

## 5.6 CULTURAL AND TRIBAL RESOURCES

### 5.6.1 INTRODUCTION

#### Purpose

State law, as substantiated in the County of Los Angeles Department of Regional Planning Environmental Checklist Form, which has been prepared pursuant to the California Environmental Quality Act (CEQA), requires that cultural and tribal resources issues be evaluated as part of the environmental documentation process. The impacts of the proposed development on the Project site are analyzed at a project-level of detail; direct and indirect impacts are addressed for each threshold criterion for both the on-site and off-site Project features. Growth-inducing impacts and cumulative impacts are described in Sections 6.0 and 7.0, respectively.

#### Summary

Both a cultural resources survey and an evaluation have been undertaken in the Project area. The survey was comprehensive, covering the entirety of the Project site. California Register of Historical Resources (CRHR) cultural resources eligibility evaluations were completed in 2012 and 2015 for sites in areas where impacts associated with development were anticipated. Also, the County of Los Angeles, as Lead Agency, completed Native American consultation under Assembly Bill (AB) 52. The Fernandeño Tataviam Band of Mission Indians (Tataviam Tribe) and the Tejon Indian Tribe (Tejon Tribe) were contacted, consultation was initiated, and mitigation measures were agreed upon by all parties involved, including the Tejon Ranch Company.

There are three archaeologically significant (i.e., California Register of Historical Resources [CRHR]-eligible sites within the grading footprint (CA-LAN-3201, CA-LAN-3240 and CA-LAN-3242); therefore, grading and other construction activities, including fuel modification, would directly impact these sites. Impacts to these three sites would be mitigated through avoidance by means of monitoring by a qualified Archaeologist and a Native American monitor representing the Tejon Indian Tribe during construction, and either Project redesign, preservation through restricted access or, if that is not feasible, through a Phase III data recovery program (MM 6-1 and MM 6-3). MM 6-2 requires these three sites, and two others, to be protected by fencing during construction to ensure avoidance of the resource, and MM 6-4 provides further protective measures if necessary. Excavated finds shall be offered to the County of Los Angeles and/or its designee (i.e., the Tejon Indian Tribe) on a first refusal basis (MM 6-1 and 6-3); the Tejon Indian Tribe can then make a determination whether the find is a significant tribal cultural resource and opt to accept the resource for curation in its facility). With implementation of MMs 6-1, 6-2, 6-3, and 6-4, impacts to sites CA-LAN-3201, CA-LAN-3240, and CA-LAN-3242 would be reduced to a less than significant level.

There are a total of 30 prehistoric archaeological sites within open space areas (i.e., areas outside the grading footprint). Of these. The CRHR eligibility of 18 of the 30 total sites has been determined, and 1 site (CA-LAN-3206) has been determined eligible and 17 sites have

been determine ineligible. For the 12 remaining sites, it is assumed that the sites are historically significant until, and unless, evaluation proves otherwise. Because these 12 sites are outside the development footprint, direct impacts during grading and other construction activities are not expected. However, site CA-LAN-3227 is immediately adjacent the development footprint. Because of its proximity, the site could suffer damage during grading activities. Therefore, MMs 6-1, MM 6-2, and MM 6-4 would be implemented for this site, and potential direct impacts to site CA-LAN-3227 during construction would be reduced to a less than significant level.

Long-term operation of the Project would result in potential indirect impacts to the 12 sites with unknown eligibility and the 1 site located in the open space areas that is known to be eligible (CA-LAN-3206) due to increased access, by residents and visitors, to these areas of the site compared to the existing condition, wherein the sites are located entirely on private property. Because archaeological excavation is considered an adverse effect on an archaeological resource, avoidance and preservation of resources without excavation would be the preferred method of managing these sites. Therefore, MM 6-4 requires preparation of an Archaeological Resources Site-Protection Program aimed to protect and preserve identified archaeological resources that may be vulnerable to disturbance. The Archaeological Resources Site-Protection Program must include several alternatives to restrict access to these sites (e.g., fencing, planting, and capping), thereby protecting and preserving these sites. With implementation of MM 6-4, potential indirect impacts to site CA-LAN-3227 during grading/construction would be reduced to a less than significant level.

The Paleo Environmental Associates report (2009) has classified rock units on the Project site according to their likelihood of containing resources of paleontologic importance, and geologic evidence from adjacent areas with similar sedimentary formations indicates a high likelihood of encountering such resources during Project development. Impacts, should they occur, would be reduced to a level considered less than significant through the application of MMs 6-5 through 6-9.

There is no evidence for the presence of Native American burial sites and associated human remains within the Project area because none of the sites recorded and evaluated on the Project area were found to contain human remains, nor were there any data to suggest they were present. However, the presence of known cultural resources sites increases the likelihood that they may be present. MM 6-10 is provided to address these potential occurrences, should they be realized.

## **Section Format**

As described in Section 5.0, Environmental Setting, Impacts, and Mitigation, and in accordance with State CEQA Guidelines Article 9 (Contents of Environmental Impact Reports), each topical environmental analysis includes a description of the existing setting; identification of thresholds of significance; analysis of potential Project effects and identification of significant impacts; identification of mitigation measures, if required to reduce the significant impacts; and level of significance after mitigation, if any. This information is presented in the following format (Please refer to Section 2.0, Introduction,

and Section 5.0, Environmental Setting, Impacts, and Mitigation, for descriptions of each of these topics):

- Introduction
  - Purpose
  - Summary
  - Section Format
  - References
- Relevant Plans, Policies, and Regulations
- Environmental Setting
- Project Design Features
- Threshold Criteria
- Environmental Impacts—A separate analysis is provided for each of the following categories of potential impacts:
  - On-Site Impacts
  - Off-Site Impacts
- Mitigation Measures
- Level of Significance After Mitigation
- References

## References

While all references cited in this analysis section are listed in Section 5.6.9, the primary technical references for this section are listed below.

1. W & S Consultants (WSC). 2002 (May). *Phase I Archaeological Survey of the Centennial Study Area, Northern Los Angeles County, California*. Simi Valley, CA: WSC (Appendix 5.6-A).
2. W & S Consultants. 2004 (September). *Phase II Test Excavations and Determinations of Significance at 12 Sites in the Centennial Project Area, Northern Los Angeles County, California*. Simi Valley, CA: WSC (Appendix 5.6-B).
3. W&S Consultants. 2007 (April). *Addendum Phase II Test Excavations and Determinations of Significance within the Centennial Study Area, Northern Los Angeles County, California*. Simi Valley, CA: WSC (Appendix 5.6-C).
4. ASM Affiliates. 2015 (September). *Phase I Survey of 768 Acres and Phase II Test Excavation of 20 Archaeological Sites, Centennial Project, Los Angeles County, California*. Tehachapi, CA: ASM (Appendix 5.6-D).
5. Natural History Museum of Los Angeles County. Paleontological Resources Records Search for the Centennial Project site (Appendix 5.6-E1) and the adequacy of the Paleontology portions of the EIR's Cultural Resources Section (Appendix 5.6-E2).
6. Paleo Environmental Associates (PEA) 2009 (March). *Paleontological Resource Inventory and Impact Assessment Technical Report Prepared in Support of Centennial*

*Specific Plan, Western Antelope Valley, Northern Los Angeles County, California. Altadena, CA: PEA. (Appendix 5.6-F).*

Because of the sensitivity of archaeological resources, in accordance with the State CEQA Guidelines, (14 *California Code of Regulations* [CCR] Section 15120[d]), no information about the specific location of archaeological sites is included in this Draft EIR. Qualified persons can request verifying information through the Los Angeles County Department of Regional Planning.

## **5.6.2 RELEVANT PLANS, POLICIES AND REGULATIONS**

### **Federal**

No federal plans or policies have been identified that relate to cultural and tribal resources.

### **State**

#### ***Senate Bill 18***

Senate Bill (SB) 18 (*California Government Code*, Section 65352.3) incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies. It establishes responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB 18 requires public notice to be sent to tribes listed on the Native American Heritage Commission's (NAHC's) SB 18 Tribal Consultation List within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter time frame has been agreed upon by the tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.993 of the *California Public Resources Code* that may be affected by the proposed adoption of or amendment to a general or specific plan.

While the Project does not require consultation under SB 18 because it was proposed prior to the adoption of the 2005 law, the County and the Project Applicant are committed to affording local Native American tribes and individuals an opportunity to provide information regarding previously unknown cultural resources and to express their concerns regarding the Project's potential impact on them. To that end, in a letter dated May 20, 2011, the County notified tribes and individuals listed in the NAHC letter providing tribal contacts of the Project and subsequently provided a copy of the Draft EIR to them as part of the public review process. No responses to the May 20, 2011, notification letter were received. Further consultation has occurred in conformance with AB 52, which is discussed below.

#### ***Assembly Bill 52***

This Project is subject to Assembly Bill (AB) 52. AB 52 is applicable to projects that have filed a Notice of Preparation (NOP) of an Environmental Impact Report (EIR), or notice of a Negative Declaration (ND) or Mitigated Negative Declaration (MND) on or after July 1, 2015.

AB 52 requires that the tribes ask the lead agency to be contacted for consultation. Then, the lead agency must contact the tribes to initiate consultation with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project and have requested such consultation prior to determining the type of CEQA documentation that is applicable to the project (i.e., EIR, ND, MND). AB 52 allows Tribes 30 days after receiving notification to request consultation. The lead agency then has 30 days to initiate consultation. Significant impacts to Tribal cultural resources are considered significant impacts to the environment. A description of the County's AB 52 process for the Project is provided in the analysis below.

### ***Human Remains***

The *California Code of Regulations* (Title 14, Section 15064.5[e]) requires that, in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the Los Angeles County Coroner must be notified of the discovery (*California Health and Safety Code*, Section 7050.5) and all activities in the immediate area of the find or in any nearby area reasonably suspected to overlie adjacent human remains must cease until appropriate and lawful measures have been implemented. If the Coroner determines that the remains are not recent, but rather of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours to permit the NAHC to determine the Most Likely Descendent (MLD) of the deceased Native American. The designated MLD may make recommendations to the Project Applicant/Developer or the person responsible for the excavation work, for means of treating or reassignment of the human remains and any associated grave goods with appropriate dignity, as provided in *California Public Resources Code*, Section 5097.98. If any of the following occurs, the Project Applicant/Developer shall rebury the Native American remains and the associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance: (A) the NAHC is unable to identify an MLD or the MLD fails to make a recommendation within 24 hours of being notified of the discovery; (B) the MLD fails to make a recommendation; or (C) the Project Applicant/Developer or authorized representative rejects the s of the MLD and mediation by the NAHC fails to provide measures acceptable to the Project Applicant/Developer.

## **County**

### ***County of Los Angeles General Plan and Antelope Valley Area Plan***

The *County of Los Angeles General Plan and Antelope Valley Area Plan* (AVAP) address issues that affect the County and the Antelope Valley. The County General Plan has the following goal in Chapter 9, Section VIII. Historic, Cultural and Paleontological Resources:

**Goal C/NR 14:** Protect historic, cultural, and paleontological resources.

**Policy C/NR 14.1:** Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible. Policy C/NR 14.2: Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.

**Policy C/NR 14.3:** Support the preservation and rehabilitation of historic buildings.

**Policy C/NR 14.4:** Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).

**Policy C/NR 14.5:** Promote public awareness of historic, cultural, and paleontological resources.

**Policy C/NR 14.6:** Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

The AVAP does not contain goals or policies pertaining to cultural resources (i.e., prehistoric and historic archaeology, the historic built environment, tribal cultural resources, and paleontological resources). A consistency analysis of the Project's specific goals and policies with the County's plans, goals, policies and regulations is provided in the Land Use, Entitlements, and Planning Section (Section 5.8) in this document.

### 5.6.3 ENVIRONMENTAL SETTING

The Project study area, for the purposes of the archaeological and paleontological analyses, is the entire Project site boundary and locations of off-site features. The study area covers portions of the U.S. Geological Survey's (USGS') Lebec and La Liebre Ranch 7.5-minute quadrangles.

## Methodology

### *Archaeological and Historical Resources*

For archaeology and historic resources, W & S Consultants (WSC), a qualified archaeological firm, prepared a Phase I Archaeological Survey Report in May 2002 that encompasses the entire Project site with the exception of the land on the east side of 300<sup>th</sup> Street West (Appendix 5.6-A). The report includes (1) the results of a records and literature search prepared by the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton; (2) the results of a systematic field walkover survey; and (3) field checking of all recorded sites on or immediately adjacent to the Project boundaries, as they were defined at that time (approximately 14,000 acres).

The archaeological and historical records search and literature review was conducted in 1999 by SCCIC staff and showed that only a small portion of the Project site had been previously surveyed. Therefore, field walkover surveys were conducted from July to December 2001. Vegetative cover was sparse overall, and ground visibility was generally very good to excellent, allowing for thorough examination of the surface.

Based on the results of the Phase I survey, WSC conducted Phase II Archaeological Testing at 12 sites in 2004 (Appendix 5.6-B). All sites considered during the Phase II study were first discovered during the Phase I survey and then evaluated because of the potential to incur direct impacts to these resources from Project development (these 12 sites were located within the Project's development footprint at that time). Generally, Phase II archaeological

fieldwork is intended to establish the nature and significance of an archaeological site and to provide baseline data from which a final determination of historical significance and disposition of the resource can be made. This includes (1) the collection of a representative sample of artifacts and archaeological indicators from each cultural resource site; (2) the establishment of the vertical and horizontal boundaries of each; (3) the analysis of the recovered artifact sample; and (4) the evaluation of each site using data collected and established CEQA criteria to determine historical significance.

In 2007, WSC conducted Phase II Archaeological Testing of 12 additional sites that were identified and recorded during the original WSC survey conducted in 2002. In addition, BonTerra consulted with Dr. Thomas Taylor (Manager, Natural and Cultural Resources, Environmental, Health and Safety Division, Southern California Edison [SCE]), via email on February 12, 2007, regarding the historical significance of several SCE electrical transmission towers in the southwestern portion of the Project site.

In May 2015, an intensive Phase I survey was completed by ASM Affiliates, Inc. (ASM Principal Investigator David Whitley was formerly a Principal with WSC) for an additional approximate 728 acres of contiguous unsurveyed fields in the northeasternmost portion of the Project site (i.e., to the east of 300<sup>th</sup> Street West) and about 40 acres of off-site lands that would require utility infrastructure to implement the Project, resulting in a total survey area of approximately 768 acres. No resources were discovered as a result of this effort. Also in 2015, Phase II test excavations were completed by ASM Affiliates, Inc. on 20 archaeological sites within the Project site. These studies augment the earlier Phase I surveys and Phase II test excavations on other portions of the Project area by W&S Consultants (2002, 2004, 2007) described above. All of the sites are located east of the West Branch of the California Aqueduct, on low rolling hills and ridges. Fieldwork at these sites included Global Positioning System (GPS) mapping, hand excavation of test units (TUs), shovel test pits (STPs) and surface scrapes, and the collection of all identified surface artifacts and archaeological indicators.

### ***Paleontological Resources***

A Paleontological Letter Report was prepared by Dr. Samuel McLeod of the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County (NHMLAC) on November 2, 2006 (Appendix 5.6-E1). The Letter Report included the results of a records search and literature review of known rock formations and any fossil localities that have been identified within and directly adjacent to the Project area, which is identical to the current Project site with the exception of the area to the east of 300<sup>th</sup> Street West. Paleontological sensitivity of a given area is determined by the types of rock formations and previously identified fossil localities in that area. Next, a paleontological resource inventory and impact assessment study was undertaken by Dr. Bruce Lander of Paleo Environmental Associates (PEA 2009). The study included background research of published and unpublished paleontologic and geologic literature, a field survey of the Project area, an evaluation of the Project's potential to impact paleontologically sensitive rock formations, and development of mitigation measures that would reduce the direct and indirect adverse environmental impacts on paleontological resources to a less than significant level. PEA describes four previously recorded localities and nine newly discovered localities in the

Project area (2009). This section was also reviewed by John Harris, Chief Curator of the NHMLAC. Both letters from the NHMLAC can be found in Appendix 5.6-E.

## **Cultural Resources Eligibility Criteria**

The cultural resources analysis, including that pertaining to the built environment as well as archaeological and paleontological resources, has been prepared to meet the requirements of CEQA (*California Public Resources Code*, Sections 21083.2 and 21084.1) and the State CEQA Guidelines. Specifically, the State CEQA Guidelines states “[a] project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment” (14 CCR 15064.5[b]). Substantial adverse change is defined as “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (14 CCR 15064.5[b][1]). CEQA has established statutory requirements for the formal review and analysis of projects that fall under its jurisdiction. The CEQA statutes maintain that any property listed in, determined, or found eligible for listing in the CRHR is considered to be a “historical resource” and shall be considered historically significant. In addition, the *California Public Resources Code* has additional statutes regarding “unique” resources and “Tribal Cultural Resources”. The criteria below are used to determine eligibility and significant effects.

### ***Prehistoric Archaeological Resources***

Section 15064.5(a)(3) the State CEQA Guidelines states that “[g]enerally, a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing in the California Register of Historical Resources” (see *California Public Resources Code*, Section 5024.1; 14 CCR 4852), including if the resource:

- A. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- B. Is associated with lives of persons important in our past;
- C. Embodies 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 values; or
- D. Has yielded, or may be likely to yield, information important in prehistory or history.

Using the information outlined above, the first level of evaluation was to determine whether an archaeological resource within a development area is considered eligible for the CRHR and is, therefore, historically significant.

A significant impact would occur if grading and construction activities would result in a substantial adverse change to archaeological resources determined to be “unique” or “historical”. “Unique” resources are defined in *California Public Resources Code*, Section 21083.2(g):

As used in this section, ‘unique archaeological resource’ means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

### ***Tribal Cultural Resources***

Pursuant to Section 21074 of the *California Public Resources Code*:

- (a) Tribal Cultural Resources are either of the following:
- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    - (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    - (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
  - (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- (b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- (c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

### **Historical Resources**

“Historical” resources are defined in *California Public Resources Code*, Section 21084.1 and the State CEQA Guidelines (14 CCR 15064.5), Section 21084.1 states:

A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. For purposes of this section, an historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources. Historical resources included in a local register of historical resources, as defined in subdivision (k) of Section 5020.1, or deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1, are presumed to be historically or culturally significant for purposes of this section, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. The fact that a resource is not listed in, or determined to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 shall not preclude a lead agency from determining whether the resource may be an historical resource for purposes of this section.

Section 15064.5(b) of the State CEQA Guidelines (14 CCR) states:

- (b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.
- (1) 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 an historical resource would be materially impaired.
  - (2) The significance of an historical resource is materially impaired when a project:
    - (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
    - (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources. . . unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
    - (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in

the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

A “Unique” resource is defined in *California Public Resources Code*, Section 21083.2(g) and is noted above under prehistoric archaeological resources.

### ***Paleontological Resources***

Paleontological resources are nonrenewable scientific and educational resources. As discussed previously, in compliance with State law, the County’s Environmental Checklist Form requires analysis of cultural resources, which includes paleontological resources under the general heading “Cultural Resources”. Projects subject to CEQA must determine whether a project would “directly or indirectly destroy a unique paleontological resource”.

An impact to paleontological resources would be considered a significant impact if a project results in the direct or indirect destruction of a unique or important paleontological resource or site. A resource is deemed unique or important if (1) it has fossils that have previously been recovered from a particular geologic unit; (2) there are recorded fossil localities within the same geologic units as occur within the project area; and (3) the types of fossil materials that have been recovered from the geologic unit are unique or important.

The goal of CEQA relative to prehistoric and historic cultural resources as well as paleontological resources is to facilitate their identification, evaluation, cataloging, preservation (if feasible), and curation in perpetuity. No significant impact to these resources will occur as a result of a project if the goal of CEQA is followed and the studies completed.

### **Existing Setting**

The Project site is located in northern Los Angeles County, California, at the westernmost edge of the Antelope Valley. It is north of State Route (SR) 138; it is bisected by the West Branch of the California Aqueduct, and is located south of the Tehachapi Mountains and the East Branch of the California Aqueduct. Oso Canyon Wash forms the northern limit of the Project site.

The portion of the Project site generally to the west of the Aqueduct consists of dissected topography comprising broad and relatively low east-west-trending ridge systems with small intervening drainages. Elevation ranges in this portion of the site are roughly from 3,100 to 3,400 feet (ft) above mean sea level (msl). Importantly, low ridges are typically capped by cobble lens. These lens are predominated by quartzite and igneous cobbles and gravels, but they are polygenetic in origin and they also contain small but potentially significant quantities of cryptocrystalline (CCS) and metavolcanic specimens. These are usually smaller than the quartzite and igneous cobbles. These lens appear to have an important factor in the location and nature of the studied sites. The portion of the site generally to the east of the Aqueduct consists of the open flats of the Antelope Valley. The average elevation in this portion of the Project site is about 3,000 ft above msl.

Grasslands cover most of the west side of the Project site, which has been used for many years as range land, while the flatter (east) side includes farmland in addition to grazing. It is uncertain for this reason what the environmental setting may have been prehistorically, and this is almost certain to have changed at various times in the ancient past due to paleoclimatic shifts. Prior to the introduction of livestock in the 19<sup>th</sup> century, the Project site may have been covered by a desert chaparral plant community. This is an open community predominated by chamise and bunch grasses (ASM 2015). It is also possible that Joshua Tree Woodlands may have been present; however, inasmuch as this plant community is present east of the site while a small remnant stand still occurs a few miles to the west, near the Interstate (I) 5 and SR-138 interchange.

### ***Archaeological Setting***

Initial occupation of the Tehachapi Mountains region occurred at least as early as the Paleoindian Period, which occurred prior to about 10,000 years before present (BP). The term “before present” assumes that 1950 is “present”, so in this case 10,000 years BP would be 8,050 B.C. Evidence of this early use of the region has been revealed by the discovery of characteristic fluted (grooved or furrowed) and stemmed projectile points found around the margins of Tulare and Buena Vista Lakes (both of which are in the southern San Joaquin Valley, approximately 100 miles northwest and 40 miles northwest of the Project site, respectively), in the foothills of the Sierra Nevada, and in the Mojave Desert. Archaeologists use the general term “projectile point” to refer to an object affixed to a pole or stick of some kind, which has been fashioned for use as a weapon, out of stone, metal, bone, or other material (Crow Canyon 2017). Both fluted and stemmed projectile points are particularly common around the lake margins, suggesting a terminal Pleistocene or early Holocene lakeshore adaptation similar to that found in other portions of the Far West at this same time, although little else is known about these earliest people (WSC 2002: 13–14).

Additional finds include a Clovis-like projectile point discovered in a flash-flood cut-bank near White Oak Lodge in 1953, northeast of the site. In the 1980s, a similar fluted point was found near Bakersfield, while a number are known from Edwards Air Force Base (50 miles to the east of the Project site) and the Boron area of the western Mojave Desert. Although it is now well-established that human occupation of California occurred during the Late Pleistocene Era, interpretations are, thus far, limited to the subsistence focus on large fauna found in and around terminal Pleistocene or early Holocene lakeshores (WSC 2002:14).

Substantial evidence for human occupation of California first occurs during the middle Holocene era, from roughly 7,500 to 3,500 BP. This period is known as the “Early Horizon”, and is sometimes alternatively referred to as the “Early Millingstone” along the Santa Barbara Channel and La Jolla in the San Diego region. In this southern area, populations were concentrated along the coast, with limited use of inland areas. Based on the archaeological assemblages recovered, adaptation appears to have emphasized hard seeds and nuts, with tool-kits dominated by mullers and grinding stones (manos and metates). An assemblage is a collection of items from a single database component of an archaeological site. A muller is an implement of stone or other substance with a flat base for grinding paints, powders, and other materials on a slab of stone or similar surface; a mano is the upper or hand-held stone used when grinding maize or other grains on a metate, or a flat stone that has a shallow

depression in the upper surface for holding maize or other grains to be ground with a mano. Minimal evidence of Early Horizon occupation has been found in most inland portions of the state. In part, this is due to a severe cold and dry paleoclimatic (relating to climate of some former period of geologic time) period which occurred at this time (WSC 2002:14).

Evidence for an Early Millingstone occupation of the Tehachapi Mountains region is very limited and has been found at only two sites, both located in the Santa Clara River Valley to the south. Both sites are located near Vasquez Rocks, with temporal attribution, or the assessment of time, based on the presence of a small number of *Olivella* barrel beads. This version of the bead is an *Olivella biplicata* shell from which the spire and base have been removed, leaving the middle or “barrel” portion of the shell. This bead type has subsequently proven to be an unreliable indicator of age, throwing doubt on human inhabitation of this region before about 4,000 BP. Furthermore, recent excavations at one of these presumed early locales, the Escondido Canyon Site, failed to uncover evidence for occupation prior to about 2,700 BP. Regardless, it is clear that Early Horizon population density was quite low and, if any kind of specialized adaptation existed, it was probably tied to plant food gathering rather than hunting (WSC 2002:14).

Environmental conditions conducive to human occupation improved dramatically after about 3,500 BP during the “Middle Horizon” or “Intermediate Period”. This period is known climatically as the “Holocene Maximum” and was characterized by significantly warmer and wetter conditions than were experienced previously. Archaeologically, it was marked by a large population increase and movement into new environments along the south-central California coast and the Mojave Desert. In the Delta region to the north, this same period of favorable environmental conditions was marked by the appearance of the Windmill culture, which exhibited a high degree of ritual elaboration (especially in burial practices) and perhaps even a rudimentary mound-building tradition. Along with ritual elaboration, Middle Horizon times saw increasing subsistence specialization, perhaps correlating with the appearance of acorn-processing technology. Penutian-speaking peoples (including ancestors of the Yokuts) are also believed to have entered the state roughly at the beginning of this period and, perhaps, to have brought this technology with them. Likewise, it is hypothesized that the so-called “Shoshonean Wedge” in Southern California (that is, the Takic-speaking groups that came to include the Gabrielino/Fernandeño, Tataviam, and Kitanemuk) may have moved into this region at this time, rather than at about 1,500 BP as was first thought (WSC 2002:14–15).

Evidence for the Middle Horizon occupation of the Upper Santa Clara/Agua Dulce region, located in Tataviam territory south of the Project site, has been found at a number of sites and has been based on radiocarbon, obsidian hydration, and typological dating. The Agua Dulce village complex, for example, includes occupation extending back to the Intermediate Period, at which time the population of the village may have been 50 or more people. Similarly, occupation of the Hathaway Ranch area near Lake Piru and Newhall Ranch near Valencia appears to have begun during the Intermediate Period. To the northwest, there is limited evidence for pre-Middle Horizon occupation in the upper Sisquoc and Cuyama River drainages (WSC 2002:15).

Assuming that the Tejon Ranch/Tehachapi Mountains region was first significantly occupied during the Middle Horizon, as existing evidence suggests, a parallel can be drawn to the inland Ventura County region, where a similar pattern has been identified, and possibly also to the Antelope Valley and western Mojave Desert, southern Sierra Nevada, and Coso Range. In all these areas, a major expansion in settlement, the establishment of large site complexes, and an increase in the range of exploited environments appear to have occurred around 3,500 BP. Although most efforts to explain this expansion have focused on very local circumstances and events, it is increasingly clear that this was a major Southern California-wide occurrence, and therefore any explanation of it must be sought at a regional level of analysis (WSC 2002:15).

The beginning of the “Late Horizon” is set variously at 1,500 and 800 BP, although a consensus seems to be growing in support of the more recent date. As such, the appearance of the Late Horizon correlates with another major drought (circa A.D. 1200), which decimated major portions of western North America. Known climatically as the “Little Ice Age”, it extended from about A.D. 1280 to 1860. In much of inland south-central California and the Mojave Desert, a large-scale abandonment of sites appears to have occurred at the approximate start of this period. It is not yet clear whether the abandonment was accompanied by a true reduction in population or an agglomeration (jumbled cluster or mass of varied parts) of the same numbers of people into fewer but larger villages. In either case, the Late Horizon presents a series of regional archaeological cultures that are the precursors to ethnographic Native California tribes. The Mojave Desert and Antelope Valley, however, appear to have been all but abandoned during this period. Given extreme drought-like conditions, Late Prehistoric villages tended to be firmly tied to permanent water sources (WSC 2002:15–16).

### ***Ethnographic Setting***

Ethnography is a cultural anthropologic research method that strives to answer anthropological questions about different cultures’ ways of life (University of Pennsylvania 2008), and the following described the ethnographic setting of the Project site. The Tejon Ranch region, including the Project site, was a contact point between five separate ethnolinguistic groups immediately prior to the arrival of Euro-Americans in California. Considerable confusion has existed concerning aboriginal landholdings in this area because almost no ethnographic research was conducted in this area until well after the period of Spanish missionization and, therefore, long after the original inhabitants had been removed from their traditional homelands. However, recent ethnohistorical studies have done much to clarify this situation. It is now apparent that the general Tejon region was occupied by the Kitanemuk, Interior Chumash, Tataviam, Southern Valley Yokuts, and Kawaiisu, with the first three of these groups likely to have lived in and/or used the lands comprising the Project site (WSC 2002:3). Ethnolinguistics is the study of language as an aspect or part of culture, especially the study of the influence of language on culture and of culture on language; ethnohistory is a branch of anthropology dealing with the development of cultures through the analysis of archaeological findings.

The Kitanemuk occupied the southern and central areas of the Tehachapi Mountains and the adjacent northwestern end of the Antelope Valley. As speakers of the Serran branch of the

Takic (Uto-Aztecan) language stock, they were closely related to other Serran Takic groups such as the Serrano and Vanyume, who lived along the northern front of the transverse ranges. Kitanemuk territory probably did not extend into the San Joaquin Valley, which was occupied by the Yokuts. The western edge of Kitanemuk territory appears to have fallen between Tunas and Poso Creeks, according to known village locations. The Kitanemuk may have occupied the northeastern portions of the Project site near the open flats of the Antelope Valley (WSC 2002:3-4).

The Interior Chumash (speakers of Ventureño Chumash, a Hokan language) occupied upper Piru Creek, Grapevine Canyon, and the Gorman area; the latter area is between one and two miles west of the Project site's western boundary. Their domain extended eastward beyond Castac Lake on the Tejon Ranch, where the historic village of *Kashtiq* was located; their territory then reached to the southeast to Quail Lake, which was known in Chumash as *Shraqang*. They also occupied a village at the mouth of Grapevine Canyon, *Mat'apxwelxwel*, and another at the mouth of Tecuya Creek west of Tejon Ranch. These two villages represent the only known occupation of the Chumash of the San Joaquin Valley (both of which are outside the Project boundaries). The Interior Chumash either occupied or lived very close to the western limits of the Project site, perhaps including the area immediately around Quail Lake (WSC 2002:3).

The Tataviam are believed to have primarily inhabited the upper Santa Clara River drainage from about Piru eastward to the Agua Dulce/Vasquez Rocks area; southward as far as Newhall; and northward to include the middle reaches of Piru Creek (on the west) and the Liebre Mountains and the westernmost fringe of the Antelope Valley (on the east). Their northeastern boundary most likely ran along the southern foothills of the Tehachapi Mountains (within the Project site) and then crossed to the southern slopes of the Sawmill Mountains and Sierra Pelona, extending as far east as Soledad Pass. The Tataviam also controlled Quail Lake and La Liebre Ranch. They do not appear to have controlled the San Andreas rift zone of Elizabeth Lake, Lake Hughes, or the Leona Valley, which was occupied by the Kitanemuk, who also inhabited the western side of the Antelope Valley (i.e., from about Neenach through the Fairmont Buttes area to the mouth of Soledad Pass) (WSC 2002:4).

A wedge of Tataviam speakers is thought to have extended north into the Tehachapi Mountains, separating the Chumash from the Kitanemuk, perhaps by controlling the headwaters of Pastoria Creek. Information concerning the Tataviam is very limited; however, based on a few existing word lists, the descriptions of early travelers, mission place-names, and the recollections of other native informants, Tataviam is generally accepted as a Uto-Aztecan Takic language, making it related to other Takic languages in the Los Angeles County region such as Gabrielino/Fernandeño (or Tongva) and Kitanemuk (WSC 2002:4).

Although no ethnographic fieldwork was conducted in the Tejon Ranch region until the end of the 19<sup>th</sup> century, the Tejon Ranch area became a multi-ethnic, post-Mission Period refuge for many Native Americans. Substantial Native American use of the Tejon Ranch region continued into the American Period. This reflected a number of circumstances, probably the first of which was the relative remoteness of the region from most Euro-American activities.

The multi-ethnic nature of this refuge was likewise partly a function of mission conditions, where different tribal groups lived together, which resulted in an increase in interaction and inter-marriage, as well as of the original status of this particular area, where a number of ethnolinguistic boundaries intersected. Equally important, Tejon Ranch was the location of the first Native American reservation in the United States, the Sebastian Reserve, which was created in 1853. The creation of this reservation resulted in the formal establishment of a multi-ethnic Native American enclave (WSC 2002:6).

### ***Historic Setting***

Because of its remote location in relation to the Pacific coast, the Tejon Ranch/Tehachapi Mountains area saw little Euro-American development until about the 1850s. Early explorers crossing the area included the Spaniards Pedro Fages in 1772, Friar Francisco Garcés in 1776, and Friar José María de Zaldivea in 1806 and Americans Jedediah Smith in 1827 and John C. Fremont in 1830 and 1844 (WSC 2002:16).

Four large Mexican Period land grants in this region occurred during the 1840s that would eventually be united as Tejon Ranch. The first of these grants, *Rancho Los Alamos y Agua Caliente* (“cottonwoods and hot water”), was awarded to Pedro Carrillo by Mexican Governor Manuel Micheltoarena in 1843. Less than two months later, the original *Rancho El Tejon* (“the badger”) was awarded to José Antonio Aguirre and Ignacio del Valle as a grant of nearly 100,000 acres. Also in 1843, the nearly 22,000-acre *Rancho Castac* (Chumash for “spring eye”, in Spanish “*ojo de agua*”) was acquired by José María Covarrubias. In 1846, *Rancho La Liebre* (“the hare”) was granted to José María Flores and contained nearly 49,000 acres. The Project site lies primarily within the historic borders of *Rancho La Liebre* (WSC 2002:16).

With the political upheavals associated with the transfer of California from Mexican to American control during the late 1840s, these lands went largely unused by their grantees, resulting in encroachment or “squatting” by incoming settlers who disregarded their ownership or assumed that the lands were unclaimed and therefore open to settlement. These included Dr. Darwin French who, in 1850, built an adobe on *Rancho El Tejon*; Samuel A. Bishop who, in about 1852, settled on *Rancho Castac*; and Edward F. Beale who, in 1853, created the Sebastian Indian Reservation on what he thought was unclaimed land available for government use (WSC 2002:16–17).

Between 1855 and 1865, Beale acquired all four of the former Mexican ranchos and united them as “El Tejon Ranch”. Because the original areas for these ranchos did not represent a contiguous holding, Beale realigned the boundaries of *Los Alamos y Agua Caliente* so that a unified property was formed, resulting in a ranch encompassing about 265,000 acres. Shortly after acquiring *Rancho La Liebre* in 1855, Beale built an adobe on the ranch and moved his family there. A small silver mine was discovered on the ranch in 1859, but did not experience significant production. Beale was an important figure in Southern California history, emerging as a military hero in the Battle of San Pasqual against Mexico in 1846; as a messenger to Washington, D.C. of news of the discovery of gold at Sutter’s Fort in 1848; as an accomplished businessman for Commodore Stockton and Aspinwall’s steamship company in 1851; and for his appointment as Commissioner of Indian Affairs by President Fillmore in 1852 (WSC 2002:17–18).

In the latter role, Beale established the Sebastian Reserve (as it was officially known) in 1853. The 25,000-acre reserve was located on the floor of the southern San Joaquin Valley from the mouth of Grapevine Canyon east to about the mouth of Chanac Creek, an area located some distance north of the Project site. In 1854, Beale established Fort Tejon in Grapevine Canyon about three miles north of the modern community of Lebec. As a facility for the U.S. Army, Fort Tejon acted to both protect the Indians on the Sebastian Reserve from exploitation by outsiders and to prevent raids into the Los Angeles Basin by hostile Indians from the San Joaquin Valley and desert areas to the east. The fort was abandoned after ten years of operation (WSC 2002:18).

The adobe that Beale constructed as his residence and headquarters for the ranch still stands (used by a private hunting club) and is the oldest building in the Antelope Valley. (The adobe is located south of the southeastern Project site boundary.) Eventually, Beale moved his residence to the earlier El Tejon headquarters along El Paso Creek to the north, but a fire in 1917 destroyed his adobe structure there (WSC 2002:19).

Beale went on to be appointed the first Surveyor-General of California and Nevada by President Lincoln; a Brigadier General for the State of California militia; and Minister to the Austro-Hungarian Empire by President Grant. In addition, he was instrumental in creating the U.S. Army Camel Corps under Jefferson Davis, then Secretary of War. With this appointment, Beale brought camels into the Tejon region, where they were used as pack animals (WSC 2002:19).

In 1858, the Butterfield Overland Mail stage route crossed the Tejon area, stopping at Lake Elizabeth, Cow Springs, Fort Tejon, and the “Sinks of the Tejon” (or “*Los Alamitos*”, below the confluence of Tejon and Chanac Creeks). The stage drew attacks from outlaws such as Joaquin Murrieta and Tiburcio Vasquez, who haunted the vast acreage of Tejon Ranch. The Butterfield route crossed the Project site, skirting Quail Lake before heading to Gorman Station. Quail Lake was originally known as *La Laguna Seca* (“dry lake”) and, since it presumably did not hold perennial or potable water, no stage stop was established. Gorman Station was built by Charles Johnson and his wife Isabel in 1863, who built a log cabin “public house” at that spot. When Johnson died, his wife continued to run the establishment, which became known as *Rancho La Viuda* (“widow’s ranch”). It was eventually acquired by James Gorman, Sr., a veteran of the Mexican War who worked as a meat hunter for Fort Tejon (WSC 2002:19–20).

The Southern Pacific Railroad came only as close as 50 miles to the east when the route was taken through Antelope Valley in 1876, keeping the Tejon area relatively isolated (WSC 2002:19).

The economic emphasis of the Tejon Ranch initially was sheep, with over 125,000 sheep that grazed on the ranch at its peak. Even though Beale had recorded the Tejon cattle brand—the crescent and the cross—in 1865, years of drought did not permit the introduction of cattle to the Ranch until the 1880s. By 1891, there were roughly 25,000 head of cattle and 7,500 sheep on the Ranch. Following Beale’s death in 1893, his son Truxton inherited Tejon Ranch and completed the transition to cattle. Truxton Beale sold the ranch in 1912 to a syndicate of wealthy Los Angeles businessman and developers, which formed the beginning

of what has evolved into the modern Tejon Ranch Company. Through a series of purchases, the syndicate increased the Ranch's holdings to 281,000 acres. Sales of various rights-of-way to public utilities initially aided the company's cash flow. More recently, the ranch has leased acreage to various farming, oil, and cattle interests. By 1957, approximately 70 percent of the ranch was operated under lease (WSC 2002:20).

Commercial oil exploration within the greater Tejon Ranch began in 1937; the first fields were abandoned by 1943. Shortly thereafter, the Richfield Oil Corporation discovered the "Grapevine Oil Field", now more commonly known as the "Tejon Oil Field", located on the floor of the southern San Joaquin Valley far to the north of the Project site. Oil exploration within the La Liebre Ranch area was restricted to six shallow test wells that were drilled in 1953 and 1954. The wells were abandoned as non-producers and no commercial oil production occurred on the Project site (WSC 2002:20).

Although large-scale farming, oil and gas production, and cattle operations continue on the Tejon Ranch, the primary use of the Project site has been livestock (cattle) grazing and recreational (hunting) activities (WSC 2002:20–21).

Two Southern California electrical transmission lines cross the southwestern portion of the Project site: the Big Creek lines and the Pastoria-Pardee line. The Big Creek Transmission lines are part of the Big Creek Hydroelectric Project (BCHP), (located 60 miles north of Fresno) which has a period of significance of 1911–1929; the BCHP is considered one of the world's most important engineering and technological achievements during the early portion of the 20<sup>th</sup> Century. The BCHP has been determined by consensus to be eligible for the National Register of Historic Places as a Historic District because of its contributions to the overall development of the Los Angeles metropolitan area. The Big Creek lines traverse the Los Angeles basin from Long Beach to the foothills of the San Gabriel Mountains and then over the Transverse Mountain Range into the Central Valley to the western Sierra Nevada. Over the years, many of the historically significant towers have been replaced by modern type MS and type MA lattice towers as part of ongoing maintenance of the lines, which is the case with the four lattice towers located on the Project site (Taylor 2007).

## **Cultural Resource Descriptions**

### ***Archaeological and Historic-Period Structural Resources***

The discussion below summarizes the findings of the Phase I Archaeological Survey conducted in 2002; the subsurface Phase II Archaeological Testing Program conducted in 2004; the Supplemental Phase II Archaeological Testing Program conducted in 2007 (all by WSC); the Phase I Archaeological Survey and Phase II Archaeological Testing Program conducted in 2015 by ASM Affiliates; and consultation with SCE regarding the historical significance of the electrical transmission towers in the southwestern portion of the Project site.

According to the SCCIC records search dated July 19, 1999, 36 archaeological sites and 6 isolated artifacts had been recorded within 8 miles of the Project site on the USGS Lebec 7.5-minute quadrangle, but no sites or isolated artifacts were reported for the La Liebre Ranch Quadrangle (WSC 2002). Review of historical documents indicates that one historic

building, the La Liebre/Beale Adobe, and the historical aboriginal village of *hwi'tahovea*, are known to be present south of the Project site. The two commingled sites share the trinomial designation CA-LAN-3254/H since there are both prehistoric and historic elements. The figure “#/H” denotes the presence of both prehistoric and historic site elements.

WSC conducted an archaeological field survey of the Project in 2002; the survey resulted in the identification of 57 archaeological sites within the boundaries of the Project site. Of these, 2 (CA-LAN-3218H and CA-LAN-3219H) were considered not significant based on the Phase I survey (WSC 2002:39) and an additional site (CA-LAN-3985) was discovered later. In 2004, WSC conducted Phase II Archaeological Testing at 12 sites identified during the Phase I survey. None of these 12 resources were found to contain sufficient data or integrity to qualify them for historical significance and were found not to be eligible for the CRHR. In 2007, WSC conducted a supplemental testing of 12 additional archaeological sites that were identified and recorded during the 2002 survey. This supplemental study determined that sites CA-LAN-3201 and CA-LAN-3206 represent significant/unique cultural resources and are eligible for inclusion on the CRHR.

In 2015, ASM Affiliates conducted an archaeological field survey of 768 acres, and no resources were noted during the survey. ASM Affiliates also conducted test excavations at 20 sites east of the California Aqueduct. Two of these sites were determined to include small, low-density subsurface archaeological deposits. These are CA-LAN-3240 and CA-LAN-3242, both of which are camps or small seasonal habitations, most likely occupied by single families. Both of these sites have the potential to yield information useful for understanding prehistory, and they are recommended as significant and potentially eligible for the CRHR. It is recommended that they be preserved in place or that Phase III data recovery be conducted at these sites. Two of the remaining 18 sites addressed in the 2015 study, that had been originally recorded as possible cairns, were determined to be surface exposures of decomposing bedrock cobbles and, as natural features, do not constitute cultural resources and are not significant or eligible for the CRHR. The remaining 16 sites were all determined to consist exclusively of surface scatters of tools and stone tool manufacturing waste. They are all small quarry workshops associated with natural cobbles lenses with one suggesting plant processing activities. Phase II studies resulted in the recovery of all archaeological specimens at these locations, thereby constituting scientifically consequential information from and about these resources. None of these sites contains temporally diagnostic artifacts. Based on this last fact, they are recommended as not significant or eligible for the CRHR.

Two aboveground electrical transmission lines consisting of four steel lattice towers cross the southwestern portion of the site. Consultation with SCE indicates that all of the towers are modern MS or MA type towers and are not, therefore, contributors to the historically significant Big Creek Hydroelectric District.

## Summary of Findings

### Archaeological Study Findings

As a result of the Phase II testing at the Project site in 2004, 2007, and 2015, a total of four archaeological sites (CA-LAN-3201, CA-LAN-3206, CA-LAN-3240, and CA-LAN-3242) appear eligible for listing in the CRHR.

The sites identified during the surveys conducted on the Project site are summarized in Table 5.6-1, and include the site's trinomial identifier; temporary field number; type of site; whether the site was evaluated and, if so, if it is CRHR eligible; whether the site is within the development footprint or in open space; and an impact significance finding. The cultural resource site location and significance finding is summarized in the setting to streamline the presentation of the data by including all relevant data in one place. The significance findings presented in Table 5.6-1 are discussed further later in this section. Aside from their listing in Table 5.6-1, the temporary site numbers assigned to resources as they were discovered in the field will not be used further. Brief descriptions of each resource and discussions regarding the assessment of CRHR eligibility are also provided in greater detail below and following Table 5.6-1.

**TABLE 5.6-1  
ARCHAEOLOGICAL AND HISTORIC RESOURCES WITHIN  
THE PROJECT SITE BOUNDARIES**

<b>Trinomial</b>	<b>Temporary Field Number<sup>a</sup></b>	<b>Site Type</b>	<b>CRHR Eligibility</b>	<b>Location</b>	<b>Potential Impact to "Historical Resource"<sup>?b</sup></b>
CA-LAN-3195	CT-2	Lithic scatter and midden	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3196	CT-3	Lithics, hearth feature, 2 meter deep midden	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3197	CT-4	Bedrock mortar	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3198	CT-5	Lithic scatter, bedrock mortar, midden	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3199	CT-6	Bedrock mortar	Ineligible	Open Space Area	None
CA-LAN-3200	CT-7	Lithic scatter, midden	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3201	CT-10	Bedrock cupules	Eligible	Development Footprint	None with mitigation
CA-LAN-3202H	CT-11H	Homestead site	Ineligible	Development Footprint	None
CA-LAN-3203	CT-12	Bedrock mortar, lithic scatter, midden	Not evaluated <sup>c</sup>	Open Space Area	None

**TABLE 5.6-1  
ARCHAEOLOGICAL AND HISTORIC RESOURCES WITHIN  
THE PROJECT SITE BOUNDARIES**

<b>Trinomial</b>	<b>Temporary Field Number<sup>a</sup></b>	<b>Site Type</b>	<b>CRHR Eligibility</b>	<b>Location</b>	<b>Potential Impact to "Historical Resource"<sup>?b</sup></b>
CA-LAN-3204H	CT-13H	Historic trash dump	Ineligible	Open Space Area	None
CA-LAN-3205	CT-14	Bedrock mortars	Ineligible	Open Space Area	None
CA-LAN-3206	CT-15	Lithic scatter, midden	Eligible	Open Space Area	None with mitigation
CA-LAN-3207	CT-16	Bedrock mortar	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3208	CT-17	Bedrock mortar	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3209	CT-18	Bedrock mortar	Ineligible	Open Space Area	None
CA-LAN-3210	CT-19	Bedrock mortar	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3211	CT-20	Lithic scatter	Ineligible	Open Space Area	None
CA-LAN-3212	CT-26	Cobble quarry	Ineligible	Open Space Area	None
CA-LAN-3213	CT-27	Cobble quarry	Ineligible	Open Space Area	None
CA-LAN-3214	CT-28	Cobble quarry	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3215	CT-32	Cobble quarry	Ineligible	Open Space Area	None
CA-LAN-3216H	CT-45H	Aircraft crash site	Ineligible	Open Space Area	None
CA-LAN-3217	CT-63	Cobble quarry	Not evaluated <sup>c</sup>	Open Space Area	None
CA-LAN-3218H	CT-8H	Reservoir and spillway	Ineligible	Open Space Area	None
CA-LAN-3219H	CT-9H	Oil drilling site	Ineligible	Development Footprint	None
CA-LAN-3220	CT-21	Cobble quarry, Lithic scatter	Ineligible	Open Space Area	None
CA-LAN-3223	CT-24	Cobble quarry	Ineligible	Open Space Area	None
CA-LAN-3224	CT-25	Cobble quarry	Ineligible	Open Space Area	None
CA-LAN-3225	CT-29	Cobble quarry	Ineligible	Open Space Area	None

**TABLE 5.6-1  
ARCHAEOLOGICAL AND HISTORIC RESOURCES WITHIN  
THE PROJECT SITE BOUNDARIES**

<b>Trinomial</b>	<b>Temporary Field Number<sup>a</sup></b>	<b>Site Type</b>	<b>CRHR Eligibility</b>	<b>Location</b>	<b>Potential Impact to "Historical Resource"<sup>?b</sup></b>
CA-LAN-3226	CT-30	Cobble quarry	Ineligible	Open Space Area	None
CA-LAN-3227	CT-31	Cobble quarry	Not evaluated <sup>c</sup>	Open Space Area	None with mitigation
CA-LAN-3229	CT-34	Cobble quarry	Ineligible	Open Space Area	None
CA-LAN-3230	CT-35	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3231	CT-36	Cobble quarry	Ineligible	Open Space Area	None
CA-LAN-3232	CT-37	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3233	CT-38	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3234	CT-39	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3235	CT-40	Possible Cairn	Not a cultural resource	Development Footprint	None
CA-LAN-3236	CT-41	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3237	CT-42	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3238	CT-43	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3239	CT-44	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3240	CT-46	Lithic scatter	Eligible	Development Footprint	None with mitigation
CA-LAN-3241	CT-47	Lithic scatter	Ineligible	Development Footprint	None
CA-LAN-3242	CT-48	Cobble quarry	Eligible	Development Footprint	None with mitigation
CA-LAN-3243	CT-49	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3244	CT-50	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3245	CT-51	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3246	CT-52	Cobble quarry	Ineligible	Development Footprint	None

**TABLE 5.6-1  
ARCHAEOLOGICAL AND HISTORIC RESOURCES WITHIN  
THE PROJECT SITE BOUNDARIES**

<b>Trinomial</b>	<b>Temporary Field Number<sup>a</sup></b>	<b>Site Type</b>	<b>CRHR Eligibility</b>	<b>Location</b>	<b>Potential Impact to "Historical Resource"<sup>?b</sup></b>
CA-LAN-3247	CT-53	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3248	CT-54	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3249	CT-55	Possible Cairn	Not a cultural resource	Development Footprint	None
CA-LAN-3250	CT-56	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3251	CT-57	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3252	CT-58	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3253	CT-59	Cobble quarry	Ineligible	Development Footprint	None
CA-LAN-3985H	CT-64H	Oil drilling site	Ineligible	Development Footprint	None
<p>CRHR: California Register of Historic Resources</p> <p>Note: In accordance with the <i>California Code of Regulations</i> (Title 14, Section 15120[d]), no information about the location of archaeological sites is included in this Program EIR.</p> <p><sup>a</sup> Temporary site numbers are included in this table in the event that comparison between trinomials and field numbers in earlier reports is necessary.</p> <p><sup>b</sup> Mitigation measures for potential impacts identified are listed in Section 5.6.7.</p> <p><sup>c</sup> Eligibility of these sites for listing in the CRHR has not yet been determined. Therefore, any impacts to these sites are assumed to be significant until proven otherwise. See Mitigation Measure 6-4.</p> <p>Source: WSC 2002, 2004, 2007; ASM 2015.</p>					

### Description of Known Archaeological Resources within the Project Site

**CA-LAN-3195:** This site is characterized by a possible prehistoric midden deposit on a stream bench associated with a spring. A midden is a mound or deposit containing shells, animal bones, and other refuse that indicates the site of a human settlement. Materials observed included a flaked stone tool, fire-cracked rock, and possible midden soil. This site is estimated to be approximately 75 by 15 meters (m, 246 by 49 ft) in size. The age of the site is unknown, and the site appears to be in good condition. CA-LAN-3195 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3196:** This site is characterized by a buried prehistoric midden deposit evident at the confluence of two seasonal drainages. The midden is as much as 2 meters (6.5 ft) deep and is visible in both sides of a steep arroyo cut. The midden is overlain by about 40 centimeters (cm, 16 inches [in]) of non-cultural soil. Materials observed included lithics,

fire-cracked rock, and a possible hearth feature that is eroding from the cut. This site is estimated to be approximately 25 by 75 m (82 by 246 ft) in size. The age of the site is unknown, and the site appears to be in good condition. CA-LAN-3196 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3197:** This site is marked by a single shallow prehistoric bedrock mortar on a low granodiorite (course-grained igneous rock) boulder measuring approximately one m (three ft) in diameter. The age of the site is unknown, and the site appears to be in good condition. CA-LAN-3197 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3198:** This site is characterized by a large prehistoric midden deposit in a canyon area. The midden is covered in some areas by about 40 cm (16 in) of colluvium. Materials observed include a high density of fire-cracked rock, flaked stone artifacts, and a “broken” small boulder containing a bedrock mortar. This site is estimated to be approximately 150 by 50 m (492 by 164 ft) in size. The age of the site is unknown, and the site appears to be in good condition. CA-LAN-3198 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3199:** This site is marked by a single shallow prehistoric bedrock mortar on a low granodiorite boulder measuring approximately one m (three ft) in diameter. The age of the site is unknown, and the site appears to be in good condition. WSC conducted subsurface testing of this site in 2007. Evaluation of the recovered artifacts indicates that the site is not significant. The site is not considered a unique resource or eligible for listing in the CRHR

**CA-LAN-3200:** This site is characterized by a small prehistoric midden deposit with a low density of artifacts. Materials observed included midden soil, fire-cracked rock, and flaked stone artifacts. This site is estimated to measure approximately 100 m (328 ft) in diameter. The age of the site is unknown, and the site appears to be in good condition. CA-LAN-3200 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3201:** This site is marked by a large sandstone outcrop that contains 11 prehistoric cupule petroglyphs (small abraded pits) arranged in short lines. Cupule sites in this region appear to have been used ethnographically in rituals for adolescent girls. This site is estimated to measure approximately 10 m (33 ft) in diameter. A broken white quartz cobble was observed nearby on the ground. The age of the site is unknown and, aside from natural erosion of the sandstone, the site appears to be in good condition. Test excavations of this site were conducted by WSC in 2007; these excavations failed to identify a subsurface component associated with the petroglyphs. However, the significance of the site, due to its association with Native American religious rites, has since been established. The site is considered a unique resource and is eligible for listing in the CRHR.

**CA-LAN-3202H:** Results of the Phase I survey characterized the site as a historic ranch homestead within a side canyon. Materials observed include the remnants of a fallen water tower and at least 2 wood-framed structures along with framing timber; wire nails; 55-gallon

drums; sheet and galvanized metal; wire mattress springs and coils; car seat coil springs; fragments of purple glass; metal stove pipe; electrical parts; iron hay rake; and a sheet metal brooder box, which is a heated box where chicks or other baby birds are kept. A small associated trash pit was observed to contain tire rubber, two enamel pots, a stove top, and broken glass. This site was estimated to be approximately 100 by 50 m (328 by 164 ft) in size, dates from the Depression era, and is in fair condition.

Phase II testing was conducted at CA-LAN-3202H in 2004. The site was divided into two loci: Locus A (containing eight discrete features) and Locus B (comprised of one discrete feature). Mapping of the site's components expanded the overall dimensions to 125 by 86 m (410 by 282 ft). A systematic surface collection of diagnostic artifacts was followed by the excavation of four 1-m by 1-m (3-ft by 3-ft) subsurface units. All recovered materials (684 specimens) date to the 20<sup>th</sup> century and were found in disturbed contexts. Therefore, the site does not contain an intact subsurface component from which to derive reliable data. The site is thought to be the seasonally occupied headquarters for the Pyramid Ranch, an operation that was not part of Tejon Ranch. CA-LAN-3202H is not significant in local history and is therefore not eligible for listing in the CRHR. The Phase II assessment resulted in the mapping and recording of all extant surface features. This action resulted in the collection of all scientific information from and about the site; therefore, the site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3203:** This site is characterized by a small prehistoric midden deposit, lithic scatter, and bedrock mortar feature. A large sandstone outcrop was observed to contain 11 mortar holes and an unshaped pestle. Midden soil was observed and included two hammerstones, calcined (heated to a high temperature so that it is oxidized, reduces, or loses water) animal bone, fire-cracked rock, and a *Haliotis* (abalone) shell. Possible hearth features eroding from a low ridge along one edge of the site were also observed. This site is estimated to measure approximately 75 m by 100 m (246 ft by 328 ft) in size. The age of the site is unknown, and the site appears to be in good condition. CA-LAN-3203 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3204H:** Results of the Phase I survey characterize the site as a historic rubbish dump at the foot of a steep slope. Materials observed include a dense concentration of glass bottles (e.g., Clorox, vinegar, ketchup, ginger ale, club soda, and whiskey); a chipped beef jar; cone-top and church-key beer cans; an early car engine cover and headlight reflector pans; sanitary seal cans; AA batteries; one-gallon kerosene cans; sardine cans; boot soles; pots; galvanized roofing; tire rubber; wire and sheet metal; and car seat springs. This site was estimated to be approximately 10 m by 25 m (33 by 82 ft) in size and may be associated with site CA-LAN-3202H as it is located approximately 250 m (820 ft) away. The site appeared to date from the Depression Era and was in good condition.

CA-LAN-3204H was archaeologically tested in 2004 (Phase II testing). The site was divided into three discrete surface features. Site mapping expanded the overall dimensions slightly to 10 m by 28 m (33 ft by 92 ft). A systematic surface collection of diagnostic artifacts was followed by the excavation of one 1-m by 1-m (3-ft by 3-ft) subsurface unit in an area most conducive to the accumulation of buried remains. The recovered materials (87 specimens)

date primarily to the late Depression/post-Depression time frame. The site does not have an intact subsurface deposit. The site is likely a trash dump associated with the Pyramid Ranch site (CA-LAN-3202H, described above). As with CA-LAN-3202H, CA-LAN-3204H is not a significant or unique resource and is not eligible for listing in the CRHR. The Phase II assessment resulted in the mapping and recording of all extant surface features. This action resulted in the collection of all scientific information from and about the site; therefore, the site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3205:** This site is marked by a prehistoric bedrock mortar feature within a wide canyon. A low sandstone outcrop was observed to contain five mortar holes of variable depths. This site is estimated to be approximately 1 m by 4 m (3 ft by 13 ft) in size. The age of the site is unknown, and the site appears to be in good condition. WSC conducted subsurface testing of this site in 2007. Evaluation of the recovered artifacts indicates the site does not constitute a significant/unique cultural resource; therefore, the site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3206:** This site is characterized by a buried prehistoric midden deposit evident in the sidewall of a deeply cut arroyo. The midden is as much as one m (three ft) deep and is overlain by about one m (three ft) of colluvium. Materials observed include ground and flaked stone artifacts and fire-cracked rock. This site is estimated to be approximately 20 m by 75 m (66 ft by 246 ft) in size. The age of the site is unknown, and the site appears to be in good condition, despite the presence of an erosional gully. WSC conducted subsurface testing of this site in 2007. Testing established the vertical and horizontal extent of the buried deposit. Based on the site's integrity, its deep midden, and evaluation of the recovered artifact assemblage indicates the site represents a significant/unique cultural resource.

**CA-LAN-3207:** This site is marked by a single prehistoric bedrock mortar on a large sandstone boulder measuring approximately 2 m by 3 m (6.5 ft by 10 ft) in size. The boulder is situated in a streambed. The age of the site is unknown and the site appears to be in good condition. CA-LAN-3207 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3208:** This site is marked by a single prehistoric bedrock mortar on a low sandstone boulder measuring approximately one m (three ft) in diameter. The boulder is situated within a drainage bottom. The age of the site is unknown, and the site appears to be in good condition. CA-LAN-3208 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3209:** This site is marked by a large prehistoric bedrock mortar location within a drainage. Four separate granodiorite boulders were observed to contain nine mortar holes in total. No midden or artifacts were observed, but the concentration of mortars indicates that they may be present. This site is estimated to be approximately 75 m (246 ft) in diameter overall. The age of the site is unknown and the site appears to be in good condition. WSC conducted subsurface testing of this site in 2007. Evaluation of the recovered artifacts indicates the site is not significant. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3210:** This site is marked by a single shallow prehistoric bedrock mortar on a low sandstone boulder that measures approximately one m (three ft) in diameter. The boulder is along the edge of a small channel. The age of the site is unknown, and the site appears to be in good condition. CA-LAN-3210 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3211:** Results of the Phase I survey characterize the site as a low density deposit of prehistoric flaked stone artifacts. Materials observed include angular chert (compact rock comprised of microcrystalline quartz) shatter, a quartzite flake, and two quartzite cobble tools. The deposit was estimated to measure approximately 30 m (98.5 ft) in diameter. The age of the site was unknown and appeared to be in good condition. CA-LAN-3211 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (three lithic artifacts) shows that the site area is much smaller than originally estimated. Three 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but none yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. All extant archaeological materials were collected as a part of Phase II testing. This action has resulted in the collection of all scientific information from and about the site; therefore, the site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3212:** This site is a prehistoric cobble quarry and workshop location characterized by a low-density deposit of flaked stone artifacts on a small knoll. Materials observed include quartzite angular shatter and cobble cores. The deposit is estimated to measure approximately 30 m by 60 m (98.5 ft by 197 ft) in size. The age of the site is unknown and the site appears to be in good condition. WSC conducted subsurface testing of this site in 2007. Evaluation of the recovered artifacts indicates the site is not significant. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3213:** This site is a prehistoric cobble quarry and workshop location characterized by a medium-density deposit of flaked stone artifacts along a small ridge line. Materials observed include angular shatter, cores, and cobble tools made primarily of quartzite. The deposit is estimated to measure approximately 30 m by 50 m (98.5 ft by 164 ft) in size. The age of the site is unknown and the site appears to be in good condition. WSC conducted subsurface testing of this site in 2007. Evaluation of the recovered artifacts indicates the site is not significant. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3214:** This site is a prehistoric cobble quarry and workshop location characterized by a medium-density deposit of flaked stone artifacts along a small ridgeline. Materials observed included quartzite angular shatter, cores and cobble tools, and two chert flakes. The deposit is estimated to measure approximately 90 m by 125 m (295 ft by 410 ft) in size. The age of the site is unknown and the site appears to be in good condition. CA-LAN-3214 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3215:** This site is a large prehistoric cobble quarry and workshop location and is characterized by a low-density deposit of flaked stone artifacts occurring in discontinuous

concentrations on a long, narrow ridgeline. Materials observed included quartzite cobble cores, flakes, and angular shatter. The deposit is estimated to measure approximately 60 m by 450 m (197 ft by 1,476 ft) in size. The age of the site is unknown and the site appears to be in good condition. WSC conducted subsurface testing of this site in 2007. Evaluation of the recovered artifacts indicates the site is not significant. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3216H:** This site represents the location of a jet aircraft crash that is known to have occurred in 1949. The site is situated along one boundary of the Project site and appears to extend outside the site. Crash debris observed in the study area consists of jet engine turbine blades, a fuel line connector with safety wire, and aluminum airframe structural fragments. Military records obtained during preliminary research shows that the crash involved two F-86 Sabre jets representing the second generation of jet fighters made for the U.S. Air Force immediately after World War II. The jets involved in the crash were stationed at March Air Force Base and were participating in a bomber-intercept training exercise. The area of the site within the Project site is estimated to measure approximately 75 m by 175 m (246 ft by 574 ft) in size, but no preliminary assessment of its condition was made. WSC conducted subsurface testing of this site in 2007. Evaluation of the recovered artifacts indicates the site is not significant. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3217:** This site is a prehistoric cobble quarry and workshop location characterized by a low-density deposit of flaked stone artifacts on a low ridge. Materials observed included quartzite debitage (i.e., flakes and lithic waste), angular shatter, cores, and cobble tools. The deposit is estimated to measure approximately 125 m (410 ft) in diameter. The age of the site is unknown and the site appears to be in good condition. CA-LAN-3217 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR.

**CA-LAN-3218H:** This site is a silted-in reservoir (i.e., a destroyed dam) with a concrete spillway and water intake structure. The dam and spillway appear to have been destroyed by flooding. Large trees are growing in the spillway bottom, suggesting that some time has passed since the feature was constructed. This site is estimated to measure approximately 50 m (164 ft) in diameter overall. Its age is uncertain and its condition is very poor. Based on the site's poor condition and low data potential, the site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3219H:** This site is characterized as an oil-drilling location in an open valley bottom. Materials observed include a low-to-moderate density scatter of fire bricks, a sanitary seal can, a glass condiment bottle, sheet metal, wire nails, a metal pipe, wooden beams, a large metal bolt, wire cable, three asphalt concentrations, a small concrete foundation, a capped two-inch metal pipe, and a low earthen berm. Fire bricks are embossed with "LAPCO" over three stars. This site is estimated to be approximately 150 m by 50 m (492 ft by 164 ft) in size. The site dates from 1953–1954 (the period of oil exploration on La Liebre Ranch) and is in poor condition. Preliminary examination indicated that the site has low data potential. At the time of the Phase I survey, the site was less than 50 years old and did not meet the minimum-age threshold for historical significance and was not considered

to be historically significant. WSC conducted subsurface testing of this site in 2007. Evaluation of the recovered artifacts indicates the site is not significant. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3220:** Results of the Phase I survey characterize the site as a low density deposit of prehistoric flaked stone artifacts on a low saddle and was described as a cobble quarry and workshop location. Materials observed included angular shatter, cores, and cobble tools made primarily of quartzite. The deposit was estimated to measure approximately 75 m by 300 m (246 ft by 984 ft) in size. The age of the site was unknown, and the site appeared to be in good condition.

CA-LAN-3220 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (four specimens including a biface chopper, a cobble hammerstone, a multiplatform core, and one piece of angular shatter debitage) shows that the site area is much smaller than originally estimated. Six 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but none yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. All extant (existing) archaeological materials were collected as a part of Phase II testing. This action has resulted in the collection of all scientific information from and about the site. CA-LAN-3220 is not considered a unique resource or eligible for listing in the CRHR, as the site no longer retains any historical significance.

**CA-LAN-3223:** Results of the Phase I survey characterize the site as a prehistoric cobble quarry and workshop location with a medium-density deposit of flaked stone artifacts occurring in discontinuous concentrations. Materials observed include angular shatter, cores, and cobble tools made primarily of quartzite. The deposit was estimated to measure approximately 100 m by 150 m (328 ft by 492 ft) in size. The age of the site was unknown and the site appeared to be in good condition.

CA-LAN-3223 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (12 specimens, including 3 multi-platform cores, 4 flakes, 3 uniface flake tools, 1 core/hammerstone, and 1 uniface chopper) shows that the site area is much smaller than originally estimated. Five 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but none yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. The Phase II assessment has resulted in the mapping and recording of all extant surface features. This action has resulted in the collection of all scientific information from and about the site. CA-LAN-3223 is not considered a unique resource or eligible for listing in the CRHR, as the site no longer retains any historical significance.

**CA-LAN-3224:** Results of the Phase I survey characterize the site as a prehistoric cobble quarry and workshop location with a medium-density deposit of flaked stone artifacts occurring in discontinuous concentrations on a broad knoll. Materials observed include angular shatter, cores, and cobble tools made primarily of quartzite. The deposit was estimated to measure approximately 150 m by 200 m (492 ft by 656 ft) in size. The age of the site was unknown and the site appeared to be in good condition.

CA-LAN-3224 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (12 surface specimens, including 6 flakes, 2 biface choppers, 2 scraper planes, and 1 multiplatform core) shows that the site area is much smaller than originally estimated. Five 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but none yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. The Phase II assessment resulted in the mapping and recording of all extant surface features. This action has resulted in the collection of all scientific information from and about the site. CA-LAN-3224 is not considered a unique resource or eligible for listing in the CRHR, as the site no longer retains any historical significance.

**CA-LAN-3225:** Results of the Phase I survey characterize the site as a prehistoric cobble quarry and workshop location characterized by a low-density deposit of flaked stone artifacts along a narrow ridgeline. Materials observed included quartzite angular shatter and cobble cores. The deposit is estimated to measure approximately 30 m by 150 m (98.5 ft by 492 ft) in size. The site area has been impacted by an underground communication cable that was placed in the center of the site. The age of the site is unknown. WSC conducted subsurface testing of this site in 2007. Evaluation of the recovered artifacts indicates the site is not significant. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3226:** Results of the Phase I survey characterize it as a prehistoric cobble quarry and workshop area marked by a low-density deposit of flaked stone artifacts on a small ridge line. Materials observed include quartzite angular shatter and a hammerstone. The deposit was estimated to measure approximately 30 m (98.5 ft) in diameter. The age of the site was unknown and the site appeared to be in good condition.

CA-LAN-3226 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (three archaeological specimens, including one multi-platform core, one cobble hammerstone, and one flake) shows that the site area is much smaller than originally estimated. Two 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but neither yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. All extant archaeological materials were collected as a part of Phase II testing. This action resulted in the collection of all scientific information from and about the site. CA-LAN-3226 is not considered a unique resource or eligible for listing in the CRHR, as the site no longer retains any historical significance.

**CA-LAN-3227:** This site is a large prehistoric cobble quarry and workshop location and is characterized by a medium-density deposit of flaked stone artifacts occurring in discontinuous concentrations on a large knoll. Materials observed include angular shatter, cores, flakes, and cobble tools made primarily of quartzite. The deposit is estimated to measure approximately 125 m by 215 m (410 ft by 705 ft) in size. The age of the site is unknown and the site appears to be in good condition. CA-LAN-3227 has not been archaeologically tested or evaluated for significance under CEQA as of the preparation of this EIR. Although the site lies in the preserved open space area, it is very close to the development area; therefore, it is assumed significant unless later proven otherwise.

**CA-LAN-3229:** Results of the Phase I survey characterize the site as a prehistoric cobble quarry and workshop location with a low-density deposit of flaked stone artifacts along one edge of a large broad ridgeline. Materials observed include quartzite cobble cores and a flake. The deposit was estimated to measure approximately 30 m (98.5 ft) in diameter. The age of the site was unknown, and the site appeared to be in good condition.

CA-LAN-3229 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (four surface specimens, including one multiplatform core, one flaked hammerstone, one cobble hammerstone, and one core scraper plane) shows that the site area is much smaller than originally estimated. Three 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but none yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. The Phase II assessment resulted in the mapping and recording of all extant surface features. This action resulted in the collection of all scientific information from and about the site. CA-LAN-3229 is not considered a unique resource or eligible for listing in the CRHR, as the site no longer retains any historical significance.

**CA-LAN-3230:** The Phase I survey characterizes the site as a small prehistoric cobble quarry and workshop location with a medium-density deposit of flaked stone artifacts that occurred along one edge of a large broad knoll. Materials observed include quartzite angular shatter, cores, and cobble tools. The deposit was estimated to measure approximately 15 m (49 ft) in diameter. The age of the site was unknown, and the site appeared to be in good condition.

CA-LAN-3230 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (13 archaeological specimens including 6 flakes, 4 multi-platform cores, 2 hammerstones, and 1 cobble chopper) shows that the site area is comparable to what was originally estimated. Two 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but none yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. The Phase II assessment resulted in the mapping and recording of all extant surface features. This action resulted in the collection of all scientific information from and about the site. CA-LAN-3230 is not considered a unique resource or eligible for listing in the CRHR, as the site no longer retains any historical significance.

**CA-LAN-3231:** The Phase I survey characterized this site as a prehistoric cobble quarry and workshop location with a low-density deposit of flaked stone artifacts occurring along one edge of a ridge line. Materials observed included quartzite cores, a cobble tool, and a hammerstone. The deposit was estimated to measure approximately 60 m (197 ft) in diameter. The age of the site was unknown and the site appeared to be in good condition.

CA-LAN-3231 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (ten surface specimens including six hammerstones, three flakes, and one multi-platform core) shows that the site area is much smaller than originally estimated. Three 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but none yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. The Phase II assessment resulted in the

mapping and recording of all extant surface features. This action resulted in the collection of all scientific information from and about the site. CA-LAN-3231 is not considered a unique resource or eligible for listing in the CRHR, as the site no longer retains any historical significance.

**CA-LAN-3232:** The Phase I survey noted that the site was a prehistoric cobble quarry and workshop location characterized by a low-density deposit of flaked stone artifacts occurring in discontinuous concentrations on a narrow ridgeline. Materials observed include quartzite cobble cores. The deposit was estimated to measure approximately 30 m by 150 m (98.5 by 492 ft) in size. The age of the site was unknown and the site appeared to be in good condition.

CA-LAN-3232 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (six surface artifacts, including four multi-platform cores and two flakes) shows that the site area is much smaller than originally estimated. Five 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but none yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. The Phase II assessment resulted in the mapping and recording of all extant surface features. This action resulted in the collection of all scientific information from and about the site. CA-LAN-3232 is not considered a unique resource or eligible for listing in the CRHR, as the site no longer retains any historical significance.

**CA-LAN-3233:** This site is a low-density cobble quarry/workshop measuring about 30 m in diameter that is associated with a small cobble concentration. Two quartzite cobble tools, two quartzite cores, two quartzite flakes, and one igneous flake were observed at this location, which is of unknown age. The site is located approximately 300 m east of the paved two-lane National Cement Road along the southern toe slope of an east-west-trending ridgeline.

CA-LAN-3233 was archaeologically tested in 2015. A systematic surface collection of artifacts (four surface artifacts, including a cobble core and three flakes) was completed. Based on the distribution of these artifacts, the site area is oriented 21 m southeast/northwest by 13 m southwest/northeast. One subsurface TU, two subsurface STPs, and one surface shovel scrape were excavated on the site. No cultural material was recovered from any of the excavation units or the scrape. The site is a small, low-density surface lithic scatter that lacks a subsurface component. All identified artifacts are quartzite, which occurs naturally in an exposed cobble lens on the site surface. The site is best interpreted as an expedient quarry/workshop, used sporadically or, perhaps, on only one occasion. Its age is unknown. CA-LAN-3233 is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3234:** This site was recorded in 2002 as a low-density cobble quarry/workshop associated with a small cobble concentration. Its size was estimated at 30 m in diameter. When recorded, it contained four quartzite cores, and it is of unknown age. The site is located roughly 300 m east of the paved two-lane National Cement Road along the southern toe slope of an east-west trending ridgeline that is 300-m north of SR-138.

CA-LAN-3234 was archaeologically tested in 2015. A systematic surface collection of artifacts (three surface artifacts including two cobble cores and one flake) was completed. The artifact distribution indicates that the site area is oriented 27 m southeast/northwest by 11 m southwest/northeast. One subsurface TU, two subsurface STPs, and one surface shovel scrape were excavated on the site. No cultural material was recovered from any of the excavation units or the scrape. Site CA-LAN-3234 is a small, low-density surface lithic scatter that is associated with a small cobble concentration. It represents quarry/workshop activities, perhaps from a single use. The site does not contain a subsurface deposit and its age is unknown. CA-LAN-3234 is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3235:** This site was described in 2002 as a rock cairn containing mixed igneous clasts ranging from fist to boulder size, measuring 2 m by 3 m in overall area. The site is located approximately 490 m east of the Aqueduct on the west side of a north/south trending drainage. It was in good condition, but of unknown age and function. At the time of its recording, it was uncertain whether the site represented a prehistoric (Native American) or historic (Euro-American) feature or a natural (non-cultural) concentration of cobbles.

CA-LAN-3235 was archaeologically tested in 2015. A systematic surface collection of artifacts was completed. No surface artifacts were identified. One subsurface TU was excavated on the site. No cultural material was recovered and decomposing granite sediments were encountered within the first ten centimeters of excavation. CA-LAN-3235 appears to represent a natural concentration of exposed, but heavily decomposing bedrock cobbles, not a cairn resulting from human actions. It does not constitute a cultural resource.

**CA-LAN-3236:** This site was described in 2002 as a low-density cobble quarry/workshop associated with a small cobble concentration. Its size was estimated at about 30 m east/west by 100 m north/south orientation. At the time of recording, five quartzite cores were noted at this location. Its age is unknown. It is located approximately 60 m southeast of CA-LAN-3237 and 360 m north of SR-138 on the same east/west-trending ridgeline that contains sites CA-LAN-3237 and CA-LAN-3235.

CA-LAN-3236 was archaeologically tested in 2015. A systematic surface collection of artifacts (three cobble cores were collected) was completed. One subsurface TU, four subsurface STPs, and two surface shovel scrapes were excavated at the site. No cultural material was encountered in the subsurface. CA-LAN-3236 is a surface lithic quarry workshop associated with a cobble exposure. It does not contain a subsurface component. Its age is unknown, and it represents ephemeral exploitation, perhaps only a single use of this location. The age of the site is unknown. CA-LAN-3236 is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3237:** This site was described in 2002 as a small, low-density cobble quarry/workshop associated with small cobble concentration. Three quartzite cores and one quartzite flake were observed at this location. The site is located approximately 60 m northwest of CA-LAN-3236 and 480 m north of SR-138, on the same east/west-trending ridgeline that contains sites CA-LAN-3235 and CA-LAN-3236.

CA-LAN-3237 was archaeologically tested in 2015. A systematic surface collection of artifacts (three cobble cores, one flake) was completed. One subsurface TU, two subsurface STPs, and two surface shovel scrapes were excavated at the site. No cultural material was encountered in the subsurface. Site CA-LAN-3237 consists of a small, low-density surface quarry/workshop associated with an exposed cobble lens. It does not contain a subsurface deposit. Its age is unknown, but it appears to represent ephemeral use of the cobble resource, perhaps consisting of only a single quarrying event. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3238:** This site was recorded in 2002 as a medium density cobble quarry/workshop consisting of lithic scatter and associated cobble concentration. It measured approximately 20 m east/west by 40 m north/south orientation. Approximately 30 archaeological specimens were noted at this location, consisting of quartzite angular shatter, cores, cobble tools, one quartzite flake, and four jasper flakes. The site is located about 450 m north of SR-138 and 250 m north of CA-LAN-3235, along the southern edge of a long east-west trending saddle.

CA-LAN-3238 was archaeologically tested in 2015. A systematic surface collection of artifacts (one cobble cores, five flake) was completed. One subsurface TU, two subsurface STPs, and two surface shovel scrapes were excavated at the site. No cultural material was encountered in the subsurface. The TU resulted in the recovery of one flake. This originated in the first few centimeters (i.e., topsoil) of the unit, essentially in the first shovel scrape layer. Rodent disturbance was noted in the excavation. Site CA-LAN-3238 is a small surface lithic scatter. The presence of angular shatter, a core, and a primary flake indicate its use as a quarry/workshop. This appears to have the exploitation of both quartzite and CCS in the cobble lens that is present on the site surface. The single piece of debitage recovered in TU-1 is essentially a surface specimen that was covered by a thin coating of soil, and the site lacks a subsurface archaeological deposit. The age of the site is unknown. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3239:** This site was identified in 2002 as a medium density cobble quarry/workshop consisting of discontinuous lithic scatters and associated cobble concentrations. Its size was estimated at 60 m east/west by 300 m north/south orientation. About 30 archaeological specimens were observed on the site, including quartzite angular shatter, cores, cobble tools, and three flakes. It is located about 600 m north of SR-138 and 900 m northeast of CA-LAN-3238, along the top of a large east-west-trending ridgeline.

CA-LAN-3239 was archaeologically tested in 2015. A systematic surface collection of 17 artifacts (6 flakes, 2 flake tools, 4 cobble cores, 3 cobble tools, and 2 hammerstones) was completed. One subsurface TU, six subsurface STPs, and four surface shovel scrapes were excavated at the site. No cultural material was encountered in the subsurface. Site CA-LAN-3239 is a surface lithic scatter containing a variety of materials. These include rhyolite, metavolcanic (perhaps also basalt), CCS, and, predominantly, locally available quartzite. The site appears to have served as an occasionally employed quartzite quarry as well as a more general workshop, based on the presence of cobble tools (potentially used for plant pulping or other heavy chopping tasks). No subsurface deposit is present at the site. The age of the

site is unknown. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3240:** This site was recorded in 2002 as a low-density lithic scatter measuring about 90 m east/west by 350 m north/south orientation. It contained 12 jasper flakes and a granitic metate at the time of recording, thereby contrasting with the cobble/quarry workshops that represent the majority of the study area sites. The site was also noted as sitting on a well-oxidized sandy loam, suggesting that this location may differ in age from the other sites, potentially being older. The site is located on a north-south-trending bluff that is situated on the southern edge of the Oso Creek Wash, near the northern limit of the 2015 study area.

CA-LAN-3240 was archaeologically tested in 2015. A systematic surface collection of 6 formal artifacts (4 flake tools, 1 cobble core, 1 biface fragment) and 37 flakes was completed. Five subsurface TUs, ten subsurface STPs, and six surface shovel scrapes were excavated at the site. A total of eight flakes were recovered from the TUs; no artifacts were recovered from the STPs; and four flakes were recovered from the shovel scrapes.

Site CA-LAN-3240 appears to represent a small campsite with a small, low-density subsurface deposit. A metate, used for grinding plant foods (probably seeds) had been observed on the site when originally recorded, but could not be relocated during the Phase II test. Along with the other artifacts, this nonetheless suggests that a wide range of activities may have occurred at this location, including plant processing and tool maintenance and manufacture as well as quarrying, and that the site may have served as a small camp. The wide range of lithic materials, some of which are not local to the study area, support the interpretation of the site as a camp; obsidian almost certainly originated in the Coso source, 130 miles to the northeast. The low density and shallow subsurface deposit (maximum depth, approximately 20 cm) likewise suggests periodic but low intensity use of this site. No temporally diagnostic artifacts were recovered and the site's age is unknown. The presence of a single obsidian flake, however, may indicate that the site pre-dates roughly AD 1200, when the obsidian trade from eastern California collapsed. Ongoing hydration analysis of this specimen will allow an evaluation of this interpretation. The site is considered a unique resource and is eligible for listing in the CRHR.

**CA-LAN-3241:** This site was recorded in 2002 as a plant processing station associated with a small cobble concentration. Two bifacial igneous manos, three quartzite cobble cores, one hammerstone, one granitic metate, one jasper uniface flake tool, and one piece of jasper angular shatter were observed on the site. As at nearby CA-LAN-3240, soils here comprised of well-oxidized sandy loam, suggesting that the site may be the same (potentially early) age as this previous locality. This site is located 200 m east of CA-LAN-3240, on the northern end of a broad northeast-southwest-trending ridge that is situated on the southern edge of, and overlooking, the Oso Creek wash.

CA-LAN-3241 was archaeologically tested in 2015. A systematic surface collection of 11 artifacts (2 metates, 2 cobble cores, 2 manos, a core, a flake tool, a biface, and 2 flakes) was completed. Four subsurface TUs, five STPs, and four surface shovel scrapes were excavated at the site. A total of two flakes were recovered from the Tus; no artifacts were recovered

from the STPs; and two flakes were recovered from the shovel scrapes. CA-LAN-3241 yielded a surface artifact assemblage that includes a small number of groundstone tools (manos and metates) used for plant processing; cores, flakes, and shatter resulting from tool manufacture; and flake tools used for a variety of cutting and piercing tasks. No subsurface deposit is, however, present at the site. The nature of the artifacts suggests that the site jointly served as a plant processing station and quarry/workshop. Given its proximity to CA-LAN-3240, it is likely that CA-LAN-3421 served as a special activity area associated with that nearby campsite. Assuming this is correct, the two sites would be the same age, although this has not yet been fully established. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3242:** This site was described in 2002 as a low-density cobble quarry/workshop associated with a small cobble concentration. It measured about 90 m east/west by 150 m north/south orientation. Artifacts noted at the time of recording included one rhyolite uniface cobble tool, one quartzite hammerstone fragment, one jasper core, and one jasper flake. The site is located approximately 30 m northeast of benchmark Pipe-3062, along the northeastern toeslope of the same northeast-southwest-trending ridgeline that contains sites CA-LAN-3243 and CA-LAN-3244 (below). This places it immediately overlooking the open flats of the western Antelope Valley, to the east.

CA-LAN-3242 was archaeologically tested in 2015. A systematic surface collection of eight artifacts (two cores, two core tools, a cobble tool, and three flakes) was completed. One subsurface TU, five STPs, and two surface shovel scrapes were excavated at the site. A total of four flakes were recovered from the TUs; no artifacts were recovered from the STPs; and no artifacts were recovered from the shovel scrapes. CA-LAN-3242 appears to represent a small and very low density subsurface deposit extended to approximately 20 cm bd. Artifacts on the site surface, though limited in number, are indicative of quarrying and primary reduction (cores and angular shatter), while the core tools are most likely the result of heavy pounding activities, perhaps plant processing. The artifact assemblage, in general terms, is similar to many of the other quarry workshops tested for this Project, which lack subsurface deposits. The presence of such a deposit in this case appears to represent a unique geomorphological context, at the toeslope of a low ridgeline, which would provide an upslope source of soil for the slow burial of artifacts below the ground. The small assemblage, furthermore, includes 30 percent core/cobble complex tools, and three of the five pieces of debitage are obsidian tertiary flakes, suggesting that at least some habitation occurred at this locale inasmuch as tertiary flakes are typically associated with tool maintenance rather than production.

The variety of kinds of lithic materials, including obsidian, almost certainly originating at the Coso source, over 130 miles to the northeast, is indicative of trade. The low density of subsurface materials suggests that the site was sporadically used, but potentially over a long period of time. The age of the site is unknown. Based on the presence of obsidian, it is believed to pre-date roughly AD 1200; this hypothesis may be clarified by obsidian hydration dating. The site is considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3243:** This site was recorded in 2002 as a medium-density cobble quarry/workshop associated with a large continuous cobble concentration. It was thought

to cover an area measuring 60 m east/west by 180 m north/south orientation. About 35 archaeological specimens were noted, including quartzite cobble cores, hammerstones, flakes, and 1 jasper flake. It is located about 180 m southwest of benchmark Pipe-3062, along the top of the same northeast-southwest-trending ridgeline that contains site CA-LAN-3244. The site was in good condition, but is of unknown age.

CA-LAN-3243 was archaeologically tested in 2015. A systematic surface collection of 17 artifacts (1 mano, 8 cobble cores, 1 cobble core tool, 3 cores, 5 flakes, and a hammerstone) was completed. One subsurface TU, six STPs, and four surface shovel scrapes were excavated at the site. No artifacts were recovered from any of the TUs, STPs, or shovel scrapes. Site CA-LAN-3243 is a moderate-density surface lithic scatter exhibiting two primary activities: quarrying the quartzite and other cobbles available on-site and, to a lesser extent, plant processing. No subsurface deposit is present at this site. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3244:** This site was recorded in 2002 as a low-density cobble quarry/workshop associated with a large discontinuous cobble concentration. It was measured at approximately 60 m north/south by 700 m east/west orientation, and about 50 specimens were observed on it, including quartzite cobble cores, hammerstones, flakes and jasper cores. It is located about 450 m southwest of benchmark Pipe-3062, on the same northeast-southwest-trending ridge line that contains site CA-LAN-3243.

CA-LAN-3244 was archaeologically tested in 2015. A systematic surface collection of 23 artifacts (6 flakes, 3 cores, 1 core tool, 1 flake tool, 9 cobble cores, 2 cobble tools, and 1 hammerstone) was completed. One subsurface TU, eight STPs, and four surface shovel scrapes were excavated at the site. No artifacts were recovered from any of the TUs, STPs, or shovel scrapes. Site CA-LAN-3244 is a moderate density surface lithic scatter consisting of a quarry/workshop associated with a natural quartzite cobble lens. The site lacks a subsurface deposit and its age is unknown. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3245:** This site was described in 2002 as a medium-density cobble quarry/workshop associated with a large continuous cobble concentration. It measures about 32 m northwest/southeast by 151 m northeast-southwest orientation. In 2002, about 35 archaeological specimens were noted, including quartzite cobble cores, hammerstones, and flakes. The site is located about 800 m southwest of benchmark Pipe-3062 and 95 m south of site CA-LAN-3244.

CA-LAN-3245 was archaeologically tested in 2015. A systematic surface collection of 9 artifacts (4 cobble cores, 1 cobble tool, 1 core, and 3 flakes) was completed. One subsurface TU, six STPs, and four surface shovel scrapes were excavated at the site. No artifacts were recovered from any of the TUs, STPs, or shovel scrapes. Site CA-LAN-3245 is a surface lithic scatter consisting of a quarry/workshop. This primarily involved the exploitation of a lens of natural quartzite cobbles, but the presence of CCS cores and flakes demonstrate that imported lithic materials were also worked at the site. No subsurface deposit is present and the age of the site is unknown. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3246:** This site was recorded in 2002 as another low-density cobble quarry/workshop associated with a small cobble concentration. It covers an area estimated at about 30 m in diameter. Two quartzite hammerstones and two quartzite flakes were observed on the site, which is located approximately 135-m northeast of Quail Lake along the southwestern edge of a large broad bluff that is immediately west of the paved two-lane National Cement access road.

CA-LAN-3246 was archaeologically tested in 2015. A systematic surface collection of two artifacts (two cobble cores) was completed. One subsurface TU, two STPs, and one surface shovel scrape were excavated at the site. One flake was recovered from the TU, and no artifacts were recovered from the STPs or shovel scrape. Site CA-LAN-3246 is a very small, low density surface lithic scatter, probably resulting from a single prehistoric visit. No subsurface deposit is present at this site and its age is unknown. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3247:** This site was recorded in 2002 as a low-density cobble quarry/workshop associated with a small cobble concentration. It measures about 15 m north/south by 45 m east/west orientation. Two cores, one uniface cobble tool, and one piece of angular shatter, all made of quartzite, were observed at this site. This site is located in a saddle at the top of a large knoll (map elevation 3,154 ft above msl) approximately 350 m south of site CA-LAN-3245, and thus towards the eastern side of the study area.

CA-LAN-3247 was archaeologically tested in 2015. A systematic surface collection of four artifacts (one cobble core, one core, and two flakes) was completed. One subsurface TU, two STPs, and one surface shovel scrape were excavated at the site. No artifacts were recovered from any of the TUs, STPs, or shovel scrapes. Site CA-LAN-3247 is a very small, low-density surface lithic scatter resulting from quarrying the locally available quartzite cobble lens. No subsurface deposit is present and the site age is unknown. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3248:** The Phase I survey noted the site as a large prehistoric cobble quarry and workshop location that is characterized by a medium-density deposit of flaked stone artifacts that occur in a continuous concentration. Materials observed include quartzite cobble cores, tools, and angular shatter. The deposit was estimated to measure approximately 60 m by 200 m (197 ft by 656 ft) in size. The age of the site was unknown and the site appeared to be in good condition.

CA-LAN-3248 was archaeologically tested (Phase II) in 2004 as a single continuous feature. A systematic surface collection of artifacts (20 specimens) shows that the site area is much smaller than originally estimated. Five 1-m by 1-m (3-ft by 3-ft) subsurface units were excavated, but none yielded any cultural materials. The site does not contain a subsurface component from which to derive informative data. The Phase II assessment resulted in the mapping and recording of all extant surface features. This action resulted in the collection of all scientific information from and about the site. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3249:** This is the second possible rock cairn discovered during the 2002 Phase I survey. It measured about 1 m by 2 m in size and contained mixed igneous clasts ranging from fist to boulder size. The cairn is located about 490 m east of the East Branch of the California Aqueduct canal and 350 m north of site CA-LAN-3250. CA-LAN-3249 was archaeologically tested in 2015. A systematic surface collection was not completed as no surface artifacts were observed. One subsurface TU was excavated at the site. No artifacts were recovered, and it is determined that the site is natural in origin and does not constitute a cultural resource.

**CA-LAN-3250:** This was described in 2002 as a low-density cobble quarry/workshop associated with a small cobble concentration. It covered an area estimated at 30 m in diameter. Three artifacts, including one core, one hammerstone, and one uniface cobble tool, all made of quartzite, were noted on the site. It is located approximately 380 m east of the East Branch of the California Aqueduct on the north side of an east/west drainage north of a spring.

CA-LAN-3250 was archaeologically tested in 2015. A systematic surface collection of two artifacts (one cobble core, one biface/projectile point) was completed. One subsurface TU, two STPs, and one surface shovel scrape were excavated at the site. No artifacts were recovered from any of the TUs, STPs, or shovel scrapes. Site CA-LAN-3250 is a very low-density surface lithic scatter with a limited artifact assemblage consisting of an assayed quartzite cobble/core and an obsidian biface fragment. The paucity of artifacts is indicative of ephemeral site use, perhaps a single episode. No subsurface deposit is present, and the site age is unknown, though the obsidian is suggestive of a roughly pre-AD 1200 date. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3251:** This is another recorded low-density cobble quarry/workshop associated with a large discontinuous cobble concentration. In 2002, it measured about 150 m north/south by 350 m east/west orientation and contained a total of about 30 specimens, including quartzite cobble cores, cobble tools, and angular shatter. It is located 80 m east of the East Branch of the California Aqueduct.

CA-LAN-3251 was archaeologically tested in 2015. A systematic surface collection of 11 artifacts (5 cobble cores, 4 flakes, 1 assayed cobble, and 1 core tool) was completed. One subsurface TU, six STPs, and four surface shovel scrapes were excavated at the site. No artifacts were recovered from any of the TUs, STPs, or shovel scrapes. Site CA-LAN-3251 is a large but low-density quarry/workshop associated with a natural quartzite cobble lens. The site lacks a subsurface archaeological deposit and its age is unknown. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3252:** This was described in 2002 as a low-density cobble quarry/workshop associated with a large discontinuous cobble concentration. It measured about 35 m north/south by 96 m east/west orientation. About two dozen archaeological specimens were noted on the site, including quartzite cobble cores, cobble tools, and angular shatter. It is located 120 m east of the East Branch of the California Aqueduct canal.

CA-LAN-3252 was archaeologically tested in 2015. A systematic surface collection of six artifacts (two cobble cores, two core tools, and two flakes) was completed. One subsurface TU, four STPs, and two surface shovel scrapes were excavated at the site. No artifacts were recovered from any of the TUs, STPs, or shovel scrapes. Site CA-LAN-3252 is a low-density surface lithic scatter/quarry workshop. It lacks a subsurface archaeological deposit and its age is unknown. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3253:** This site was recorded in 2002 as a low-density cobble quarry/workshop associated with a small cobble concentration. It was estimated to be about 60 m north/south by 90 m east/west orientation in size. At the time of recording, one basalt flake, one basalt uniface cobble tool, and one quartzite uniface cobble tool were noted on the site. It is located on a long narrow east-west-trending ridgeline that is approximately 340 m northeast of the paved, two-lane National Cement access road. CA-LAN-3253 was archaeologically tested in 2015. A systematic surface collection of two artifacts (one flake and one flake tool) was completed. One subsurface TU, four STPs, and two surface shovel scrapes were excavated at the site. No artifacts were recovered from any of the TUs, STPs, or shovel scrapes. The site is not considered a unique resource or eligible for listing in the CRHR.

**CA-LAN-3985H:** This site is characterized as an oil drilling location similar to the previously identified CA-LAN-3219H. This site is estimated to be approximately 42 m by 22 m (138 ft by 72 ft) in size. According to California Division of Oil, Gas, and Geothermal Resources' records, the well was operated by Alexander N. Campbell. It was drilled to 3,756 feet in 1956, plugged, and abandoned due to the absence of oil or gas. At the time of the Phase I survey, the site was less than 50 years old and did not meet the minimum-age threshold for historical significance and therefore was not considered to be historically significant.

WSC conducted an evaluation of the site in 2007. Materials observed include a low-density scatter of sheet metal, mesh screening, a ring bearing, 1-inch wire cable, a few galvanized bolts, and a 55-gallon drum. Non-metal artifacts include milled lumber, a two-inch rubber hose, a rubber gasket, and three cement concentrations as a result of abandoned cement sacks. The site is not considered a unique resource or eligible for listing in the CRHR.

### ***Paleontological Resources Findings***

#### Literature Review

According to the paleontological records search and literature review conducted by the NHMLAC in November 2006, there was no record of any previously identified vertebrate fossil localities within the Project site (McLeod 2006), nor had any vertebrate fossil localities been discovered in the general vicinity within the same rock formations that occur on the Project site.

The NHMLAC literature review reveals that two of the three rock formations identified on the Project site are sensitive for the presence of fossil resources. They include (1) the marine Late Miocene Quail Lake Formation, exposed in the elevated parts of the southwestern portion of the Project site (north of SR-138 and northwest of Quail Lake) and in part of the elevated areas of the southeastern portion of the Project site (south of SR-138) and (2) the

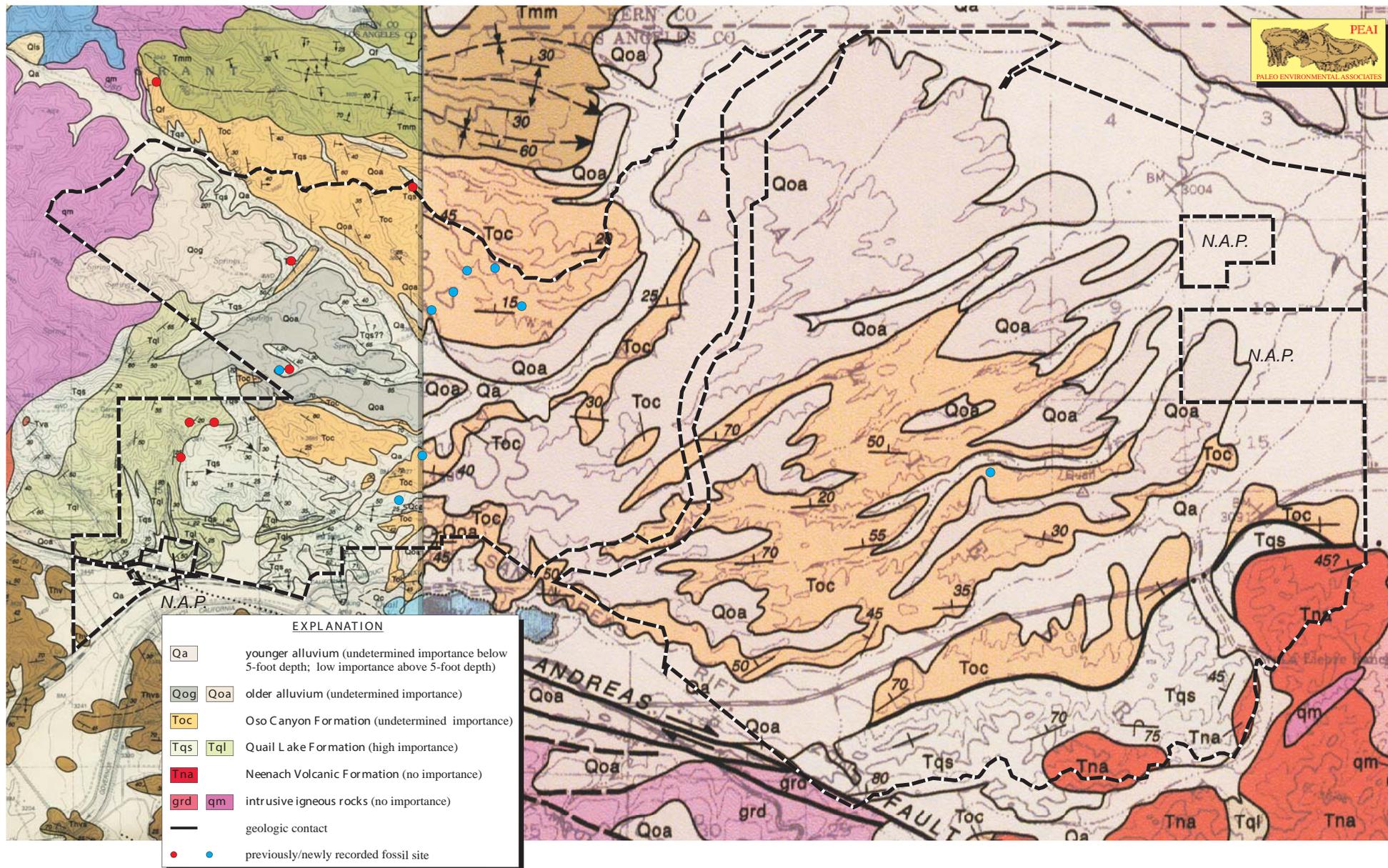
terrestrial Late Miocene Oso Canyon Formation that grades into the Quail Lake Formation. The third formation, the Neenach Volcanic Formation, exposed in the southeastern portion of the Project site (on the west side of Tentrock Canyon) and northeast of La Liebre Ranch is expected to lack fossils. Older Quaternary terrace deposits, of Pleistocene age, occurring around the exposures of the Oso Canyon Formation may contain significant fossils, probably similar to those from the famous Rancho La Brea asphalt deposits in Los Angeles (i.e., La Brea Tar Pits). Younger Quaternary Alluvium in the drainages in the lower lying areas is unlikely to contain any fossil deposits.

The 2006 investigation did not include a search for invertebrate species. The records search and literature review do not contain information that indicates that the Project site had been subjected to a comprehensive paleontological field survey. Therefore, a paleontological survey was conducted for the Project (PEA 2009) and is described below.

### Survey

A paleontological resource inventory and impact assessments study was undertaken by Dr. Bruce Lander of Paleo Environmental Associates (PEA 2009). The study included background research of published and unpublished paleontologic and geologic literature; examination of geologic maps; a field survey of the Project site; an evaluation of the Project's potential to impact paleontologically sensitive rock formations; and development of mitigation measures that would reduce the direct and indirect adverse environmental impacts on paleontological resources to a less than significant level.

This study is in general agreement with McLeod (2006) in the description and evaluation of the relative sensitivity of the rock units in the Project area. PEA goes further by assigning each unit a level of paleontological importance; identifying potential fossil localities; and evaluating the Project's potential to adversely affect fossils in them. These are presented in Table 5.6-2, Geologic Formations and Paleontological Sensitivity within the Project Site Boundaries, and are described below. As with the discussion of archeological and historical resources above, the significance finding for each geologic unit is provided here in the setting discussion to streamline the presentation of data. The significance findings are discussed further in the impact analysis later in this section. Exhibit 5.6-1, Geological Formations, depicts the distribution of geologic formations within the Project site.



Source: Paleo Environmental Associates 2009

# Geologic Formations

# Exhibit 5.6-1

Centennial Project



**TABLE 5.6-2  
GEOLOGIC FORMATIONS AND PALEONTOLOGICAL SENSITIVITY WITHIN THE  
PROJECT SITE BOUNDARIES**

<b>Geologic Formation</b>	<b>Importance</b>	<b>Impact</b>
Intrusive Igneous Rocks	No paleontologic importance	No Project impacts
Neenach Volcanic Formation	No paleontologic importance	No Project impacts
Quail Lake Formation	High paleontologic importance	Highly significant development-related impacts without mitigation
Oso Canyon Formation	Undetermined, but potentially high paleontologic importance	Undetermined, but potentially highly significant development-related impacts without mitigation
Older Quaternary Alluvium	Undetermined (but likely moderate) paleontologic importance	Undetermined development-related impacts without mitigation
Younger Quaternary Alluvium	Undetermined (but likely moderate) paleontologic importance at depths more than 5 feet from the current ground surface. Low paleontological importance at depths less than 5 feet below the current ground surface	Undetermined development-related impacts without mitigation. Above 5 feet: low potential of significant impacts above 5 feet
Note: Mitigation measures for the potential impacts identified above are listed in Section 5.6.7. Source: PEA 2009.		

### *Intrusive Igneous Rocks*

Intrusive igneous rocks are exposed only at the northwestern corner of the Project site. These igneous rocks consist of plutonic rocks that do not contain fossils because of their origin from a molten state deep within the Earth's crust (PEA 2009). Consequently, there is no potential for any previously unrecorded fossil site or remains occurring where this rock unit underlies the Project site. Therefore, the igneous rocks are of no paleontologic importance.

### *Neenach Volcanic Formation*

The Neenach Volcanic Formation is exposed only at the southeastern corner of the Project site. The formation consists of extrusive igneous rocks, primarily andesitic lava flows; because of their origin from a molten state, this formation does not contain fossils (PEA 2009). Consequently, there is no potential for any previously unrecorded fossil site or remains occurring where the Project site is underlain by this rock unit. Therefore, the Neenach Volcanic Formation is of no paleontologic importance.

### *Quail Lake Formation*

The Quail Lake Formation comprises intervals of light gray to tan, massive to bedded, medium- to coarse-grained sandstone that commonly are conglomeratic at the base and silty siliceous shale (PEA 2009). It is exposed only in the western half of the western portion of the Project site. The literature review and field survey conducted in support of this inventory documented the occurrence of a number of previously recorded sites and one previously unrecorded fossil site in exposures of the Quail Lake Formation in the Project area. Six such sites are mapped in the Project site, several of which were relocated as a result of the field survey and still found to be productive, and a seventh just outside the northwestern corner of the Project site (Exhibit 5.6-1). These sites produced fossilized remains representing extinct species of calcareous marine algae, bryozoans (moss animals), sand dollars, and marine snails and clams (PEA 2009). Petrified wood was found at the one previously unrecorded site discovered during the survey.

These fossil occurrences indicate that there is a high potential for additional similar fossil remains being encountered at previously recorded sites and at currently unrecorded fossil sites where the Project site is underlain by this rock unit. Therefore, the Quail lake Formation is potentially of high paleontologic importance.

### *Oso Canyon Formation*

The Oso Canyon Formation comprises layers of pebble and cobble conglomerate; gray to red, fine- to coarse-grained or conglomeratic sandstone; and greenish-gray to red sandy or pebbly siltstone (PEA 2009). This formation is exposed in much of the Project site. The archival search conducted in support of this inventory did not document the occurrence of any previously recorded fossil site in the Oso Canyon Formation. However, a fossil-bearing limestone bed near the base of the Oso Canyon Formation yielded the remains of fresh-water snails and ostracods (bivalved crustaceans) near La Liebre Ranch, which lies at the southeastern corner of the Project site. The fossil remains and the species they represent have been critical in determining the fresh-water origin of the fossil-bearing strata. Petrified wood was documented at a number of newly recorded fossil sites discovered as a result of the field survey conducted in support of the inventory.

Pending further investigation, occurrences indicate that there is an undetermined (but possibly high) potential for additional similar fossil remains being encountered at previously recorded and currently unrecorded fossil sites where the Project site is underlain by this rock unit. Therefore, the Oso Canyon Formation is of undetermined (but possibly high) paleontological importance.

### *Older Quaternary Alluvium*

The Older Quaternary Alluvium comprises dissected and unconsolidated to weakly consolidated alluvial deposits, including alluvial fan gravel and poorly bedded, alluvial gravel and sand (PEA 2009). This rock unit is exposed in much of the Project site. The literature review, archival search, and field survey conducted in support of this inventory did not document the occurrence of any previously recorded fossil site in the Older Quaternary Alluvium in the Project site or its immediate vicinity. However, several sites in the Older

Alluvium near Barrel Springs in Palmdale have yielded fossilized bones and teeth representing a taxonomically diverse faunal assemblage that includes mostly extinct species of early to middle Pleistocene (Ice Age) land mammals. The remains from the Older Quaternary Alluvium are scientifically highly important because of their taxonomic diversity and, particularly with regard to those of the packrat, have allowed the determination of the age of the formation.

Pending further investigation, the occurrence of several previously recorded fossil sites in the Project region indicates that there is an undetermined (but probably no more than a moderate) potential for additional similar fossil remains being encountered at unrecorded fossil sites where the Project site is underlain by this rock unit. Therefore, the Older Quaternary Alluvium is of undetermined (but likely no more than moderate) paleontological importance.

#### *Younger Quaternary Alluvium*

The Younger Quaternary Alluvium comprises undissected and unconsolidated layers of alluvial gravel, sand, and silt of valley areas (PEA 2009). This rock unit is exposed within much of the Project site. The literature review, archival search, and field survey conducted in support of this inventory did not document the occurrence of any previously recorded fossil site in the Younger Quaternary Alluvium within the Project site or the immediate vicinity. However, several sites—including fossils of a leopard lizard, gopher, and a large land mammal—lie east of Little Rock Wash in Palmdale and near General William J. Fox Airfield in Lancaster, from 0 to 10 feet below the surface and, like the Project site, are at elevations above 2,325 feet above msl, which is the highstand of ancient Lake Thompson (including Rosamond Lake).

Pending further investigation, the occurrence of several previously recorded fossil sites in the Project region indicates that there is an undetermined (but probably no more than a moderate) potential for additional similar fossil remains being encountered at unrecorded fossil sites where the Project site is underlain by this rock unit and at depths greater than five feet below the current ground surface. Therefore, the Younger Quaternary Alluvium is of undetermined (but likely no more than moderate) paleontological importance at such depths (more than five feet below ground surface).

On the other hand, at depths less than five feet below the current ground surface, any remains probably would be too young to be considered fossilized. Therefore, the Younger Quaternary Alluvium is of low paleontological importance at such shallow depths.

### **5.6.1 PROJECT DESIGN FEATURES**

No project design features for cultural resources have been identified. However, design of the Project incorporated data from the archaeological and paleontological evaluations performed on the site. Specifically, identified archaeological and historical sites are known to be, or are assumed to be, eligible for the CRHR and were avoided wherever feasible, and are outside the development footprint in open space areas. Sites were assumed CRHR-eligible without evaluation to provide a conservative assessment. Sites within the 50-foot construction buffer zone were also evaluated for CRHR eligibility. The specific

locations of these sites cannot be disclosed in the EIR because of confidentiality issues associated with archaeological sites.

### 5.6.2 THRESHOLD CRITERIA

The following significance threshold criteria are derived from the County of Los Angeles Environmental Checklist. The Project would result in a significant impact related to cultural resources if it would:

- Threshold 6-1** Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines.
- Threshold 6-2** Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines.
- Threshold 6-3** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or contain rock formations indicating potential paleontological resources.
- Threshold 6-4** Disturb any human remains, including those interred outside of dedicated cemeteries.
- Threshold 6-5** Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- Threshold 6-6** Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

### 5.6.3 ENVIRONMENTAL IMPACTS

- Threshold 6-1** Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines?
- Threshold 6-2** Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines?
- Threshold 6-5** Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
- Threshold 6-6** Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

#### On-Site Impacts

As discussed previously, archaeological field surveys resulted in the identification of 57 archaeological sites (see Table 5.6-1, Archaeological and Historic Resources within the Project Boundaries). As noted in Table 5.6-1, sites are distinguished by location either within the development footprint or within open space areas, as discussed further below.

#### *Sites Located within the Development Footprint*

As identified in Table 5.6-1 above, there are a total of 26 prehistoric and historic archaeological sites within the development footprint. The archaeological testing of these sites concluded that three prehistoric sites (CA-LAN-3201, CA-LAN-3240 and CA-LAN-3242) are eligible for CRHR listing. As such, these sites are considered to be significant archeological resources pursuant to Section 15064.5(a)(3) of the State CEQA Guidelines. Each of these three sites is discussed further below.

Sites CA-LAN-3240 and CA-LAN-3242 both have archaeological deposits that extend to about 20 cm in depth. Site CA-LAN-3240 had the largest artifact assemblage recovered, including 5 flake tools, used for small cutting and scraping tasks; 27 secondary and tertiary waste flakes, resulting from lithic tool manufacture and maintenance; and 1 core. The predominance of smaller (secondary and tertiary as opposed to larger primary) waste flakes, the limited number of cores, and the absence of angular shatter indicate that quarrying and primary lithic reduction were not significant activities at this site. Although it could not be relocated in 2015, a metate was present when this site was originally recorded in 2002, indicating that some amount of plant processing also occurred at this location.

Site CA-LAN-3201 is marked by a large sandstone outcrop that contains 11 prehistoric cupule petroglyphs arranged in short lines. Cupule sites in this region appear to have been used ethnographically in rituals for adolescent girls. Test excavations of this site were conducted by WSC in 2007; these excavations failed to identify a subsurface component associated with the petroglyphs; however, due to its association with Native American religious rites, the site is considered significant.

Lithic materials present at CA-LAN-3240 were diverse. Many of these are locally available, though not necessarily on the site per se, but one obsidian flake was recovered. The closest obsidian source to the Project site is in the Coso Mountains, roughly 130 miles to the northeast, making this the most likely source for this material and, in any case, indicating that the site's occupants were involved in some degree of long-distance trade. No temporal diagnostics were recovered from the site. The Coso obsidian trade in this portion of California primarily occurred between about 4000 to 800 Years Before Present (YBP), or mostly during the Middle Horizon, however. This suggests (but does not prove) that this site may be 800 years old or more. The low subsurface artifact density of this site, regardless of its age, suggests occasional but non-intensive occupation, probably by a small group (such as a single family). Site CA-LAN-3240 can be interpreted as a dispersal phase campsite based on this fact, most likely associated with the Spring-season exploitation of locally available plant resources.

Site CA-LAN-3242, had a small artifact assemblage, limited to ten specimens, including two cores, five secondary and tertiary flakes, two pieces of angular shatter, and three core/cobble complex tools. Despite the limited size of this assemblage, it contains a high diversity of kinds of artifacts relative to many of the other sites. The cores and angular shatter are indicative of quarrying and primary lithic reduction, whereas the three obsidian tertiary flakes are more characteristic of tool maintenance, found at occupation sites. This suggests that the site served as a campsite, with the subsurface deposition of lithic materials resulting from the site's location, at the toeslope of a ridge, providing a natural upslope source for soil deposition. As noted above in reference to CA-LAN-3240, the presence of obsidian at CA-LAN-3242 is indicative of long distance trade, and suggests that the site may have been occupied sometime between roughly 4000 and 800 YBP.

#### Tribal Cultural Resources (AB 52 Consultation)

Consistent with AB 52 requirements, the County, as lead agency, initiated the offer of consultation to the tribes that have submitted to the County of Los Angeles a request to be consulted. Subsequently, the County received correspondence from both the Fernandeño

Tataviam Band of Mission Indians (Tataviam Tribe) dated November 17, 2016 and the Tejon Indian Tribe (Tejon Tribe) dated October 25, 2016 regarding consultation concerning topics such as the assessment of tribal resources, Project impact to tribal resources, mitigation measures, and access to surveys and reports related to the assessment. Prior to submittal of these written correspondences, both Tribes communicated with the County via email regarding the status of their responses to the consultation request and the communications between the two Tribes regarding the Project. In addition, the Tejon Ranch Company (TRC) has coordinated extensively with the Tejon Tribe separate from, and prior to, the consultation required by CEQA. Based on this and the associated review by the Tejon Tribe of the Project cultural resources studies, the written correspondence from the Tejon Tribe states that the Tataviam Tribe has “deferred to the Tejon Tribe’s support of the adequacy of the cultural resource studies...”. The Tataviam Tribe has recommended the Tejon Tribe be the lead tribal consultants, and that the Tataviam will provide future comments through the Tejon (Tataviam Tribe 2016). The Tejon Tribe reports that current considerations to protect tribal resources include, but are not limited to, employing Native American monitors from the Tejon Tribe and the permanent curation of any prehistoric artifacts/Tribal Cultural Resources collected during construction of the Project (Tejon Tribe 2016). Consistent with the expectations of the Tejon Tribe through coordination with the TRC, the MMs for the Project incorporate Native American monitoring by the Tejon Tribe and recovered archaeological resources shall be offered on a first refusal basis to the County (as Lead Agency) and/or its designee, which shall be the Tejon Indian Tribe.

### Conclusion

Because these three archaeologically significant sites are within the grading footprint, grading and other construction activities, including fuel modification, would directly impact these sites. This represents a significant environmental impact and mitigation would be required. Impacts to these three sites would be mitigated through avoidance by means of monitoring by a qualified Archaeologist and a Native American monitor representing the Tejon Indian Tribe during construction, and either Project redesign, preservation through restricted access or, if that is not feasible, through a Phase III data recovery program (MM 6-1 and MM 6-3). MM 6-2 requires these three sites, and two others, to be protected by fencing during construction to ensure avoidance of the resource, and MM 6-4 provides further protective measures if necessary. Excavated finds shall be offered to the County of Los Angeles and/or its designee (i.e., the Tejon Indian Tribe) on a first refusal basis (MM 6-1 and 6-3); the Tejon Indian Tribe can then make a determination whether the find is a significant tribal cultural resource and opt to accept the resource for curation in its facility). With implementation of MMs 6-1, 6-2, 6-3, and 6-4, impacts to sites CA-LAN-3201, CA-LAN-3240, and CA-LAN-3242 would be reduced to a less than significant level.

Implementation of the Project would result in a less than significant impact to the 24 sites within the development footprint that have been determined ineligible for CRHR or are not cultural resources, and no mitigation is required; however, as testing may not have recovered all significant materials, these sites and a reasonable radius around them will be monitored during grading.

Table 5.6-3 lists the mitigation measures that will reduce all impacts to resources within the development footprint to a less than significant level.

**TABLE 5.6-3  
MITIGATION MEASURES FOR RESOURCES IN  
DEVELOPMENT FOOTPRINT**

<b>Trinomial</b>	<b>CRHR Eligibility</b>	<b>Mitigation Measures</b>
CA-LAN-3201	Eligible	MM 6-1; MM 6-2; MM 6-3;MM 6-4
CA-LAN-3202H	Ineligible	MM 6-1
CA-LAN-3219H	Ineligible	MM 6-1
CA-LAN-3230	Ineligible	MM 6-1
CA-LAN-3232	Ineligible	MM 6-1
CA-LAN-3233	Ineligible	MM 6-1
CA-LAN-3234	Ineligible	MM 6-1
CA-LAN-3235	Ineligible	None
CA-LAN-3236	Ineligible	MM 6-1
CA-LAN-3237	Ineligible	MM 6-1
CA-LAN-3238	Ineligible	MM 6-1
CA-LAN-3239	Ineligible	MM 6-1
CA-LAN-3240	Eligible	MM 6-1; MM 6-2; MM 6-3; MM 6-4
CA-LAN-3241	Ineligible	MM 6-1
CA-LAN-3242	Eligible	MM 6-1; MM 6-2; MM 6-3; MM 6-4
CA-LAN-3243	Ineligible	MM 6-1
CA-LAN-3244	Ineligible	MM 6-1
CA-LAN-3245	Ineligible	MM 6-1
CA-LAN-3246	Ineligible	MM 6-1
CA-LAN-3247	Ineligible	MM 6-1
CA-LAN-3248	Ineligible	MM 6-1
CA-LAN-3249	Ineligible	None
CA-LAN-3250	Ineligible	MM 6-1
CA-LAN-3251	Ineligible	MM 6-1
CA-LAN-3252	Ineligible	MM 6-1
CA-LAN-3253	Ineligible	MM 6-1
CA-LAN-3985H	Ineligible	MM 6-1

### ***Sites Located within the Open Space Areas***

As identified in Table 5.6-1 above, there are a total of 30 prehistoric archaeological sites within open space areas (i.e., areas outside the development footprint), including 27 prehistoric archaeological sites and 3 historic-period sites. The CRHR eligibility of 18 of the 30 total sites located within Open Space-designated areas has been determined through archaeological testing. Of the 18 sites evaluated, 1 site (CA-LAN-3206) has been determined eligible and 17 sites have been determine ineligible. The CRHR eligibility of the remaining 12 sites has not been evaluated to date, as these sites have never been within an anticipated

development (i.e., grading) footprint during the evolution of the Project design. For the 12 sites whose eligibility for the CRHR is unknown, because these resources have not yet been formally evaluated, it is assumed that the sites are historically significant until, and unless, evaluation proves otherwise. Because these 12 sites are outside the development footprint, direct impacts during grading and other construction activities are not expected. However, site CA-LAN-3227 is immediately adjacent the development footprint. Because of its proximity, the site could suffer damage during grading activities. Because site CA-LAN-3227 is assumed CRHR-eligible, this would be considered a potential significant direct impact. Therefore, MM 6-1 requires monitoring by a qualified Archaeologist and a Native American monitor representing the Tejon Indian Tribe (pursuant to AB 52 consultation as described above) when grading is in the vicinity of these sites (MM 6-1); MM 6-2 requires the sites to be fenced off during construction to ensure avoidance of the resource; and MM 6-4 provides further protective measures if necessary. Excavated finds shall be offered to the County of Los Angeles and/or its designee (i.e., the Tejon Indian Tribe) on a first refusal basis (MM 6-1); the Tejon Indian Tribe can then make a determination whether the find is a significant tribal cultural resource and opt to accept the resource for curation in the Tejon Tribe's facility. With implementation of MM 6-1, MM 6-2, and MM 6-4, potential direct impacts to site CA-LAN-3227 during construction would be reduced to a less than significant level.

Long-term operation of the Project would result in potential indirect impacts to the 12 sites with unknown eligibility and the 1 site located in the open space areas that is known to be eligible (CA-LAN-3206) due to increased access, by residents and visitors, to these areas of the site compared to the existing condition, wherein the sites are located entirely on private property. Because archaeological excavation is considered an adverse effect on an archaeological resource, avoidance and preservation of resources without excavation would be the preferred method of managing these sites. Therefore, MM 6-4 requires preparation of an Archaeological Resources Site-Protection Program aimed to protect and preserve identified archaeological resources that may be vulnerable to disturbance. The Archaeological Resources Site-Protection Program must include several alternatives to restrict access to these sites (e.g., fencing, planting, and capping), thereby protecting and preserving these sites. With implementation of MM 6-4, potential indirect impacts to site CA-LAN-3227 during grading/construction would be reduced to a less than significant level.

For the 17 sites determined to be ineligible, Project implementation would result in no impacts to these sites and no mitigation is required.

Table 5.6-4 lists the mitigation measures that would reduce all direct and indirect impacts to archaeological resources in open space areas to a less than significant level.

**TABLE 5.6-4  
MITIGATION MEASURES FOR RESOURCES WITHIN OPEN  
SPACE AREAS**

<b>Trinomial</b>	<b>CRHR Eligibility</b>	<b>Mitigation Measures</b>
CA-LAN-3195	Not evaluated	MM 6-4
CA-LAN-3196	Not evaluated	MM 6-4
CA-LAN-3197	Not evaluated	MM 6-4
CA-LAN-3198	Not evaluated	MM 6-4
CA-LAN-3199	Ineligible	None
CA-LAN-3200	Not evaluated	MM 6-4
CA-LAN-3203	Not evaluated	MM 6-4
CA-LAN-3204H	Ineligible	None
CA-LAN-3205	Ineligible	None
CA-LAN-3206	Eligible	MM 6-2, MM 6-4
CA-LAN-3207	Not evaluated	MM 6-4
CA-LAN-3208	Not evaluated	MM 6-4
CA-LAN-3209	Ineligible	None
CA-LAN-3210	Not evaluated	MM 6-4
CA-LAN-3211	Ineligible	None
CA-LAN-3212	Ineligible	None
CA-LAN-3213	Ineligible	None
CA-LAN-3214	Not evaluated	MM 6-4
CA-LAN-3215	Ineligible	None
CA-LAN-3216H	Ineligible	None
CA-LAN-3217	Not evaluated	MM 6-4
CA-LAN-3218H	Ineligible	None
CA-LAN-3220	Ineligible	None
CA-LAN-3223	Ineligible	None
CA-LAN-3224	Ineligible	None
CA-LAN-3225	Ineligible	None
CA-LAN-3226	Ineligible	None
CA-LAN-3227	Not evaluated	MM 6-1, MM 6-2, MM 6-4
CA-LAN-3229	Ineligible	None
CA-LAN-3231	Ineligible	None

## Off-Site Impacts

No known significant cultural resources are associated with the proposed off-site access roads, off-site utility connections, and California Aqueduct crossings; therefore, no impacts are anticipated. However, the potential for these resources to be present is the same as those for other aspects of the Project.

There are no existing structures at any of the proposed off-site well locations, and there are no known historical or archaeological resources based on cultural resources records

searches conducted for the Project site and surrounding area, including the well sites. However, construction of the proposed wells would involve rotary drilling into native soils, and would have the potential to impact unknown archeological resources if such resources were directly beneath the well site. Also, installation of the proposed pipelines would involve trenching to depths of approximately five feet. Implementation of MM 6-1, requiring a qualified Archaeologist and a Native American monitor representing the Tejon Indian Tribe to observe excavation activities for evidence of archeological resources, would reduce potential impacts to a less than significant level. Therefore, impacts would be reduced to a less than significant level with the incorporation of MM 6-1.

Off-site work requires the construction of a bridge crossing the West Branch of the California Aqueduct as well as improvements to two existing bridges. As proposed, the bridge construction and improvements will have no adverse effect on the potentially historically significant canal. The architectural design of the new bridge will be similar in character to the other bridges that already span the channel. While the Project would add a new bridge over the canal, in the context of the Aqueduct being a long linear feature, there would be no direct or indirect adverse effect and no cumulative effect due to the length of the property. Further, the footings and abutments of the new bridge will be located outside the potential National Register of Historic Places (NRHP) boundaries of the historic canal. The short bridge crossings over the canal do not diminish the historic character nor significant qualities that may qualify the West Branch of the California Aqueduct for NRHP eligibility.

***Impact Summary:*** A combination cultural resources survey/evaluation has been undertaken on the Project site. The survey was comprehensive, covering the entirety of the Project area. CRHR-eligibility evaluations were limited largely to sites in areas where impacts associated with the proposed development impact area are anticipated, although some of the sites within the preserved open space areas were also evaluated early in the Project development phase when site impacts were different. CRHR-eligible resources within the development impact area (CA-LAN-3201, CA-LAN-3240 and CA-LAN-3242) or that are within an open space area, but adjacent to the grading footprint and may be indirectly impacted by Project implementation (CA-LAN-3227) were defined and mitigation measures developed (MM 6-1, MM 6-2, MM 6-3, and MM 6-4, below), which will reduce all direct and indirect impacts to a less than significant level. Less than significant impacts are associated with those resources found not to be a “unique” or “historical resource” through Phase II testing and evaluation, and are therefore not eligible for listing in the CRHR.

Resources outside the development impact area (i.e., those contained within the preserved open space areas that have been evaluated as eligible ( CA-LAN-3206) or those not yet evaluated [CA-LAN-3195, CA-LAN-3196, CA-LAN-3197, CA-LAN-3198, CA-LAN-3200, CA-LAN-3203, CA-LA-3207, CA-LAN-3208, CA-LAN-3210, CA-LAN-3214, and CA-LAN-3217] are assumed significant and are subject to preservation until such time as formal evaluation is necessitated and completed.

Mitigation measures developed (MM 6-4) will reduce direct and indirect impacts to these resources to a less than significant level.

**Threshold 6-3**      **Would the project directly or indirectly destroy a paleontological resource or site or unique geologic feature, or contain rock formations indicating potential paleontological resources?**

### **On-Site Impacts**

As previously discussed, the Project site is underlain by four sedimentary units that potentially contain fossil resources: Older and Younger Quaternary Alluvium, the Quail Lake Formation, and the Oso Canyon Formation. The presence of fossil localities and sedimentary units known to contain fossil materials indicates that there is a potential for unidentified, significant, non-renewable paleontological resources. Damage to an important paleontological resource is a significant impact under CEQA. As such, implementation of the Project would have a potentially significant direct impact on paleontological resources during construction (i.e., brushing, grading, trenching, and other earth-moving activities) and a potentially significant indirect impact due to increased accessibility, which would result in unauthorized fossil collecting and removal. Mitigation of these potential Project impacts includes measures for salvage of presently exposed fossils prior to and during grading; for monitoring during earth-moving activities; for temporary isolation of discovered fossil resources; and for fossil recovery, preservation, reporting, and curation (see MMs 6-5, 6-6, 6-7, 6-8, and 6-9). With implementation of these mitigation measures, potential direct and indirect impacts would be reduced to a less than significant level.

### **Off-Site Impacts**

While there are no known paleontological resources at the locations of proposed off-site intersections with SR-138, utility connections, and California Aqueduct crossings, the potential for these resources to be present exists, as it does throughout much of the Project site. Construction of the proposed wells would involve rotary drilling into native soils, which would have the potential to impact unknown paleontological resources if such resources were directly beneath the well site. Also, installation of the proposed off-site pipeline would involve shallow trenching to depths of approximately five feet. Implementation of MMs 6-5, 6-6, 6-7, 6-8, and 6-9—which require a Paleontological Monitor, evaluation of significant fossils if recovered, and a museum storage agreement if fossils are discovered—are also applicable to off-site locations and their implementation would reduce potential impacts to a less than significant level.

**Impact Summary:** Direct evidence indicates the presence of paleontological resources in the Project area, and geologic evidence from adjacent areas with similar sedimentary formations indicates a high likelihood of encountering additional resources during Project development. Potential direct and indirect impacts would be reduced to a less than significant level with implementation of MM 6-5, MM 6-6, MM 6-7, MM 6-8, and MM 6-9.

**Threshold 6-4**      **Would the project disturb any human remains, including those interred outside of dedicated cemeteries?**

**On-Site Impacts**

No direct evidence of human remains has been found as a result of the Phase I survey and Phase II testing and evaluation of identified archaeological sites. Based on these data, no disturbance of human remains is anticipated as a result of the Project. However, the presence of substantial numbers of prehistoric archaeological sites within the Project site, especially those with buried deposits, increases the likelihood that human remains may be present. Implementation of MM 6-10, which ensures adherence to State regulations, would reduce potential impacts related to the discovery of unknown human remains to a less than significant level.

**Off-Site Impacts**

There are no known burial grounds or evidence of them at the locations of proposed off-site Project features, including intersections with SR-138, utility connections, water wells, and California Aqueduct crossings. However, there is always the potential to encounter unknown remains. As with Project implementation, MM 6-10 ensures adherence to State regulations and would reduce potential impacts to a less than significant level.

***Impact Summary:*** No direct evidence of human remains has been found as a result of archaeological surveys. However, the presence of prehistoric archaeological sites within the Project site, especially those with buried deposits, increases the likelihood that burials may be present. Implementation of MM 6-10, which ensures adherence to State regulations, would reduce potential impacts related to the discovery of unknown human remains during implementation of the Project and off-site features to a less than significant level.

**5.6.4 MITIGATION MEASURES**

**MM 6-1**      The Project Applicant/Developer shall retain a qualified Archaeologist who shall oversee archaeological monitoring of topsoil grading and removals (including clearing, grubbing, and trenching) in the immediate vicinity of the following 25 archaeological sites that are within the grading footprint and 1 site in the open space area that is immediately adjacent to the development impact area: CA-LAN-3201, CA-LAN-3202H, CA-LAN-3219H, CA-LAN-3227, CA-LAN-3230, CA-LAN-3232, CA-LAN-3233, CA-LAN-3234, CA-LAN-3236, CA-LAN-3237, CA-LAN-3238, CA-LAN-3239, CA-LAN-3240, CA-LAN-3241, CA-LAN-3242, CA-LAN-3243, CA-LAN-3244, CA-LAN-3245, CA-LAN-3246, CA-LAN-3247, CA-LAN-3248, CA-LAN-3250, CA-LAN-3251, CA-LAN-3252, CA-LAN-3253, and CA-LAN-3985H. CA-LAN-3227 is the site immediately adjacent to the grading footprint. Additionally, a Native American monitor representing the Tejon Indian Tribe shall be present during topsoil grading and removals in the vicinity of the 26 above-listed archaeological sites.

The Project Applicant/Developer shall provide written evidence to the County that a qualified Archaeologist has been retained; shall be present at the pre-grading meeting; shall establish procedures for archaeological resource surveillance, including coordination with representatives of the Tejon Indian Tribe on the location and schedule of Native American monitoring; and shall establish (in cooperation with the Project Applicant/Developer and/or County as well as the Tejon Indian Tribe) procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of any artifacts found, as appropriate.

The qualified Archaeologist shall develop and submit an Archaeological Resource Monitoring Plan to the County for sites in development areas. The qualified Archaeologist and a Native American monitor representing the Tejon Indian Tribe shall be retained to attend pre-grade meetings and to monitor earth-moving activities, including clearing, grubbing and trenching, in the vicinity (i.e., the area of a site reasonably expected to contain archaeological resources plus a buffer of at least 10 meters [33 feet]) of any and/or all cultural resource sites. The Archaeologist and Native American monitor shall carefully inspect these areas to assess the potential for significant prehistoric or historic remains. If potentially significant archaeological resources are uncovered, a subsurface test and/or evaluation shall be performed to assess the discovery. Further subsurface investigation or data recovery shall be undertaken if the resource is determined unique or historically significant (i.e., important for its prehistoric or historic information) and therefore eligible for the California Register of Historical Resources (CRHR).

The archaeological procedures shall be incorporated as a note on the Grading Plan cover sheet. If additional or unexpected archaeological features are discovered, the qualified Archaeologist shall report such findings in writing to the County and/or the Tejon Indian Tribe. If archaeological resources are found to be of possible significance, the qualified Archaeologist shall determine appropriate actions, in cooperation with the County and the Tejon Indian Tribe, for further exploration and/or salvage.

The Archaeologist shall submit a Follow-up Report to the County. The Follow-up Report shall include the period of inspection; an analysis of any artifacts found; and the present repository of the artifacts. Recovered finds shall be offered to the County of Los Angeles and the Tejon Indian Tribe on a first refusal basis. If the artifacts are refused, the Project Applicant/Developer may retain said finds if written assurance is provided that they will be properly preserved in Los Angeles County, unless (1) said finds are of special significance or (2) a museum in the County of Los Angeles indicates a desire to study and/or display them, in which case the items shall be donated to the County or its designee. If the Project Applicant/Developer provides no such assurance, the County shall retain the artifacts and shall be subject to the same stipulations set forth in this mitigation measure for disposition of artifacts.

These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the County.

The Project Applicant/Developer shall retain a certified Archaeologist who will perform a Phase II subsurface test-level investigation and surface collection for archaeological resource sites of undetermined CRHR eligibility discovered during monitoring. A Phase II Test-level Report shall be completed that evaluates the sites; includes a discussion of the sites' significance (depth, nature, condition, and extent of the resources); and contains recommendations for final mitigation and cost estimates (if required) to fully mitigate significant impacts. Should the Phase II subsurface test-level investigation and surface collection determine the potential presence of significant subsurface resources, the site shall be mitigated to a less than significant level through the implementation of one of the mitigation options discussed below.

- a. Relocation of grading boundaries and fuel modification zones to completely avoid disturbance to the site(s). Should boundary relocation be infeasible, a qualified Archaeologist shall be present in the vicinity of archaeological resources during grading and fuel modification brush clearance. (**NOTE:** confidential archaeological mapping is on file at the Natural History Museum of Los Angeles County and the South Central Coastal Information Center [SCCIC] at California State University, Fullerton. Review of this material is restricted to qualified individuals and project proponents on a need to know basis.) Fencing shall be erected outside the sites to visually depict the areas to be avoided during construction.
- b. If it is determined that avoidance and/or preservation are not feasible, then prior to grading in the vicinity of archaeological resources, Phase III data recovery (salvage excavations) shall be conducted for these archaeological sites or any other sites within the potential impact area of development that cannot be avoided. (**NOTE:** confidential archaeological mapping is on file at the Natural History Museum of Los Angeles County and the SCCIC. Review of this material is restricted to qualified individuals and project proponents on a need to know basis.) The Phase III work shall provide sufficient scientific information to fully mitigate the impacts of development on these sites to a level considered less than significant and shall be performed in accordance with the standards of the State Historic Preservation Office (SHPO).

Excavated assemblages shall be offered to the County and/or the Tejon Indian Tribe on a first refusal basis. If the artifacts are refused, the Project Applicant/Developer may retain said finds if written assurance is provided that they will be properly preserved in Los Angeles County, unless (1) said finds are of special significance or (2) a museum in the County of Los Angeles indicates a desire to study and/or display them, in which case the items shall be donated to the County or its designee. If the Project Applicant/Developer

provides no such assurance, the County shall retain the artifacts and shall be subject to the same stipulations set forth in this mitigation measure for disposition of artifacts. Final mitigation shall be carried out based upon the recommendations in the Phase II Test-Level Report, and the County of Los Angeles Department of Regional Planning shall make a determination as to the site's disposition based on the recommendations of the qualified Archaeologist. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary.

**MM 6-2** Archaeological sites CA-LAN-3201, CA-LAN-3206, CA-LAN-3227, CA-LAN-3240, and CA-LAN-3242 shall be surrounded with high visibility construction fencing with a buffer of approximately 50 feet around each site to ensure that the archaeological sites are completely avoided during construction-related activities. A qualified Archaeologist shall work with surveying teams and the Construction Supervisor to fence the area to be avoided prior to the commencement of grading.

**MM 6-3** The Project Applicant/Developer shall retain a qualified Archaeologist to mitigate impacts to eligible archaeological sites within the development impact area. Additionally, and a Native American monitor representing the Tejon Indian Tribe shall be present during ground-disturbing activities (i.e, topsoil grading and removals) in the vicinity of the three below-listed archaeological sites. Impacts to these eligible sites (CA-LAN-3201, CA-LAN-3240, and CA-LAN-3242) shall be mitigated to a less than significant level through the implementation of one of the mitigation options described below.

- a. Relocation of grading boundaries and fuel modification zones to completely avoid disturbance to the site(s). Should boundary relocation be infeasible, a qualified Archaeologist and a Native American monitor representing the Tejon Indian Tribe shall be present in the vicinity of archaeological resources during grading and fuel modification brush clearance to monitor all activities and ensure that archaeological resources are not impacted. (**NOTE:** confidential archaeological mapping is on file at the Natural History Museum of Los Angeles County and the SCCIC. Review of this material is restricted to qualified individuals and project proponents on a need to know basis.) Fencing shall be erected outside the sites to visually depict the areas to be avoided during construction. Any temporary fencing materials (i.e., plastic web, chain link, etc.) placed during construction should not become permanent. Any permanent fencing erected to protect the sites should be visually pleasing and consistent with the overall aesthetic experience of the community of Centennial.
- b. If avoidance and/or preservation are not feasible, then prior to grading in the vicinity of archaeological resources, Phase III data recovery (salvage excavations) shall be conducted for these archaeological sites or any other sites within the potential impact area of development that cannot be avoided. (**NOTE:** confidential archaeological mapping is on

file at the Natural History Museum of Los Angeles County and the SCCIC. Review of this material is restricted to qualified individuals and project proponents on a need to know basis.) The Phase III work shall provide sufficient scientific information to fully mitigate the impacts of development on these sites and shall be performed in accordance with the standards of the SHPO.

Excavated finds shall be offered to the County and/or the Tejon Indian Tribe on a first refusal basis. If the artifacts are refused, the Project Applicant/Developer may retain said finds if written assurance is provided that they will be properly preserved in Los Angeles County, unless (1) said finds are of special significance or (2) a museum in the County of Los Angeles indicates a desire to study and/or display them, in which case the items shall be donated to the County or its designee. If the Project Applicant/Developer provides no such assurance, the County shall retain the artifacts and shall be subject to the same stipulations set forth in this mitigation measure for disposition of artifacts. Final mitigation shall be carried out based upon the recommendations in the Phase II Test-Level Report, and the County shall make a determination as to the site's disposition based on the recommendations of the qualified Archaeologist and the Native American monitor representing the Tejon Indian Tribe. Possible determinations include, but are not limited to, preservation, salvage, partial salvage, or no mitigation necessary.

**MM 6-4** The Project Applicant/Developer shall develop and implement an Archaeological Resources Site-Protection Program aimed to protect and preserve identified archaeological resources vulnerable to disturbance. This program shall be prepared by the qualified monitoring Archaeologist familiar with the resources present within the Project boundaries and approved by the County and shall include implementation of one or more of the following:

- a. Fencing and/or other access-restriction methods shall be placed around the archaeologically sensitive areas of the Project site to inhibit human access. This is especially applicable to site CA-LAN-3227.
- b. Non-invasive plant species with thorns (e.g., prickly pear cactus [*Opuntia* spp.]) or other deterrent characteristics shall be planted in areas close to known resources in order to discourage human presence; this is generally applicable to the majority of sites to be preserved in areas of native vegetation.
- c. Known resources shall be capped with a layer of chemically inactive soil/sediment, in consultation with a qualified Archaeologist. This is especially applicable to sites CA-LAN-3201, CA-LAN-3206, CA-LAN-3240, and CA-LAN-3242.

The above-mentioned mitigation shall be implemented prior to the completion of construction activities and shall be overseen by the County

and/or the Tejon Indian Tribe. The qualified Archaeologist shall prepare a written statement documenting appropriate site-protection measures. Additionally, a Native American monitor representing the Tejon Indian Tribe shall be present during all initial surface grubbing, initial ground surface grading, and any excavation greater than one-half foot in depth. For implementation of each tract map, if no subsurface Native American or archaeological remains are identified during that initial grading, continuous monitoring will no longer be required but the Native American monitor shall spot-check all additional subsurface excavations at least once a week for the duration of grading and excavation activities or until monitor deems site clear. The Project Archaeologist shall be responsible for coordinating the location and schedule of Native American monitors.

**MM 6-5** For the exposed paleontological resources discovered during the Paleo Environmental Associates (PEA) 2009 study (as detailed in the document entitled *Paleontologic Resource Inventory and Impact Assessment Technical Report prepared in support of Centennial Specific Plan, western Antelope Valley, northern Los Angeles County, California*) and any paleontological resources uncovered during grading or excavation activities in or out of the presence of a Monitor, grading activities will be stopped and diverted to a part of the site reasonably away from the find (highly dependent on the size and complexity of the resource), and a qualified Paleontologist shall (1) ascertain the significance of the resources; (2) establish protocol with the Project Applicant/Developer to protect (or mitigate impacts to) such resources; (3) ascertain the presence of additional resources; and (4) provide additional monitoring of the site, if the Monitor deems it appropriate.

**MM 6-6** A Paleontological Treatment and Monitoring Plan (PTMP) shall be developed by a qualified Paleontologist retained by the Project Applicant/Developer. The PTMP shall be reviewed and approved by the County. This plan shall include a protocol for examining, evaluating, and (if necessary) salvaging known fossil localities identified during the PEA (2009) study (as detailed in the document entitled *Paleontologic Resource Inventory and Impact Assessment Technical Report prepared in support of Centennial Specific Plan, western Antelope Valley, northern Los Angeles County, California*); a grading observation schedule shall be maintained when grading occurs within sedimentary rock units so that the Paleontologist may identify and evaluate fossil resources within the Project site. This qualified Paleontologist shall be retained to attend pre-grade meetings and to monitor deep earth-moving activities (including grading, cutting, and trenching) at the site. Paleontological monitoring shall be conducted by a qualified Paleontologist during grading and other excavation work. Recommended hours for monitoring activities shall be established by the qualified Paleontologist and shall be outlined in the PTMP. It shall be the responsibility of the qualified Paleontologist to demonstrate, to the satisfaction of the County, the appropriate level of monitoring necessary based on the tentative map-level grading plans. The qualified Paleontologist shall carefully inspect PTMP-identified areas in order to assess the potential for

significant fossil remains. If potential paleontological resources are uncovered, a subsurface evaluation will be performed to assess the discovery. Further subsurface investigation will be undertaken if the resource is determined unique or important for its paleontological information. Because of the potential for producing small fragments of vertebrate microfossils, the Paleontologist shall conduct reasonable, periodic screening of sands from cuts in these units. Such material may be removed in bulk and screened off site for further analysis.

**MM 6-7** The qualified Paleontologist retained by the Project Applicant/Developer shall coordinate with appropriate construction contractor personnel to provide information concerning the protection of paleontological resources. Contractor personnel shall be informed that unauthorized fossil collecting is prohibited. The contractor's heavy equipment operators shall be briefed on procedures to be followed in the event that fossil remains and a fossil site are encountered during earth-moving activities (grading or blasting). The briefing shall be presented to new contractor personnel as necessary. Names and telephone numbers of the Monitor and other appropriate mitigation program personnel shall be provided to appropriate contractor personnel and to the County.

**MM 6-8** The qualified Paleontologist shall initiate and coordinate recovery operations with the Project Applicant/Developer and the County of Los Angeles for any significant fossil localities identified in the Paleo Environmental Associates 2009 document entitled *Paleontologic Resource Inventory and Impact Assessment Technical Report prepared in support of Centennial Specific Plan, western Antelope Valley, northern Los Angeles County, California* as well as if significant fossils are exposed during any Project-related grading pursuant to the PTMP. To initiate recovery operations, the Paleontologist shall be allowed to divert or direct grading in the area of exposure to facilitate evaluation and, if identified as potentially significant, to recover significant fossils. The qualified Paleontologist shall notify the Construction Foreman of the discovery of fossil resources and shall discuss recovery methods and the timeline needed to evaluate the find. If a fossil discovery occurs during grading operations when the Paleontologist is not present, grading shall be diverted a reasonable distance away from the area until the qualified Paleontologist can survey the area, conduct recovery operations, and make an assessment on the significance of the find.

**MM 6-9** A formal museum storage agreement shall be developed between the Project Paleontologist and an accredited institution. Any fossils and their contextual stratigraphic data that are collected during development shall be prepared and identified by a qualified Paleontologist. Excavated significant fossil finds shall be donated with funding for stabilization, identification, and curation on a first right-of-refusal basis to an appropriate, accredited institution that has a retrievable collection system and an educational and research interest in the materials (e.g., the Natural History Museum of Los Angeles County). A final

report prepared by the qualified Paleontologist that details the discovery, recovery, laboratory analysis, and findings and disposition of specimens shall be submitted to the County.

**MM 6-10** In accordance with *California Code of Regulations* (Title 14, Section 15064.5[e]), in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the Los Angeles County Coroner must be notified of the discovery (*California Health and Safety Code*, Section 7050.5) and all activities in the immediate area of the find or in any nearby area reasonably suspected to overlie adjacent human remains must cease until appropriate and lawful measures have been implemented. If the Coroner determines that the remains are not recent, but rather of Native American origin, the Coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours to permit the NAHC to determine the Most Likely Descendent (MLD) of the deceased Native American. The designated MLD may make recommendations to the Project Applicant/Developer or the person responsible for the excavation work, for means of treating or reassignment of the human remains and any associated grave goods with appropriate dignity, as provided in *California Public Resources Code*, Section 5097.98. If any of the following occurs, the Project Applicant/Developer shall rebury the Native American remains and the associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance: (1) the NAHC is unable to identify an MLD; (2) the MLD fails to make a recommendation within 48 hours of being notified of the discovery; or (3) the Project Applicant/Developer /Landowner rejects the recommendation of the MLD and mediation by the NAHC fails to provide acceptable measures.

#### 5.6.4 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of specified mitigation measures, significant impacts to archaeological, tribal, historical, and paleontological resources from implementation of the Project would be reduced to a less than significant level.

#### 5.6.5 REFERENCES

ASM Affiliates. 2015 (September). *Phase I Survey of 768 Acres and Phase II Test Excavation of 20 Archaeological Sites, Centennial Project, Los Angeles County, California*. Tehachapi, CA: ASM (Appendix 5.6-D).

California, State of. 2015a (as amended). *California Code of Regulations*. (Title 14, Natural Resources; Division 6, Resources Agency; Chapter 3, Guidelines for Implementation of the California Environmental Quality Act). Sacramento, CA: the State.

———. 2015b (as amended). *California Public Resources Code* (Division 5, Parks and Monuments; Chapter 1.75, Native American Historical, Cultural, and Sacred Sites; Sections 5097.9–5097.991). Sacramento, CA: the State of California.

[http://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=PRC&division=5.&title=&part=&chapter=1.75.&article=.](http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=5.&title=&part=&chapter=1.75.&article=)

- . 2015c (January, effective date). *California Public Resources Code* (Division 13, Environmental Quality; Chapter 2.5, Definitions; Section 21074). Sacramento, CA: the State. [http://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=PRC&division=13.&title=&part=&chapter=2.5.&article=.](http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=13.&title=&part=&chapter=2.5.&article=)
- . 2015d (as amended). *California Public Resources Code* (Division 13, Environmental Quality; Sections 21080–21098). Sacramento, CA: the State. [http://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=PRC&division=13.&title=&part=&chapter=2.6.&article=.](http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=13.&title=&part=&chapter=2.6.&article=)
- . 2014 (January, as amended). *California Public Resources Code* (Division 5, Parks and Monuments; chapter 1, State Parks and Monuments; Article 2, Historic Resources; Sections 5020–5029.6). Sacramento, CA: the State of California. [http://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=PRC&division=5.&title=&part=&chapter=1.&article=2.](http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=5.&title=&part=&chapter=1.&article=2)
- . 2005a (as amended). *California Government Code* (Title 7, Planning and Land Use; Division 1, Planning and Zoning; Article 6, Preparation, Adoption, and Amendment of the General Plan; Section 65352.3). Sacramento, CA: the State. [http://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=GOV&division=1.&title=7.&part=&chapter=3.&article=6.](http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=GOV&division=1.&title=7.&part=&chapter=3.&article=6)
- . 2005b (January). *California Public Resources Code* (Division 5, Parks and Monuments; Chapter 1.76, Native American Historic Resource Protection Act; Sections 5097.993–5097.994). Sacramento, CA: the State. [http://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=PRC&division=5.&title=&part=&chapter=1.76.&article=.](http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=5.&title=&part=&chapter=1.76.&article=)
- . 1987. *California Health and Safety Code* (Division 7, Dead Bodies; Part 1, General Provisions; Section 7050.5). Sacramento, CA: the State of California. [http://leginfo.legislature.ca.gov/faces/codes\\_displayText.xhtml?lawCode=HSC&division=7.&title=&part=1.&chapter=2.&article=.](http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=7.&title=&part=1.&chapter=2.&article=)
- Harris, J.M. 2009 (August 12). Personal communication. Letter from J.M. Harris, Chief Curator (Natural History Museum of Los Angeles County, Division of Vertebrate Studies) to J. Lemieux, Special Projects (County of Los Angeles Department of Regional Planning (Appendix 5.6-E2).
- Crow Canyon Archaeological Center (Crow Canyon). 2017 (May 5, last accessed). *What is a Projectile Point?* Cortez, CO: Crow Canyon. [https://www.crowcanyon.org/EducationProducts/peoples\\_mesa\\_verde/projectile\\_point.asp.](https://www.crowcanyon.org/EducationProducts/peoples_mesa_verde/projectile_point.asp)
- Los Angeles County Department of Regional Planning (DRP). 2015a (June). *Antelope Valley Area Plan: Town & Country*. Los Angeles, CA: DRP. [http://planning.lacounty.gov/tnc.](http://planning.lacounty.gov/tnc)

- . 2015b (May 27, last accessed). Los Angeles County General Plan 2035. Los Angeles, CA: DRP. <http://planning.lacounty.gov/generalplan>.
- McLeod, S. 2006 (November 2). Paleontological Resources for the Proposed CentFou J001: Centennial Specific Plan, Los Angeles, County, project Area (Letter Report from Samuel McLeod to Ms. Caprice D. [Kip] Harper) (Appendix 5.6-E1).
- Paleo Environmental Associates (PEA). 2009 (April). *Paleontologic Resource Inventory and Impact Assessment Technical Report prepared in support of Centennial Specific Plan, western Antelope Valley, northern Los Angeles County, California*. Altadena, CA: PEA (Appendix 5.6-F).
- Taylor, T. 2007 (February 12). Personal communication. Email from T. Taylor, Manager, Natural and Cultural Resources, Environmental, Health and Safety Division (Southern California Edison [SCE]) to C. Harper, Cultural Resources Manager (BonTerra Consulting) regarding the historical significance of several Southern SCE electrical transmission towers within the southwestern portion of the project area.
- Fernandeño Tataviam Band of Mission Indians (Tataviam Tribe). 2016 (November 17). Personal communication. Letter (sent via email) from K. Fatehi (Tataviam Tribe) to S. Dea (County of Los Angeles Department of Regional Planning). Subject: Centennial Project, Los Angeles County, CA (Project).
- Tejon Indian Tribe (Tejon Tribe). 2016 (October 25). Personal communication. Letter from K. Morgan (Tejon Tribe) to S. Dea (County of Los Angeles Department of Regional Planning). Subject: Tejon Tribal Consultation Update and Summary for the Centennial Project Proposed by the Tejon Ranch Company, Los Angeles County, California.
- University of Pennsylvania, Public Interest Anthropology Department (University of Pennsylvania). 2008 (April 21, last accessed). *Methods: What is Ethnography?* Philadelphia, PA: University of Pennsylvania, Public Interest Anthropology Department.
- W & S Consultants (WSC). 2007 (April). *Addendum Phase II Test Excavations and Determinations of Significance within the Centennial Study Area, Northern Los Angeles County, California*. Simi Valley, CA: WSC (Appendix 5.6-C).
- . 2004 (September). *Phase II Test Excavations and Determinations of Significance at 12 Sites in the Centennial Project Area, Northern Los Angeles County, California*. Simi Valley, CA: WSC (Appendix 5.6-B).
- . 2002 (May). *Phase I Archaeological Survey of the Centennial Study Area, Northern Los Angeles County, California*. Simi Valley, CA: WSC (Appendix 5.6-A).

*This page is intentionally left blank.*