SOI's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Department of the Interior 2017). This includes rehabilitation of properties that suffered unanticipated impacts, to the extent feasible. Mitigation measures that could take place prior to, during, or after construction include implementation of interpretive programs, including displays, and interpretive signage.

Mitigation measures, along with the IAMFs, will strive to provide the greatest level of protection feasible in light of project costs and logistics, and technological and environmental conditions. Preservation in place through methods such as project redesign of relevant facilities to avoid destruction or damage to eligible cultural resources, capping archaeological resources with fill, or deeding resources into conservation easements is always preferable if these methods are also consistent with project objectives. Extensive documentation of built-environment resources that would be moved or demolished or data recovery of significant archaeological sites where destruction is not avoidable would be at the opposite end of this spectrum.

Under NEPA and Section 106, regulatory requirements exist that must be followed in accordance with the PA. The PA stipulates that an MOA would be prepared for each section of the project to detail the project's commitments to implement these treatments. The MOA for the Palmdale to Burbank Project Section would be developed by the Authority in consultation with the SHPO, Surface Transportation Board, and consulting parties listed in Section 3.17.4.2, and would include input from the signatories and other interested members of the public in the development of treatment measures.

The PA stipulates that two treatment plans be developed: an ATP and a BETP. These plans, prepared in consultation with the MOA signatories and consulting parties, would provide specific performance standards that make sure that each impact would be avoided, minimized, or mitigated to the extent possible and provide enforceable performance standards to follow the SOI's Standards when implementing the mitigation measures (Stipulations III and VIII in the PA).

These treatment plans would include relevant mitigation measures for the purposes of NEPA and CEQA and would be implemented in compliance with Section 106; they would be coordinated with the measures included in this Draft EIR/EIS.

Specifically, the ATP would focus on the treatment of known and unknown archaeological resources, and would require the phased identification, evaluation, and mitigation of archaeological resources that may be located on parcels for which legal access has yet to be granted. It would also provide requirements for procedures and protocols to be followed in the event of unanticipated discoveries during construction.

The BETP would describe the treatments to be applied to affected resources in the built environment, as well as protection measures for properties to avoid significant impacts. The treatments and measures included would be specific to each property that would be or would have the potential to be adversely affected by the Palmdale to Burbank Project Section.

The treatment plans would be approved and implemented before the start of construction activities that could adversely affect historic properties or historical resources. These requirements would be included in the construction contracts.

The impacts presented in Section 3.17.7 reflect implementation and inclusion of numerous standard IAMFs adopted by the Authority. The following mitigation measures would be required to

reduce remaining impacts on archaeological and historic built resources during construction and operations of the Palmdale to Burbank Project Section, as deemed appropriate in the impact analysis.

CUL-MM#1: Mitigate adverse effects to archaeological and built-environment resources identified during phased identification and comply with the stipulations regarding the treatment of archaeological and historic built resources in the PA and MOA

Once parcels are accessible and surveys have been completed, including consultation as stipulated in the MOA, additional archaeological and built-environment resources may be identified. For newly identified eligible properties that would be adversely affected, the following process would be followed, which is presented in detail in the BETP and ATP:

- The Authority will consult with the MOA signatories and concurring parties to determine the preferred treatment of the properties/resources and appropriate mitigation measures.
- For CRHR-eligible archaeological resources, the Authority shall determine if these resources can feasibly be preserved in place, or if data recovery is necessary. The methods of preservation in place shall be considered in the order of priority provided in CEQA Guidelines Section 15126.4(b)(3). If data recovery is the only feasible treatment, the Authority shall adopt a data recovery plan as required under CEQA Guidelines Section 15126.4(b)(3)(C).
- Should data recovery be necessary, the contractor's Principal Investigator (PI), in consultation with the MOA signatories and consulting parties, would prepare a data recovery plan for approval from the Authority and in consultation with the MOA signatories. Upon approval, the contractor's PI will implement the plan.
- For archaeological resources, the Authority shall also determine if the resource is a unique archaeological site under CEQA. If the resource is not a historical resource but is an archaeological site, the resource shall be treated as required in Cal. Public Res. Code Section 21083.2 by following protection, data recovery, and other appropriate steps outlined in the ATP. The review and approval requirements for these documents is outlined in the ATP.
- For historic built resources, the contractor's PI will amend the BETP to include the treatment and mitigation measures identified by the Authority in consultation with the MOA signatories and concurring parties. The contractor's PI will implement the treatment and mitigation measures accordingly.

CUL-MM#2: Halt work in the event of an archaeological discovery, and comply with the PA, MOA, ATP, and all state and federal laws, as applicable

During construction (i.e., ground-disturbing activities, including cleaning and grubbing) should there be an unanticipated discovery, the contractor shall follow the procedures for unanticipated discoveries as stipulated in the PA, MOA, and associated ATP. The procedures must also be consistent with the following: the SOI's Standards and Guidelines for Archaeology and Historic Preservation (48 Fed. Reg. 44716-42), as amended by the National Park Service, and Guidelines for the Implementation of CEQA, as amended. Should the discovery include human remains, the contractor and the Authority shall comply with federal and state regulations and guidelines regarding the treatment of human remains, including relevant sections of the Native American Graves Protection and Repatriation Act (3l(d)); California Health and Safety Code, Section 8010 et seq.; and Cal. Public Res. Code Section 5097.98; and consult with the NAHC, tribal groups, and the SHPO.

In the event of an unanticipated archaeological discovery, the contractor will cease work in the immediate vicinity of the find, based on the direction of the archaeological monitor or the apparent location of cultural resources if no monitor is present. If no qualified archaeologist is present, no work can commence until it is approved by the qualified archaeologist in accordance with the MOA, ATP, and monitoring plan. The contractor's qualified archaeologist will assess the potential significance of the find and make recommendations for further evaluation and treatment as necessary. These steps may include evaluation for the CRHR and NRHP, and necessary

treatment to resolve significant impacts if the resource is a historical resource or historic property. If, after documentation is reviewed by the Authority, and they determine it is a historic property and the SHPO concurs that the resource is eligible for the NRHP, or the Authority determines it is eligible for the CRHR, preservation in place shall be considered by the Authority in the order of priority provided in CEQA Guidelines Section 15126.4(b)(3) and in consultation with the signatories and consulting parties to the MOA. If data recovery is the only feasible mitigation, then the contractor's qualified PI shall prepare a data recovery plan as required under CEQA Guidelines Section 15126.4(b)(3)(C), the MOA, and ATP, for the Authority's approval.

The contractor shall notify the Authority, who shall notify the CSLC, if the find is a cultural resource on or in the submerged lands of California and consequently under the jurisdiction of the CSLC. The Authority will comply with all applicable rules and regulations promulgated by CSLC with respect to cultural resources in submerged lands.

If human remains are discovered on State-owned or private lands, the contractor shall contact the relevant County Coroner to allow the Coroner to determine if an investigation regarding the cause of death is required. If no investigation is required and the remains are of Native American origin the Authority shall contact the NAHC to identify the most likely descendant (MLD). The MLD shall be empowered to reinter the remains with appropriate dignity. If the MLD fails to make a recommendation, the remains shall be reinterred in a location not subject to further disturbance and the location shall be recorded with the NAHC and relevant Information Center of the California Historical Resources Information System.

If human remains are part of an archaeological site, the Authority and contractor shall, in consultation with the MLD and other consulting parties, consider preservation in place as the first option, in the order of priority called for in CEQA Guidelines Section 15126.4(b)(3).

In consultation with the relevant Native American tribes, the Authority may conduct scientific analysis on the human remains if called for under a data recovery plan and amenable to all consulting parties. The Authority will work with the MLD to satisfy the requirements of Cal. Public Res. Code Section 5097.98. Performance tracking of this mitigation measure would be based on successful implementation and acceptance of the documentation by the SHPO and appropriate consulting parties.

CUL-MM#3: Implement other mitigation for effects to pre-contact archaeological sites

Due to limited access to private properties during the environmental review phase of the Palmdale to Burbank Project Section, the Authority's ability to fully identify and evaluate archaeological resources within the archaeological APE has, correspondingly, also been limited. Thus, most of the archaeological APE has not been subject to archaeological field inventories. As pedestrian field surveys are a necessary component of the archaeological resource identification and evaluation effort, the commitment to complete the field surveys, prior to ground-disturbing activities associated with the project, is codified in the MOA that has been executed as a condition of this Draft EIR/EIS (Authority 2019h).

Access to previously inaccessible properties to complete the archaeological resource identification effort is expected to be available after the ROD, during the design-build phase of the Palmdale to Burbank Project Section. However, due to the design constraints associated with constructing a high-speed train, the ability to shift the alignment to avoid newly identified archaeological resources at this late phase of the project delivery process is substantially limited or unlikely because the alignment is already established. As such, impacts/effects on as-of-yet-unidentified significant archaeological resources as a result of the Palmdale to Burbank Project Section are anticipated; however, the nature and quantity of such effects remains unknown until completion of the archaeological field identification and evaluation effort, and after all ground-disturbing construction activities are complete.

Protocols for the identification, evaluation, treatment, and data recovery mitigation of yet-to-be-identified archaeological resources are addressed in the MOA and ATP. Efforts to develop meaningful mitigation measures for effects on as-of-yet-unidentified Native American archaeological resources that cannot be avoided would be negotiated with the tribal consulting parties. Measures that are negotiated among the MOA signatories and tribal consulting parties will be the responsibility of the Authority to implement.

CUL-MM#4: Minimize adverse effects to archaeological resources through BMPs

The Authority-prepared MOA and ATP may identify archaeological sites and resources that may be protected-in-place through implementation of BMPs for standard practice maintenance and utility connections to reduce ground disturbance activities (i.e., aboveground utility lines and overhead electrical connections).

CUL-MM#5: Minimize adverse effects to Blum Ranch through consultation with SHPO

In the event the E1 or E2 Build Alternatives are selected, prior to construction, the Authority will be required to consult with the SHPO and the owner of Blum Ranch to develop protection measures to minimize effects on the visual integrity of the Blum Ranch viewshed. The alternative design measures would modify the color and design of the HSR structure and portal visible from the historic resources. Implementation of such visual modifications would minimize the contrast between the HSR structure and its surroundings within Aliso Canyon, and thus, the visual impact on Blum Ranch.

CUL-MM#6: Construction Protocols for the Preservation of Eagle and Last Chance Mine Road

In order to preserve the integrity of the roadway and facilitate its restoration to pre-construction conditions, the road would be covered with geofabric before laying asphalt. Furthermore, asphalt would be removed following construction of the project.

3.17.8.1 Impacts from Implementing Mitigation Measures

Implementation of the above-mentioned cultural resource mitigation measures (listed in Section 3.17.8) would result in secondary impacts on the physical environmental, including the following:

- Impacts of CUL-MM#1—This mitigation measure will apply to the Palmdale to Burbank Project Section site (entirely within the Build Alternative footprint). This mitigation measure will not trigger additional ground-disturbing activities outside of the project footprint and will not change the character or significantly increase the overall amount of construction activity.
- Impacts of CUL-MM#2—No ground-disturbing activities or property acquisition will be necessary to comply with this mitigation measure if the site can be preserved in place. In this case, there would be no impacts on other resources as a result of implementing this mitigation measure. If intentional burial is required, the new burial site will be selected in consultation with the MLD and surveyed by qualified archaeologists prior to excavation. A site will be selected that would not result in impacts on other resource types.
- Impacts of CUL-MM#3—This mitigation measure will require pedestrian surveys to identify unknown archaeological resources and known archaeological resources that have not yet been field-verified or evaluated. No increase in ground-disturbing activities or property acquisition will be necessary to comply with this mitigation measure. Therefore, there would be no secondary environmental impacts on other resources as a result of implementing this mitigation measure.
- Impacts of CUL-MM#4—No increase in ground-disturbing activities or property acquisition will be necessary to comply with this mitigation measure. Therefore, there would be no secondary environmental impacts as a result of implementing this mitigation measure.

- Impacts of CUL-MM#5—No increase in ground-disturbing activities or property acquisition will be necessary to comply with this mitigation measure. Therefore, there would be no secondary environmental impacts on other resources as a result of implementing this mitigation measure.
- Impacts of CUL-MM#6—No increase in ground-disturbing activities or property acquisition will be necessary to comply with this mitigation measure. Therefore, there would be no secondary environmental impacts on other resources as a result of implementing this mitigation measure.

3.17.9 NEPA Impacts Summary

This section summarizes impacts on archaeological sites and historic built resources associated with the each of the six Build Alternatives and compares them to the anticipated impacts of the No Project Alternative. Table 3.17-18 and information in this summary provide a comparison of the impacts of each of all six Build Alternatives and summarizes the more detailed information provided in Section 3.17.7.

Table 3.17-18 Comparison of High-Speed Rail Build Alternative Impacts for Cultural Resources

Cultural Resource	Build Alternatives						NEPA Conclusion before Mitigation (All Build Alternatives)	Mitigation	NEPA Conclusion post Mitigation (All Build Alternatives)
	Refined SR14	SR14A	E1	E1A	E2	E2A			
Construction Impacts									
Impact CUL#1: Effects on Known Archaeological Resources Caused by Construction Activities[1] Construction of the six Build Alternatives would result in impacts to known archaeological resources located within the archaeological APE.									
P-19-000305 (Prehistoric habitation site)	X	X	X	X	X	X	**Refined SR14 and SR14A:** No Adverse Effect **E1, E1A, E2, and E2A:** Adverse Effect	CUL-MM#1 CUL-MM#3	**Refined SR14 and SR14A:** N/A. See Section 3.17.9.1 **All Build Alternatives:** No Adverse Effect. See Section 3.17.9.1
P-19-00360 (Prehistoric complex lithic scatter; part of Vasquez Rocks Site Cluster)	X	N/A	N/A	N/A	N/A	N/A	**Refined SR14:** Adverse Effect **SR14A, E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14:** No Adverse Effect. See Section 3.17.9.1 **SR14A, E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-000541 (Prehistoric habitation site)	X	X	N/A	N/A	N/A	N/A	**Refined SR14 and SR14A:** Adverse Effect **E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14 and SR14A:** No Adverse Effect. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-000591 (Prehistoric complex lithic scatter)	X	X	N/A	N/A	N/A	N/A	**Refined SR14 and SR14A:** Adverse Effect **E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14 and SR14A:** No Adverse Effect. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1

Cultural Resource	Build Alternatives						NEPA Conclusion before Mitigation (All Build Alternatives)	Mitigation	NEPA Conclusion post Mitigation (All Build Alternatives)
	Refined SR14	SR14A	E1	E1A	E2	E2A			
P-19-000595 (Prehistoric midden and lithic scatter)	X	N/A	N/A	N/A	N/A	N/A	**Refined SR14:** Adverse Effect **SR14A, E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#1 CUL-MM#3	**Refined SR14:** No Adverse Effect. See Section 3.17.9.1 **SR14A, E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-000618 (Prehistoric milling area and complex lithic scatter)	X	N/A	N/A	N/A	N/A	N/A	**Refined SR14:** Adverse Effect **SR14A, E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14:** No Adverse Effect. See Section 3.17.9.1 **SR14A, E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-000628 (Prehistoric earthen oven and lithic scatter)	X	N/A	N/A	N/A	N/A	N/A	**Refined SR14:** Adverse Effect **SR14A, E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#1 CUL-MM#3 CUL-MM#4	**Refined SR14:** No Adverse Effect. See Section 3.17.9.1 **SR14A, E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-000800/5015500001 (Remains of historic period German lime kilns (1880s–1890s)	N/A	N/A	N/A	N/A	X	X	**Refined SR14, SR14A, E1, and E1A:** No Adverse Effect **E2 and E2A:** Adverse Effect	CUL-MM#4	**Refined SR14, SR14A, E1, and E1A:** N/A. See Section 3.17.9.1 **E2 and E2A:** No Adverse Effect. See Section 3.17.9.1
P-19-000902/5015500003 (Prehistoric habitation site)	N/A	N/A	X	X	X	X	**Refined SR14 and SR14A:** No Adverse Effect **E1, E1A, E2, and E2A:** Adverse Effect	CUL-MM#1 CUL-MM#3 CUL-MM#4	**Refined SR14 and SR14A:** N/A. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** No Adverse Effect. See Section 3.17.9.1

Cultural Resource	Build Alternatives						NEPA Conclusion before Mitigation (All Build Alternatives)	Mitigation	NEPA Conclusion post Mitigation (All Build Alternatives)
	Refined SR14	SR14A	E1	E1A	E2	E2A			
P-19-001410/5015500026 (Prehistoric ground-stone artifacts possibly displaced from original location as decoration around a residence)	X	N/A	X	X	N/A	N/A	**Refined SR14, E1, and E1A:** Adverse Effect **SR14A, E2 and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14, E1, and E1A:** No Adverse Effect. See Section 3.17.9.1 **SR14A, E2 and E2A:** N/A. See Section 3.17.9.1
P-19-001572/5015500104 (Prehistoric midden site with lithic tools)	N/A	N/A	X	X	X	X	**Refined SR14 and SR14A:** No Adverse Effect **E1, E1A, E2, and E2A:** Adverse Effect	CUL-MM#4	**Refined SR14 and SR14A:** N/A. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** No Adverse Effect. See Section 3.17.9.1
P-19-001690/5011901690 (Prehistoric lithic scatter)	N/A	N/A	X	X	X	X	**Refined SR14 and SR14A:** No Adverse Effect **E1, E1A, E2, and E2A:** Adverse Effect	CUL-MM#1 CUL-MM#4	**Refined SR14 and SR14A:** N/A. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** No Adverse Effect. See Section 3.17.9.1
P-19-001846 (Historic period landfill site)	X	X	N/A	N/A	N/A	N/A	**Refined SR14 and SR14A:** Adverse Effect **E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#1 CUL-MM#4	**Refined SR14 and SR14A:** No Adverse Effect. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-001847 (Historic period house foundations, debris scatter)	X	X	N/A	N/A	N/A	N/A	**Refined SR14 and SR14A:** Adverse Effect **E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14 and SR14A:** No Adverse Effect. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1

Cultural Resource	Build Alternatives						NEPA Conclusion before Mitigation (All Build Alternatives)	Mitigation	NEPA Conclusion post Mitigation (All Build Alternatives)
	Refined SR14	SR14A	E1	E1A	E2	E2A			
P-19-001855 (Prehistoric lithic scatter)	X	N/A	N/A	N/A	N/A	N/A	**Refined SR14:** Adverse Effect **SR14A, E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#1 CUL-MM#4	**Refined SR14:** No Adverse Effect. See Section 3.17.9.1 **SR14A, E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-001859 (Prehistoric rock shelter with rock art and mixed cultural material)	X	X	N/A	N/A	N/A	N/A	**Refined SR14 and SR14A:** Adverse Effect **E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14 and SR14A:** No Adverse Effect. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-001860 (Prehistoric rock shelter and lithic scatter)	X	X	N/A	N/A	N/A	N/A	**Refined SR14 and SR14A:** Adverse Effect **E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14 and SR14A:** No Adverse Effect. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-001888 (Prehistoric lithic scatter)	X	X	X	X	X	X	**All Build Alternatives:** Adverse Effect	CUL-MM#1 CUL-MM#4	**All Build Alternatives:** No Adverse Effect. See Section 3.17.9.1
P-19-001889 (Prehistoric quarry with midden loci)	N/A	N/A	X	N/A	X	N/A	**Refined SR14, SR14A, E1A, and E2A:** No Adverse Effect **E1, and E2:** Adverse Effect	CUL-MM#1	**Refined SR14, SR14A, E1A, E2A:** N/A. See Section 3.17.9.1 **E1 and E2:** No Adverse Effect. See Section 3.17.9.1

Cultural Resource	Build Alternatives						NEPA Conclusion before Mitigation (All Build Alternatives)	Mitigation	NEPA Conclusion post Mitigation (All Build Alternatives)
	Refined SR14	SR14A	E1	E1A	E2	E2A			
P-19-001894 (Prehistoric lithic scatter)	X	N/A	N/A	N/A	N/A	N/A	**Refined SR14:** Adverse Effect **SR14A, E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14:** No Adverse Effect. See Section 3.17.9.1 **SR14A, E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
P-19-001904 (Prehistoric lithic scatter)	X	N/A	X	N/A	X	N/A	**Refined SR14, E1, E2:** Adverse Effect **SR14A, E1A, and E2A:** No Adverse Effect	CUL-MM#1	**Refined SR14, E1, E2:** No Adverse Effect. See Section 3.17.9.1 **SR14A, E1A, and E2A:** N/A. See Section 3.17.9.1
P-19-001988 (Prehistoric lithic scatter)	N/A	N/A	X	N/A	X	N/A	**Refined SR14, SR14A, E1A, and E2A:** No Adverse Effect **E1 and E2:** Adverse Effect	CUL-MM#1	**Refined SR14, SR14A, E1A, E2A:** N/A. See Section 3.17.9.1 **E1 and E2:** No Adverse Effect. See Section 3.17.9.1
P-19-002039 (Historic period homesite remains)	X	X	X	X	X	X	**All Build Alternatives:** Adverse Effect	CUL-MM#1 CUL-MM#3	**All Build Alternatives:** No Adverse Effect. See Section 3.17.9.1
P-19-002415 (Prehistoric midden site)	N/A	N/A	X	X	X	X	**Refined SR14 and SR14A:** No Adverse Effect **E1, E1A, E2 and E2A:** Adverse Effect	CUL-MM#4	**Refined SR14 and SR14A:** N/A. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** No Adverse Effect. See Section 3.17.9.1
P-19-002474 (Historic period household refuse dump, 1920s–1930s)	X	N/A	X	N/A	X	N/A	**Refined SR14, E1, E2** Adverse Effect **SR14A, E1A, E2A:** No Adverse Effect	CUL-MM#1	**Refined SR14, E1, E2:** No Adverse Effect. See Section 3.17.9.1 **SR14A, E1A, and E2A:** N/A. See Section 3.17.9.1

Cultural Resource	Build Alternatives						NEPA Conclusion before Mitigation (All Build Alternatives)	Mitigation	NEPA Conclusion post Mitigation (All Build Alternatives)
	Refined SR14	SR14A	E1	E1A	E2	E2A			
P-19-003536 (Historic period refuse deposit)	X	X	X	X	X	X	**All Build Alternatives:** Adverse Effect	CUL-MM#3 CUL-MM#4	**All Build Alternatives:** No Adverse Effect. See Section 3.17.9.1
P-19-003890 (Prehistoric Vasquez Rocks Archaeological District)	X	X	N/A	N/A	N/A	N/A	**Refined SR14 and SR14A:** Adverse Effect **E1, E1A, E2, and E2A:** No Adverse Effect	CUL-MM#4	**Refined SR14 and SR14A:** No Adverse Effect. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** N/A. See Section 3.17.9.1
19-004778 (Prehistoric lithic scatter)	N/A	N/A	X	X	X	X	**Refined SR14 and SR14A:** No Adverse Effect **E1, E1A, E2 and E2A:** Adverse Effect	CUL-MM#3 CUL-MM#4	**Refined SR14 and SR14A:** N/A. See Section 3.17.9.1 **E1, E1A, E2, and E2A:** No Adverse Effect. See Section 3.17.9.1
P-188397/5015500210 (Historical period structural remains)	N/A	N/A	X	N/A	N/A	N/A	**Refined SR14, SR14A, E1A, E2, and E2A:** No Adverse Effect **E1:** Adverse Effect	CUL-MM#4	**Refined SR14, SR14A, E1A, E2, and E2A:** N/A. See Section 3.17.9.1 **E1:** No Adverse Effect. See Section 3.17.9.1

Cultural Resource	Build Alternatives						NEPA Conclusion before Mitigation (All Build Alternatives)	Mitigation	NEPA Conclusion post Mitigation (All Build Alternatives)
	Refined SR14	SR14A	E1	E1A	E2	E2A			
Impact CUL#2: Effects on Unknown Archaeological Resources Caused by Construction Activities									
Construction of the six Build Alternatives may result in the discovery of previously undiscovered archaeological resources							**All Build Alternatives:** Adverse Effect	CUL-MM#1 CUL-MM#2 CUL-MM#3	**All Build Alternatives:** No Adverse Effect. See Section 3.17.9.1
Impact CUL#3: Human Remains Discovered During Construction Activities									
Construction of the six Build Alternatives may result in the discovery of previously undiscovered human burial sites							**All Build Alternatives:** Adverse Effect	CUL-MM#1 CUL-MM#2 CUL-MM#3	**All Build Alternatives:** No Adverse Effect. See Section 3.17.9.1
Impact CUL#4: Effects to Historic Built Resources Caused by Construction Activities Construction of the six Build Alternatives would result in impacts on historic architectural resources within the historic built resources APE.									
Resource ID 3480: Palmdale Ditch	X	X	X	X	X	X	**All Build Alternatives:** No Adverse Effect	No mitigation measures needed	**All Build Alternatives** N/A. See Section 3.17.9.2
Resource ID 3421: East Branch of the California Aqueduct	X	X	X	X	X	X	**All Build Alternatives:** No Adverse Effect	No mitigation measures needed	**All Build Alternatives** N/A. See Section 3.17.9.2
Resource ID 2947: Blum Ranch	N/A	N/A	X	X	X	X	**Refined SR14 and SR14A:** No Adverse Effect **E1, E1A, E2, and E2A:** Adverse Effect	CUL-MM#5	**Refined SR14 and SR14A:** N/A. See Section 3.17.9.2 **E1, E1A, E2, and E2A:** Adverse Effect. See Section 3.17.9.2

Cultural Resource	Build Alternatives						NEPA Conclusion before Mitigation (All Build Alternatives)	Mitigation	NEPA Conclusion post Mitigation (All Build Alternatives)
	Refined SR14	SR14A	E1	E1A	E2	E2A			
Resource ID 3768: Blum Ranch Farmhouse	N/A	N/A	X	X	X	X	**Refined SR14 and SR14A:** No Adverse Effect **E1, E1A, E2, and E2A:** Adverse Effect	CUL-MM#5	**Refined SR14 and SR14A:** N/A. See Section 3.17.9.2 **E1, E1A, E2, and E2A:** Adverse Effect. See Section 3.17.9.2
Resource ID 2593: Eagle & Last Chance Mine Road	N/A	N/A	X	X	X	X	**Refined SR14 and SR14A:** No Adverse Effect **E1, E1A, E2, and E2A:** Adverse Effect	CUL-MM#6	**Refined SR14 and SR14A:** N/A. See Section 3.17.9.2 **E1, E1A, E2, and E2A:** No Adverse Effect. See Section 3.17.9.2
Operations Impacts									
Impact CUL#5: Effects on Archaeological Resources Caused by Operations									
No known or unknown archaeological resources would be affected by operations impacts.							**All Build Alternatives:** No Adverse Effect	No mitigation needed	**All Build Alternatives:** N/A. See Section 3.17.9.2
Impact CUL#6: Effects on Historic Built Resources Caused by Operations Operations of the six Build Alternatives would result in operational noise impacts on historic architectural resources within the historic built resources APE.									
Resource ID 3768: Blum Ranch Farmhouse	N/A	N/A	X	X	X	X	**All Build Alternatives:** No Adverse Effect	No mitigation needed	N/A. See Section 3.17.9.2
Resource ID 1044: Pink Motel and Café	X	X	X	X	N/A	N/A	**All Build Alternatives:** No Adverse Effect	No mitigation needed	N/A. See Section 3.17.9.2

[1]The Vasquez Rocks Archaeological District is the only site currently listed on the NRHP as an eligible archaeological resource.
APE = area of potential effects
N/A = not applicable to the respective Build Alternative
NRHP = National Register of Historic Places

Under the No Project Alternative, growth and development would continue and the resulting impacts on archaeological sites and historic built resources would still occur. Development activities and ongoing infrastructure maintenance, such as continued operation of existing roads, highways, utilities, airports, and railways, would continue to result in impacts, including construction-related disturbance to unknown archaeological sites, increased public access leading to site disturbance, and impacts on historic built resources. Development under the No Project Alternative would result in similar types of impacts on cultural resources as the Palmdale to Burbank Project Section Build Alternatives.

Per the Section 106 PA, the recorded sites in the archaeological APE that have not been evaluated for NRHP eligibility would be revisited. Each site would be re-surveyed and recorded. It is possible that site boundaries may be reduced or expanded, and site constituents may be revised. It is also possible that some site boundaries were not accurately depicted when previously recorded and may actually lay outside the archaeological APE; these sites would not be evaluated. Additionally, unevaluated sites within the APE that are evaluated as part of this undertaking may have been determined by FRA not eligible for listing in the NRHP.

Because of limited access to private lands in the APE for all six Build Alternatives, it is possible that as-yet-unknown NRHP-eligible archaeological sites could be identified within the archaeological APE as part of the Section 106 phased historic properties identification effort that would be conducted when property access becomes available, prior to ground-disturbing activities. If such sites are identified and cannot be avoided, impacts on archaeological properties would occur. While cultural resource inventories would be completed once legal access is secured, no inventory can ensure that all resources are identified. All six Build Alternatives also have the potential to damage previously unidentified archaeological sites that may not be identified through survey prior to construction. Because these sites may be historic properties, damage to these sites may diminish their integrity. Additionally, given the nature of the Build Alternatives and the design requirements, an established alignment may not be able to be altered to avoid archaeological sites discovered by the time property access is granted. For these reasons the impact of all six Build Alternatives could be adverse.

However, a geospatial layer of archaeological sensitivity on construction drawings, completion of archaeological surveys prior to ground-disturbing activities, and halt work requirements in the event of an archaeological discovery, would reduce the potential for ground-disturbance–related impacts on known and as-yet undiscovered archaeological sites to occur before and during construction.

All six Build Alternatives incorporate IAMFs that would avoid and minimize impacts related to archaeological sites and historic built resources (see Section 3.17.5.3). These IAMFs will include requirements for additional surveys, WEAP cultural resources sensitivity training sessions for construction personnel, a monitoring plan, a discovery plan and procedure if unanticipated discoveries are made during ground-disturbing activities and plans to protect and avoid or minimize damage to historic properties. Mitigation measures will address the following:

- Effects on archaeological resources caused by construction activities (CUL-MM#1, CUL-MM#3, and CUL-MM#4)
- Effects on unknown archaeological resources caused by construction activities (CUL-MM#1, CUL-MM#2, and CUL-MM#3)
- Effects on human remains discovered during construction activities (CUL-MM#1, CUL-MM#2, and CUL-MM#3)
- Effects on historic built resources caused by construction (CUL-MM#5)

Application of CUL-MM#1, CUL-MM#3, and CUL-MM#4 would minimize construction effects on known archaeological sites located within the APE. Archaeological geospatial data layering, sensitivity maps, WEAP training sessions, and an archaeological resource monitoring plan will protect known archaeological resources encountered during subsurface construction activities, and will minimize visual impacts by conducting pre-construction conditions assessments and

preserving existing conditions to the extent feasible (CUL-IAMF#1, CUL-IAMF#2). Although CUL-MM#1 includes adherence to a data recovery plan, archaeological resources encountered during construction may be destroyed.

CUL-MM#1, CUL-MM#2, and CUL-MM#3 would minimize potential damage to unknown archaeological resource deposits and as-of-yet undiscovered human remains and CUL-MM#5 would minimize visual impacts on the Blum Ranch and the Blum Ranch Farmhouse.

3.17.9.1 Archaeological Resources

All six Build Alternatives may result in construction-related impacts on known archaeological sites caused by ground-disturbing construction activities, if the sites are found to be eligible. As previously discussed, the recorded sites in the APE that have not been evaluated for NRHP eligibility would be revisited, resurveyed, and recorded once a Preferred Alternative is selected and the land is accessible. It is possible that site boundaries of evaluated resources were not accurately depicted and may lie outside the archaeological APE; these sites would not be evaluated. Similarly, site boundaries may be reduced or expanded, and site constituents may be revised. Evaluated resources may be determined not eligible. Ground disturbance such as soil excavation or compaction induced by the use of heavy machinery and other construction activities would have the potential to affect or destroy known or unknown archaeological sites. Unevaluated archaeological resources would undergo a program of phased identification and evaluation per the PA, and effects would be assessed on archaeological historic properties.

Additionally, for all six Build Alternatives, unknown archaeological sites and undiscovered human remains may exist within the APE but are currently unidentified. Construction of each of the Build Alternatives would have the potential to encounter previously unidentified resources.

3.17.9.2 Historic Built Resources

Architectural resources can be affected if character-defining features are altered. Construction and operations of the six Build Alternatives would result in adverse effects on historic built resources located within the historic built APE. Surveys identified 12 historic built resources listed, previously determined eligible, and newly determined eligible-for-listing properties within the APE. Construction of the Refined SR14, SR14A, E1, and E1A Build Alternatives would result in no adverse effects on the EBA or the Palmdale Ditch, and operations would result in no adverse effects on the Pink Motel and Café. The E1, E1A, E2, and E2A Build Alternatives would result in no adverse effects on the EBA, the Palmdale Ditch, or the Eagle and Last Chance Mine Road, with consideration of mitigation. However, the E1, E1A, E2, and E2A Build Alternatives would result in an adverse effect on Blum Ranch and Blum Ranch Farmhouse, with mitigation applied. The E1, E1A, E2, and E2A Build Alternatives would not result in operations effects on the Blum Ranch Farmhouse.

Construction Effects Unique to the Refined SR14, E1, and E2 Build Alternatives

Construction of the Refined SR14 Build Alternative would entail excavation around and under the EBA to shore it up during and after construction of tunneling beneath the property. No temporary or permanent physical damage is anticipated, and the EBA would be protected in place. Alternatively, the E1 and E2 Build Alternatives would entail piping of approximately 1,900 feet of the canal. Construction of the E1 and E2 Build Alternatives would have the potential to damage character-defining features of this section of the aqueduct, such as the unreinforced concrete channel, concrete lining, alignment curvature, and associated access roads.

However, since the EBA was constructed, minor alterations to its infrastructure have been common in order to maintain its function as a water conveyance system. Stabilization measures and consultation with SHPO would take place in order to review plans for rehabilitation in accordance with SOI's Standards.

The Palmdale Ditch would also undergo realignment resulting in comparable construction effects for the Refined SR14, E1, and E2 Build Alternatives. Although the Refined SR14, E1, and E2 Build Alternatives would realign a portion of the historic built resource, all modifications would occur exclusively where the once-open ditch was covered between 2008 and 2009. Accordingly, proposed modifications would not damage or remove character-defining features contributing the resource's eligibility.

Construction Effects Unique to the E1, E1A, E2, and E2A Build Alternatives

Construction of the E1, E1A, E2, and E2A Build Alternatives would entail construction activities within the vicinity of the Eagle and Last Chance Mine Road. A construction staging area would be placed just east of the historic property and a portion of the road used as a truck route. Although the road would not be widened, realigned, relocated, or destroyed, asphalt may be laid depending on the condition of the road. The road would be protected in place by use of geofabric and that pavement would be removed following construction.

Construction of the E1 E1A, E2, and E2A Build Alternatives would also result in adverse visual effects on Blum Ranch and the Blum Ranch Farmhouse. Construction-related visual impacts would be minimized by conducting pre-construction conditions assessments and preserving existing visual conditions of the ranch to the extent feasible. Although consultation between the Authority, SHPO, and the owner of Blum Ranch would be required in order to develop measures to preserve the visual integrity of the Blum Ranch viewshed, there would be an adverse effect on Blum Ranch and the Blum Ranch Farmhouse.

Construction Effects Unique to the SR14A, E1A, and E2A Build Alternatives

Construction of the SR14A, E1A, and E2A Build Alternatives would entail culverting up to 0.06 miles (320 feet) of the Palmdale Ditch where it is currently an open, earthen channel. This would occur within a contributing portion of the historic property. However, construction of the SR14A, E1A, and E2A Build Alternative alignments and associated elements would likely not impede the character or use of the Palmdale Ditch as a historic property.

Implementation of the SR14A, E1A, and E2A Build Alternatives would entail construction of an at grade track alignment over the EBA where the resource is a below-grade covered channel. Therefore, construction of the SR14A, E1A, and E2A Build Alternative alignment and associated elements would not cause temporary or permanent physical damage to the resource.

Operations Effects Unique to the Refined SR14, SR14A, E1, and E1A Build Alternatives

Due to the proximity of the elevated Build Alternative tracks to the Pink Motel and Café, the Refined SR14, SR14A, E1, and E1A Build Alternatives would result in noise effects on the historic resource. However, because a quiet setting is not a character-defining feature of the Pink Motel and Café, there would be no adverse effect on the resource.

Operations Effects Unique to the E1, E1A, E2, and E2A Build Alternatives

The E1, E1A, E2, and E2A Build Alternatives would affect the Blum Ranch Farmhouse due to operational noise. However, a quiet setting is not a character-defining feature of the resource. Given this, operation of HSR trains would not result in adverse noise effects on the Blum Ranch Farmhouse. Similarly, the Blum Ranch Farmhouse would not be subject to vibration or ground-borne noise impacts.

3.17.10 CEQA Significance Conclusions

This section summarizes the impacts on archaeological sites and historic built resources associated with implementation of the six Build Alternatives. As described above, recorded archaeological sites that have not been evaluated for NRHP eligibility will be revisited as their parcels become accessible during a phased evaluation. This will occur through implementation of CUL-IAMF#3 (Section 3.17.5.3).

Table 3.17-19 summarizes impacts, mitigation measures, and CEQA conclusions associated with construction and operations of the six Build Alternatives. With incorporation of IAMFs and

implementation of mitigation measures, the six Build Alternatives would result in less than significant impacts on six to nine archaeological resources and significant and unavoidable impacts on zero to two historic built resources (depending on the Build Alternative).

Table 3.17-19 Summary of CEQA Significance Conclusions and Mitigation Measures for Cultural Resources

Impact	Level of CEQA Significance before Mitigation						Mitigation Measures	Level of CEQA Significance after Mitigation					
	Refined SR14	SR14A	E1	E1A	E2	E2A		Refined SR14	SR14A	E1	E1A	E2	E2A
Construction Impacts													
Impact CUL#1: Effects on Known Archaeological Resources Caused by Construction Activities.													
P-19-000305	LTS	LTS	S	S	S	S	CUL-MM#1 CUL-MM#3	LTS	LTS	LTS	LTS	LTS	LTS
P-19-00360	S	N/A	N/A	N/A	N/A	N/A	CUL-MM#4	LTS	N/A	N/A	N/A	N/A	N/A
P-19-000541	S	S	N/A	N/A	N/A	N/A	CUL-MM#4	LTS	LTS	N/A	N/A	N/A	N/A
P-19-000591	S	S	N/A	N/A	N/A	N/A	CUL-MM#4	LTS	LTS	N/A	N/A	N/A	N/A
P-19-000595	S	N/A	N/A	N/A	N/A	N/A	CUL-MM#1 CUL-MM#3	LTS	N/A	N/A	N/A	N/A	N/A
P-19-000618	S	N/A	N/A	N/A	N/A	N/A	CUL-MM#4	LTS	N/A	N/A	N/A	N/A	N/A
P-19-000628	S	N/A	N/A	N/A	N/A	N/A	CUL-MM#1 CUL-MM#3 CUL-MM#4	LTS	LTS	N/A	N/A	N/A	N/A
P-19-000800/5015500001	N/A	N/A	N/A	N/A	S	S	CUL-MM#4	N/A	N/A	N/A	N/A	LTS	LTS
P-19-000902/5015500003	N/A	N/A	S	S	S	S	CUL-MM#1 CUL-MM#3 CUL-MM#4	N/A	N/A	LTS	LTS	LTS	LTS
P-19-001410/5015500026	S	N/A	S	S	N/A	N/A	CUL-MM#4	LTS	N/A	LTS	LTS	N/A	N/A
P-19-001572/5015500104	N/A	N/A	S	S	S	S	CUL-MM#4	N/A	N/A	LTS	LTS	LTS	LTS
P-19-001690/5011901690	N/A	N/A	S	S	S	S	CUL-MM#1 CUL-MM#4	N/A	N/A	LTS	LTS	LTS	LTS
P-19-001846	S	S	N/A	N/A	N/A	N/A	CUL-MM#1 CUL-MM#4	LTS	LTS	N/A	N/A	N/A	N/A
P-19-001847	S	S	N/A	N/A	N/A	N/A	CUL-MM#4	LTS	LTS	N/A	N/A	N/A	N/A
P-19-001855	S	N/A	N/A	N/A	N/A	N/A	CUL-MM#1 CUL-MM#4	LTS	N/A	N/A	N/A	N/A	N/A
P-19-001859	S	S	N/A	N/A	N/A	N/A	CUL-MM#4	LTS	LTS	N/A	N/A	N/A	N/A
P-19-001860	S	S	N/A	N/A	N/A	N/A	CUL-MM#4	LTS	LTS	N/A	N/A	N/A	N/A
P-19-001888	S	S	S	S	S	S	CUL-MM#1 CUL-MM#4	LTS	LTS	LTS	LTS	LTS	LTS
P-19-001889	N/A	N/A	S	N/A	S	N/A	CUL-MM#1	N/A	N/A	LTS	N/A	LTS	N/A
P-19-001894	S	N/A	N/A	N/A	N/A	N/A	CUL-MM#4	LTS	N/A	N/A	N/A	N/A	N/A

Impact	Level of CEQA Significance before Mitigation						Mitigation Measures	Level of CEQA Significance after Mitigation					
	Refined SR14	SR14A	E1	E1A	E2	E2A		Refined SR14	SR14A	E1	E1A	E2	E2A
P-19-001904	S	N/A	S	N/A	S	N/A	CUL-MM#1	LTS	N/A	LTS	N/A	LTS	N/A
P-19-001988	N/A	N/A	S	N/A	S	N/A	CUL-MM#1	N/A	N/A	LTS	N/A	LTS	N/A
P-19-002039	S	S	S	S	S	S	CUL-MM#1 CUL-MM#3	LTS	LTS	LTS	LTS	LTS	LTS
P-19-002415	N/A	N/A	S	S	S	S	CUL-MM#4	N/A	N/A	LTS	LTS	LTS	LTS
P-19-002474	S	N/A	S	N/A	S	N/A	CUL-MM#1	LTS	N/A	LTS	N/A	LTS	N/A
P-19-003536	S	S	S	S	S	S	CUL-MM#4 CUL-MM#3	LTS	LTS	LTS	LTS	LTS	LTS
P-19-003890	S	S	N/A	N/A	N/A	N/A	CUL-MM#4	LTS	LTS	N/A	N/A	N/A	N/A
19-004778	N/A	N/A	S	S	S	S	CUL-MM#4 CUL-MM#3	N/A	N/A	LTS	LTS	LTS	LTS
P-19-188397/5015500210	N/A	N/A	S	N/A	N/A	N/A	CUL-MM#4	N/A	N/A	LTS	N/A	N/A	N/A
Impact CUL#2: Effects on Unknown Archaeological Resources Caused by Construction Activities.													
Construction of the six Build Alternatives may result in the discovery of previously undiscovered archaeological resources	S	S	S	S	S	S	CUL-MM#1 CUL-MM#2 CUL-MM#3	LTS	LTS	LTS	LTS	LTS	LTS
Impact CUL#3: Effects on Human Remains Discovered during Construction Activities.													
Construction of the six Build Alternatives may result in the discovery of previously undiscovered human burial sites	S	S	S	S	S	S	CUL-MM#1 CUL-MM#2 CUL-MM#3	LTS	LTS	LTS	LTS	LTS	LTS
Impact CUL#4: Effects to Historic Built Resources Caused by Construction Activities.													
Resource ID 3480: Palmdale Ditch	LTS	LTS	LTS	LTS	LTS	LTS	No mitigation measures required	N/A	N/A	N/A	N/A	N/A	N/A
Resource ID 3421: East Branch of the California Aqueduct	LTS	LTS	LTS	LTS	LTS	LTS	No mitigation measures required	N/A	N/A	N/A	N/A	N/A	N/A
Resource ID 2947: Blum Ranch	N/A	N/A	S	S	S	S	CUL-MM#5	N/A	N/A	SU	SU	SU	SU
Resource ID 3768: Blum Ranch Farmhouse	N/A	N/A	S	S	S	S	CUL-MM#5	N/A	N/A	SU	SU	SU	SU
Resource ID 2593: Eagle and Last Chance Mine Road	N/A	N/A	LTS	LTS	LTS	LTS	CUL-MM#6	N/A	N/A	LTS	LTS	LTS	LTS

Impact	Level of CEQA Significance before Mitigation						Mitigation Measures	Level of CEQA Significance after Mitigation					
	Refined SR14	SR14A	E1	E1A	E2	E2A		Refined SR14	SR14A	E1	E1A	E2	E2A
Operations Impacts													
Impact CUL#5: Effects on Archaeological Resources Caused by Operations.													
No known or unknown archaeological resources would be affected by operations impacts.													
Impact CUL#6: Effects on Historic Built Resources Caused by Operations.													
Resource ID 3768: Blum Ranch Farmhouse	N/A	N/A	LTS	LTS	LTS	LTS	No mitigation measures required	N/A	N/A	N/A	N/A	N/A	N/A
Resource ID 1044: Pink Motel and Café	LTS	LTS	LTS	LTS	N/A	N/A	No mitigation measures required	N/A	N/A	N/A	N/A	N/A	N/A

N/A = not applicable
LTS = less than significant
S = significant
SU = significant and unavoidable

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3.17.11 United States Forest Service Impact Analysis

This section summarizes potential cultural resource effects associated with the six Build Alternatives that could occur on land managed by USFS, specifically the ANF and SGMNM.

3.17.11.1 Consistency with Applicable United States Forest Service Policies

Appendix 3.1-B, USFS Policy Consistency Analysis, contains a comprehensive evaluation of consistency of each of the relevant USFS laws, regulations, plans, and policies pertaining to the ANF and the SGMNM. This analysis determined that the six Build Alternatives would be consistent with applicable USFS laws, regulations, plans, or policies pertaining to archaeological resources and historic built resources for the reasons discussed below.

Within the ANF including the SGMNM, the six Build Alternatives would primarily involve the construction of underground bored tunnels. The only surface construction of Build Alternative alignments that would occur within the ANF including the SGMNM would be at the Vulcan Mine Site under the Refined SR14 and SR14A Build Alternatives. Other surface improvements, such as the construction of access roads, adits, and windows are contained to private in-holdings.

At the depths anticipated for the tunnels, it is assumed the six Build Alternatives would avoid archaeological sites, which are typically found closer to the ground surface. No information was available to calculate the anticipated depth of archaeologically sensitive deposits within the archaeological APE at the time of this study. Pre-construction subsurface archaeological investigations will assess the depth of archaeologically sensitive deposits relative to the proposed depth of ground disturbance through implementation of CUL-IAMF#1 and CUL-IAMF#3. Construction of the bored tunnels will avoid the historic built resources within the ANF including the SGMNM located on the surface above the tunnels (Authority 2019a).

Besides the bored tunnels, other Palmdale to Burbank Project Section features would involve aboveground construction activities, which would potentially affect surface archaeological resources. These known archaeological resources would undergo phased evaluation. Historic built resources located within the ANF including the SGMNM would also be affected. The incorporation of IAMFs into the project design and the implementation of mitigation measures ensure that such impacts would be avoided or minimized; however, the E1 and E1A and E2 and E2A Build Alternatives would result in adverse effects on one historic built resource within the ANF including the SGMNM.

The following USFS policies pertain to cultural resources:

- Tribal 1—Traditional and Contemporary Uses: Allow traditional uses, access to traditionally used areas, as well as contemporary uses and needs by tribal and other Native American interests.
- Her 1—Heritage Resource Protection: Protect heritage resources for cultural and scientific value and public benefit.
- Cultural and Historic Standards:
  - S60: Until proper evaluation occurs, known heritage resource sites shall be afforded the same consideration and protection as those properties evaluated as eligible to the National Register of Historic Places.
  - S61: Leave human remains which are not under the jurisdiction of the County Coroner undisturbed unless there is an urgent reason for their disinterment. In case of accidental disturbance of human remains, excavation of human remains, or subsequent re-internment of human remains follow national forest, federal and tribal policies.
  - S62: Protect the access to and the use of sensitive traditional tribal use areas.

- Heritage Resources
  - Goal 1. The cultural resources identified in Management Approach 7 are to be enhanced through interpretative measures such as exhibits, displays, formal evaluation and National Register nominations and listing, protection and stabilization treatments, public education, and outreach efforts.
  - Standard 1. Cultural resources and historic properties within the Monument will be managed in accordance with Section 106 of the NRHP and its implementing regulations at 36 CFR 800.
  - Standard 2. Pursuant to the Programmatic Agreement between the USDA Forest Service, Pacific Southwest Region (Region 5); California State Historic Preservation Officer; Nevada State Historic Preservation Officer; and the Advisory Council, all cultural resources within the Monument are treated as historic properties and assumed eligible for the National Register of Historic Places until formally evaluated and determined, through consensus, not eligible.

3.17.11.2 United States Forest Service Resource Analysis

Archaeological Resources

Table 3.17-20 summarizes the archaeological resources located within the ANF within the archaeological APE. Although certain features of the six Build Alternatives would be located in areas in which the archaeological resources listed in Table 3.17-20 are present, archaeological resource sites within the boundaries of the ANF including the SGMNM have been determined not eligible for the NRHP with concurrence by SHPO. Impacts on archaeological resources located within the ANF are summarized below by Build Alternative. Per the Section 106 PA, the recorded archaeological sites that have not been evaluated for NRHP eligibility would be revisited once a Preferred Alternative is selected.

Refined SR14 and SR14A Build Alternatives

The Refined SR14 and SR14A Build Alternative alignments would encounter one archaeological resource site within the ANF, the Lang Station Nike Missile Site (5015500239). Although this site is located within the archaeological APE, USACE determined that the Magic Mountain/Lang Nike Missile complex was not eligible for listing in the NRHP and SHPO concurred with the determination in June 1987. Given the Lang site's ineligibility for listing in the NRHP, impacts associated with this site are not discussed further.

E1 and E1A Build Alternative

The E1 and E1A Build Alternative alignments would encounter 11 archaeological resources within the ANF including SGMNM. Of these 11 resources, one resource was previously determined not eligible for the NRHP with SHPO concurrence, a mortarless stacked rock wall segment (19-003344/5015500206). Although the stacked wall site is located within the archaeological APE, the USFS recommended that the resource not be deemed eligible for the NRHP and SHPO concurred with the determination in March 2005.

Three archaeological resources in the SGMNM were determined not eligible for the NRHP as a part of this study: a prehistoric rock alignment and lithic scatter (5015500122), prehistoric stone circles and clusters (5015500119) and a rock cairn (19-101403/5015500301). One archaeological resource site, a prehistoric basalt flake (19-101404/5015599030) was found not eligible for the NRHP and is exempt under the Section 106 PA. Given the ineligibility of the five resources discussed above, impacts associated with these sites are not discussed further.

Of the remaining six resources, the E1 and E1A Build Alternatives would result in phased determinations to the following resources in the ANF or the SGMNM (Authority 2019c):

- 19-101402/5015500300 (located in the ANF only)
- 5015500126 (located in the ANF including the SGMNM)
- 5015500127(located in the ANF including the SGMNM)

- 19-001572/5015500104 (located in the ANF including the SGMNM)
- 19-188397/5015500210 (E1 Build Alternative only – located in the ANF only)
- 19-000902/5015500003 (located in the ANF including the SGMNM)

Table 3.17-20 Archaeological Resources within the ANF, including the SGMNM

Primary Number	USFS Number	Within SGMNM	Description	Refined SR14/	SR14A	E1	E1A	E2	E2A	Status
19-000800	5015500001	No	Remains of three historic period German lime kilns—late 19th century (1880s–1890s)	N/A	N/A	N/A	N/A	Phased	Phased	Unevaluated—not an exempt archaeological property
19-000902	5015500003	Yes	Prehistoric habitation site	N/A	N/A	Phased	N/A	Phased	Phased	Considered eligible for NRHP under Criterion D by USFS
19-001142	5015500012	Yes	Prehistoric lithic scatter	N/A	N/A	N/A	N/A	Phased	Phased	Portion of site in APE unevaluated—not an exempt archaeological property
19-001572	5015500104	Yes	Prehistoric midden site with lithic tools	N/A	N/A	Phased	Phased	No Adverse Effect	N/A	Unevaluated—not an exempt archaeological property
19-188397	5015500210	No	Historic period structural remains	N/A	N/A	Phased	N/A	N/A	Phased	Unevaluated—not an exempt archaeological property
19-101402	5015500300	No	Prehistoric: Possible hearth feature	N/A	N/A	Phased	Phased	N/A	N/A	Unevaluated – not an exempt archaeological property
None Available	5015500126	Yes	Prehistoric circular rock feature	N/A	N/A	Phased	Phased	Phased	Phased	Unevaluated—not an exempt archaeological property
None Available	5015500127	Yes	Prehistoric circular rock feature	N/A	N/A	Phased	Phased	Phased	Phased	Unevaluated—not an exempt archaeological property
19-002138	5015500064	No	Black Wonder Mill site	N/A	N/A	N/A	N/A	Not Eligible	Not Eligible	Not Eligible—with SHPO Concurrence
19-003344	None Available	Yes	A mortarless stacked rock wall segment	N/A	N/A	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible—with SHPO Concurrence

Primary Number	USFS Number	Within SGMNM	Description	Refined SR14/	SR14A	E1	E1A	E2	E2A	Status
None Available	5015500119	Yes	Prehistoric stone circles and clusters	N/A	N/A	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Determined by the FRA not eligible for the NRHP
None Available	5015500122	Yes	Prehistoric rock alignment and lithic scatter	N/A	N/A	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible—with SHPO Concurrence
None Available	5015500239	Yes	Lang Station Nike Missile Site	Not Eligible	Not Eligible	N/A	N/A	N/A	N/A	Not Eligible—with SHPO Concurrence
19-101403	5015500301	Yes	Historic period rock cairn	N/A	N/A	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Determined by the FRA not eligible for the NRHP
19-101404	5015599030	Yes	Isolate—prehistoric basalt flake	N/A	N/A	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Exempt under Section 106 PA Not eligible per Section 106 PA

Source: Authority, 2019a
ANF = Angeles National Forest
APE = area of potential effects
FRA = Federal Railroad Administration
N/A = not applicable to the respective Build Alternative
NRHP = National Register of Historic Places
PA = programmatic agreement
SGMNM = San Gabriel Mountains National Monument
SHPO = State Historic Preservation Officer
USFS = United States Forest Service

E2 and E2A Build Alternatives

The E2 and E2A Build Alternatives would encounter 12 archaeological resources within the ANF including SGMNM. Of these resources, two were previously determined not eligible for the NRHP with SHPO concurrence; the Black Wonder Mill site in the ANF (19-002138/5015500064) and a mortarless stacked rock wall segment (19-003344/5015500206) in the SGMNM. Although both resources are located within the archaeological APE, USFS determined the Black Wonder Mill site not eligible for the NRHP, and USFS recommended the stacked wall site not eligible for the NRHP. SHPO concurred with the determinations for both resources in 1993 and 2005, respectively.

Three other archaeological resources in the SGMNM were determined not eligible for the NRHP by the FRA as a part of this study: a prehistoric rock alignment and lithic scatter (5015500122), prehistoric stone circles and clusters (5015500119), and a historic period rock cairn (19-101403/5015500301). Alternatively, one archaeological resource, a prehistoric basalt flake (19-101404/5015599030) was found not eligible for the NRHP and is exempt under the Section 106 PA. Given the ineligibility of the six resources discussed above, impacts associated with construction of the six Build Alternatives are not discussed further.

Of the remaining six resources, the E2 and E2A Build Alternatives would result in phased determinations for the following resources in the ANF and the SGMNM (Authority 2019c):

- 19-001142/5015500012 (located in the ANF including the SGMNM)
- 5015500126 (located in the ANF including the SGMNM)
- 5015500127 (located in the ANF including the SGMNM)
- 19-000800/5015500001(located in the ANF only)
- 19-001572/5015500104 (located in the ANF including the SGMNM
- 19-000902/5015500003 (located in the ANF including the SGMNM)

Built Resources

Seven historic built resources within the historic built APE within the SGMNM are considered eligible for the NRHP. Table 3.17-21 summarizes impacts on historic built resources located in the ANF including the SGMNM. Due to the depth of bored tunnels, the six Build Alternatives would result in no effect determinations for the following resources in the SGMNM (Authority 2019c):

- Big Creek Hydroelectric System Historic District - Vincent Transmission Line (Map ID 3862)
- Los Pinetos Nike Missile Site (Map ID 152)
- LADWP Boulder Transmission Line 3 (Map ID 2500)
- 1890s Acton Ford Road (Map ID 2920)
- Monte Cristo Wagon Road System (Map ID 2990/3000/3002)

The remaining historic built resources within the ANF including the SGMNM pertain to the E1 and E1A and E2 and E2A Build Alternatives: Blum Ranch (Map ID 2947) and the Eagle and Last Chance Mine Road (Map ID 2593) are discussed below. The Refined SR14 and SR14A Build Alternatives would not encounter historic built resources within the ANF or the SGMNM.

Table 3.17-21 Historic Built Resources within the ANF including the SGMNM[1]

Temporary or Primary Number	Map ID	APN/Address	Historic Name	Within SGMNM	Build Alternatives						City	Year Built	Current OHP Code	NRHP and CRHR Criteria
					Refined SR14	SR14A	E1	E1A	E2	E2A				
None Available	3862	None Available	Big Creek Hydroelectric System Historic District—Vincent Transmission Line	Yes	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	Multiple	1927	1D	A/1 and C/3
None Available	2947	Portions of 3058006015; 3058007010; 3058010900;31880 Aliso Canyon Road	Blum Ranch	Yes[2]	N/A	N/A	**Adverse Effect**	**Adverse Effect**	**Adverse Effect**	**Adverse Effect**	Acton Vicinity	1891–ca. 1924	2S2	A/1 and C/3
19-186545	2990/3000/ 3002	N/A; FS 05-01-55-116, FS 05-01-55-158, FS: 05-01-55-189	Monte Cristo Wagon Road System (including Monte Cristo Mining District Road, Aliso Creek Wagon Road, Forest Road 4N32—Aliso Arrastre Cutoff)	Yes	N/A	N/A	No Effect	No Effect	No Effect	No Effect	Angeles National Forest	Late 19 C.	2D2	A/1
19-188484	2920	N/A; FS 05-01-55-216	1890s Acton Ford Road	Yes	N/A	N/A	No Effect	No Effect	No Effect	No Effect	Angeles National Forest	Circa 1890s	2D2	A/1
19-150047; HAER No. NV-27-M	2500	N/A—resource is multistate	LADWP Boulder Transmission Line 3	Yes	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	N/A—multistate resource	1939–1940	2D2	A/1 and C/3
P-19-002-009	2593	None Available; FS 05-01-55-45	Eagle and Last Chance Mine Road	Yes	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	No Adverse Effect	Angeles National Forest	Circa 1880s	2D2	A/1, B/2; C/3
No P# HAER No. CA-56	152	None Available; Forest Road 3N 17	Los Pinetos Nike Missile Site	No	No Effect	No Effect	N/A	N/A	N/A	N/A	N/A	1955-1956	2S2	A/1 and C/3

Source: Authority, 2017
[1]Considered eligible for listing on the NRHP, without SHPO concurrence
[2]A contributing element (irrigation line) of the Blum Ranch Historic District is within the ANF, including the SGMNM.
ID = Contributor to a district or multiple resource property listed in the NRHP by the Keeper and listed in the CRHR
2B = Determined eligible for the NRHP as an individual property and as a contributor to an eligible district in a federal regulatory process, and listed in the CRHR
2D2 = Contributor to a district determined eligible for NRHP by consensus through Section 106 process. Listed in the CRHR
2S2 = Individual property determined eligible for the NRHP by consensus through the Section 106 process and listed in the CRHR
3D = Appears eligible for the NRHP as contributor to a NRHP eligible district through survey evaluation
APN = Assessor's Parcel Number
CRHR = California Register of Historical Resources
HAER = Historic American Engineering Record
NRHP = National Register of Historic Places
OHP = Office of Historic Preservation
N/A = not applicable to the respective Build Alternative

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Blum Ranch (Map ID: 2947)

Blum Ranch is located in the Acton area and is eligible for listing in the NRHP under Criterion A/1 and Criterion C/3. Although Blum Ranch itself is not located within the ANF, the Blum Ranch Historic District boundary encompasses the footprint of a buried historic concrete irrigation pipeline that extends through APN 3058-007-010, approximately 370 feet into the ANF including the SGMNM. APN 3058010900. Operations impacts on Blum Ranch are summarized below and are discussed in greater detail in Section 3.17.7.5.

As discussed in Impact CUL#5, construction of the E1, E1A, E2, and E2A Build Alternatives would entail construction and operations of the aboveground HSR outside the Blum Ranch historic property boundary. Although these Build Alternatives would be located outside the historic property boundary, they would be highly noticeable and audible, and would diminish the integrity of the property's setting. Implementation of CUL-IAMF#6 would minimize visual impacts by conducting pre-construction conditions assessments and preserving existing conditions to the extent feasible.

In the event that either the E1, E1A, E2, or the E2A Build Alternative is selected, CUL-MM#5 will require the Authority to consult with SHPO and the owner of Blum Ranch in order to develop protection measures to preserve the visual integrity of the Blum Ranch viewshed. Although such visual changes may not alter the characteristics of the property that qualify it for the NRHP, the E1, E1A, E2, and E2A Build Alternatives would have an adverse visual effect on Blum Ranch, even after implementation of CUL-MM#5.

Eagle and Last Chance Mine Road (Map ID 2593)

The Eagle and Last Chance Mine Road is located in the ANF, including the SGMNM, and is eligible for listing in the NRHP under Criterion A/1, B/2, and C/3. Construction and operations impacts on the Eagle and Last Chance Mine Road associated with the E1, E1A, E2, and E2A Build Alternatives are summarized below and are discussed in greater detail in Section 3.17.7.5.

As discussed in Impact CUL#4, implementation of the E1, E1A, E2, or E2A Build Alternative would entail the placement of a construction staging area just east of the historic property and may involve temporary (and potentially permanent) utility easements within the road right-of-way. Asphalt would be laid during construction of the E1, E1A, E2, and E2A Build Alternatives. Implementation of CUL-IAMF#8 will implement protection measures such as vibration monitoring of construction in the vicinity of the historic property and preventing access of resources from construction activities. With implementation of CUL-IAMF#8, the pre-construction conditions of the Eagle and Last Chance Mine Road will be preserved and implementation of either the E1, E1A, E2, or the E2A Build Alternative will not result in a change of the character of the historic property's use or features within its setting. Accordingly, implementation of the E1, E1A, E2, or the E2A Build Alternative would not result in adverse effects on the Eagle and Last Chance Mine Road. CUL-MM#6 will be implemented to add further protection measures for the EBA, such as the placement of geofabric prior to laying asphalt, and the removal of all paved asphalt following construction activities in order to restore the roadway's pre-construction conditions.

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