Appendix IS-2

Archaeological Resources Technical Report

Archaeological Resources Assessment for the 9000 Airport Boulevard LAX Industrial Development Project, Los Angeles, California

DECEMBER 2023

PREPARED FOR

Eyestone Environmental

REPARED BY

SWCA Environmental Consultants

ARCHAEOLOGICAL RESOURCES ASSESSMENT FOR THE 9000 AIRPORT BOULEVARD PROJECT, LOS ANGELES, CALIFORNIA

Prepared for

Eyestone Environmental
2121 Rosecrans Avenue, Suite 3355
El Segundo, California 90245
Attn: Laura Rodriguez

Prepared by

David K. Sayre

Principal Investigator

Chris Millington, M.A., RPA

SWCA Environmental Consultants
320 North Halstead Street, Suite 120
Pasadena, California 91107
(626) 240-0587
www.swca.com

SWCA Project No. 83236

SWCA Cultural Resources Report No. 23-690

December 2023

Keywords: CEQA; Archaeological resources; Sensitivity assessment; City of Los Angeles Department of City Planning; Eyestone Environmental; Westchester; Los Angeles County; Township 2 South, Range 14 West, Section 31, San Bernardino Base Meridian; USGS Venice, California 7.5-minute Topographic Quadrangle

MANAGEMENT SUMMARY

Purpose and Scope: Eyestone Environmental retained SWCA Environmental Consultants (SWCA) to prepare an archaeological resources assessment for the proposed 9000 Airport Boulevard Project (Project), located at 9000 Airport Boulevard in the Westchester neighborhood of Los Angeles, California. The proposed Project consists of the removal of an existing rental car facility and construction of new industrial warehouse buildings and office spaces. The Project is subject to review under the California Environmental Quality Act (CEQA), and the City of Los Angeles (City) Department of City Planning is the CEQA lead agency.

This study was conducted to analyze the potential for impacts to archaeological resources in the Project site in accordance with Section 15064.5 in Title 14 of the California Code of Regulations, and the significance thresholds in the Environmental Checklist included as Appendix G of CEQA Guidelines. This report documents the methods and results of a confidential records search of the California Historical Resources Information System (CHRIS), a search of the Sacred Lands File (SLF) through the California Native American Heritage Commission (NAHC), and archival research used to evaluate the presence or likelihood of archaeological resources within the Project site. Information about Native American archaeological resources not otherwise listed in the CHRIS or SLF can be identified during government-to-government consultation with California Native American tribes pursuant to Public Resources Code 21080.3.1. Because the need for tribal consultation under Public Resources Code 21080.3.1 has yet to be determined, the current analysis has not analyzed or otherwise considered information or recommendations put forward by tribal parties during consultation or any other outreach process.

Dates of Investigation: On August 8, 2023, SWCA requested a search of the CHRIS at the South Central Coastal Information System, located on the campus of California State University, Fullerton. SWCA received the results on September 20, 2023. The results of the SLF search were received from the NAHC on September 1, 2023.

Summary of Findings: The CHRIS record search identified 18 cultural resource investigations that have been previously conducted within a 0.5-mile buffer around the Project site; one of these studies intersected the present Project site. The record search identified one cultural resource (LAN-214) that has been previously recorded within 0.8 kilometer (km) (0.5 mile) of the Project site and no resources were documented within the Project site. The site record for LAN-214 states that the site was initially recorded in 1953 as having contained one or more Native American artifacts.

An SLF search was conducted by the NAHC with negative results. Background research for cultural resources did not identify any previously recorded archaeological sites in the Project site directly or within a 0.8-km (0.5-mile) buffer. SWCA's background research identified the Native American settlement of Waachnga in the vicinity, which is located approximately 4.4 km (2.7 miles) to the northwest. SWCA finds there is a **low potential for buried Native American archaeological resources within the Project site**. What potential exists would be in naturally deposited dune sediments beneath any mechanically altered strata associated with land uses from the nineteenth and early twentieth centuries.

The CHRIS records search results did not identify any historical archaeological resources recorded within a 0.8-km (0.5-mile) radius of the Project site and no historical archaeological resources were identified within the Project site. SWCA's background research determined that the Project site appears to have been used for agricultural purposes and remained vacant until 1956, at which point it was developed with the Airport Junior High School campus. By 1980, construction had started on the extant car rental facility within the Project site. SWCA finds there is a **moderate potential for buried historical archaeological resources within the Project site**.

Conclusion: There are no known archaeological resources recorded within the Project site. The Project site has moderate potential for encountering building materials, structural foundations, or individual pieces of refuse associated with the use of the Project site as the Airport Junior High School from the mid-1950s to early 1970s. Historical archaeological resources of this age and type do not typically satisfy the criteria for listing on the California Register of Historical Resources or to be considered a unique archaeological resource. Therefore, although there is a moderate potential to encounter certain types of historical archaeological resources, these are not likely to be historical resources under CEQA. The Project is subject to the City's Regulatory Compliance Measures (RCMs) that address the inadvertent discovery of archaeological resources and human remains.

If an archaeological resource were to be discovered during construction of the Project, work in the area would cease, and deposits would first be evaluated for historic significance in accordance with CEQA Guidelines Section 15064.5. As set forth in CEQA Guidelines Section 15064.5, if the City determines that the archaeological resource is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code. If an archaeological resource does not meet the criteria for historical resources but meets the definition of a unique archaeological resource, the resource shall be treated in accordance with the provisions of Section 21083.2.

Regarding the discovery of human remains, notification is required per California Health and Safety Code Section 7050.5. In addition, disposition of the human remains and any associated grave goods would occur in accordance with PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e), which requires that work stop near the find until a coroner can determine that no investigation into the cause of death is required and if the remains are Native American. Specifically, in accordance with CEQA Guidelines Section 15064.5(e), if the coroner determined the remains to be Native American, the coroner shall contact the Native American Heritage Commission who shall identify the person or persons it believes to be most likely descended from the deceased Native American. The most likely descendent may make recommendations regarding the treatment of the remains and any associated grave goods in accordance with PRC Section 5097.98.

Based on these RCMs, as implemented according to best practices incorporated into the Project, any potential impacts would be reduced to less than significant levels. Therefore, SWCA finds that the Project will have **less than significant impacts to archaeological resources and human remains interred outside a cemetery.**

Disposition of Data: The final archaeological resources report and any subsequent related reports will be filed with City Planning, Eyestone Environmental, SWCA's Pasadena office, and the South Central Coastal Information Center at California State University, Fullerton. All field notes, photographs, and records related to the current study are also on file at the SWCA Pasadena office.

CONTENTS

Appendices

Figures

Tables

INTRODUCTION

Eyestone Environmental retained SWCA Environmental Consultants (SWCA) to prepare an archaeological resources assessment for the proposed 9000 Airport Boulevard Project (Project), located at 9000 Airport Boulevard in the Westchester neighborhood of Los Angeles, California. The proposed Project consists of the removal of an existing rental car facility and construction of new industrial warehouse buildings and office spaces. The Project is subject to review under the California Environmental Quality Act (CEQA), and the City of Los Angeles (City) Department of City Planning is the CEQA lead agency.

This study was conducted to analyze the potential for impacts to archaeological resources in the Project site in accordance with Section 15064.5 in Title 14 of the California Code of Regulations (CCR), and the significance thresholds in the Environmental Checklist included as Appendix G of CEQA Guidelines. This report documents the methods and results of a confidential records search of the California Historical Resources Information System (CHRIS), a search of the Sacred Lands File (SLF) through the California Native American Heritage Commission (NAHC), and archival research used to evaluate the presence or likelihood of archaeological resources within the Project site. Information about Native American archaeological resources not otherwise listed in the CHRIS or SLF can be identified during government-to-government consultation with California Native American tribes pursuant to Public Resources Code (PRC) 21080.3.1. Because the need for tribal consultation under PRC 21080.3.1 has yet to be determined, the current analysis has not analyzed or otherwise considered information or recommendations put forward by tribal parties during consultation or any other outreach process.

SWCA archaeologist David Sayre, B.A., prepared the report, and senior archaeologist Chris Millington, M.A., Registered Professional Archaeologist, acted as principal investigator. Copies of the report are on file with SWCA's Pasadena office and the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. Note to the reader: the CHRIS assigns primary and trinomial site numbers to all archaeological sites, which will be referenced herein first by their trinomial number, and for ease of reference, will exclude the "CA-" prefix. Sites that are not assigned a trinomial are referenced by their primary number.

PROJECT DESCRIPTION AND LOCATION

The Project is a new industrial development proposed for an approximately 18.3-acre site (Project site) in the Westchester-Playa del Rey Community Plan Area of Los Angeles (Figure 1). The Project would demolish an existing rental car facility composed of several single-story commercial, accessory structures, and associated surface parking areas, and would construct one or more industrial warehouse buildings and office spaces. The Project would require rough grading and excavation to remove fill sediments and comply with engineering requirements. The total depth of excavation is estimated to be 3 meters (m) (10 feet) or less below the current grade across the full extent of the Project site.

The Project site is composed of the parcel designated as Los Angeles County Assessor Parcel Number 4125-010-016, which is associated with multiple street addresses abbreviated here as 9000 Airport Boulevard. The Project site measures approximately 225 × 345 m (738 × 1,132 feet). The Project site is bounded by Interceptor Street to the north, Ramsgate Avenue to the east, West Arbor Vitae Street to the south, and Airport Boulevard to the west, within the city of Los Angeles, California (Figure 2). The Project site is in Section 31, Township 2 South, Range 14 West, and is plotted on the U.S. Geological Survey (USGS) Venice, California, quadrangle (Figure 3).

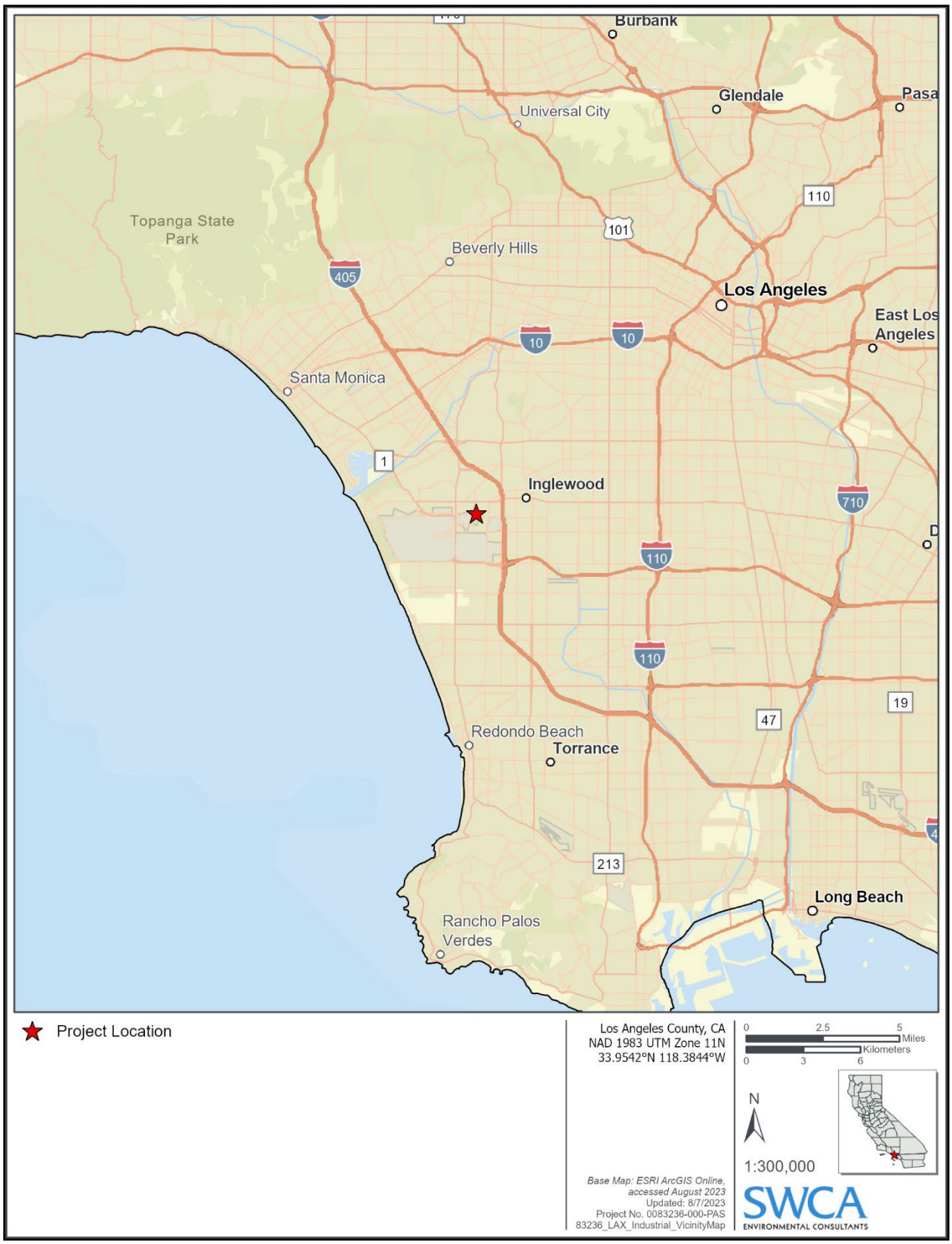

Figure 1. Project vicinity map.

Figure 2. Aerial photograph (2020) showing the Project site.

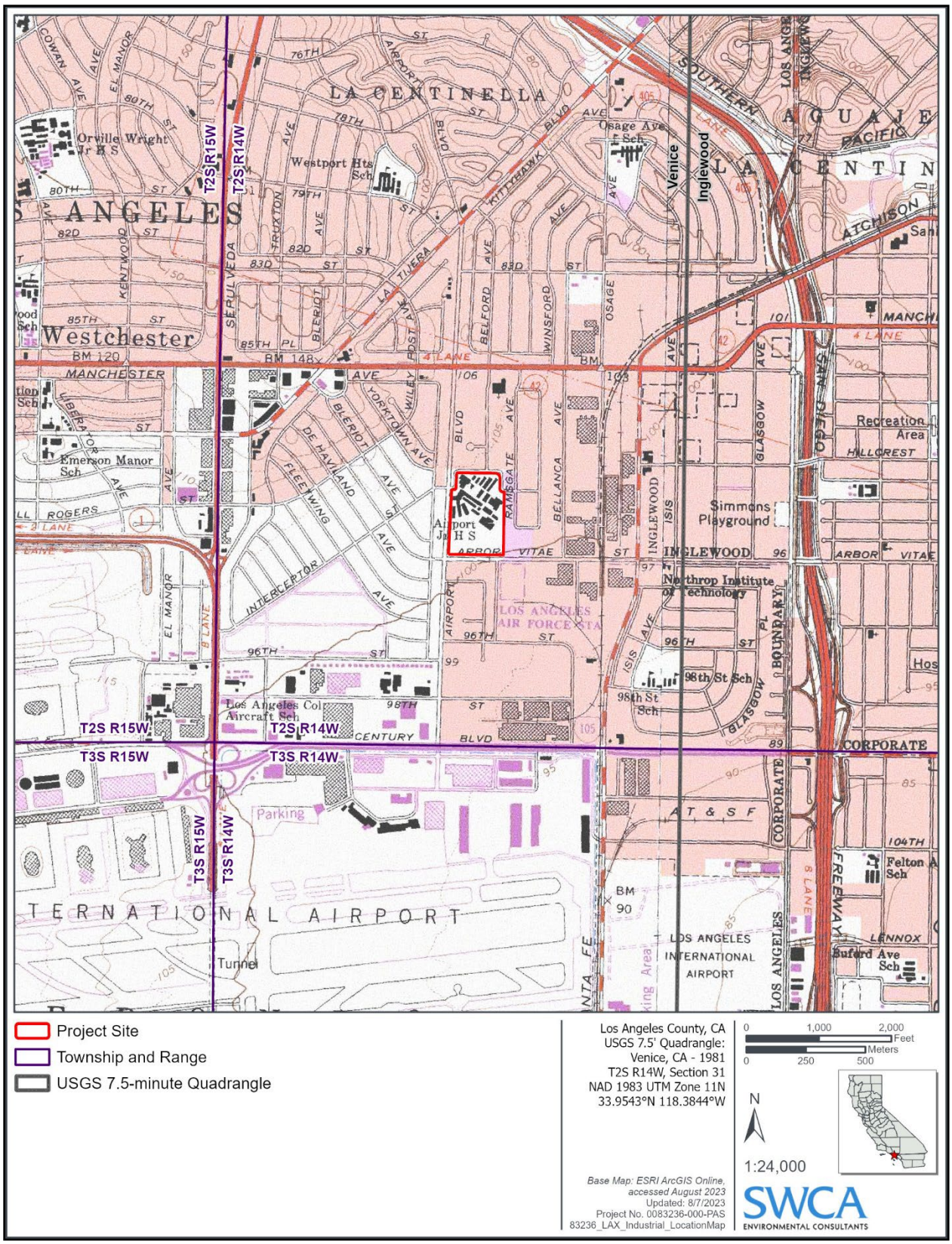

Figure 3. Project site plotted on the USGS Venice, California, 7.5-minute quadrangle.

REGULATORY SETTING

State Regulations

The California Office of Historic Preservation, a division of the California Department of Parks and Recreation, performs certain duties described in the California PRC and maintains the California Historic Resources Inventory and California Register of Historical Resources (CRHR). The state-level regulatory framework also includes CEQA, which requires the identification, and mitigation, if necessary, of substantial adverse impacts that may affect the significance of eligible historical and archaeological resources.

California Environmental Quality Act

CEQA requires a lead agency to analyze whether historic and/or archaeological resources may be adversely affected by a proposed project. Under CEQA, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment" (PRC 21084.1). Addressing this issue is a two-part process: first, the determination must be made as to whether the proposed project involves cultural resources. Second, if cultural resources are present, the proposed project must be analyzed for a potential "substantial adverse change in the significance" of the resource.

HISTORICAL RESOURCES

According to CEQA Guidelines Section 15064.5, for the purposes of CEQA, historical resources are:

- A resource listed in, or formally determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC 5024.1, 14 CCR 4850 et seq.).
- A resource included in a local register of historical resources, as defined in PRC 5020.1(k), or identified as significant in a historic resources survey by meeting the requirements of PRC 5024.1(g).
- Any object, building, structure, site, area, place, record, or manuscript that the lead agency determines to be eligible for national, state, or local landmark listing; generally, a resource shall be considered by the lead agency to be historically significant (and therefore a historic resource under CEQA) if the resource meets the criteria for listing on the CRHR (as defined in PRC 5024.1, 14 CCR 4852).

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity (as defined above) does not meet National Register of Historic Places (NRHP) criteria may still be eligible for listing in the CRHR.

According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR or is not included in a local register or survey, shall not preclude the lead agency from determining that the resource may be a historical resource (PRC 5024.1). Pursuant to CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (CEQA Guidelines Section 15064.5(b)).

Substantial Adverse Change and Indirect Impacts to Historical Resources

CEQA Guidelines specify that a "substantial adverse change in the significance of an 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" (CEQA Guidelines Section 15064.5). Material impairment occurs when a project alters in an adverse manner or demolishes "those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion" or eligibility for inclusion in the NRHP, CRHR, or local register. In addition, pursuant to CEQA Guidelines Section 15126.2, the "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

UNIQUE ARCHAEOLOGICAL RESOURCES

In terms of archaeological resources, PRC 21083.2(g) defines a unique archaeological resource as 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.

California Register of Historical Resources

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC 21083.2 and 21084.1). Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys, or designated by local landmarks programs, may be nominated for inclusion in the CRHR. According to PRC 5024.1(i), a resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- **Criterion 2:** It is associated with the lives of persons important in our past.
- **Criterion 3:** It 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.
- **Criterion 4:** It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity does not meet NRHP criteria may still be eligible for listing in the CRHR. Although all sites are evaluated according to all four of the CRHR criteria, the eligibility for archaeological resources is typically considered under Criterion 4.

Most Native American archaeological sites lack identifiable or important association with specific persons or events of regional or national history (Criteria 1 and 2), and/or lack the formal and structural attributes necessary to qualify as eligible under Criterion 3.

An archaeological site may be considered significant if it displays one or more of the following attributes (Office of Historic Resources [OHR] 1991): chronologically diagnostic, functionally diagnostic, or exotic artifacts; datable materials; definable activity areas; multiple components; faunal or floral remains; archaeological or architectural features; notable complexity, size, integrity, time span, or depth; or stratified deposits. Determining the period(s) of occupation at a site provides a context for the types of activities undertaken and may well supply a link with other sites and cultural processes in the region. Further, well-defined temporal parameters can help illuminate processes of culture change and continuity in relation to natural environmental factors and interactions with other cultural groups. Finally, chronological controls might provide a link to regionally important research questions and topics of more general theoretical relevance. As a result, the ability to determine the temporal parameters of a site's occupation is critical for a finding of eligibility under Criterion 4 (information potential). A site that cannot be dated is unlikely to possess the quality of significance required for CRHR eligibility or be considered a unique archaeological resource. The content of an archaeological site provides information regarding its cultural affiliations, temporal periods of use, functionality, and other aspects of its occupation history. The range and variability of artifacts present in the site can allow for reconstruction of changes in ethnic affiliation, diet, social structure, economics, technology, industrial change, and other aspects of culture.

Treatment of Human Remains

The disposition of burials falls first under the general prohibition on disturbing or removing human remains under California Health and Safety Code 7050.5. More specifically, remains suspected to be Native American are treated under CEQA at CCR 15064.5; PRC 5097.98 illustrates the process to be followed if remains are discovered. If human remains are discovered during excavation activities, the following procedures shall be observed.

- Stop immediately and contact the County Coroner:

  1104 North Mission Road
  Los Angeles, California 90033
  (323) 343-0512 (8:00 a.m. to 5:00 p.m. Monday through Friday) or
  (323) 343-0714 (after hours, Saturday, Sunday, and holidays)

- If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC.
- The NAHC will immediately notify the person it believes to be the most likely descendant (MLD) of the deceased Native American.
- The MLD has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods.
- If the owner does not accept the MLD's recommendations, the owner or the MLD may request mediation by the NAHC.

Local Regulations

Los Angeles Historic-Cultural Monuments

Local landmarks in Los Angeles are known as Historic-Cultural Monuments (HCMs) and are under the aegis of the City's Department of City Planning, OHR. An HCM, monument, or local landmark is defined in the Cultural Heritage Ordinance as follows:

> [A] Historic-Cultural Monument (Monument) is any site (including significant trees or other plant life located on the site), building or structure of particular historic or cultural significance to the City of Los Angeles, including historic structures or sites in which the broad cultural, economic or social history of the nation, State or community is reflected or exemplified; or which is identified with historic personages or with important events in the main currents of national, State or local history; or which embodies the distinguishing characteristics of an architectural type specimen, inherently valuable for a study of a period, style or method of construction; or a notable work of a master builder, designer, or architect whose individual genius influenced his or her age. (Los Angeles Municipal Code Section 22.171.7)

City of Los Angeles General Plan

The *Conservation Element of the City of Los Angeles General Plan* (Conservation Element) (City of Los Angeles 2001), Chapter II, Section 3, defers to the State CEQA Guidelines regarding the identification, evaluation, and mitigation of impacts to archaeological resources. The Conservation Element recognizes that the City has the primary responsibility to protect significant archaeological resources and states the following:

> If it is determined that a development project may disrupt or damage such a site, the project is required to provide mitigation measures to protect the site or enable study and documentation of the site, including funding of the study by the applicant. The city's environmental guidelines require the applicant to secure services of a bona fide archaeologist to monitor excavations or other subsurface activities associated with a development project in which all or a portion is deemed to be of archaeological significance. Discovery of archaeological materials may temporarily halt the project until the site has been assessed, potential impacts evaluated and, if deemed appropriate, the resources protected, documented and/or removed. (City of Los Angeles 2001:II-3)

The Conservation Element gives the following objective and policy for archaeological and paleontological resources:

- **Objective:** protect the city's archaeological and paleontological resources for historical, cultural, research and/or educational purposes.
- **Policy:** continue to identify and protect significant archaeological and paleontological sites and/or resources known to exist or that are identified during land development, demolition, or property modification activities.

Regulatory Compliance Measures

State law addresses the inadvertent discovery of archeological resources and human remains. The City included the following Regulatory Compliance Measures (RCMs) to ensure that if any archaeological resources or human remains are found during construction of the proposed Project, they will be handled in compliance with State law such that any potential impacts would be reduced to less than significant levels.

Inadvertent Discovery of an Archaeological Resource: Before ground-disturbing activities are initiated on the site, the construction personnel who will be conducting the activities will be notified of the potential for archaeological resources and the protocols to be implemented in the event of a discovery. Ground-disturbing work includes activities such as excavation, grading, digging, trenching, plowing, drilling, tunneling, stripping, and clearing where the ground disturbance that occurs in sediments is designated as fill. In the event that an archaeological resource is observed during construction, all ground-disturbing work within 25 feet of the find should temporarily cease until a Qualified Archaeologist can evaluate the find as a historical resources pursuant to PRC Section 5024.1 and Title 14 California Code of Regulations, Section 15064.5 of the CEQA Guidelines. A Qualified Archaeologist is one who meets the Society for California Archaeology professional qualification standards for a principal investigator. The Qualified Archaeologist or an archaeologist working under their direction would have the authority to stop or divert construction excavation elsewhere on the site while the find is being assessed.

Upon discovery, the Project proponent will notify the City. As set forth in CEQA Guidelines Section 15064.5, if the City determines that the archaeological resource is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code. If an archaeological resource does not meet the criteria for historical resources but meets the definition of a unique archaeological resource, the resource shall be treated in accordance with the provisions of Section 21083.2. The found deposits would be treated in accordance with State and local guidelines, including those set forth in California PRC Section 21083.2. Significant archaeological resources shall be protected and preserved. If such resources cannot be preserved in place or left in an undisturbed state, the Qualified Archaeologist working at the direction of the Project proponent and in consultation with the City shall prepare plans for feasible mitigation of impacts to the find, pursuant to Section 15064.5 of the CEQA Guidelines. If the discovery is Native American in origin, then consultation and development of proposed mitigation will also be carried out in concert with any measures that address the inadvertent discovery as a tribal cultural resource, including consultation with one or more affiliated California Native American tribes. Personnel of the proposed Project shall not collect or move any archaeological materials and associated materials. Construction activity may continue in other portions of the Project site while any mitigation or treatment is being carried out.

Inadvertent Discovery of Human Remains: If human remains are encountered unexpectedly during construction demolition and/or grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e), which requires that work stop near the find until a coroner can determine that no investigation into the cause of death is required and if the remains are Native American. Specifically, in accordance with CEQA Guidelines Section 15064.5(e), if human remains are discovered during excavation activities, the following procedure shall be observed:

- Stop immediately and contact the County Coroner:

  1104 North Mission Road
  Los Angeles, California 90033
  (323) 343-0512 (8:00 a.m. to 5:00 p.m. Monday through Friday), or
  (323) 343-0714 (after hours, Saturday, Sunday, and holidays)

- If the remains are determined to be of Native American descent, the Coroner has 24 hours to notify the NAHC.
- The NAHC will immediately notify the person it believes to be the most likely descendent (MLD) of the deceased Native American.
- The MLD has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods.
- If the owner does not accept the MLD's recommendations, the owner or the MLD may request mediation by the NAHC.

Best Practices

As a means of fulfilling the RCMs, the following best practices have been incorporated into the Project that will be implemented by the Project applicant.

Worker Training. Prior to the commencement of ground-disturbing repair activities, at the Project kickoff, a Qualified Archaeologist or someone working under their direction will provide a training to construction crews to provide information on regulatory requirements for the protection of archaeological resources. As part of this training, construction crews will be briefed on proper procedures to follow should an archaeological resource or human remains be inadvertently discovered during construction. Workers will be shown examples of the types of archaeological resources that would require notification and be provided contact information and protocols to follow if an inadvertent discovery is made.

METHODS

California Historical Resources Information System Records Search

On August 8, 2023, SWCA requested a search of the CHRIS at the SCCIC, on the campus of California State University, Fullerton. SWCA received the results on September 20, 2023. The search included any previously recorded cultural resources and investigations within a 0.8-kilometer (km) (0.5-mile) radius of the Project site for archaeological resources. The CHRIS records search also included a review of the NRHP, the CRHR, California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list (OHR Directory of Historic Properties Data File), the City HCM list, and the California State Inventory of Historic Resources. A letter from the SCCIC summarizing the results of the records search is provided in Appendix A.

Sacred Lands File Search

The NAHC is charged with identifying, cataloging, and protecting Native American archaeological resources, which include ancient places of special religious or social significance to Native Americans, and known ancient graves and cemeteries of Native Americans on private and public lands in California.

The NAHC's inventory of these resources is known as the SLF. The NAHC also maintains a list of tribal contacts affiliated with various geographic regions of California. The contents of the SLF are strictly confidential, and SLF search requests return positive or negative results in addition to a list of tribal contacts with affiliation to the specified location. SWCA requested an SLF search on August 8, 2023, and a letter from the NAHC summarizing the results of the records search is provided in Appendix B.

Archival Research

Concurrent with the confidential CHRIS records search, SWCA reviewed property-specific historical and ethnographic context research to identify information relevant to the Project site. Research focused on a variety of primary and secondary materials relating to the history and development of the Project site, including historical maps, aerial and ground photographs, ethnographic reports, and other environmental data. Archival research focused on assessing the general sequence of developments within the Project site and vicinity during the nineteenth and twentieth centuries. Sources from the early to mid-nineteenth century were used to assess the environmental setting before development dramatically increased in the latter years of the nineteenth century, at which point the character of the landscape transitioned from rural open space and large agricultural properties to fully urban and industrial. Low-altitude aerial photographs were used to help assess the setting of the Project site. Sources consulted consisted of the following publicly accessible data sources: OHR (SurveyLA); David Historical Map Collection; Early California Cultural Atlas (Native American villages and placenames [Hackel et al. 2015]); Huntington Library Digital Archives; Library of Congress; Los Angeles Public Library Map Collection; USGS historical topographic maps; University of California, Santa Barbara Digital Library (aerial photographs); and University of Southern California Digital Library.

Archaeological Sensitivity Factors

Generally, the location of an archaeological deposit is unpredictable in nature; however, combining information from different sources can allow for a qualitative assessment of the potential for an archaeological resource to be present in a given area. Accordingly, sensitivity assessments are qualitative or probabilistic in nature—ranging along a spectrum of increasing probability—which is designated here as low, moderate, and high sensitivity. The sensitivity assessment essentially combines two variables: indications of intensive use and preservation conditions. For areas in which there is a favorable setting for habitation or use, soil conditions capable of preserving buried material, and little to no disturbances, the sensitivity is high. Areas lacking these traits are considered to have low sensitivity. Areas with a combination of these traits are generally considered to have moderate sensitivity.

SWCA's sensitivity assessment considered the potential for archaeological components associated with Native American populations separately from those of non-Native American populations, which began with Spanish colonization. The first variable considered concerns the link between human behavior and material remains, i.e., whether there are any indications that a given area was the focus of past use such that any material remains, or physical evidence associated with those activities would have resulted. For Native American archaeological resources, questions about the environmental setting are particularly important. What was the environmental setting within the period of human occupation in Southern California beginning approximately 13,000 years ago? Based on what is known about past Native American lifeways, was the location favorable for habitation or other types of activities within this time span? For historical (i.e., non-Native American) archaeological resources, information obtained from archival sources can help to characterize the types of activities that occurred within the Project site.

Indicators of favorable habitability for Native Americans are proximity to natural features (e.g., perennial water source, plant or mineral resource, animal habitat) and other known Native American archaeological

sites, flat topography, prominent viewsheds, and relatively dry conditions. Access to permanent sources of fresh water, especially springs or spring-fed streams for inland settings, carried particular significance. Many and perhaps most streams in the Los Angeles Basin are seasonal or at least include substantial portions in which the water does not reach the surface and primarily remains below ground. Even if the streams themselves did not always provide perennial access to fresh water, stream courses often formed important habitat for plants and animals that were important to Native American subsistence and cultural practices, as did various types of wetland features that formed in patches across the landscape.

Also, as has been reported through oral history, stream courses provided navigable means of travel by foot, which is to say, streams were used as trails and would have been part of a network of travel corridors in the region. Native Americans who foraged for resources in the region would have accessed settlements and areas with natural resources using footpaths and trails. Foraging and other types of activities, including interring human remains, would have occurred intermittently along these routes, some of which would have produced archaeological deposits. Such deposits, typically described as open camps, tend to be characterized by less substantial deposits than what might be expected at a more permanently inhabited settlement or intensively used area. At least some of the primary thoroughfares within the contemporary street grid were likely established along some of these trails. For example, when the Portolá expedition passed through this part of the Los Angeles Basin, they were reportedly guided by Native Americans following along one such trail.

Thus, freshwater sources, stream courses, wetland features, and other areas of concentrated plant and animal communities were all important factors in Native American subsistence foraging practices and patterns in land use and settlement. Accordingly, proximity to any of these natural features is indicative of an area in which activities were more concentrated, and therefore more likely to produce physical evidence. However, within the urbanized setting that characterizes the Project site and its surroundings, there is little to no direct evidence identified that would allow for a reliable reconstruction of any such trails in a spatially explicit way. Therefore, in the absence of direct archaeological evidence associated with a specific stream, wetland feature, or vegetation community, the influence on Native American archaeological sensitivity is considered generalized at a local scale and is considered alongside other variables where it concerns the potential for archaeological sensitivity.

Because historical (i.e., non-Native American) archaeological resources can commonly be assessed using archival materials that are more easily tied to a specific geography, assessing the sensitivity is typically more explicit and precise than it is for Native American archaeological resources. Typical indicators of historical archaeological sensitivity include the following: presence of bricks, glass, and/or building materials in geotechnical bores; historically, documented occupation of a property, especially from before trash and sewer services were established; and multiple episodes of construction and demolition of historical structures.

The next consideration given is whether the Project site is conducive to the preservation of any such material remains that may have once been present. Assessing the preservation conditions considers the following types of questions. Is there a potential for shallow or deeply buried deposits? What kinds of land uses have occurred within the region and have there been any alterations to the physical setting within the Project site? What is the age of the sediments and is there evidence of high- or low-energy deposition or erosion during the period of human occupation and historical land uses? Did the physical alterations result from natural causes, such as flooding or erosion, or from more recent historical land developments, such as mechanical grading, and how have these processes influenced the potential for preserving buried materials? In other words, is there evidence that physical alterations to the subsurface setting may have eroded, displaced, or otherwise destroyed any potential archaeological resources that may have once been present?

To assess these variables, SWCA considers archaeological, ethnographic, historical, environmental, and other archival data sources. Archaeological site data include those identified in the CHRIS records search and supplemental background research. The CHRIS data are also analyzed in greater detail to identify any sample bias in the identification of sites, which is to say, to what degree the absence of archaeological site information is because no resources were identified or because an archaeological investigation never occurred. For assessing Native American archaeological sensitivity, the information obtained through background research is reviewed to determine whether the general location is described in ethnographic studies and oral histories, and whether the historical ecological conditions of the Project site are much like the physical setting in which other Native American archaeological sites have been identified. The sensitivity assessment considers proximity to a given feature, such as a previously recorded archaeological site, former village, settlement, placename, or environmental feature; however, there is no universal measure of sensitivity as a function of distance, and there is no consistent depth above or below which buried resources can occur in all circumstances. These variables are assessed on a case-by-case basis and the conclusions incorporate a degree of professional judgment based on industry standards and best practices for archaeology.

ENVIRONMENTAL SETTING

The Project site is in the Los Angeles Basin, a broad, level plain defined by the Pacific Ocean to the west, the Santa Monica Mountains and Puente Hills to the north, and the Santa Ana Mountains and San Joaquin Hills to the south. This extensive alluvial wash basin is filled with Quaternary alluvial sediments. It is drained by several major watercourses, including the Los Angeles, Rio Hondo, San Gabriel, and Santa Ana Rivers. The Project site and vicinity are within a fully urbanized setting on an open-aspect plain at an elevation of 31 to 33 m (101–108 feet) above mean sea level. This location is 5.3 km (3.3 miles) northeast of the current shoreline of the Pacific Ocean and 2.9 km (1.8 miles) southeast of Ballona Creek. Ballona Creek includes an extensive wetland (Ballona Wetlands), which was referred to in the late nineteenth and early twentieth centuries by several names including Port Ballona, Ballona Lagoon, and Ballona Lake. The Spanish term *ballona* was historically used to describe a type of wetland environment characterized by freshwater marshes with dense vegetation and permanently saturated soils. Historical records, photographs, and accounts from Gabrieleno and early non-Native inhabitants describe what was once an active ecosystem characterized by freshwater marshes, dense vegetation, and permanently saturated soils amid sand bars and in basins and troughs that form between sand dunes.

Prior to 1825, the Los Angeles River discharged into the wetland, along what is now the approximate course of Ballona Creek, rather than the current course emptying into the harbor near San Pedro (Gumprecht 2001:137–143). Now Ballona Creek is a perennial southwest-flowing stream that serves as a major drainage for the Ballona Valley Watershed, fed by water from the Baldwin Hills and Santa Monica Mountains. Since it was channelized with a concrete lining beginning in 1935 (Gumprecht 2001:206), the creek no longer discharges into the Ballona Lagoon and instead flows directly into the ocean. Using historical maps (e.g., historical topographic maps) and other sources, Dark et al. (2011) reconstructed features of the wetland as they would have existed in the nineteenth century. In their work, Dark et al. (2011) documented 174 unique wetland features classified into five wetland types (in order of total surface area): alkali meadow, valley freshwater wet meadow, valley freshwater marsh, brackish to salt marsh/tidal marsh, and alkali flat. In addition to these environments, the authors also note that freshwater seeps and springs and vernal pools were common features (Dark et al. 2011).

Interstate 405 approximates the former course of Centinela Creek. Additional reconstructions of the Ballona Wetlands and related features, including Centinela Creek, were completed by Statistical Research, Inc. (SRI) in association with the Admiralty Site and Playa Vista Project (Altschul et al. 1992; Altschul et al. 2003:77–85; Homburg et al. 2014). Through a series of in-depth studies and detailed

reports, SRI's team of researchers developed a chronological sequence through the Holocene showing the wetlands' development, illustrated in a series of seven frames. Their work demonstrates that up to 8,500 years before present (B.P.) (uncalibrated[1]) what is now Marina del Rey was primarily a terrestrial environment. After fluctuations in sea levels and periodic river flooding, the character of a wetland would gradually take shape, and conditions varied between freshwater, brackish, and salt water. Through this developmental sequence there was relatively little change along the course of Centinela Creek or the position of the dune field.

The wetland setting in the basin north of the Project site but including areas along Centinela Creek would have supported a variety of plant and animal species that were used throughout the early historic period by Gabrielino communities. An intensive survey of vegetation in the Ballona region conducted in 1981 identified three habitats and six plant communities that would have existed prehistorically. Altschul et al. (2003:81) note that "pickleweed saltmarsh, mudflat, and saltflat plant communities of the estuary contrast sharply with the freshwater willow and marsh habitat, and the coastal dune and coastal sage plant communities that dominate terrestrial landscapes." A rich variety of faunal remains represented in archaeological assemblages was uncovered along Centinela Creek during SRI's work for the Playa Vista Archaeological and Historical Project (Altschul et al. 2003; Altschul et al. 2007; Douglass et al. 2016). Remains from the site are considered representative of those that would have been available within the Project site. These include vertebrate species (mammals, bony fish, reptiles, birds) and invertebrates (gastropods, clams, mussels, oyster, and scallop).

The Project site is located within a geologic area known as the El Segundo Sand Hills, which are characterized by rolling hills that run parallel to the coast and extend from Ballona Creek in the north to Palos Verdes in the south. The sediments that form the dune complex are estimated to have been predominantly deposited in the late Pleistocene to Holocene. The Project site is mapped within a surficial geologic unit defined by Bedrossian et al. (2012) as old eolian and dune deposits (Qoe), which formed during the late to middle Pleistocene. Saucedo and colleagues (2016:17) describe this unit as composed of poorly consolidated eolian (wind-blown) deposits of dense to very dense, well-sorted, fine- to coarse-grained sand and silty sand. The Qoe unit was formed as a massive accumulation of these sediments within an approximately 21-km-long (13-mile-long) area along the coastline, and the Project site is situated at its northeast end (Figure 4). The eastern edge of the Qoe unit abuts a surficial deposit of Quaternary alluvium (Qoa), which formed in the basins at the same time. The Qoa unit is described as dissected clay, silt, sand, and gravel deposited along stream valleys and alluvial flats of larger rivers (Saucedo et al. 2016:16–17).

Leighton Consulting, Inc. (Leighton) conducted a geotechnical investigation within the Project site that included eight hollow-stem auger borings (LB-1 through LB-6, LP-1, and LP-2) that measured 20 centimeters (8 inches) in diameter (Pflueger and Kim 2023). LB-1 through LB-6 were excavated to a depth of 9.6 m (31.5 feet) and LP-1 and LP-2 were excavated to a depth of 3 m (10 feet). This work revealed that artificial fill is present in the upper 0.9 to 2.3 m (3.0–7.5 feet) and is consistently underlain by naturally deposited Quaternary-aged (late to middle Pleistocene) old eolian and dune deposits. The artificial fill sediments consist primarily of clayey sand and silty clayey sands and the old eolian and dune deposits generally consist of yellow brown to reddish brown, slightly moist to moist, medium dense to very dense sand, silty sand, and clayey sand with few interlayers of yellow-brown to orange-brown, moist, stiff to hard sandy clay and clay.

[1] Dates presented as years B.P. (years before AD 1950) are assumed to be uncalibrated radiocarbon years. Calibrated dates will be notated as cal B.P.

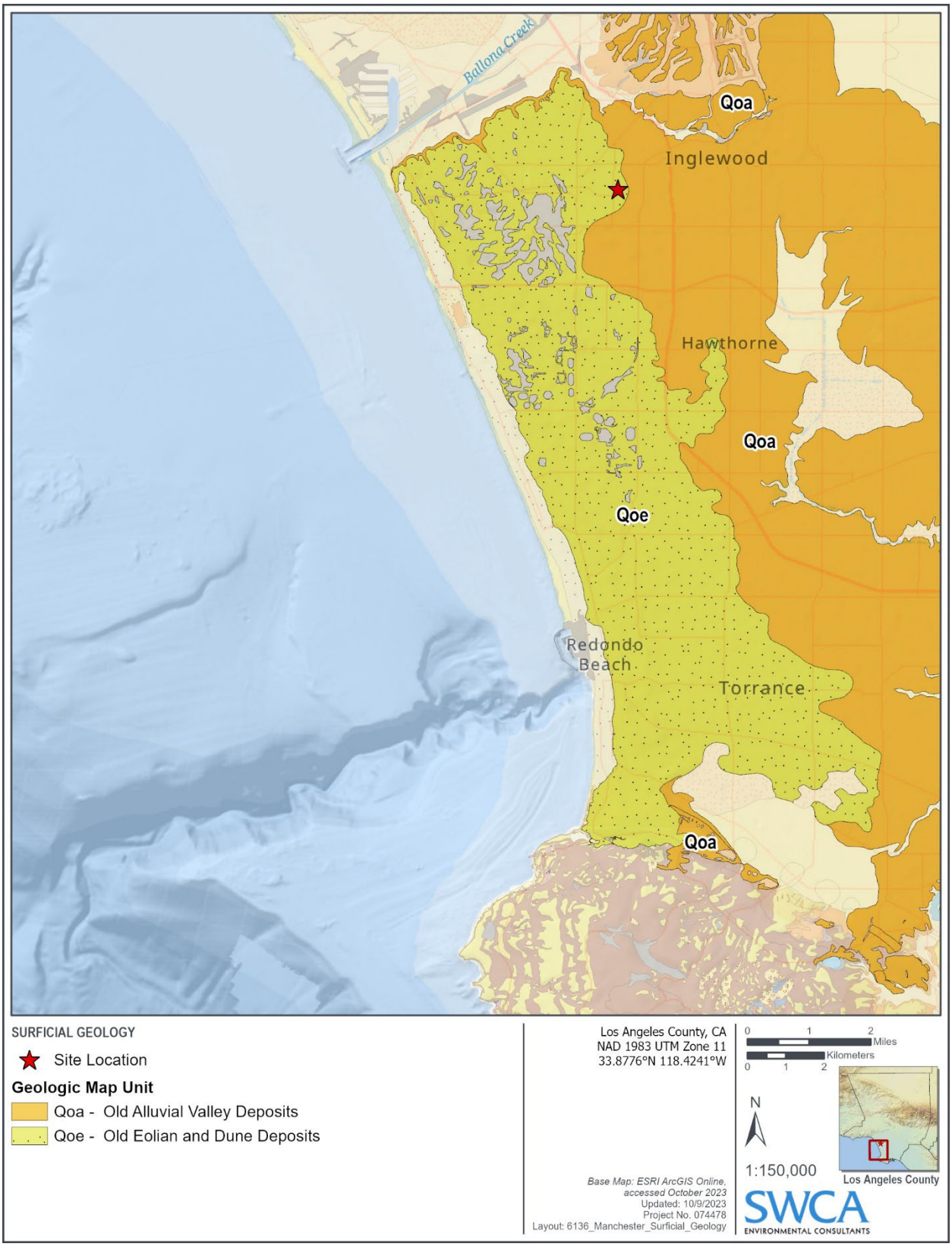

Figure 4. Surficial geology from Bedrossian et al. (2012) emphasizing quaternary units composed of eolian and dune deposits along the coastline (Qoe) and alluvium in basins (Qoa).

CULTURAL SETTING

Native American Archaeological Record

Over the years, researchers have devised numerous chronological sequences to aid in understanding cultural changes at various scales (regional vs. local patterning) in Southern California, as demonstrated in the archaeological record. The Native American archaeological record for California is generally divided into three broad temporal periods (Paleoindian, Archaic, and Emergent periods; see Fredrickson [1973, 1974, 1994]) that reflect similar cultural characteristics throughout the state and were generally governed by climatic and environmental variables, such as the drying of pluvial lakes at the transition from the Paleoindian to the Lower Archaic period. Numerous chronological sequences were also devised to characterize cultural changes on a smaller scale, within the subregion of Southern California specifically.

Building on early studies and focusing on data synthesis and artifact types, Wallace (1955, 1978) developed a chronology of Native American archaeology for the Southern California coastal region that is still widely used today and is applicable to near-coastal and some inland areas. Wallace's (1955, 1978) chronology for Southern California was composed of four sequential horizons: Horizon I, Early Man; Horizon II, Milling Stone; Horizon III, Intermediate; and Horizon IV, Late Prehistoric (Late Period). Wallace's 1955 synthesis initially lacked chronological precision due to a paucity of absolute dates (Moratto 1984:159) but this situation has been alleviated in the past several decades by the availability of thousands of radiocarbon dates obtained by Southern California researchers (Byrd and Raab 2007:217). Consequently, several revisions have been made to Wallace's 1955 synthesis using radiocarbon dates and projectile point assemblages, resulting in more refined chronologies and sequences (e.g., Koerper and Drover 1983; Koerper et al. 2002; Mason and Peterson 1994; see also Moratto 1984).

Additional primary syntheses for organizing the Native American archaeological record in California were developed by Warren (1968) and King (1981, 1990), which used the growing archaeological data sets of specific subregions within Southern California to define increasingly localized cultural sequences. Using the concepts of cultural ecology and cultural tradition, Warren (1968) proposed a series of six "traditions." Three of these traditions—the San Dieguito Tradition, Encinitas Tradition, and Campbell Tradition—correlated with Wallace's Horizons I, II, and III. The Chumash Tradition, Takic Tradition (formerly "Shoshonean"), and Yuman Tradition are represented in Wallace's Horizon IV. These ecologically based traditions are applicable to specific regions within Southern California.

More recently, there have been several syntheses of chronologies from before Spanish colonization for Southern California (Byrd and Raab 2007; Sutton 2009; Sutton and Koerper 2009). Extensive mitigation-driven excavations have further refined a local chronology for the Ballona Wetlands area, which integrates data from more than 200 radiocarbon date ranges (Douglass et al. 2016). The Ballona Wetlands area is also in the northwestern Los Angeles Basin, several miles southwest of the Project site, and thus directly relevant to the cultural context for this Project. The Ballona chronology is included alongside the more general Southern California chronologies in Figure 5, which provides a reference point for the primary periods and cultural traditions discussed below along with chronologies denoted by years before present (B.P.) and calendar ages (B.C. and A.D.).[2]

[2] Elsewhere in this report, uncalibrated radiocarbon ages are presented as radiocarbon years B.P., and their calibrated dates are expressed as cal B.P.

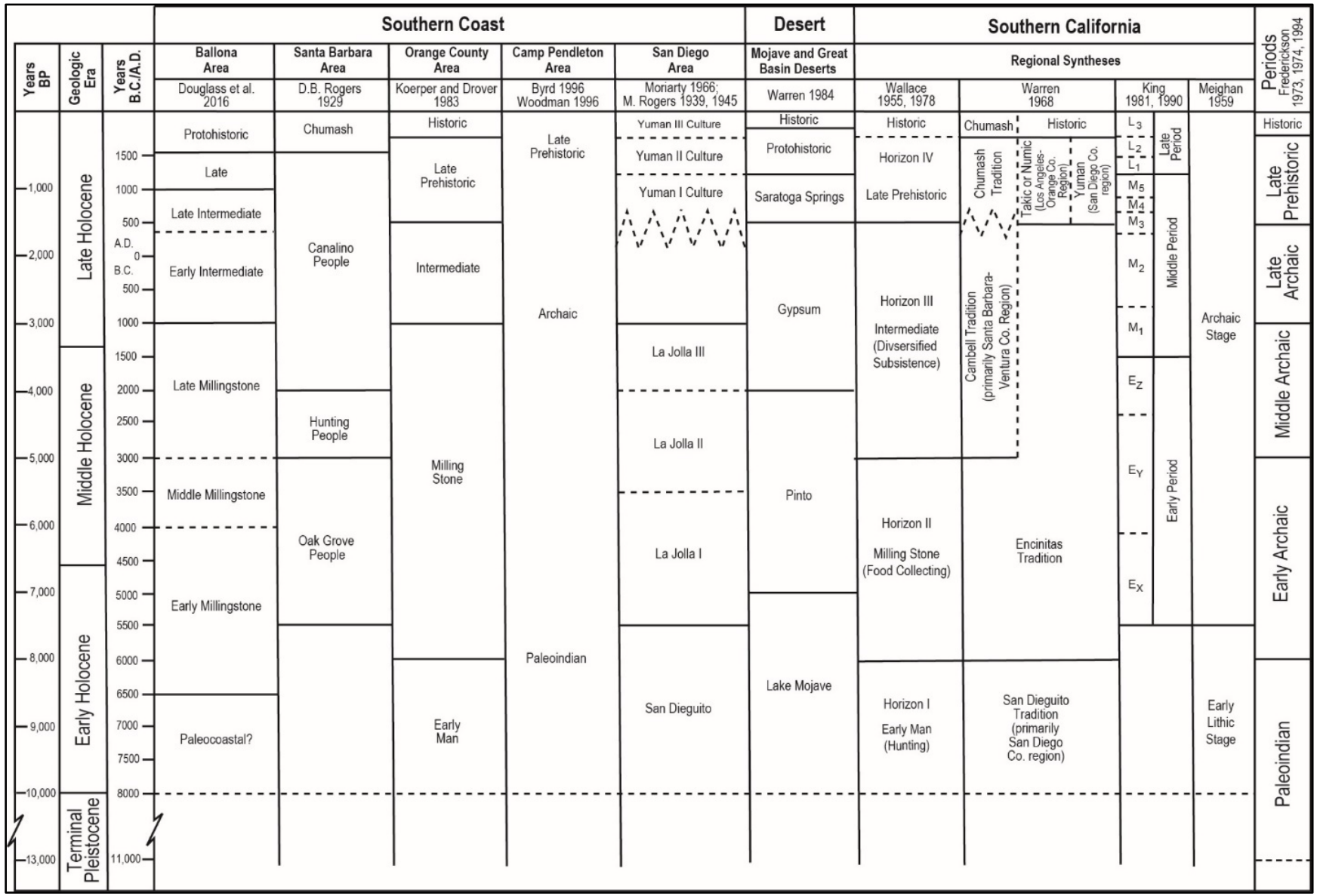

Figure 5. Chronological frameworks for Southern California and Los Angeles Basin cultural traditions and archaeological contexts.

Terminal Pleistocene: Paleoindian/Paleocoastal Tradition

Any discussion of human occupation of coastal areas during the Terminal Pleistocene must be prefaced with an understanding that sea level rise during this period of severely shifting climate inundated many kilometers of shoreline worldwide and along Southern California coastlines specifically, submerging an unknown number of archaeological sites (Reeder-Myers et al. 2015). Therefore, any evidence that we do have of human occupation in what are now coastal settings is likely only a small fraction of what originally existed (Erlandson et al. 2007; Erlandson et al. 2015). Recent studies using offshore core samples have made important progress in reconstructing paleoshorelines and the paleoenvironment of Southern California's Terminal Pleistocene coast (Gusick et al. 2022).

The earliest evidence for human occupation in Southern California is found on the northern Channel Islands, where multiple Terminal Pleistocene sites have been identified and dated in the past couple decades, firmly establishing the presence of early coastal-adapted people in the region (Erlandson and Braje 2008; Erlandson and Colton 1991; Erlandson et al. 1996; Erlandson et al. 2011; Erlandson et al. 2020; Gusick and Erlandson 2019). On Santa Rosa Island, human remains from the Arlington Springs site have been dated to approximately 13,000 years ago (Johnson et al. 2002). Recent excavations and radiometric dating of multiple archaeological assemblages on San Miguel, Santa Rosa, and Santa Cruz Islands document Paleoindian technologies, subsistence strategies, and seasonality of site occupation during the latter part of the Terminal Pleistocene (ca. 11,700 B.P.), with similarities to the Western Stemmed Tradition found across much of western North America (Braje et al. 2013; Erlandson 2013; Erlandson and Braje 2008; Erlandson et al. 1987; Erlandson et al. 2011; Erlandson et al. 2020; Jew et al. 2013; Rick et al. 2013).

Well-crafted chipped stone crescents like those recorded on the northern Channel Islands as part of the Paleocoastal toolkit were also found in surficial contexts on San Nicolas Island, suggesting an earlier occupation for the southern Channel Islands as well (Davis et al. 2010). It is possible that similarly early sites were present on the mainland California coast as well; however, the rate and degree of development beginning with Spanish colonization and continuing to the present has likely destroyed most early sites along the California mainland coast. Nevertheless, three fluted points representing the Clovis culture have been found in Southern California mainland coastal areas, including one in Santa Barbara County (Erlandson et al. 1987), one in Los Angeles County near Malibu (Stickel 2000), and one in El Morro Canyon, in what is now Crystal Cove State Park in Orange County (Fitzgerald and Rondeau 2012). Additionally, numerous fluted projectile points of the Clovis and Folsom Traditions have been reported from inland contexts in central and Southern California (e.g., Davis 1975; Dillon 2002; Moratto et al. 2011; Riddell and Olsen 1969; Rondeau 2006; Yohe and Gardner 2016).

PALEOCOASTAL OCCUPATION OF THE BALLONA AREA

Two sites, LAN-61 and LAN-63, in the Ballona area are believed to include occupations from this time based on diagnostic artifacts (crescents and stemmed points) (Lambert 1983; Van Horn 1987). However, recent data recovery excavations and analyses, including numerous radiocarbon dates, failed to provide incontrovertible evidence that people were using this area during the Paleocoastal period (Douglass et al. 2005), although this lack of radiocarbon dates does not necessarily negate the possibility that an earlier occupation occurred and might be uncovered in the future.

Early Holocene (ca. 11,500 to 7000 B.P.)

HORIZON I: EARLY MAN

During the early twentieth century, several sensationalized finds were thought to be evidence of "Early Man" in the Los Angeles Basin; however, subsequent analyses have not held up as hoped. First, in 1914, human remains were found in direct association with extinct Pleistocene fauna at the La Brea Tar Pits (LAN-159/H) (Merriam 1914). Although early estimates suggested that this find extended up to 34,000 years ago, radiocarbon dating has since shown these remains to have an estimated age range of approximately 9000 to 4450 B.P. (Berger et al. 1971; Payen 1970), with the most recent redating using accelerator mass spectrometry providing a calibrated date range of ca. 10,200 cal B.P. (Fuller et al. 2016), placing this individual at the transition between the Paleoindian/Paleocoastal period and the Millingstone period.

A second early discovery at Angeles Mesa in Baldwin Hills (the Haverty, or Angeles Mesa Site, LAN-171) included partially mineralized skeletal remains of several individuals found in depths up to 7 m (23 feet) below surface (Brooks et al. 1990; Stock 1924). Issues, however, with the various methods used to date these bones remain unresolved and have returned estimated dates of more than 50,000 years ago based on amino acid racemization (AAR) (Taylor et al. 1985) and radiocarbon date ranges that span 15,900 ± 50 to 3870 ± 350 B.P., representing an unacceptably large margin of error for a single individual (Berger et al. 1971; Brooks et al. 1990). The wide range of dates suggested problems with the methods used in the radiocarbon dating and calibration, especially concerning the use of AAR, and subsequent revisions to the estimates found a revised date range of between 7900 and 4050 B.P. (Taylor et al. 1985:137).

There are similar concerns related to the age of remains referred to as "Los Angeles Man"—designated LAN-172 (Lopatin 1940)—which were discovered in a similar depositional context less than 3.2 km (2 miles) from the Haverty Site in 1936 (Brooks et al. 1990; Erlandson et al. 2007:54). The remains at LAN-172 consisted of skull fragments and a broken humerus that were described as having been found in the same stratigraphic setting as mammoth bones, suggesting late Pleistocene antiquity, although neither of the discoveries were conducted as controlled excavation and the mammoth discovery was made approximately 370 m (1,213 feet) away. Subsequent dating using AAR could only yield a date of more than 23,600 B.P. (Berger et al. 1971:47), but revised estimates based on radiocarbon and AAR yielded a more much more recent date of 3560 B.P. (Taylor et al. 1985:137).

Mainland sites attributed to Horizon I generally indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas (e.g., Jones et al. 2002) and a greater emphasis on inland large-game hunting. Fundamental elements of lithic tool technology described by Wallace (1955) for this period include numerous scrapers, choppers, chipped and notched crescents, and large blades and points. Wallace (1955) also describes clamshell and bone beads, along with an absence of seed-grinding implements from the site type for this period, Malaga Cove. Several sites in Orange and San Diego Counties contain components that date to between 9,000 and 10,000 years ago (Byrd and Raab 2007:219; Macko 1998a:41; Mason and Peterson 1994:55–57; Sawyer and Koerper 2006), and radiocarbon dates from the Goleta Slough area in Santa Barbara County indicate occupations spanning ca. 9300 to 8400 cal B.P. (ca. 7300–6400 B.C.) with a primary subsistence focus on lagoon/bay shellfish (Owen et al. 1964).

HORIZON II: MILLINGSTONE

The Millingstone horizon corresponds to the Early Holocene when rising sea levels continued to encroach on coastlines, although global climate was slowly stabilizing. Set during a warmer and drier climatic

regime than the previous horizon, the Millingstone horizon is characterized by subsistence strategies centered on collecting plant foods and small animals, although in coastal areas where archaeological assemblages have been preserved, there is also ample evidence of marine resource use during this time (Connolly et al. 1995; Rick et al. 2001). The importance of seed processing is apparent in the dominance of stone grinding implements in archaeological assemblages from this period, namely milling stones (metates) and hand stones (manos) (Erlandson 1991, 1994; Moriarty 1966; Warren 1967). The variety of site types from this period indicate a mobile settlement pattern, and later research indicated that Millingstone horizon food procurement strategies varied in both time and space, reflecting divergent responses to variable coastal and inland environmental conditions (Byrd and Raab 2007:220).

Millingstone assemblages are characterized by the extensive use of milling implements (particularly manos and metates) and mullers along with scraper planes, choppers, and core tools and a general lack of meticulously crafted projectile points, although leaf-shaped points believed to be darts are present. The general lack of faunal remains along with bone and shell tools at some sites dated to this period have led researchers to suggest a stronger reliance of plant food resources (i.e., seeds) with only a minor focus on hunting. Several sites have been described for this horizon throughout Southern California, including Little Sycamore in Ventura, Porter Ranch in San Fernando, and the La Jolla shell mounds in San Diego. Los Angeles County sites with Millingstone components include Malaga Cove (Level 2, LAN-138; Walker 1952), the Tank Site (LAN-1) in Topanga Canyon (Heizer and Lemert 1947; Treganza and Bierman 1958), the La Brea Tar Pits Site (LAN-159; Salls 1986), the Zuma Creek Site (LAN-174; Wallace 1955; see also Ascher 1959), the Sweetwater Mesa Site (LAN-267; King 1967), the Shobhan Paul Site (LAN-958; Porcasi and Porcasi 2002; Salls 1995); and the Parker Mesa site (LAN-215; King 1962). Primary sites with Millingstone components in Orange County include Bolsa Chica (ORA-83; Herring 1961, 1968), ORA-64 (Drover et al. 1983; Macko 1998b), and the Landing Hill Site (Cleland et al. 2007).

Middle Holocene (ca. 7000 to 4000 B.P.)

HORIZON III: INTERMEDIATE

This horizon corresponds with the Middle Holocene and early Late Holocene time periods geologically and marks the point when current shorelines were established in most parts of the world. Consequently, evidence for marine resource use appears to have increased after 5,000 to 6,000 years ago.
The Intermediate horizon is characterized by important changes in almost all aspects of culture, including settlement patterns, economic activities, mortuary practices, and technology (Byrd and Raab 2007). During this period, economic practices shifted toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. An increasing variety and abundance of fish, land mammal, and sea mammal remains are found in sites from this horizon along the California coast. Related chipped stone tools suitable for hunting, including side-notched projectile points, are more abundant and diversified, and shell fishhooks became part of the toolkit during this period. Mortars and pestles became more common during this period, gradually replacing manos and metates as the dominant milling equipment and signaling a shift away from the processing and consuming of hard-shelled seed resources to the increasing importance of fleshier fruits like the acorn (e.g., Glassow et al. 1988; True 1993). Bow and arrow technology is first seen toward the end of the Intermediate period (ca. 1500–1000 B.P.) when it appears to have spread to the Southern California coast from the north and east.

Technological markers described for this horizon consist of basket-hopper mortars, mortars and pestles, diverse and plentiful chipped stone assemblages with greater numbers and a wider variety of projectile point types, and bone and antler tools, which are present to some degree but not in the quantity seen during later phases, along with occasional use of bitumen (asphalt) and steatite (Byrd and Raab 2007;

Johnson 1966; Wallace 1955). Faunal assemblages often include terrestrial mammals representing wild game, along with some marine mammal bones and often high densities of shellfish remains.

The Middle Holocene also marks a time of cultural innovation in the archaeological record of California. Significant cultural developments are seen in the increasing formation of larger settlements, the intensification of long-distance trade networks including distinct cultural spheres throughout western North America, and the elaboration of art and personal aesthetics (e.g., shell and stone pendants and increasing variety of shell bead types and styles) (Erlandson and Glassow 1997; Glassow 1997; Howard and Raab 1993; Jenkins and Erlandson 1996; King 1990; Raab and Howard 2002; Vellanoweth 2001).

There is also evidence suggesting migrations into coastal Southern California by desert peoples from the east during the Intermediate period based on changes in mortuary practices (i.e., cremations), the presence of desert tanged projectile points, and increased numbers of stone as opposed to shell beads. This question has been discussed by several archaeologists (Koerper 1979; Kowta 1961; Kroeber 1925; Moratto 1984; True 1966; Van Horn 1987, 1990) with most suggesting an arrival date of ca. 1500 cal B.P., although some argue for a much earlier migration at around 3500 cal B.P., which coincides with the Millingstone/Intermediate period transition (Sutton 2009). Of course, it is possible, and even likely, that multiple migrations of various scales occurred over the course of hundreds, or thousands, of years.

INTERMEDIATE PERIOD IN THE BALLONA AREA

The Intermediate period in the Ballona area is well documented, with five bluff-top sites containing large middens dated to within this period, in addition to four sites along the creek and one site situated on what was likely a small island in the middle of the lagoon (see Douglass et al. 2016:42 and references therein). There was a pronounced increase in settlement and use of this area during the Intermediate period, which some researchers attribute to the incursion of people from the desert areas to the east based on several new cultural traits. These include an increase in stone beads in funerary contexts in conjunction with an unusual paucity of shell beads in burial features at some sites along with a general lack of shell artifacts, the presence of tanged projectile points associated with desert cultures from this period, and the introduction of cremation, all of which are evident at several sites in the Ballona area with Intermediate components (see discussion in Douglass et al. 2016:42–43). Van Horn and Murray (1985) suggested a cultural tradition unique to the Ballona area based on analysis of the microlithic industry and the presence of desert-type projectile points.

Our understanding of settlement trends in the Ballona area during the Intermediate period is based on detailed analyses from three sites (LAN-63, LAN-64, and LAN-206) that demonstrate a high degree of diversity in subsistence activities, suggestive of more permanent occupations (Douglass et al. 2005). Extensive excavations also revealed that intra-site space at some of these bluff-top mesa sites was significantly structured and segregated, indicating the increased sedentary nature of habitation sites during the Intermediate period and a degree of site structure not previously seen in the area. Investigations identified discrete activity areas, including inhumation clusters composed of large numbers of broken or "killed" ground stone artifacts and sometimes large numbers of mostly stone beads along with fragmentary cremated human bone, suggesting discrete burial locales for various families or social groups, specific plant procurement and plant processing areas, communal refuse areas, and demarcated ritual spaces (Altschul et al. 2007; Douglass et al. 2005; see also Douglass et al. 2016). Data from extensive data recovery excavations at LAN-63 distinguish this site as containing more evidence of highly structured use areas and ritual activity than any other contemporaneous site; however, it is possible that this is a factor of sampling bias in that this site underwent larger-scale data recovery and was entirely exposed due to planned development (Douglass et al. 2005; Douglass et al. 2016). Although there were earlier debates, current information indicates that settlement along the lagoon and creek, as well as on top

of the bluff, was contemporaneous, with occupants of all sites performing similar activities and some sites representing specialized food-collecting and processing locales (Douglass et al. 2016).

Late Holocene (ca. 3000 B.P. to Spanish Colonization)

HORIZON IV: LATE PREHISTORIC

The Late Prehistoric period extended from the end of the Intermediate period (ca. A.D. 500) until Spanish colonization, marked by the Cabrillo expedition in A.D. 1542. This period is characterized by extensive population growth and a large increase in the number and types of sites along the Southern California coast. During this period, there was a significant increase in the population of Native peoples in Southern California accompanied by the advent of larger, more permanent villages (Wallace 1955:223), particularly at the mouths of large mainland coastal canyons and drainages with year-round water supplies (McLendon and Johnson 1999). Large populations, and in places, high population densities are characteristic, with some coastal and near-coastal settlements containing as many as 1,500 people. Many of the larger settlements were permanent villages in which people resided year-round, although the populations of these villages may have also increased seasonally. The development of social differentiation is indicated during this period by the complexity of site layouts with numerous complex features and the highly variable nature of mortuary treatments and burial grounds (Byrd and Raab 2007).

During the Late Prehistoric period, there was an increase in the use of plant food resources in addition to an increase in terrestrial and marine mammal hunting. There was a concomitant increase in the diversity and complexity of material culture during the Late Prehistoric horizon, demonstrated by more classes of artifacts. The recovery of a greater number of small, finely flaked projectile points suggests increased use of the bow and arrow rather than the atlatl (spear thrower) and dart for hunting. Steatite cooking vessels and containers are also present in sites from this time, and there is an increased presence of composite bone gorges and circular shell fishhooks, perforated stones, arrow shaft straighteners made of steatite, a variety of bone tools, and personal ornaments such as beads made from shell, bone, and stone. Olivella shell bead styles include a variety of wall and callus beads in addition to the previous spire-lopped and cup beads. There was also an increased use of asphaltum, or bitumen, for waterproofing basketry and caulking canoes and as an adhesive.

Technological markers of this horizon include the increased use of the bow and arrow, stemless points with concave or convex bases, steatite containers, widespread use of asphaltum as adhesive, and increased abundance and types of bone tools, as well as shell, bone, and stone ornaments (Byrd and Raab 2007; Wallace 1955). Wallace (1955) also describes notable distinctions between northern and southern groups during this period, including less pottery north of Orange County, where steatite vessels were more prevalent, and the presence of portable mortars and pestles and basket-hopper slabs in the north with bedrock mortars and milling stones being more prevalent in the San Diego area.

By A.D. 1000, fired clay smoking pipes and ceramic vessels were being used at some sites (Drover 1971, 1975; Meighan 1954; Warren and True 1961). The scarcity of pottery in coastal and near-coastal sites implies that ceramic technology was not well developed, or that occupants were trading with neighboring groups to the south and east for ceramics. The lack of widespread pottery manufacture is usually attributed to the high quality of tightly woven and watertight basketry that was caulked with bitumen (asphaltum) and functioned in the same capacity as ceramic vessels.

In Warren's (1968) cultural ecological scheme, the period between A.D. 500 and European colonization, which occurred as early as 1542, is divided into three regional patterns: Chumash/Canaliño (Santa Barbara and Ventura Counties), Takic/Numic (Los Angeles, Orange, and western Riverside Counties), and Yuman (San Diego County). The seemingly abrupt introduction of cremation, pottery,

and small triangular arrow points (Cottonwood Triangular points) in parts of modern-day Los Angeles, Orange, and western Riverside Counties at the beginning of the Late Prehistoric period is thought to be the result of a Takic migration to the coast from inland desert regions within the past few thousand years. Modern Gabrielino, Juaneño, and Luiseño people in this region are considered the descendants of the Uto-Aztecan, Takic-speaking populations that settled along the California coast during this time (see discussion in Byrd and Raab 2007).

LATE PREHISTORIC PERIOD IN THE BALLONA AREA

Settlement patterns in the Ballona area are in stark contrast to the rest of Southern California in that, rather than an increase in the number of sites occupied during the Late Prehistoric period, there was a sharp decline in the number of sites that were occupied during this time (Douglass et al. 2016). Only five sites in the Ballona area contain evidence of Late Prehistoric period occupation, with three sites along the edge of the wetlands (LAN-47, LAN-62, and LAN-211) containing evidence of more consistent but likely seasonal occupations during this time and two sites on the adjacent bluffs (LAN-61 and LAN-63) that contain isolated and ephemeral evidence of use during the Late Prehistoric period evidenced by the presence of diagnostic Canaliño and Cottonwood Triangular points (Douglass et al. 2005; Douglass et al. 2016; Hull and Douglass 2005). Faunal data from LAN-47 indicate people were primarily subsisting on plant and animal resources found in the adjacent salt marsh environments, including shellfish, waterfowl, fish that inhabit brackish environments, and small mammals, along with a variety of berries and seeds (Altschul et al. 1992). This site appears to represent a series of temporary camps along the edge of the lagoon at various times during the year depending on when different resources were available. Lithic technology during this period ranged broadly from well-crafted points to expediently produced flaked tools that were manufactured from an equally broad range of lithic materials.

Deposits from LAN-67 and LAN-211 were more disturbed than others assessed by SRI in the Ballona area but excavations at LAN-62 revealed the development of a specified burial area. Interments appear to have been placed in a more scattered and unorganized manner during previous occupations in the Ballona area. However, during Late Prehistoric period occupations of LAN-62, people began concentrating burials within a specified part of the midden (demarcated as Locus A/B) beginning a cultural practice that continued during subsequent Mission period occupations when the burial space was further restricted and confined to an even smaller area.

Climatic reconstruction for the area suggests a return to drier conditions by around 1,000 years ago (Wigand 2005). The Los Angeles River appears to have shifted its course away from Ballona during this time as well, further lessening the freshwater input to the lagoon and likely resulting in an expansion of the salt marshes. These localized deteriorating terrestrial conditions likely prompted the shift in settlement as people directed their focus to the more reliable salt marsh resources (Altschul et al. 2007).

Gabrielino Ethnography

The Project site is in an area historically occupied by the Gabrielino (Bean and Smith 1978:538; Kroeber 1925:Plate 57). Surrounding Native groups included the Chumash and Tataviam/Alliklik to the north, the Serrano to the east, and the Luiseño/Juaneño to the south (Figure 6). The interaction between the Gabrielino and many of their neighbors in the form of intermarriage and trade was regularly documented in ethnographic accounts. The name “Gabrielino” (also spelled Gabrieleno and Gabrieleño) denotes those people who were associated with Mission San Gabriel, whereas those who were associated with the nearby Mission San Fernando were referred to as Fernandeño. In the Mission and Rancho periods, Mission San Gabriel included Natives of the greater Los Angeles area, as well as members of surrounding groups such as Kitanemuk, Serrano, and Cahuilla.

Figure 6. Native American territorial boundaries based on ethnographic and tribal sources.

There is little evidence that the people we call Gabrielino had a broad term for their group (Dakin 1978:222). Instead, these people seem to have identified themselves as inhabitants of a specific community with locational suffixes. For example, a resident of Yaanga was called a Yabit, which Johnston likened to the way that a resident of New York is called a New Yorker (Johnston 1962:10). Native words suggested as labels for the broader group of Native Americans in the Los Angeles region include Tongva (or Tong-v) (Merriam 1955:7–86) and Kizh (Kij or Kichereno) (Heizer 1968:105), and many present-day descendants have taken on their preferred group name. The term Gabrielino is used in the remainder of this report to designate Native people of the Los Angeles Basin and their descendants.

The Gabrielino subsistence economy was centered on gathering and hunting. The surrounding environment was rich and varied, and the people used resources in mountains, foothills, valleys, deserts, riparian, estuarine, and open and rocky coastal eco-niches. Like that of most Native Californians, acorns were the staple food (an established industry by the time of the Early Intermediate period). Inhabitants supplemented acorns with the roots, leaves, seeds, and fruits of a variety of flora (e.g., islay, cactus, yucca, sages, and agave). Freshwater and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed (Bean and Smith 1978:546; Kroeber 1925:631–632; McCawley 1996:119–123, 128–131).

The Gabrielino used a variety of tools and implements to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Groups residing near the ocean used oceangoing plank canoes and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands (McCawley 1996:7). Gabrielino people processed food with a variety of tools, including hammer stones and anvils, mortars, and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Food was consumed from a variety of vessels including soapstone bowls and Catalina Island steatite was used to carve ollas and cooking vessels (Blackburn 1963; Kroeber 1925:629; McCawley 1996:129–138).

At the time of Spanish colonization, the basis of Gabrielino religious life was the ceremonies and rituals connected with the figure of Chinigchinich, who was the last in a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions and taught the people how to dance as a form of religious practice. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws (Kroeber 1925:637–638). The origins of the practices connected to Chinigchinich are somewhat unclear as it seems to have been relatively new when the Spanish arrived. It was spreading south into the southern Takic groups even as Christian missions were being built and may represent a mixture of Native and Christian belief and practices (McCawley 1996:143–144).

Deceased Gabrielino were either buried or cremated, with inhumation more common on the Channel Islands and the neighboring mainland coast, and cremation predominating on the remainder of the coast and in the interior (Harrington 1942; McCawley 1996:157). Remains were buried in distinct burial areas, either directly associated with villages or without apparent village association (Altschul et al. 2007). Cremation ashes have been found in archaeological contexts buried within stone bowls and in shell dishes (Ashby and Winterbourne 1966:27), as well as scattered among broken ground stone implements (Cleland et al. 2007). Archaeological data such as these correspond with ethnographic descriptions of an elaborate mourning ceremony that included a variety of offerings, including seeds, stone grinding tools, otter skins, baskets, wooden tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the sex and status of the deceased (Dakin 1978:234–365; Johnston 1962:52–54; McCawley 1996:155–165).

For more than 2,500 years, the Gabrielino and their predecessors practiced the *kotuumot kehaay*, or mourning ceremony, an important community ritual by which the living assisted the soul of the deceased

on its journey to the land of the dead (Hull 2011, 2012; Hull et al. 2013). It was not only an act of loving remembrance—the Gabrielino believed that the spirits of the deceased were dangerous and must be treated properly lest they molest the living (Boscana 1978). Observed every 1 to 4 years to commemorate those who had died since the previous iteration, the 8-day mourning ceremony was either conducted in late summer or in the same month as the person to be honored had died. The ceremony included four primary rites: ritual clothes washing, clothes burning, image burning, and a distribution of the property of the dead. It took place within an approximately 5-m-diameter (16-foot-diameter) circular brush enclosure called a yovaar, which was decorated with poles at cardinal directions topped with figures, or around an approximately 12- to 15-m-tall (40- to 50-foot-tall) central kotuumut pole that was painted in various colors representing body parts and erected in a pit in the ground surrounded by offerings of food, clothing, baskets, beads, and money. It included a hosted feast, paid dancers, and the ritual destruction and burial of valuable goods (McCawley 1996:161–165; Merriam 1955).

Hugo Reid, a Scottish immigrant married to a Gabrielino woman and owner of San Gabriel Mission in the 1840s, described the post-burial treatment of grave goods by the Gabrielino in his 1852 letters:

> When a person died, all the kin collected to lament and mourn his or her loss. After lamenting a while a mourning dirge was sung. If the deceased were the head of the family, or a favorite son, the hut in which he died was burned up, as likewise all of his personal effects, reserving only some article or another, or a lock of hair. This reservation was not as a memento of the deceased, but to make a feast with on some future occasion, generally after the first harvest of seeds and berries. (Dakin 1978:235)

Discussing the culmination of the ceremony itself, Reid continued:

> On the eighth day the…old women were employed to make more food than usual, and when the sun was in its zenith, it was distributed, not only among the actors, but to the spectators likewise. After eating, a deep hole was dug, and a fire kindled in it, when the articles reserved at the death of relatives were committed to the flames; at the same time, baskets, money, and seeds were thrown to the spectators, as in the marriage ceremony. During the burning process, one of the seers, reciting mystical words, kept stirring up the fire to ensure the total destruction of the things. The hole was then filled up with earth and well trodden down. The feast was over. (Dakin 1978:242–243)

This mourning ceremony has deep roots in Southern California, predating the period of Spanish colonization (1769–1834) by at least 2,000 years (Hull et al. 2013). It was also reportedly practiced in mid-nineteenth century Gabrielino communities in San Fernando, Piru, and Saticoy (Blackburn 1976:232), in neighboring Luiseño- and Cahuilla-speaking regions, including the greater Los Angeles area (Dietler et al. 2018; Morris et al. 2016).

Continuity After Colonization

The traditional way of life for Indigenous people was dramatically altered by the Spanish mission system and later Mexican and Euro-American settlement in this part of Southern California. The dissolution of cultural practices alienated Native Americans from their traditional subsistence patterns, social customs, and marriage networks. European diseases, against which they had no immunity, reached epidemic proportions, and Gabrielino populations were rapidly decimated (Johnson 1987). The increase in agriculture and the spread of grazing livestock into their collecting and hunting areas made maintaining traditional lifeways increasingly difficult. Although many Gabrielino were eventually subsumed by the mission system, some refused to give up their traditional existence and escaped into the interior regions of the state, where they survived as refugees living with other tribes.

Many researchers have brought attention to the role of Native American labor in developing and sustaining colonial settlements by providing crucial services and highly skilled roles across multiple types of industry (Akins and Bauer 2021; Anderson 2005:81–82; Hackel 1998, 2005:272–320; Phillips 2010; Silliman 2001).

> The involvement of Native American groups in any of the standard colonial institutions in the Americas—missions, ranchos, trade outposts, presidios, forts, and secular towns—revolved around labor, even in contexts of frequent interethnic marriage. Sometimes colonial groups forced labor on native societies; other times, indigenous peoples found colonial labor opportunistic and capitalized on it. In either case, labor constituted one of the primary and most influential interpersonal and intercultural relations in pluralistic colonial communities. (Silliman 2001:379–384)

Gabrielino acquired equestrian skills used in herding, corralling, and branding cattle, and they routinely conducted the work of killing and skinning livestock. They demonstrated an aptitude for the engineering needed to create irrigation systems—finding grades, laying out ditches, and managing watering regimes. Irrigation was crucial for supplying domestic supplies and agriculture, especially wine making, which also relied on Gabrielino to plant the grapevines. Native women and children provided crucial household chores within the ranchos across the Los Angeles Basin: "Most of those (Indians) who left the missions remained close by, often in their traditional tribal homeland, and worked on ranchos" (Akins and Bauer 2021:112).

During the early American period, Native Americans found work in citrus groves and other large-scale agricultural operations. During the twentieth century, Native Americans affiliated with tribes from outside the region increasingly came to Los Angeles, some out of necessity or in pursuit of new opportunities, and others because of the federal government's termination and relocation policies (Akins and Bauer 2021:266). Native American workers made important contributions to several important industries such as aviation and film during the early and middle parts of the twentieth century.

Although the contribution of Native American labor is clearly critical to an account of local history, Phillips (2010) offers an important consideration in terms of the motivation for taking this perspective.

> By examining how Indians adjusted to the new work regime and by describing how many became efficient workers, the focus remains on Indians themselves. Recognizing adaptation and efficiency, however, is far different from approving the system in which they were achieved…. The missions radically altered Indian culture, but they did not destroy Indian people. Even secularization—the systematic breakup of the mission system in the 1830s—was not designed to destroy Indians. In fact, Indians played an important role in this crucial event in California history, a role downplayed by some historians. (Phillips 2010:17–19)

It is estimated that several thousand Gabrielino descendants currently live in the Los Angeles area, although no reservation or rancherias were ever set aside (Bean 1995) and no Gabrielino tribal organizations have been federally recognized. Gabrielino descendants are represented by the following tribal organizations who actively strive to maintain their cultural legacy: Gabrielino-Tongva Indians of California Tribal Council, the Gabrielino-Tongva Indian Tribe, the Gabrielino/Tongva Nation, the Gabrielino/Tongva San Gabriel Band of Mission Indians, and the Gabrieleño Band of Mission Indians – Kizh Nation.

Locating Former Gabrielino Settlements

In general, it has proven difficult to establish the precise location of Native American settlements occupied immediately preceding and following Spanish arrival in California approximately 250 years ago (McCawley 1996:31–32). Many of the settlements and so-called villages had long since been abandoned

by the time ethnographers, anthropologists, and historians attempted to document any of their locations, at which point Native American lifeways had been irrevocably changed. McCawley (1996) quotes Kroeber (1925:616) in his remarks on the subject, writing that "the opportunity to prepare a true map of village locations 'passed away 50 years ago'" (McCawley 1996:32).

Several factors have confounded efforts at locating former Native American settlements. Firstly, many settlements were recorded with alternative names and spellings. Second, there have been conflicting reports on the meaning and locational reference of the placenames. In addition to differences in the interpretation of a given word, some of the placenames refer to a site using relatively vague terms that could fit several possible locations, or the word may reference a natural feature that no longer exists such as a type of plant that once grew in an area now fully urbanized. Third and perhaps most importantly, Native American placenames recorded in historical records and reported in oral histories did not necessarily represent a continually occupied settlement within a discrete location, which is how the term "village" is commonly understood today. Instead, in at least some cases, the settlements were represented by several smaller camps scattered throughout an approximate geography, shaped by natural features that were subject to change over generations (Ciolek-Torello and Garraty 2016; Johnston 1962:122). Furthermore, the criteria for what constitutes a village site has been especially lacking in consistency and specificity, even within a strictly academic context (see summary by Ciolek-Torello and Garraty [2016:69]). Much of the debate in this regard concerns whether sites were occupied on a permanent or temporary basis, and archaeological data do not always provide unequivocal evidence to make a reliable classification for a given site.

Still, within the range of terms put forth to characterize different types of Native American settlements, there are conventions and core insights shared among scholars. Prehistoric sites in coastal California, for example, are commonly referenced in archaeological sources as residential sites, habitation sites, and seasonal camps, whereas the term village is more often used to reference Mission period settlements such as the Chumash site of Humaliwo, Helo', and Muwu, or Luiseño sites such as Topomai (Ciolek-Torello and Garraty 2016:69). These Spanish and Mexican period sites are also sometimes referred to as rancherias—a term with connotations for a more permanent settlement and often used synonymously with village. The convention was established by Hugo Reid in 1852 who published the first list of Native American placenames in the Los Angeles area, which was by no means comprehensive (Stoll et al. 2016:387–389). The more generic terms of *settlement* and *site* will be used in this report and refer to places where Native American communities were once gathered. Native American sites may also refer to locations where archaeological materials, including human remains, have been identified. Such locations may consist of one or more known Native American archaeological resources or a general area in which a Native American archaeological resource could exist.

Native American Communities in the Project Vicinity

Several named Native American sites and suspected settlements are identified by historical maps and ethnographic accounts northwest of the Project site within a 14.8-km (9.2-mile) radius (Figure 7). The named sites include Waachnga (alternately spelled or referred to as Guaspet, Guasna, Guashna, Guachpet, or Guashpet, 4.4 km [2.7 miles] to the northwest), Kuruvunga (12.1 km [7.5 miles] to the northwest) and Comicrabit (14.8 km [9.2 miles] to the northwest). The La Brea Tar Pits, located 12.4 km (7.7 miles) north of the Project site, were known to have provided valuable resources to Native American groups. The closest named Native American village to the Project site is known as Waachnga (Guaspet), which has been identified through historical and ethnographic sources and was likely located within the Ballona Wetlands, northwest of the Project site. When Rancho de Sausal Redondo was granted in 1836, the governor referred to the land as "Sausal Redondo and Guaspita," indicating that the site may have been located within these rancho boundaries (Tatum 1969:277). Stoll et al. (2009) offer a detailed discussion of the history of its reference as a place name and potential locations (see also Douglass et al. 2016). While

some debate may still exist, all accounts of Waachnga point to an area either on the bluffs to the south of Ballona Creek or in the lowlands near the creek (Douglass et al. 2016:416; McCawley 1996:61–63), approximately 4.0 km (2.5 miles) to the northwest of the Project site (see Figure 7). The village is referenced on historical maps and diseño (map), including Kirkman (1938), who refers to a village site Guacho. This spelling is also seen on the original diseño drawn around 1840 for what was then referred to as Rancho del Paso de las Carretas ("Wagon Pass"), later Rancho La Ballona. For his 1962 map of Gabrielino sites, Weltz (1962) used the name Sa'angna, though this likely refers to a different site located farther upstream along Ballona Creek.

The precise location of most Native American villages in the Los Angeles Basin is subject to much speculation. Most maps depicting villages throughout the greater Los Angeles area show these sites along rivers or streams, and several maps have been produced throughout the twentieth century depicting this settlement pattern. This pattern of settlements concentrated along the Los Angeles River appears in Johnston (1962:x) and George Kirkman's (1938) map of historical sites ca. 1860–1937, which places the Native American village of Waachnga approximately 4.4 km (2.7 miles) northwest of the Project site along the Ballona Creek. These maps convey a general sense of significant historical areas but are intended as a representational depiction of these locations rather than explicit geographic points.

Figure 7. Native American village sites, place names, and sites described in ethnographic literature.

Mission and Rancho Period (1769 to 1848)

Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Mission period in California begins with the establishment in 1769 of a settlement at San Diego by the Spanish and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican era of governance within California, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, signals the beginning of the American period, when California became a territory of the United States.

Spanish explorers made sailing expeditions along the coast of Southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríquez Cabrílllo stopped in 1542 at present-day San Diego Bay. With his crew, Cabrílllo explored the shorelines of present-day Catalina Island as well as San Pedro and Santa Monica Bays. Much of the present-day California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabrílllo and Vizcaíno (Bancroft 1886:96–99; Gumprecht 2001:35).

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July 1769, while Portolá was exploring Southern California, Franciscan Fr. Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

The Portolá expedition first reached the present-day boundaries of Los Angeles in August 1769, thereby becoming the first Europeans to visit the area. Father Juan Crespí, a member of the expedition, named the campsite by the river Nuestra Señora la Reina de los Angeles de la Porciúncula or "Our Lady the Queen of the Angels of the Porciúncula." Two years later, Fr. Junípero Serra returned to the valley to establish a Catholic mission, the Mission San Gabriel Arcángel, on September 8, 1771 (Engelhardt 1927). In 1781, a group of 11 Mexican families traveled from Mission San Gabriel Arcángel to establish a new pueblo called El Pueblo de la Reyna de Los Angeles ("the Pueblo of the Queen of the Angels"). This settlement consisted of a small group of adobe-brick houses and streets and would eventually be known as the Ciudad de Los Angeles ("City of Angels").

A major emphasis during the Spanish period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish period, only two of which were successful and remain as California cities (San José and Los Angeles). Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the Indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants.

Extensive land grants were established in the interior while California was under the control of the Mexican government, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The secularization of the missions following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos. The Project site is within the original boundaries of Rancho La Brea, which was granted to Antonio Jose Rocha in 1828 (Seaman 1914).

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. This was largely the case for Rancho La Brea, which was situated in the vast, open space between Los Angeles and the Pacific Ocean. Cattle hides became a primary Southern California export, providing a commodity to trade for goods from the East and other areas in the United States and Mexico. The number of non-Native inhabitants increased during this period because of the influx of explorers, trappers, and ranchers, contributing to the rise of diseases foreign to the Native American population with no immunities.

American Period (1848 to Present)

War in 1846 between Mexico and the United States began at the Battle of Chino, a clash between resident Californios and Americans in the San Bernardino area. This battle was a defeat for the Americans and bolstered the Californios' resolve against American rule, emboldening them to continue the offensive in later battles at Dominguez Field and in San Gabriel (Beattie 1942). However, this early skirmish was not a sign of things to come, and the Americans were ultimately the victors of this 2-year war. The Mexican–American War officially ended with the Treaty of Guadalupe Hidalgo in 1848, which resulted in the annexation of California and much of the present-day Southwest, ushering California into its American period.

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. territories. Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the Southern California economy through 1850s. The Gold Rush began in 1848; with the influx of people seeking gold, cattle were no longer desired mainly for their hides, but also as a source of meat and other goods. During the 1850s cattle boom, rancho vaqueros drove large herds from Southern to Northern California to feed that region's burgeoning mining and commercial boom. Cattle were at first driven along major trails or roads such as the Gila Trail or Southern Overland Trail, then were transported by trains when available. The cattle boom ended for Southern California as neighbor states and territories drove herds to Northern California at reduced prices. Operation of the huge ranchos became increasingly difficult, and droughts severely reduced their productivity (Cleland 1941).

On April 4, 1850, only 2 years after the Mexican–American War and 5 months prior to California achieving statehood, Los Angeles was officially incorporated as an American city. Settlement of the Los Angeles region continued steadily throughout the Early American period. Los Angeles County was established on February 18, 1850, one of 27 counties established in the months prior to California acquiring official statehood in the United States. At that time, the city was bordered on the north by the Los Felis and the San Rafael Land Grants and on the south by the San Antonio Luge Land Grant. Many of the ranchos in the area now known as Los Angeles County remained intact after the United States took possession of California; however, a severe drought in the 1860s resulted in many of the ranchos being sold or otherwise acquired by Americans. Most of these ranchos were subdivided into agricultural parcels or towns (Dumke 1944).

Ranching retained its importance through the mid-nineteenth century, and by the late 1860s, Los Angeles was one of the top dairy production centers in the country (Rolle 2003). By 1876, the county had

a population of 30,000 (Dumke 1944:7). Los Angeles maintained its role as a regional business center, and the development of citriculture in the late 1800s and early 1900s further strengthened this status (Caughey and Caughey 1977). These factors, combined with the expansion of port facilities and railroads throughout the region, contributed to the impact of the real estate boom of the 1880s on Los Angeles (Caughey and Caughey 1977; Dumke 1944). By the late 1800s, government leaders recognized the need for water to sustain the growing population in the Los Angeles area. Irish immigrant William Mulholland personified the city's efforts for a stable water supply (Dumke 1944; Nadeau 1997). By 1913, the City of Los Angeles had purchased large tracts of land in the Owens Valley, and Mulholland planned and completed the construction of the 386-km (240-mile) aqueduct that brought the valley's water to the city (Nadeau 1997).

Los Angeles continued to grow in the twentieth century, in part due to the discovery of oil in the area and its strategic location as a wartime port. The county's mild climate and successful economy continued to draw new residents in the late 1900s, with much of the county transformed from ranches and farms into residential subdivisions surrounding commercial and industrial centers. Hollywood's development into the entertainment capital of the world and Southern California's booming aerospace industry were key factors in the county's growth in the twentieth century.

Los Angeles: From Pueblo to City

On September 4, 1781, 44 settlers from Sonora, Mexico, accompanied by the governor, soldiers, mission priests, and several Native Americans, arrived at a site along the Rio de Porciúncula (later renamed the Los Angeles River), which was officially declared El Pueblo de Nuestra Señora de los Angeles de Porciúncula, or the Town of Our Lady of the Angels of Porciúncula (Ríos-Bustamante 1992; Robinson 1979:238; Weber 1980). The site chosen for the new pueblo was elevated on a broad terrace 0.8 km (0.5 mile) west of the river (Gumprecht 2001). By 1786, the area's abundant resources allowed the pueblo to attain self-sufficiency, and funding by the Spanish government ceased.

Efforts to develop ecclesiastical property in the pueblo began as early as 1784 with the construction of a small chapel northwest of the plaza. Though little is known about this building, it was at the pueblo's original central square near the corner of present-day Cesar Chavez Avenue and North Broadway (Newcomb 1980:67–68; Owen 1960:7). Following continued flooding, however, the pueblo was relocated to its current location on higher ground, and the new town plaza soon emerged.

Alta California became a state in 1821, and the town slowly grew as the removal of economic restrictions attracted settlers to Los Angeles. The population continued to expand throughout the Mexican period and the city of Los Angeles was formally incorporated in 1850. Los Angeles maintained its role as a regional business center in the early American period and the transition of many former rancho lands to agriculture, as well as the development of citriculture in the late 1800s, further strengthened this status (Caughey and Caughey 1977). As previously mentioned, the development of agriculture in the region coupled with key infrastructure expansions at the time helped usher in the real estate boom of the 1880s in Los Angeles (Caughey and Caughey 1977; Dumke 1944).

Newcomers poured into the city, nearly doubling the population between 1870 and 1880, resulting in an increased demand for public transportation options. As the city neared the end of the nineteenth century, numerous privately owned passenger rail lines were in place. Though early lines were horse and mule drawn, they were soon replaced by cable cars in the early 1880s, and by electric cars in the late 1880s and early 1890s. Many of these early lines were subsequently consolidated into Henry E. Huntington's Los Angeles Railway Company (LARy) in 1898, which reconstructed and expanded the system into the twentieth century and became the main streetcar system for central Los Angeles, identified by their iconic "yellow cars." During this period, Huntington also developed the much larger Pacific Electric system

(also known as the "red cars") to serve the greater Los Angeles area. Just as the horse-and-buggy street cars were replaced by electric cars along the same routes, gas-powered buses (coaches) eventually served former yellow car routes. Both the red cars and LARy served Los Angeles until they were eventually discontinued in the early 1960s.

Los Angeles continued to grow outward from the city core in the twentieth century in part due to the discovery of oil and its strategic location as a wartime port. The military presence led to the growth in the aviation and eventually aerospace industries in the city and region. Hollywood became the entertainment capital of the world through the presence of the film and television industries and continues to tenuously maintain that position. With nearly 4 million residents, Los Angeles is the second largest city in the United States (by population), and it remains a city with worldwide influence that continues to struggle with its population's growth and needs.

Westchester

The Project site is located in the northern portion of the former rancho lands of Rancho Sausal Redondo, a 22,458-acre Mexican land grant in present-day Los Angeles County. The land grant was given by Governor Juan Alvarado to Antonio Ygnacio Ávila in 1837. Following the Mexican–American War and the Treaty of Guadalupe Hidalgo of 1848, which allowed for the previous Mexican land grants to be honored, the claim for the Rancho Sausal Redondo was filed with the Public Land Commission in 1852 and the grant was patented to Antonio Ygnacio Ávila in 1855. Antonio Ygnacio Ávila died in 1858 and Ávila's heirs were forced to sell the rancho to pay the probate costs in 1868. The Rancho was sold to Sir Robert Burnett of Scotland, who had previously acquired Rancho Aguaje de la Centinela to the north; the combined property was named Centinela Ranch. Centinela Ranch was used for sheep and cattle raising.

The Mexican–American War and the influx of new people brought many changes to the ranchos of Los Angeles. As the population of the greater Los Angeles area expanded greatly, the price of beef rose dramatically, and crime increased throughout the area (Scott 2004:32). The change in government also led to logistical problems for rancho owners who were forced to engage in difficult and lengthy legal processes in order to resecure the title of their land under American authorities. All these issues, coupled with a floundering cattle business, forced many rancho owners to sell off their land by the late nineteenth and early twentieth century (Scott 2004:34).

The Westchester neighborhood is in west Los Angeles, west of Inglewood, south of Del Rey and Marina del Rey, and east of Playa del Rey. During the Mexican period, Westchester was located within parts of Rancho Sausal Redondo and Rancho Aguaje de la Centinela. The first major development in the area came when the Santa Fe Railroad attempted to build a harbor in the Ballona. Work to achieve this goal began in 1887 with the construction of a railroad, the dredging of the wetland, and the construction of two wharfs (Dillon 1996:28). This investment in infrastructure led to the birth of several towns in the area; however, the initial venture was a failure, the town and port were never built, and dredging was halted because of its impracticality (Basten 1974:12; Dillon 1996:28). This episode represents the first stage of failure for the Ballona Wetlands, which were decimated by further development in the area during the end of the nineteenth and the beginning of the twentieth century.

From the late nineteenth until the early twentieth century Westchester was largely devoted to farming. However, the 1920s brought a new type of development to the area through the growth of the aviation industry (Friends of the Ballona Wetlands 2017; Masters 2014). The current site of Los Angeles International Airport (LAX), approximately 0.8 km (0.5 mile) south of the Project site, was initially developed as an airplane landing strip during this time. Known as Mines Field in the early 1920s, the modest landing strip was chosen as the site for Los Angeles' airport in 1928 (Starr 2002:133). Though the

aeronautics industry took a hit during the Great Depression, it came back in full force in the years before the United States entered World War II. The factories at this time had big orders to fill—in 1940, President Roosevelt asked the aircraft industry to produce 50,000 planes a year for the war effort. Though a seemingly innocuous number by today's standards, at the time the President was asking the industry to produce as many planes in one year as had been manufactured in America since planes were invented. The aircraft companies and their employees, however, were up to the task; many, such as the Douglas Aircraft Company in nearby Venice, began to operate 24/7, and several others switched to similar multiple shift schedules (Starr 2002:133–134).

This boom in industry caused a corresponding boom in employment; however, the boom in housing did not occur until Congress passed Title VI of the Housing Act in 1941. This legislation created more incentives for builders to concentrate on single-family homes, restricted in areas where critical housing shortages were predicted (Architectural Resources Group [ARG] 2013). Developers at the time were further incentivized to build houses for workers because at the time there was a ban on nonessential construction; one of the few authorized projects included homes for war workers, included those in the aeronautics industry (ARG 2013). Westchester quickly became a planned community and between 1941 and 1944 a group of developers created a planned community of 10,000 people in an 8-square-km (5-square-mile) area. Houses were quickly sold to defense workers (ARG 2013). By the 1950s, the area had been completely built out, resembling its present-day state. Airport Junior High School was constructed around 1956 and was removed in 1975.

RESULTS

CHRIS Records Search

Previously Conducted Studies

SWCA received the results of the CHRIS records search from the SCCIC on September 20, 2023. Results of the records search indicate that 18 cultural resources studies have been conducted within 0.8 km (0.5 mile) of the Project site (Table 1). Of the studies conducted within the records search boundary, one previous study intersects the Project site: LA-11973. LA-11973 included the entirety of the Project site and consisted of the Crenshaw/LAX Transit Corridor Project Final Environmental Impact Report, which was a management/planning project and did not include an intensive cultural resources survey.

Table 1. Prior Cultural Resources Studies within a 0.8-km (0.5-mile) Radius of the Project Site

Report Number	Title	Author (Affiliation)	Year	Proximity to Project Site
LA-01975	*Cultural Resource Survey and Clearance Report for the Proposed American Telephone and Telegraph Los Angeles Airport Central Office to the Santa Monica Central Office Fiberoptic Communication Route*	Neuenschwander, Neal J. (Peak & Associates, Inc.)	1989	Outside
LA-01982	*Los Angeles International Airport Series Volume 1 Draft Environmental Impact Statement*	Leonard, Nelson N. III (Los Angeles Department of Airports / FAA)	1976	Outside
LA-03673	*Historic Property Survey Report North Outfall Relief Sewer (NORS)*	Anonymous (Myra L. Frank & Associates)	1987	Outside
LA-03912	*Historic Property Survey Airport Boulevard - Manchester Avenue to N/o 98th Street*	Anonymous (Unknown affiliation)	1977	Outside

Report Number	Title	Author (Affiliation)	Year	Proximity to Project Site
LA-04836	*Phase I Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project*	Anonymous (Science Applications International Corporation)	2000	Outside
LA-04910	*Paleontological and Archaeological Resources Reconnaissance of the Los Angeles International Airport(lax) Property, Los Angeles County, California*	Raschke, Rod (RMW Paleo Associates, Inc.)	1995	Outside
LA-05564	*A Neighborhood History and Predictions of Archaeological Potential the Archaeology of Los Angeles XL 197l*	Verity, Sue (Unknown)	1999	Outside
LA-07713	*Cultural Resource Assessment for AT&T Wireless Facility 950-004-132 Located at 8530 Airport Boulevard City of Los Angeles Los Angeles County, California*	Kyle, Carolyn E. (Kyle Consulting)	2004	Outside
LA-07715	*Cultural Resources Records Search Results and Site Visit for Cingular Wireless Candidate El-014-03 (Neutrogena Property) 5705 West 98th Street, Los Angeles, Los Angeles County, California*	Bonner, Wayne H. (Michael Brandman Associates)	2005	Outside
LA-08255	*Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California: Volumes I and II*	Arrington, Cindy and Nancy Sikes (SWCA Environmental Consultants)	2006	Outside
LA-10732	*Cultural Resources Records Search, Site Visit Results, and Direct APE Historic Architectural Assessment for Clearwire Candidate CA-LOS2038/CA6587, 9750 Airport Boulevard, Los Angeles, California*	Bonner, Wayne and Kathleen Crawford (Michael Brandman Associates)	2010	Outside
LA-10857	*Final - LAX Master Plan Mitigation Monitoring & Reporting program- Archaeological Treatment Plan*	Smith, Brian F. (Earth Tech)	2005	Outside
LA-11973	*Crenshaw/LAX Transit Corridor Project Final Environmental Impact Report/Final Environmental Impact Statement*	Unknown (Metro)	2011	Within
LA-11974	*Abandonment Exemption, BNSF Railway Company, Milepost 7.95 to Milepost 13.25, Los Angeles, Los Angeles County, CA*	Morell, Karl (Ball Janick LLP)	2012	Outside
LA-12265	*Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate LA03057F (Four Points Hotel) 9750 Airport Boulevard, Los Angeles, California*	Bonner, Wayne H. and Kathleen A. Crawford (MBA)	2013	Outside
LA-12437	*Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Candidate LA0034 (Airport SBC Building), 8530 Airport Boulevard, Los Angeles, Los Angeles County, California*	Bonner, Wayne H. and Kathleen A. Crawford (Environmental Assessment Specialists, Inc.)	2013	Outside
LA-12728	*Cultural Resources Records Search and Site Visit Results for Verizon Wireless Candidate East LAX, 5705 West 98th Street, Los Angeles, Los Angeles County, California, EBI Job No. 61141090*	Wills, Carrie D. and Diane F. Bonner (MBA)	2014	Outside
LA-13443	*Los Angeles Department of Water and Power Century Trunk Line Project, City of Los Angeles, California, Phase I Cultural Resources Study*	Ortiz, Vanessa, Chris Taylor, Chris Lockwood, and Candace Ehringer (ESA)	2018	Outside

Previously Recorded Archaeological Resources

The CHRIS records search identified one cultural resource (LAN-214) within a 0.8-km (0.5-mile) radius of the Project site and this resource does not intersect the Project site.

LAN-214

The site record for LAN-214 site was filed in 1953 by Hal Eberhart who worked for the Archaeological Survey at the University of California, Los Angeles (UCLA). The record is based on the description by William Deane, who was an amateur collector/archaeologist. Eberhart's recording describes the site area as "small," consisting of "chipped stone points" (i.e., lithic projectile points), and that it was located approximately 61 m (200 feet) south of Manchester Avenue, and 122 m (400 feet) southwest of the intersection between Manchester Avenue and La Tijera Boulevard. Meanwhile, the SCCIC has the site plotted as approximately 253 m (830 feet) south of Manchester Avenue and approximately 274 m (900 feet) southeast of the Manchester Avenue and La Tiera intersection. This plotted location is approximately 0.4 km (0.25 mile) northwest of the Project site, whereas Deane's description places it approximately 1 km (0.6 mile) northwest of the Project site.

William Arthur Deane was born in 1923 in Los Angeles and had lived in Inglewood, California, from at least the time he was a teenager to the point he enlisted in World War II. Notably, Deane served as a tail gunner in a B-17, was shot down in 1942 and spent 22 months as a prisoner of war in Austria. After returning home, Deane moved to Torrance, got married and worked for Union Oil. Researchers at SRI report that Deane's brother worked as a grading contractor for Hughes Aircraft Company and had regularly informed him of archaeological discoveries on the Hughes property (Garraty et al. 2016:263). During the late 1940s and early 1950s, Deane collected artifacts and conducted unauthorized excavations on several Native American sites in the area, focused primarily around Ballona Creek. Marlys Thiel, a student at UCLA, conducted interviews with Deane and photographed portions of his collection, which she compiled into a report focused on the site identified at the Hughes Aircraft Company (Thiel 1953). In the same year, Eberhart prepared several site records based strictly on Deane's description, likely taken from the records compiled by Thiel, and because Deane did not keep detailed records, the site forms included only basic information concerning the contents and location.

In 1953, Eberhart filed nine site records in which he references the source of the information coming from William Deane, presumably based strictly on Thiel's interviews: one site near the coastline, south of Ballona Creek; five sites along the bluffs marking the south side of Ballona Creek; two sites along the southern margin of Centinela Creek; and LAN-214. It is unlikely that Eberhart ever visited these sites, and he appears to have calculated geographic coordinates for the sites based on the reported distances from streets.

The location of the site boundary for LAN-214 that is on file with the SCCIC matches the boundary recorded in an updated site record prepared in 1995 by R. Raschke and R. Bissell of RMW Paleo Associates. The record was prepared as part of a study assessing archaeological and paleontological resources on portions of Los Angeles International Airport (LA-4910). The 1995 record and current boundary on file with the CHRIS shows the site plotted approximately 274 m (900 feet) to the southeast of the intersection between Manchester Avenue and La Tijera Boulevard, not 122 m (400 feet) southwest as originally recorded. It is unclear whether Raschke and Bissell's preparation of the site record produced the erroneously plotted boundary, or if they had reported the boundary on file in the CHRIS.

Sacred Lands File Search

On September 1, 2023, the NAHC submitted the results of an SLF search in response to SWCA's request; the results are provided as an attachment (see Appendix B). The results of the SLF search were negative. In the response letter, the NAHC noted that the lack of recorded sites does not indicate the absence of Native American archaeological resources within the Project site, and that the CHRIS and SLF are not exhaustive. The NAHC's response to SWCA's request included a list of 11 Native American contacts

representing seven tribal organizations who may have knowledge of cultural resources in or near the Project site (Table 2).

Table 2. NAHC's Native American Contact List Included with the SLF Results

Name, Title	Affiliation
Christina Swindall Martinez, Secretary	Gabrieleño Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson	Gabrieleño Band of Mission Indians - Kizh Nation
Anthony Morales, Chairperson	Gabrielino/Tongva San Gabriel Band of Mission Indians
Sandonne Goad, Chairperson	Gabrielino/Tongva Nation
Christina Conley, Cultural Resource Administrator	Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson	Gabrielino Tongva Indians of California Tribal Council
Sam Dunlap, Cultural Resource Director	Gabrielino-Tongva Tribe
Charles Alvarez, Chairperson	Gabrielino-Tongva Tribe
Lovina Redner, Tribal Chair	Santa Rosa Band of Cahuilla Indians
Jessica Valdez, Cultural Resource Specialist	Soboba Band of Luiseno Indians
Joseph Ontiveros, Tribal Historic Preservation Officer	Soboba Band of Luiseno Indians

Archival Research

The land-use history for the Project site is described below and was ascertained through a review of historical maps and aerial photographs.

Map Review (1868 to 1980)

Around the turn of the twentieth century, the land surrounding the Project site still retained a pastoral character with very few permanent residents. Historical topographic maps and aerial photographs show that the Project site was undeveloped at the beginning of the twentieth century. An 1896 topographic map depicts the Project site in an undeveloped area west of the Atchison Topeka and Santa Fe (AT&SF) Railroad and southwest of Inglewood (Figure 8). By 1924, Inglewood has expanded farther to the south and to the west toward the Project site (see Figure 8). The Project site remains undeveloped on topographic maps and by 1948, the urbanized portion of Westchester has grown and is depicted as ending just northwest of the Project site (Figure 9); by 1950, almost the entire vicinity of the Project site has been developed (see Figure 9). Airport Junior High School is depicted within the Project site on a 1964 topographic map and the area is entirely encompassed by the urban area of Westchester.

Aerial photographs from the early and mid-twentieth century provide more clarity regarding the development of the Project site. The first aerial photograph depicting the Project site is dated 1928 and shows the Project site within an undeveloped area west of the AT&SF Railroad within an area that appears to have undulating small hills and depressions (Figure 10). An unpaved road that would become Arbor Vitae Street can be seen along the southern edge of the Project site and an unpaved north-south-trending road is shown to bisect the Project site. Another unpaved road heads northeast toward present-day Florence Avenue just north of the Project site. By 1934, the Project site and surrounding area remain undeveloped and the area west and southwest of the Project site appears to show the layout of a grove on an aerial photograph (see Figure 10). A 1941 aerial photograph does not show any roads visible within the Project site and the groves west and southwest of the Project site are no longer visible (Figure 11). By 1952, the area surrounding the Project site has been developed with suburban residences with the

exception to the south of the Project site (see Figure 11). The parcels directly to the south have several structures but they still have undeveloped areas. An unpaved road can be seen transecting the Project site from its northwest corner to its southeast corner and another unpaved road is shown to transect the northern portion of the Project site in an east-west direction. The northeastern portion of the Project site is partitioned off with vegetation and the southwest corner of a large square structure can be seen within the Project site and several small unpaved roads are also visible in the northeast corner of the Project site.

By 1956, Airport Junior High School is situated within the Project site with over 20 buildings and walkways (Figure 12). The buildings are concentrated in the northern three-quarters of the Project site and the remaining southern third of the Project site appears to be the school's athletic field. The area south of the Project site also exhibits additional development. Development south of the Project site continues until 1962 (see Figure 12), when the entire area around the Project site has been developed. No major changes to the Project site are visible in 1962, 1971 (Figure 13), and 1974 aerial photographs. By 1980, an aerial photograph shows the buildings of the junior high school have been removed and construction activities associated with the present-day car rental business are shown within the Project site. The present-day car rental facility can be seen on a 2017 aerial photograph (see Figure 13). The existing structures within the Project site include at least four buildings, paved parking lots, and covered parking areas with roofs containing solar panels.

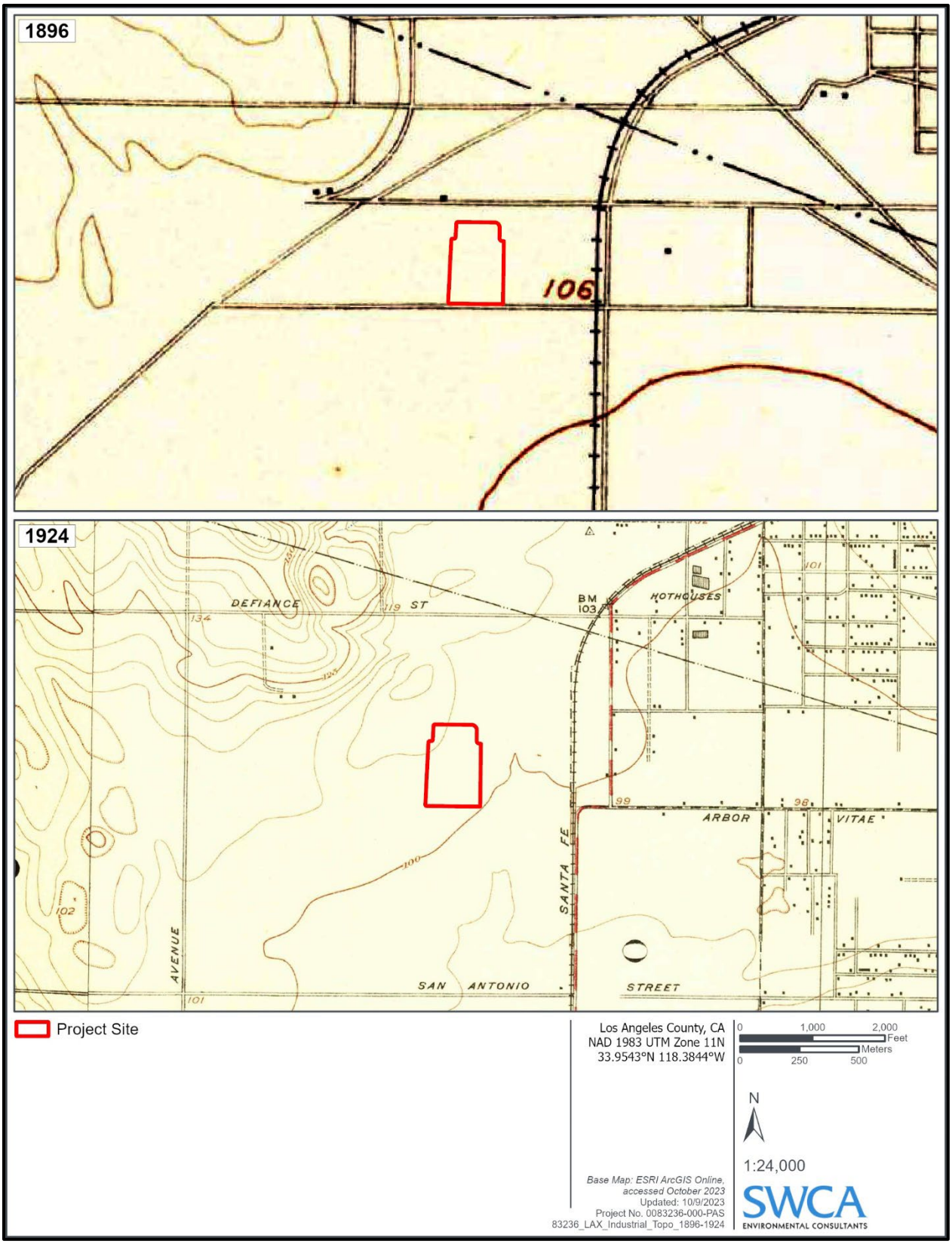

Figure 8. Project site depicted on USGS topographic maps from 1896 (top) and 1924 (bottom).

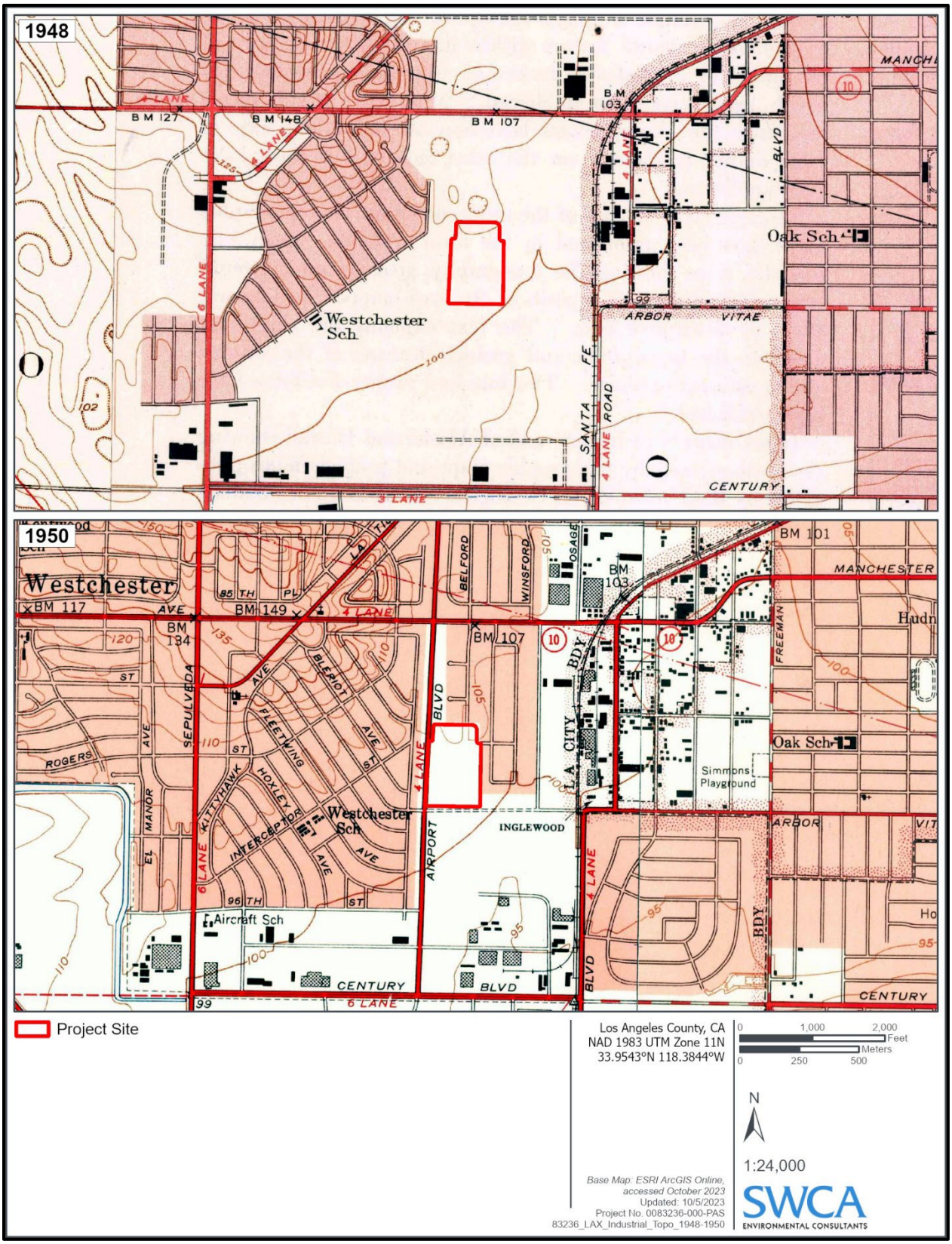

Figure 9. Project site depicted on USGS topographic maps from 1948 (top) and 1950 (bottom).

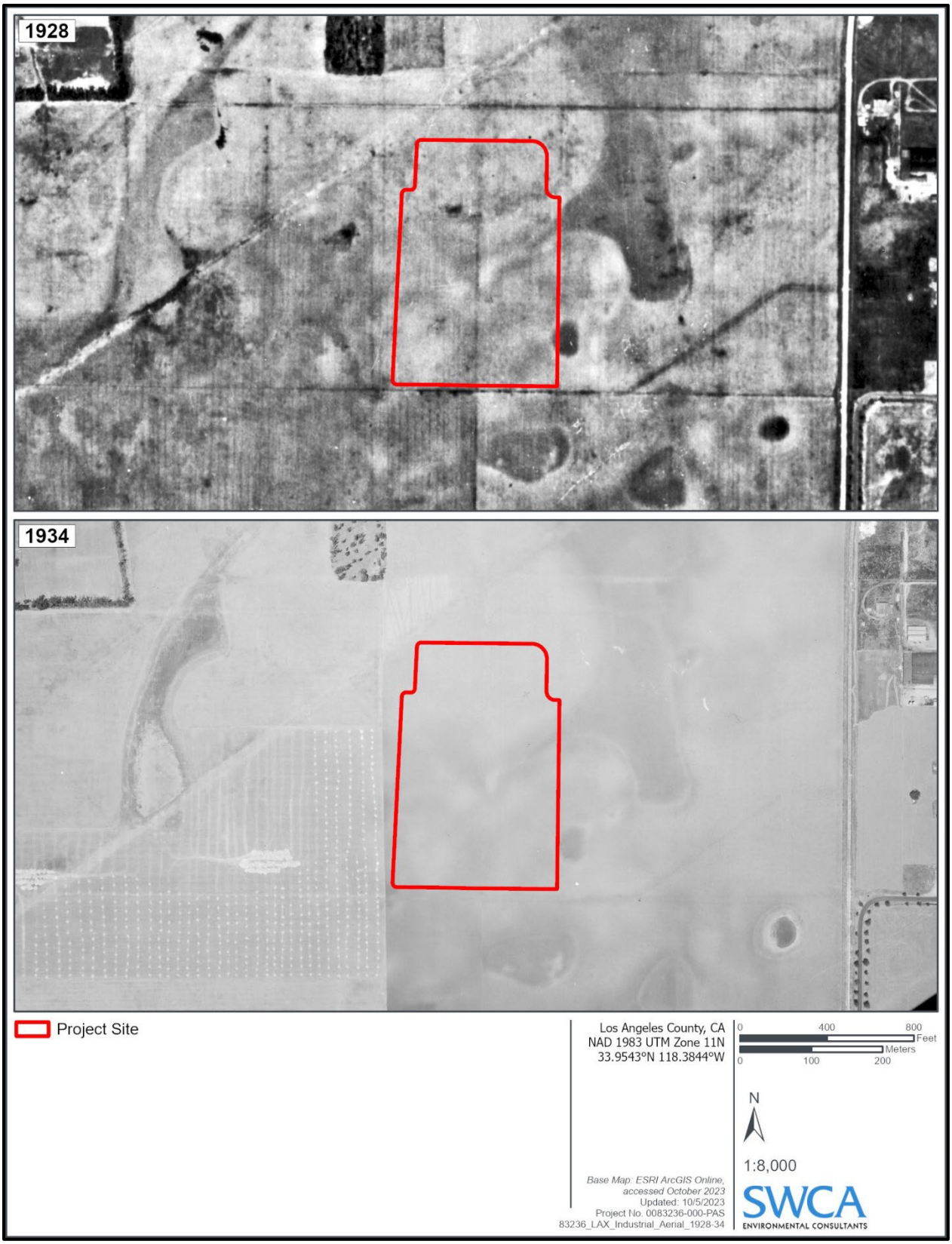

Figure 10. Project site depicted on aerial photographs from 1928 (top) and 1934 (bottom).

Figure 11. Project site depicted on aerial photographs from 1941 (top) and 1952 (bottom).

Figure 12. Project site depicted on aerial photographs from 1956 (top) and 1962 (bottom).

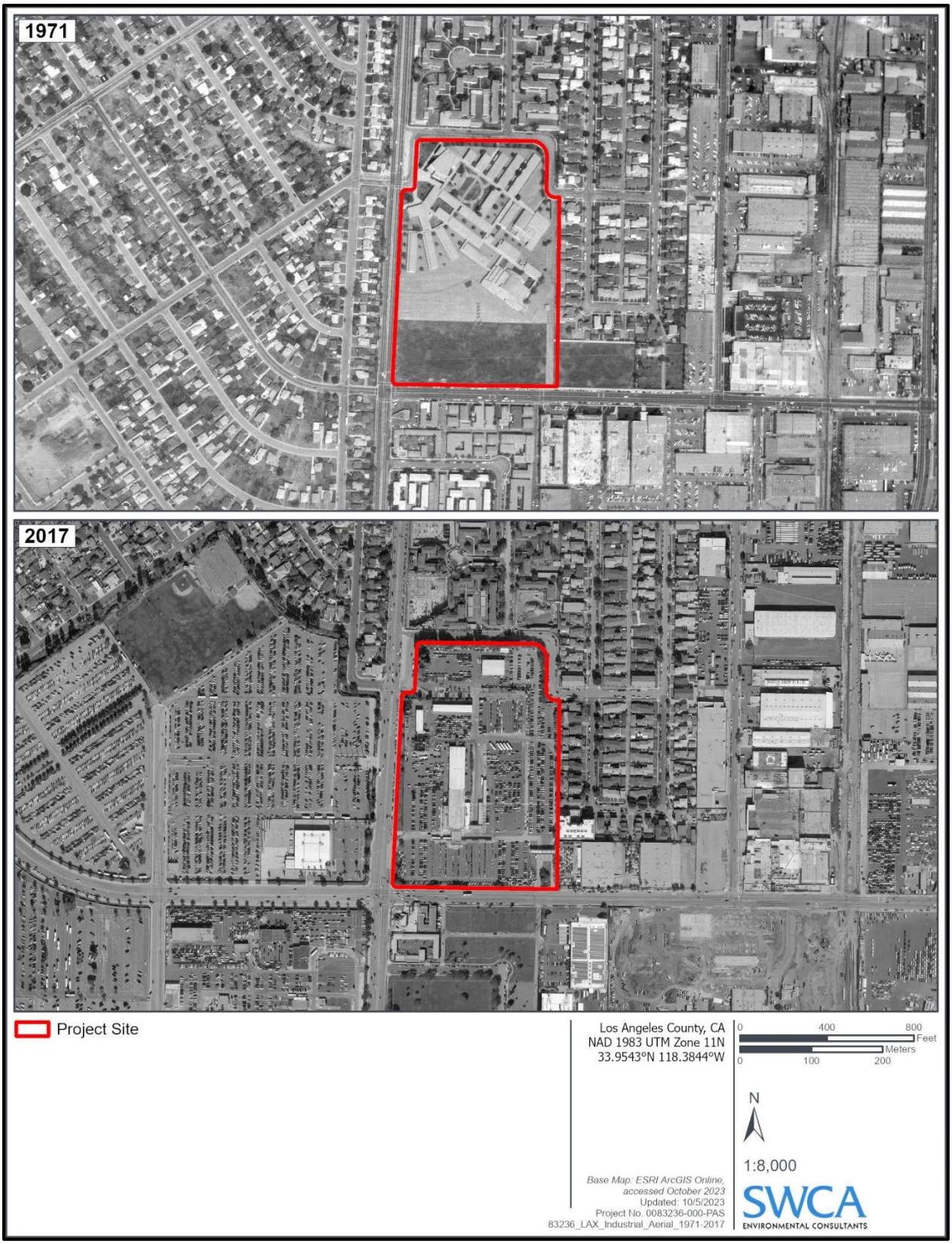

Figure 13. Project site plotted on aerial photographs from 1971 (top) and 2017 (bottom).

Archaeological Sensitivity Assessment

Native American Archaeological Sensitivity

The NAHC's SLF search returned negative results for the Project site. The CHRIS search returned one archaeological site: LAN-214. The site record for LAN-214 states that the site was initially recorded in 1953 as having contained one or more Native American artifacts described only as "points," located in a small area located 61 m (200 feet) south of Manchester Avenue and 122 m (400 feet) southwest of the intersection with La Tijera Boulevard. As to the accuracy of the location, if the streets and bearings and even approximate distances are to be trusted, LAN-214 is closer to at least 0.8 km (0.5 mile) northwest of the Project site.

The nearest ethnographically documented Native American village to the Project site is known as Guaspet (also known as Waachnga), located approximately 4.4 km (2.7 miles) to the northwest. In both prehistoric and historic periods, particularly after about 3000 B.P. as marshland conditions gave way to coastal plain, the wetland environment of the Ballona Creek area provided a highly favorable habitat for plant and animal species, many of which are known to have been important resources for Native Americans (Altschul et al. 1992:19; Altschul et al. 2003:77–85; Homburg et al. 2014). The Ballona area contains several substantial archaeological sites, some of which include multiple Native American burials. Several of these sites were also visited by Deane in the 1940s and 1950s.

Several prominent Native American sites exist in the Project site vicinity (e.g., the La Brea Tar Pits and Kuruvungna Springs) and Native Americans who occupied these settlements and foraged for resources in the area would have accessed the different locations using footpaths. Foraging and other types of activities, including interring human remains, would have occurred intermittently along these routes, some of which would have produced archaeological deposits. Such deposits, typically described as open camps, tend to be characterized by less substantial deposits, like that described for LAN-214, at least when compared with what is expected in an area whose use was greater in duration and frequency. At least some of the primary thoroughfares within the contemporary street grid were likely established along some of these trails. However, within the urbanized setting that characterizes the Project site and its surroundings, there is little to no direct evidence identified that would allow for a reliable reconstruction of any such trails in a spatially explicit way. Therefore, the influence on Native American archaeological resource sensitivity must be considered similarly generalized.

The closest known freshwater source to the Project site is Centinela Creek, located approximately 1.6 km (1.0 mile) to the northeast. The Pacific Ocean shoreline is located approximately 5.3 km (3.3 miles) to the west. As mentioned above, the ridge overlooking the Ballona wetland area was intensively occupied by multiple generations of Native American communities. Proximity to a freshwater source and marine resources is a strong indicator of potential for concentrated Native American activity and an increased likelihood that material components were deposited, and where preservation conditions are favorable, there is an increased sensitivity for Native American archaeological resources. Given the distance from the Project site to the coastline, major streams, and other major Native American settlements, there is little indication that the artifacts reported for LAN-214 were part of a more substantial settlement.

As noted above, only one recorded Native American archaeological site is located within 0.8 km (0.5 mile) of the Project site, and no documented reports of Native American archaeological materials in the Project site are known. The Project site lies within the El Segundo dune complex—mapped as Pleistocene old eolian deposits (Saucedo et al. 2016)—that consists of wind-blown sand. However, because no reliable source of fresh water is in or near the Project site, there were comparatively few plants and animals able to live and thrive in the semi-arid dunes. In contrast, areas with fresh water were present around the dunes where richer habitats could support a more diverse array of plants and animals.

Thus, compared with the dunes, areas with water were more attractive and preferrable places for repeated Native American use and sustained settlement over time. This assessment indicates the sensitivity for Native American sites is low in the Project site.

Furthermore, assuming that archaeological materials were ever present in the parcel, they would be associated with the soil that formed at or near the surface of the older dune deposits, which are now below at least 0.9 to 2.4 m (3–8 feet) of undocumented artificial fill (Pflueger and Kim 2023). However, given the nature and extent of the historical and modern land use within the parcel, the previous earth disturbances likely disturbed and/or destroyed the integrity of any intact archaeological materials and related deposits. This suggests the archaeological preservation potential is low in the parcel. Finally, because the dunes had formed and stabilized before widespread Native American use and occupation of the area, the potential for them to contain buried archaeological resources at greater depths is low.

In summary, this assessment finds that **there is a low potential for buried Native American archaeological resources in the Project site**. As such, no further archaeological research, identification, or field efforts appear to be warranted at this time as they pertain to Native American archaeological resources.

Historical Archaeological Sensitivity

No historical archaeological sites (i.e., those not affiliated with Native Americans) were identified in the CHRIS search conducted within a 0.8-km (0.5-mile) radius of the Project site. The Project site was originally used for agricultural lands and was first developed for the Airport Junior High School in the mid-1950s. Aerial photographs taken between 1928 and 1971 capture the development of the Project site and surroundings in the conversion from an agricultural property into the present-day urbanized setting. An aerial photograph taken in 1928 shows the Project site as undeveloped but part of a larger agricultural field. The Project site appears to have been used for agricultural purposes and remained vacant until 1956, at which point it was developed with the Airport Junior High School campus. By 1980, construction had started on the extant car rental facility within the Project site. Based on the inspection of the aerial photographs, the school campus appears to have mostly been paved, which significantly reduces the likelihood for substantial deposits of historical materials to have accumulated during the period in which the school was used. The construction of the campus would have likely destroyed any material evidence of its use as an agricultural field such as farming equipment, discarded tools, or irrigation components.

Sediment profiles produced from the geotechnical investigation identified undocumented artificial fill between 0.9 to 2.4 m (3–8 feet) deep. The description of the fill omits any mention of specific building materials or items such as glass and wood that could indicate buried refuse or structural remains, which are of an age that would be considered a historical archaeological resource. There was no evidence identified indicating whether sediments were imported either during construction of the school or the extant facility that succeeded it. The consistent presence of the fill across the Project site and its relative thickness compared with fill commonly observed in other urban settings within the Los Angeles Basin suggests the demolition of the school involved substantial mechanical excavation and grading.
The demolition process very likely removed not only the above grade and at grade buildings, structures, and hardscaping, but also the foundations.

It is possible that during the period in which the school was in operation, miscellaneous personal items (e.g., school materials, buttons, hair clips, coins, fragments of beverage bottles) were discarded and shallowly buried. Such items are commonly found as historical archaeological deposits. However, because most of the campus was paved, it is highly unlikely such deposits would have accumulated in substantial quantities or concentrations in the first place. Furthermore, whatever materials may have been discarded and shallowly buried would have been destroyed or otherwise dislocated during the demolition

and would now be effectively randomly distributed as isolated items throughout the stratum designated as undocumented artificial fill.

Based on these findings, SWCA finds that the undocumented artificial fill represents a zone in which there is a **moderate potential for isolated pieces of refuse and building materials from the middle twentieth century**.

DISCUSSION OF RESOURCE SIGNIFICANCE AND IMPACT ANALYSIS

Resource Significance

No previously recorded archaeological resource has been identified within 0.8 km (0.5 mile) of the Project site. The depth of excavation for the Project is assumed to extend to a depth of 3 m (10 feet) below ground surface. The potential for unidentified archaeological resources within the Project site was assessed based on available evidence and is found to include areas of low and moderate sensitivity, particularly for archaeological resources associated with mid-twentieth century residential and school land use. The specific types of archaeological resources most likely to be encountered during ground disturbance (designated as moderate sensitivity) are building materials and structural remains from the former Airport Junior High School campus, constructed in the mid-1950s and demolished by the early 1970s. There is at least some potential for discarded personal items from this period to be preserved as isolated items that have been redistributed anywhere within the stratum designated as undocumented artificial fill. Although the significance of any archaeological resource that may be preserved as a buried deposit within the Project site cannot be evaluated until it is encountered, this section considers the typical considerations given to the historical archaeological resources assessed as being most likely to occur.

Significance for historical archaeological deposits is typically found under Criterion 4, but significance can also be found under Criteria 1 and 2 where the archaeological materials can be correlated with a historically significant event or person. Establishing the significance of an archaeological deposit under Criteria 1 and 2 would depend on the nature of the materials and additional background research that make the associations more explicit. The nature of historical refuse scatters and building foundations are such that they are not commonly found eligible for the CRHR under Criterion 3, i.e., refuse scatters and buildings foundations do not typically convey any distinctive characteristics in type, period, region, or method, and are not the focus of masterful design or artistry. As such, considerations under Criterion 3 are omitted from the discussion below.

Determining the integrity and the extent (horizontal and vertical) of any identified archaeological remains is an important component of CRHR eligibility evaluation. Information on the horizontal distribution and vertical depth of the cultural material provides baseline data about the site (e.g., size, presence or absence of subsurface components, discrete activity areas) that contribute to a determination of the site's integrity. For an archaeological site to be considered CRHR eligible, it must be considered significant under the CRHR criteria for evaluation and possess the quality of integrity (location, design, setting, materials, workmanship, feeling, and association). The integrity of an archaeological site, particularly the elements of location, setting, and association, can be seriously impacted by disturbance due to natural or cultural transformations.

CRHR Criteria 1 and 2. An archaeological site can be found significant where a direct association can be demonstrated with a historically significant event (Criterion 1) or person (Criterion 2). No known historically significant events or persons were identified that have direct associations with the location

of the Project site. Additional archival research would be required to assess whether any archaeological materials identified in the Project site (if present) are significant under Criteria 1 and 2. The same integrity considerations described under Criterion 4 would equally apply when determining CRHR eligibility under Criteria 1 and 2. For any refuse deposits or building foundations identified in the Project site, the CRHR eligibility under Criteria 1 and 2 is considered to be unlikely compared to Criterion 4, but cannot be categorically ruled out.

CRHR Criterion 4. Resources that are significant under Criterion 4 have yielded, or have the potential to yield, information important to the history of the local area, California, or the nation. The Project site was used as a junior high school beginning in the middle twentieth century. There is a substantial body of literature and information already available concerning the history of Los Angeles from this period, including details concerning educational institutions. The archaeological record can provide opportunities to investigate specific research topics and contribute important historical information beyond what is already known. When historical archaeological investigations integrate both archival and archaeological data sets, they are even better positioned to meet this data potential. Archaeological materials could provide these data, although certain types of data have the potential to answer some research questions better than others.

Fragmentary building materials, structural foundations, and isolated pieces of refuse are the most likely archaeological resources to exist as a buried deposit in the Project site. Structural remains could provide data on the location of buildings and construction methods. While structural blueprints or detailed drawings of the former school were not obtained for the current study, the presence of building materials or structural foundations is not likely to contribute to our understanding of important historical topics and rise to the level of significance under Criterion 4. The evidence from the sediment profiles showing a relatively thick stratum of fill strongly suggests the integrity of any such materials is likely to be poor, further reducing the likelihood that any building materials or structural remains would qualify for CRHR listing.

In addition to structural remains and building materials, there is a potential for personal items to be present as isolated artifacts. Such items in the aggregate have the potential to reveal information about economic status, religious or ethnic affiliations, or other demographic information that could be of use in investigating various historical research topics. However, there is no evidence identified to suggest that these are likely to occur in high concentrations or even in high overall quantities. Furthermore, as with the building materials and structural foundations, the demolition of the former school campus has very likely compromised the integrity of any items below the level needed to establish the eligibility of these items under Criterion 4.

To summarize, evaluations under Criterion 4 should consider whether the archaeological data can contribute to important historical research topics, which for the Project site could be patterns in demography at educational institutions in the middle twentieth century. This evaluation should factor in existing documentary evidence and integrity of the archaeological remains identified. Given the disturbances to the setting resulting from the demolition of the former Airport Junior High School campus, and after considering the substantial body of existing historical information for this location and time period, the types of archaeological resources most likely to occur in the Project site are not likely to satisfy Criterion 4 of the CRHR or retain sufficient integrity to be considered a historical resource under CEQA.

Unique archaeological resource. For a historical archaeological refuse scatter or building foundation to be considered a unique archaeological resource, it must contain information needed to answer important scientific research questions of public interest, possess a unique quality such as being the oldest or best example of a resource type, or be directly associated with a scientifically recognized important historic

event or person. A historic archaeological site that does not meet the significance threshold for any CRHR eligibility criteria is unlikely to be considered a unique archaeological resource.

Impact Analysis

Archaeological Resources

The Project requires the excavation and removal of soils up to at least 3 m (10 feet) within the Project site, which likely will contain up to 2.4 m (8 feet) of undocumented artificial fill, as well as underlying alluvial sediments below the current grade. The potential for Native American archaeological resources is found to be low. Assuming that Native American archaeological materials were ever present in the parcel, they would be associated with the soil that formed at or near the surface of the older dune deposits, which are now beneath the fill. Given the nature and extent of the historical and modern land use within the Project site, the previous disturbances have likely disturbed and/or destroyed the integrity of any intact archaeological materials or related deposits associated with Native American uses. Further, because the dunes had formed and stabilized before widespread Native American use and occupation of the area, the potential for them to contain buried archaeological resources at greater depths is low.

Regarding historical archaeological resources, there is moderate sensitivity within the fill stratum. Specifically, there is a potential to encounter individual pieces of refuse, building materials, and structural remains associated with the Airport Junior High School campus that existed in the Project site from the mid-1950s to the early 1970s. However, these types of archaeological resources are unlikely to be found significant under CEQA because they typically lack the historical associations or attributes necessary to meet CRHR criteria. Furthermore, the sediment profiles and review of the land use history strongly suggests that the physical and spatial integrity of any such deposits, if present at all, has been compromised to the point that any material remains associated with the former school are incapable of conveying their historical significance.

Thus, the potential for encountering archaeological resources cannot be fully ruled out, but the available evidence suggests the resources most likely to be preserved would be contained within the fill and are not likely to be considered a historical resource under CEQA. The Project is subject to RCM CUL-1, which addresses the inadvertent discovery of archaeological resources as set forth in the environmental impact report. RCM CUL-1 requires that ground-disturbing work be stopped within a 50-foot radius in the event an archaeological resource is inadvertently discovered during grading, excavation, or other soil-disturbing activities within the Project site. Once discovered, the resource would be formally evaluated for significance based on its eligibility for the CRHR and as a unique archaeological resource. Based on RCM CUL-1, as implemented according to best practices incorporated into the Project, any potential impacts would be reduced to less than significant levels. Therefore, SWCA finds that the Project will have **less than significant impacts to archaeological resources**.

Human Remains

There was no evidence identified to indicate there are human remains interred in the Project site, but the discovery of human remains is always a possibility during ground disturbances. The Project is subject to RCM CUL-2, which addresses the inadvertent discovery of human remains and is in substantial conformance with the California Health and Safety Code Section 7050.5 and California PRC Section 5097.98. By adhering to these existing regulations, SWCA finds the Project will have **less than significant impacts to human remains interred outside a cemetery**.

SUMMARY AND CONCLUSION

As discussed above, there are no known archaeological resources recorded within the Project site. The Project site has moderate potential for encountering building materials, structural foundations, or individual pieces of refuse associated with the use of the Project site as the Airport Junior High School from the mid-1950s to early 1970s. Historical archaeological resources of this age and type do not typically satisfy the criteria for listing on the CRHR or to be considered a unique archaeological resource. Therefore, although there is a moderate potential to encounter certain types of historical archaeological resources, these are not likely to be historical resources under CEQA.

The Project is subject to RCMs that address the inadvertent discovery of archaeological resources and human remains. If an archaeological resource were to be discovered during construction of the Project, work in the area would cease, and deposits would first be evaluated for historic significance in accordance with CEQA Guidelines Section 15064.5. As set forth in CEQA Guidelines Section 15064.5, if the City determines that the archaeological resource is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code. If an archaeological resource does not meet the criteria for historical resources but meets the definition of a unique archaeological resource, the resource shall be treated in accordance with the provisions of Section 21083.2.

Regarding the discovery of human remains, notification is required per California Health and Safety Code Section 7050.5. In addition, disposition of the human remains and any associated grave goods would occur in accordance with PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e), which requires that work stop near the find until a coroner can determine that no investigation into the cause of death is required and if the remains are Native American. Specifically, in accordance with CEQA Guidelines Section 15064.5(e), if the coroner determined the remains to be Native American, the coroner shall contact the Native American Heritage Commission who shall identify the person or persons it believes to be most likely descended from the deceased Native American. The most likely descendent may make recommendations regarding the treatment of the remains and any associated grave goods in accordance with PRC Section 5097.98.

Based on these RCMs, as implemented according to best practices incorporated into the Project, any potential impacts would be reduced to less than significant levels. Therefore, SWCA finds that the Project will have **less than significant impacts to archaeological resources and human remains interred outside a cemetery.**

REFERENCES CITED

Akins, Damon B., and William J. Bauer, Jr.
2021 *We are the Land: A History of Native California.* University of California Press, Oakland, California.

Altschul, Jeffrey H., Richard Ciolek-Torrello, and Jeffrey A. Homburg
1992 Late Prehistoric Change in the Ballona Wetland. In *Archaeological Investigations of Some Significant Sites on the Central Coast of California*, edited by Herb Dallas, Jr., and Gary S. Breschini, pp. 89–108. Archives of California Prehistory No. 37, Gary S. Breschini and Trudy Haversat, general editors. Coyote Press, Salinas, California.

Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manuel Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell
2007 Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles. *Proceedings of the Society for California Archaeology* 20:34–42.

Altschul, Jeffery H., Anne Q. Stoll, Donn R. Grenda, and Richard Ciolek-Torrello (editors)
2003 *At the Base of the Bluff: Archaeological Inventory and Evaluation along Lower Centinela Creek, Marina del Rey, California*. Playa Vista Monograph Series, Test Excavation Report 4. Statistical Research, Inc., Tucson, Arizona.

Anderson, M. Kat
2005 *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources*. University of California Press, Berkeley.

Architectural Resources Group (ARG)
2013 *Historic Resources Survey Report: Westchester-Playa del Rey Community Plan Area*. Prepared for City of Los Angeles Department of City Planning Office of Historic Resources.

Ascher, Robert
1959 A Prehistoric Population Estimate using Midden Analysis and Two Population Models. *Southwestern Journal of Anthropology* 15(2):168.

Ashby, G. E., and J. W. Winterbourne
1966 A Study of Primitive Man in Orange County and Some of Its Coastal Areas. *Pacific Coast Archaeological Society Quarterly* 2(1):5–52.

Bancroft, Hubert Howe
1886 *History of California, Volume 1, 1542-1800*. The History Company Publishers, San Francisco, California.

Basten, Fred. E.
1974 Santa Monica Bay: The First 100 Years: a pictorial history of Santa Monica, Venice, Ocean Park, Pacific Palisades, Topanga, & Malibu. General Publishing Group, Los Angeles, California.

Bean, Lowell J.
1995 Gabrielino/Tongva. In *Native America in the Twentieth Century: An Encyclopedia*, edited by Mary B. Davis, p. 205. Garland Publishing, Inc., New York, New York.

Bean, Lowell J., and Charles R. Smith
1978 Gabrielino. In *California,* edited by Robert F. Heizer, pp. 538–549. In *Handbook of North American Indians*, Vol. 8, edited by William C. Sturtevant. Smithsonian Institution Press, Washington, D.C.

Beattie, George William
1942 Battle of Chino. *The Quarterly: Historical Society of Southern California* 24(4):143–160.

Bedrossian, Trinda L., Peter Roffers, Cheryl A. Hayhurst, Jeremy T. Lancaster, and William R. Short
2012 Special Report 217: Geologic Compilation of Quaternary Surficial Deposits in Southern California (2012 Revision). California Department of Conservation.

Berger, Rainer, Reiner Protsch, Richard Reynolds, Charles Rozaire, and James R. Sackett
1971 New Radiocarbon Dates based on Bone Collagen of California Paleoindians. *Contributions of the University of California Archaeological Research Facility* 12:43–49.

Blackburn, Thomas
1963 *Ethnohistoric Descriptions of Gabrielino Material Culture.* Annual Report, Archaeological Survey. University of California, Los Angeles.

1976 Ceremonial Integration and Social Interaction in Aboriginal California. In *Native Californians: A Theoretical Retrospective*, edited by Lowell John Bean and Thomas C. Blackburn, pp. 225–244. Ballena Press, Menlo Park, California.

Boscana, Friar Gerónimo, O.F.M.
1978 *Chinigchinich: A Revised and Annotated Version of Alfred Robinson's Translation of Father Gerónimo Boscana's Historical Account of the Belief, Usages, Customs and Extravagancies of the Indians of this Mission of San Juan Capistrano Called the Acagchemem Tribe*, edited by Phil T. Hanna. Reprinted. Classics in California Anthropology No. 3. Malki Museum Press, Morongo Indian Reservation, California. Originally published 1933, Fine Arts Press, Santa Ana, California.

Braje, T. J., J. M. Erlandson, and T. C. Rick
2013 Points in Space and Time: The Distribution of Paleocoastal Points and Crescents on the Northern Channel Islands. In *California's Channel Islands: The Archaeology of Human-Environment Interactions*, edited by C. S. Jazwa and J. E. Perry, pp. 26–39. University of Utah Press, Ann Arbor, Michigan.

Brooks, Sheilagh, Richard A. Brooks, G. E. Kennedy, J. Austin, James R. Firby, Louis A. Payen, Peter J. Slota, Jr., Christine A. Prior, and R. E. Taylor
1990 The Haverty Human Skeletons: Morphological, Depositional, and Geochronological Characteristics. *Journal of California and Great Basin Anthropology* 12(1):60–83.

Byrd, Brian F., and L. Mark Raab
2007 Prehistory of the Southern Bight: Models for a New Millennium. In *California Prehistory*, edited by Terry L. Jones and Kathryn A. Klar, pp. 215–228. Altimira Press, Lanham, Maryland.

Caughey, John, and LaRee Caughey
1977 *Los Angeles, Biography of a City.* University of California Press, Berkeley and Los Angeles.

Ciolek-Torello, Richard, and Christopher Garraty
2016 Site Function, Settlement, and Community Organization in the Ballona. In *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California. Volume 5: Gabrielino/Tongva Origins and Development: A View from Guaspet*, edited by J. Douglass, S. Reddy, R. Ciolek-Torello, and D. Grenda, pp. 61–151. Statistical Research, Inc., Tucson, Arizona.

City of Los Angeles
2001 *Conservation Element of the City of Los Angeles General Plan.* City Plan Case No. 2001-0413-GPA, Council File No. 01-1094.

Cleland, James H., Andrew L. York, and Lorraine M. Willey
2007 *Piecing Together the Prehistory of Landing Hill: A Place Remembered.* EDAW Cultural Publications No. 3. EDAW, Inc., San Diego, California.

Cleland, Robert Glass
1941 *The Cattle on a Thousand Hills: Southern California, 1850-80*. The Huntington Library, San Marino, California.

Connolly, T. J., J. M. Erlandson, and S. E. Norris
1995 Early Holocene Basketry and Cordage from Daisy Cave San Miguel Island, California. *American Antiquity*, pp. 309–318.

d'Azevedo, Warren L.
1986 Great Basin. In Handbook of North American Indians, Vol. 11, edited by William Sturtevant. Smithsonian Institute, Washington, D.C.

Dakin, Susanna Bryant
1978 *A Scotch Paisano in Old Los Angeles: Hugo Reid's Life in California, 1832-1852 Derived from His Correspondence*. Originally published 1939. University of California Press, Berkeley, Los Angeles, and London, United Kingdom.

Dark, Shawna, Eric D. Stein, Danielle Bram, Joel Osuna, Joeseph Montegerante, Travis Longcore, Robin Grossinger, and Erin Beller
2011 *Historical Ecology of the Ballona Creek Watershed*. Southern California Coastal Water Research Project. Technical Report 671. Electronic PDF version of report and geospatial data. Available at: http://www.ballonahe.org. Accessed July 2023.

Davis, Emma L.
1975 The Expanded Archaeology of China Lake, California. *American Antiquity* 40:39–53.

Davis, Troy, Jon Erlandson, Gerrit Fenenga, and Keith Hamm
2010 Chipped Stone Crescents and the Antiquity of Maritime Settlement on San Nicolas Island, Alta California. *California Archaeology* 2(2):185–202.

Dietler, John, Heather Gibson, and Benjamin Vargas
2018 "A Mourning Dirge was Sung": Community and Remembrance at Mission San Gabriel. In *Forging Communities in Colonial Alta California*, edited by Kathleen L. Hull and John G. Douglass, pp. 62–87. University of Arizona Press, Tucson.

Dillon, Brian D.

1996 Archaeological Impact Assessment of the Price-Costco Plaza Project 18.4 +/- Acres in Culver City, Los Angeles County, California. Prepared for Christopher A. Joseph & Associates. On file at Southern Central Coastal Information Center.

2002 California Paleoindians: Lack of Evidence, or Evidence of Lack. In *Essays in California Archaeology: A Memorial to Franklin Fenenga,* edited by William J. Wallace and Francis A. Riddell, pp. 110–128. Contributions of the University of California Archaeological Research Facility No. 60. University of California, Berkeley.

Douglass, John G., Jeffrey H. Altschul, and Richard Ciolek-Torello (editors)

2005 *Overlooking the Wetlands: Archaeological Investigations at the West Bluff Project, CA LAN-63, CA-LAN-64, and CA-LAN-206A, Playa del Rey, California.* 2 Vols. Draft. Technical Report 05-93. Statistical Research, Inc., Redlands, California.

Douglass, John G., Seetha N. Reedy, Richard Ciolek-Torello, and Donn R. Grenda (editors)

2016 People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California. Volume 5: *Gabrielino/Tongva Origins and Development: A View from Guaspet.* Submitted to U.S. Army Corps of Engineers, Los Angeles. SRI Technical Series 94, Statistical Research, Inc., Tucson, Arizona.

Drover, Christopher E.

1971 Three Fired-Clay Figurines from 4-Ora-64, Orange County, California. *Pacific Coast Archaeological Society Quarterly* 7(4):73–86.

1975 Early Ceramics from Southern California. *The Journal of California Anthropology* 2(1):101–107.

Drover, Christopher E., Henry C. Koerper, and Paul E. Lagenwalker II

1983 *Early Holocene Adaptations on the Southern California Coast: A Summary Report of Investigations at the Irvine Site (CA-ORA-64), Newport Bay, Orange County, California.* Pacific Coast Archaeological Society, Santa Ana, California.

Dumke, Glenn S.

1944 *The Boom of the Eighties in Southern California.* Huntington Library Publications, San Marino, California.

Engelhardt, Zephyrin

1927 *San Gabriel Mission and the Beginning of Los Angeles*. Mission San Gabriel, San Gabriel, California.

Erlandson, Jon M.

1991 Early Maritime Adaptations on the Northern Channel Islands. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by J. M. Erlandson and R. Colten, pp. 101–112. Perspectives in California Archaeology, Vol. 1. Institute of Archaeology, University of California, Los Angeles.

1994 Early Hunter-Gatherers of the California Coast. Plenum Press, New York, New York.

2013 Channel Island Amol Points: A Stemmed Paleocoastal Type from Santarosae Island, Alta California. *California Archaeology 5*(1):105–121.

Erlandson, J. M., A. F. Ainis, T. J. Braje, B. J. Culleton, K. M. Gill, C. A. Hofman, D. J. Kennett, L. A. Reeder-Myers, and T. C. Rick
2020 Maritime Paleoindian Technology, Subsistence, and Ecology at an ~11,700 year old Paleocoastal site on California's Northern Channel Islands, USA. *PLOS One* 15(9):e0238866.

Erlandson, J. M., and T. J. Braje
2008 Five Crescents from Cardwell: The Context of Eccentric Crescents from CA-SMI-679, San Miguel Island, California. *Pacific Coast Archaeological Society Quarterly* 40(1):35–45.

Erlandson, J. M., T. J. Braje, K. M. Gill, and M. H. Graham
2015 Ecology of the Kelp Highway: Did Marine Resources Facilitate Human Dispersal from Northeast Asia to the Americas? *The Journal of Island and Coastal Archaeology* 10(3):392–411.

Erlandson, J. M., and R. H. Colton
1991 An Archaeological Context for Early Holocene Studies on the California Coast. In *Hunter-Gatherers of Early Holocene Coastal California*, pp. 1–10. Institute of Archaeology, University of California, Los Angeles.

Erlandson, J. M., T. Cooley, and R. Carrico
1987 A Fluted Projectile Point Fragment from the Southern California Coast: Chronology and Context at CA-SBA-1951. *Journal of California and Great Basin Anthropology* 9:120–128.

Erlandson, J. M., and M. A. Glassow (editors)
1997 *Archaeology of the California Coast During the Middle Holocene*. Institute of Archaeology, University of California, Los Angeles.

Erlandson, J. M., D. J. Kennett, L. Ingram, D. Guthrie, D. Morris, M. Tveskov, G. West, and P. Walker
1996 An Archaeological and Paleontological Chronology for Daisy Cave (CA-SMI-261), San Miguel Island, California. *Radiocarbon* 38(2):355–373.

Erlandson, J. M., T. C. Rick, T. J. Braje, M. Casperson, B. Fullfrost, T. Garcia, D. A. Guthrie, N. Jew, M. L. Moss, L. Reeder, J. Watts, and L. Willis
2011 Paleoindian Seafaring, Shell Middens, and Maritime Technologies on California's Northern Channel Islands. *Science* 331:1181–1185.

Erlandson, Jon M., Torben C. Rick, Terry L. Jones, and Judith F. Porcasi
2007 One if by Land, Two if by Sea: Who Were the First Californians? In *California Prehistory: Colonization, Culture, and Complexity,* edited by Terry L. Jones and Kathryn A. Klar, pp. 53–62. Altamira Press, Lanham, Maryland.

Fitzgerald, Richard T., and Michael Rondeau
2012 A Fluted Projectile Point from Crystal Cove State Park, Orange County, Alta California. *California Archaeology* 4(2):247–256.

Fredrickson, D. A.
1973 Early Cultures of the North Coast Ranges, California. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Davis.

1974 Cultural Diversity in Early Central California: A View from the North Coast Ranges. *Journal of California Anthropology* 1:41–53.

1994 Spatial and Cultural Units in Central California Archaeology. In *Toward a New Taxomomic Framework for Central California Archaeology*, edited by Richard E. Hughes, pp. 25–47. University of California Archaeological Research Facility Contributions No. 51, Berkeley.

Friends of the Ballona Wetlands
2017 Early History. Available at: http://www.ballonafriends.org/history.html#7. Accessed August 5, 2022.

Fuller, B. T., J. R. Southon, S. M. Fahrni, J. M. Harris, A. B. Farrell, G. T. Takeuchi, O. Nehlich, M. P. Richards, E. J. Guiry, and R. E. Taylor
2016 Tar Trap: No Evidence of Domestic Dog Burial with "La Brea Woman." *PaleoAmerica* 2(1):56–59.

Garraty, Christopher P., Benjamin R. Vargas, Stacey N. Lengyel, Jeffrey A. Homburg, Jill A. Onken, Donn R. Grenda, and John G. Douglass
2016 LAN-62 Field Methods and Excavation Results. In *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California*. Volume 2: Archaeological Sites and Chronology, edited by Benjamin R. Vargas, John G. Douglass, and Seetha N. Reddy, pp. 231–255. Statistical Research, Inc., Tucson, Arizona.

Glassow, M. A.
1997 Middle Holocene Cultural Development in the Central Santa Barbara Channel Region. In *Archaeology of the California Coast during the Middle Holocene*, edited by J. M. Erlandson and M. A. Glassow, pp. 73–90. Perspectives in California Archaeology, Vol. 4. Institute of Archaeology, University of California, Los Angeles.

Glassow, Michael A., L. Wilcoxon, and J. M. Erlandson
1988 Cultural and Environmental Change During the Early Period of Santa Barbara Channel Prehistory. In *The Archaeology of Prehistoric Coastlines*, edited by G. Bailey and J. Parkington, pp. 64–77. Cambridge University Press, United Kingdom.

Gumprecht, Blake
2001 *The Los Angeles River: Its Life, Death, and Possible Rebirth*. Johns Hopkins University Press, Baltimore, Maryland.

Gusick, A. E. and J. M. Erlandson
2019 Paleocoastal Landscapes, Marginality, and Initial Settlement of California's Islands. In *An Archaeology of Abundance: Re-evaluating the Marginality of California's Islands*, edited by K. Gill, J. Erlandson, and M. Fauvelle, pp. 59–97. University of Florida Press, Gainesville.

Gusick A. E., J. Maloney, T. J. Braje, G. J. Retallack, L. Johnson, S. Klotsko, A. Ainis, and J. M. Erlandson
2022 Soils and terrestrial sediments on the seafloor: Refining archaeological paleoshoreline estimates and paleoenvironmental reconstruction off the California coast. *Frontiers in Earth Science* 10:941911. Available at: https://www.frontiersin.org/articles/10.3389/feart.2022.941911/full. Accessed September 2023.

Hackel, Steven
1998 Land, Labor, and Production: The Colonial Economy of Spanish and Mexican California. In *Contested Eden: California Before the Gold Rush*, edited by R. A. Guiterrez and R. J. Orso, pp. 111–146. University of California Press, Berkeley and Los Angeles.

2005 *Children of Coyote, Missionaries of Saint Francis: Indian-Spanish Relations in Colonial California, 1769-1850*. University of North Carolina Press, Chapel Hill.

Hackel, Stephen, Jeanette Zerneke, and Nat Zappia
2015 Early California Cultural Atlas. Available at: http://ecai.org/. Accessed August 10, 2022.

Harrington, John P.
1942 Culture Element Distributions: XIX Central California Coast. *University of California Anthropological Records* 7(1):1–46.

Heizer, Robert F.
1968 *Village Names in Twelve California Mission Records.* Reports of the University of California Archaeological Survey 74.

1978 California. In Handbook of North American Indians, Vol. 8, edited by William Sturtevant. Smithsonian Institute, Washington, D.C.

Heizer, Robert F., and Edwin M. Lemert
1947 *Observations on Archaeological Sites in Topanga Canyon, California*. University of California Publications in American Archaeology and Ethnology Vol. 44, No. 2. University of California Press, Berkeley.

Herring, Alika K.
1961 Three Unusual Artifacts from Orange County, California. *Science of Man* 1:132.

1968 Surface Collections from ORA-83, a Cogged Stone Site at Bolsa Chica, Orange County, California. *Pacific Coast Archaeological Society Quarterly* 4(3):3–37.

Homburg, Jeffrey A., John G. Douglass, Seetha N. Reddy (editors)
2014 *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California. Volume I: Paleoenvironment and Culture History*. Statistical Research, Inc., Redlands, California.

Howard, W. J., and L. M. Raab
1993 Olivella grooved rectangle beads as evidence of an early period Southern Channel Islands interaction sphere. *Pacific Coast Archaeological Society Quarterly* 29(3):1–11.

Hull, Kathleen L.
2011 Archaeological Expectations for Communal Mourning in the Greater Los Angeles Basin. *Journal of California and Great Basin Anthropology* 31:23–36.

2012 Communal Mourning Revisited: A New Appraisal of Old Evidence. *California Archaeology* 4:3–38.

Hull, Kathleen L., and John G. Douglass
2005 Chronology. In *Overlooking the Wetlands: Archaeological Investigations at the West Bluffs Project, CALAN-63, CA-LAN-64, and CA-LAN-206A, Playa del Rey, California, Vol. 2*, edited by John G. Douglass. Technical Report 09-93. Statistical Research, Inc., Redlands, California.

Hull, Kathleen L., John G. Douglass, and Andrew L. York
2013 Recognizing Ritual Action and Intent in Communal Mourning Features on the Southern California Coast. *American Antiquity* 78(1):24–47.

Hull, Kathleen L., and John G. Douglass
2005 Chronology. In *Overlooking the Wetlands: Archaeological Investigations at the West Bluffs Project, CALAN-63, CA-LAN-64, and CA-LAN-206A, Playa del Rey, California, Vol. 2*, edited by John G. Douglass. Technical Report 09-93. Statistical Research, Inc., Redlands, California.

Jenkins, D. L., and J. M. Erlandson
1996 Olivella Grooved Rectangle Beads from a Middle Holocene Site in the Fort Rock Valley, Northern Great Basin. *Journal of California and Great Basin Anthropology*, pp. 296–302.

Jew, N. P., J. M. Erlandson, and F. J. White
2013 Paleocoastal Lithic use on Western Santarosae Island, California. *North American Archaeologist* 34(1):49–69.

Johnson, J. R.
1987 Chumash Social Organization: An Ethnohistoric Perspective. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Santa Barbara.

Johnson, J. R., T. W. Stafford, Jr., H. O. Ajie, and D. P. Morris
2002 Arlington Springs Revisited. In *Proceedings of the Fifth California Islands Symposium*, edited by D. R. Brown, K. C. Mitchell, and H. W. Chaney, pp. 541–545. Santa Barbara Museum of Natural History, Santa Barbara, California.

Johnson, K. L.
1966 *Site LAN-2: A Late Manifestation of the Topanga Complex in Southern California Prehistory*. Anthropological Records 23. University of California Press, Berkeley.

Johnson, John R., and David D. Earle
1990 Tatavium Geography and Ethnohistory. *Journal of California and Great Basin Anthropology* 12(1990):191–214.

Johnston, Bernice E.
1962 *California's Gabrielino Indians.* Frederick Webb Hodge Anniversary Publication Fund 8, Southwest Museum, Los Angeles, California.

Jones, Terry L., Richard T. Fitzgerald, Douglas J. Kennett, Charles Miksicek, John L. Fagan, John Sharp, and Jon M. Erlandson
2002 The Cross Creek Site and Its Implications for New World Colonization. *American Antiquity* 67:213–230.

King, Chester D.
1962 *Excavations at Parker Mesa (LAN-215).* In *Archaeological Survey Annual Report for 1961–1962*, pp. 91–155. Department of Anthropology, University of California, Los Angeles.

1967 *Archaeological Investigations of the Hammack Street Site: LAN-194.* On file, California Historical Resources Information System, South Central Coastal Information Center, Department of Anthropology, California State University, Fullerton.

1981 The Evolution of Chumash Society: A Comparative Study of Artifacts Used in Social System Maintenance in the Santa Barbara Channel Region Before A.D. 1804. Unpublished Ph.D. dissertation, University of California, Davis.

1990 Evolution of Chumash Society: A Comparative Study of Artifacts Used in Social System Maintenance in the Santa Barbara Channel Region Before A.D. 1804. Revised Ph.D. dissertation with a new preface and updated bibliography. In *The Evolution of North American Indians*, edited by David Hurst Thomas. Garland Publishing, New York, New York.

2004 Ethnographic Overview of the Angeles National Forest: Tataviam and San Gabriel Mountain Serrano Ethnohistory. Prepared for U.S. Department of Agriculture. Unpublished confidential literature on file at the South Central Coastal Information Center, California State University, Fullerton.

Kirkman, George W.
1938 *Kirkman-Harriman Pictorial and Historical Map of Los Angeles County 1860–1937*. Map. On file, Los Angeles Public Library Online Map Collection. Call Number 91.7941 L88Ki.

Koerper Henry
1979 On the Question of the Chronological Placement of Shoshonean Presence in Orange County, California. *Pacific Coast Archaeological Society Quarterly* 15(3):69–94.

Koerper, Henry C., and Christopher E. Drover
1983 Chronology Building for Coastal Orange County: The Case from CA-ORA-119-A. *Pacific Coast Archaeological Society Quarterly* 19(2):1–34.

Koerper, Henry C., Roger D. Mason, and Mark L. Peterson
2002 Complexity, Demography, and Change in Late Holocene Orange County. In *Catalysts to Complexity, Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp. 63–81. Perspectives in California Archaeology Vol. 6. Costen Institute of Archaeology, University of California, Los Angeles.

Kowta, Makoto
1961 Excavations at Goleta, SBA-60, Part 2: Artifact Description – Chipped Lithic Material. *Archaeological Survey Annual Report 1960–1961*, pp. 349–384. University of California Los Angeles.

Kroeber, Alfred J.
1925 *Handbook of the Indians of California*. Bulletin 78, Bureau of American Ethnology, Smithsonian Institution. Government Printing Office, Washington, D.C. Reprinted 1976 by Dover Publications, Inc., New York, New York.

Lambert, Vincent
1983 A Surface Collection from the Del Rey Hills, Los Angeles, California. *Journal of New World Archaeology* 5(3):7–19.

Lopatin, I. A.
1940 Fossil Man in the Vicinity of Los Angeles, California. In *Proceedings of the Sixth Pacific Science Congress of the Pacific Science Association, Held at the University of California, Berkeley, Stanford University, and San Francisco, July 24th to August 12th, 1939, Vol. 4*, edited by the Pacific Science Association, pp. 177–181. University of California Press, Berkeley.

Masters, Nathan
2014 CityDig: When Santa Monica Airport Was Clover Field. Electronic Resource, http://www.lamag.com/citythinkblog/citydig-when-santa-monica-airport-was-clover-field/, Date accessed: October 2022.

McCawley, William
1996 *The First Angelinos: The Gabrielino Indians of Los Angeles*. Malki-Ballena Press, Banning, California.

McLendon, S., and J. R. Johnson
1999 *Cultural Affiliation and Lineal Descent of Chumash Peoples in the Channel Islands and Santa Monica Mountains,* 2 vols. Report submitted to the Archaeology and Ethnography Program, National Park Service. Santa Barbara Museum of Natural History, California.

Macko, Michael E.
1998a *The Muddy Canyon Archaeological Project: Results of Phase II Test Excavations and Phase III Data Recovery Excavations at Archaeological Sites within the Crystal Cove Planned Community, Phase IV, Tentative Tract 15447, San Joaquin Hills, Orange County, California*. On file, South Central Coastal Information Center, California State University, Fullerton.

1998b *Executive Summary of Mitigation Measures Implemented Pursuant to the Operation Plan and Research Design for the Proposed Newporter North Residential Development, Huntington Beach, California.*

Mason, Roger D., and Mark L. Peterson
1994 *Newport Coast Archaeological Project: Newport Coast Settlement Systems–Analysis and Discussion,* Vol. 1, part 1 of 2. Prepared by the Keith Companies. On file at the South Central Coastal Information Center, California State University, Fullerton.

Meighan, Clement W.
1954 A Late Complex in Southern California Prehistory. *Southwestern Journal of Anthropology* 10(2):215–227.

Merriam, Clinton Hart
1955 *Studies of California Indians*. University of California Press, Berkeley, California.

Merriam, John C.
1914 Preliminary Report on the Discovery of Human Remains in an Asphalt Deposit at Rancho La Brea. *Science* 40(1023):198–203.

Moratto, M. J.
1984 *California Archaeology*. Academic Press, New York, New York.

Moratto, M. J., Alan P. Garfinkel, Jon M. Erlandson, Alexander K. Rogers, Michael F. Rondeau, Jeffrey Rosenthal, Craig Skinner, Tim Carpenter, and Robert M. Yohe
2011 Fluted and Basally Thinned Concave Base Points of Obsidian in the Borden Collection from Inyo County, Alta California: Age and Significance. *California Archaeology* 10(1):27–60.

Moriarty, J. R., III
1966 Cultural Phase Divisions Suggested by Typological Change Coordinated with Stratigraphically Controlled Radiocarbon Dating in San Diego. *The Anthropological Journal of Canada* 4(4):20–30.

Morris, Susan L., John R. Johnson, Steven J. Schwartz, René L. Vellanoweth, Glenn J. Farris, and Sara L. Schwebel
2016 The Nicoleños in Los Angeles: Documenting the Fate of the Lone Woman's Community. *Journal of California and Great Basin Anthropology* 36(1):91–118.

Nadeau, Remi
1997 *The Water Seekers.* 4th ed. Revised. Crest Publishers, Santa Barbara, California.

Newcomb, Rexford
1980 Architectural Observations (1822). In *The Old Plaza Church,* compiled and edited by Francis J. Weber, pp. 66–70. Libra Press Limited, Leicestershire, United Kingdom.

Office of Historic Resources (OHR)
1991 Guidelines for Archaeological Research Design. Preservation Planning Bulletin, No. 5. California Office of Historic Preservation, Sacramento, California.

Owen, R., F. Curtis, and D. Miller
1964 The Glen Annie Canyon Site, SBA-142, An Early Horizon Coastal Site of Santa Barbara County. University of California Archaeological Survey Annual Report 1963-1964. Los Angeles.

Owen, Thomas J.
1960 The Church by the Plaza: A History of the Pueblo Church of Los Angeles. *The Historical Society of Southern California Quarterly* March:5–28.

Payen, Louis A.
1970 A Spearthrower (Atlatl) from Potter Creek Cave, Shasta County, California. In *Papers on California and Great Basin Prehistory*, edited by Eric W. Ritter, Peter D. Schulz, and Robert Kautz, pp. 157–170. Center for Archaeological Research at Davis Publication No. 2. University of California, Davis.

Scott, Paula A.
2004 *Santa Monica: A History on the Edge*. Arcadia Publishing. Mt. Pleasant, South Carolina.

Porcasi, Judith, and Paul Porcasi
2002 New Dates and Data from Archaic Malibu with Some Regional Considerations. *Pacific Coast Archaeological Society Quarterly* 36(4):21–43.

Pflueger, Jeffrey M. and Carl C. Kim
2023 *Geotechnical Exploration Report Proposed Industrial Buildings 9000 Airport Boulevard City of Los Angeles, California*. Leighton Consulting, Inc., Irvine, California.

Phillips, George Harwood
2010 *Vineyards and Vaqueros*. University of Nebraska Press, Lincoln.

Raab, L. M., and W. J. Howard
2002 Modeling Cultural Connections between the Southern Channel Islands and Western United States: The Middle Holocene Distribution of Olivella Grooved Rectangle Beads. In *Proceedings of the Fifth Channel Islands Symposium*, edited by K. Mitchell and C. Mitchell, pp. 590–597. Santa Barbara Museum of Natural History, California.

Reeder-Myers, L., J. M. Erlandson, D. R. Muhs, and T. C. Rick
2015 Sea Level, Paleogeography, and Archeology on California's Northern Channel Islands. *Quaternary Research*, 83(2):263–272.

Rick, T. C., J. M. Erlandson, N. P. Jew, and L. A. Reeder-Myers
2013 Archaeological Survey and the Search for the Paleocoastal Peoples of Santa Rosa Island, California, USA. *Journal of Field Archaeology* 38(4):324–331.

Rick, T. C., J. M. Erlandson, and R. L. Vellanoweth
2001 Paleocoastal Marine Fishing on the Pacific Coast of the Americas: Perspectives from Daisy Cave, California. *American Antiquity* 66:595–613.

Riddell, F. A., and W. H. Olsen
1969 An Early Man Site I the San Joaquin Valley. *American Antiquity* 34:121–130.

Ríos-Bustamante, Antonio
1992 *Mexican Los Angeles: A Narrative and Pictorial History*. Floricanto Press, Mountain View, California.

Robinson, W. W.
1979 *Land in California: The Story of Mission Lands, Ranchos, Squatters, Mining Claims, Railroad Grants, Land Scrip, Homesteads*. University of California Press, Berkeley.

Rogers, D.B
1929 Prehistoric Man of the Santa Barbara Coast. Santa Barbara Museum of Natural History.

Rogers, Malcom
1939 Early Lithic Industries of the Lower Basin of the Colorado River and adjacent Desert Areas. *San Diego Museum Papers* (3).

1945 An Outline of Yuman Prehistory. *Southwestern Journal of Anthropology* 1(2):167–198

Rolle, Andrew F.
2003 *California: A History.* Revised and expanded 6th edition. Harlan Davidson, Wheeling, Illinois.

Rondeau, Michael
2006 Revising the Number of Reported Clovis Points from Tulare Lake, California. *Current Research in the Pleistocene* 23:140–142.

Salls, Roy A.
1986 The La Brea Atlatl Foreshafts: Inferences for the Millingstone Horizon. *Pacific Coast Archaeological Society Quarterly* 22(2):21–30.

1995 The Shobhan Paul Site (CA-LAN-958): Archaeological Investigations of a Coastal Millingstone Horizon Occupation. *Coyote Press Archives of California Prehistory*, No. 43. Coyote Press, Salinas, California.

Saucedo, George J., H. Gary Greene, Michael P. Kennedy, and Stephen P. Bezore
2016 Geologic Map of the Long Beach 30' x 60' Quadrangle, California. Version 2.0. Scale 1:100,000. California Department of Conservation, California Geological Survey, Sacramento.

Sawyer, William A., and Henry C. Koerper
2006 The San Joaquin Hills Venus: A Ceramic Figurine from CA-ORA-1405-B. In *Contributions from Orange County Presented in Remembrance of John Peabody Harrington*, edited by Henry C. Koerper, pp. 13–34. Coyote Press Archives of California Prehistory No. 53. Coyote Press, Salinas, California.

Seaman, Florence Josephine
1914 A Brief History of Ranch La Brea. *Annual Publication of the Historical Society of Southern California* 9(3):253–256.

Silliman, Stephen W.
2001 Theoretical Perspectives on Labor and Colonialism: Reconsidering the California Missions. *Journal of Anthropological Archaeology* 20(4):370–407.

Starr, Kevin
2002 *Embattled Dreams: California in War and Peace*. Oxford University Press, New York, New York.

Stickel, E. Gary
2000 *A Phase 3 Excavation and Mitigation Report on the Archaeological Site CA-LAN-451, City of Malibu, California*. Prepared for Timber Rock Properties, Santa Monica, California. Environmental Research Archaeologists – A Scientific Consortium.

Stock, Chester
1924 A Recent Discovery of Ancient Human Remains in Los Angeles, California. *Science* 60(1540):2–5.

Stoll, Anne Q., John G. Douglass, and Richard Ciolek-Torrello
2009 *Searching for Guaspet: A Mission Period Rancheria in West Los Angeles*. SCA Proceedings (22):1–9.

2016 The Early Historical Period in the Ballona. In *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California. Volume 5: Gabrielino/Tongva Origins and Development: A View from Guaspet*, edited by J. Douglass, S. Reddy, R. Ciolek-Torello, and D. Grenda, pp. 385–416. Statistical Research, Inc., Tucson, Arizona.

Sutton, Mark Q.
2009 People and Language: Defining the Takic Expansion into Southern California. *Pacific Coast Archaeological Society Quarterly* 41(2 and 3):31–93. Original issue year 2005.

Sutton, Mark Q., and Henry C. Koerper
2009 The Middle Holocene Western Nexus: An Interaction Sphere between Southern California and the Northwestern Great Basin. *Pacific Coast Archaeological Society Quarterly* 41(2–3):1–29. Original issue year 2005.

Tatum, Donn B., Jr.
1969 General William S. Rosecrans and the Rancho Sausal Redondo. *Southern California Quarterly* 51(4):275–312.

Taylor, R. E., L. A. Payen, C. A. Prior, P. J. Slota, Jr., R. Gillespie, J. A. J. Gowlett, R. E. M. Hedges, A. J. T. Jull, T. H. Zabel, D. J. Donahue, and R. Berger
1985 Major Revisions in the Pleistocene Age Assignments for North American Human Skeletons by C-14 Accelerator Mass Spectrometry: None Older than 11,000 C-14 Years b.p. *American Antiquity* 50:136–140.

Thiel, Marlys
1953 *Recording in Pictures: The Collection of William Deane of the Hughes Aircraft Site*. Report on file, California Historical Resources Information System, South Central Coastal Information Center, Department of Anthropology, California State University, Fullerton.

Treganza, Adán E., and Agnes Bierman
1958 *The Topanga Culture: Final Report on Excavations, 1948*. University of California Anthropological Records Vol. 20, No. 2. University of California Press, Berkeley.

True, Delbert L.
1966 *Archaeological Differentiation of Shoshonean and Yuman Speaking Groups in Southern California*. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles. University Microfilms, Ann Arbor, Michigan.

1993 Bedrock Milling Elements as Indicators of Subsistence and Settlement Patterns in Northern San Diego County, California. *Pacific Coast Archaeological Society Quarterly* 29(2):1–26.

Van Horn, David M.
1987 *Excavations at the Del Rey Site (LAN-63) and the Bluff Site (LAN-64), in the City of Los Angeles*. Archaeological Associates, Sun City, California. Submitted to Howard Hughes Realty, Los Angeles, California.

1990 Marymount Points: A Tanged Arrowhead Series in Coastal Southern California. *Journal of New World Archaeology* 7(4):29–36.

Van Horn, David M., and John R. Murray
1985 *The Loyola Marymount Archaeological Project: Salvage Excavations at LAN-61A–C*. Archaeological Associates, Sun City, California. On file, California Historical Resources Information System, South Central Coastal Information Center, Department of Anthropology, California State University, Fullerton.

Vellanoweth, R. L.
2001 AMS Radiocarbon Dating and Shell Bead Chronologies: Middle Holocene Trade and Interaction in Western North America. *Journal of Archaeological Science* 28(9):941–950.

Walker, Edwin F.
1952 *Five Prehistoric Archaeological Sites in Los Angeles County, California*. Publications of the Frederick Webb Hodge Anniversary Publication Fund Vol. 6. Southwest Museum, Los Angeles, California.

Wallace, W. J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11(3):214–230.

1978 Post-Pleistocene Archaeology, 9000 to 2000 B.C. In *California*, edited by Robert F. Heizer, pp. 25–36. Handbook of North American Indians Vol. 8, William G. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Warren, Claude N.
1967 The San Dieguito Complex. A Review and Hypothesis. *American Antiquity* 32(2):168–185.

1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams. *Eastern New Mexico University Contributions in Anthropology* 1(3):1–14, Portales, New Mexico.

1984 The Desert Region. In: *California Archaeology*, by Michael J. Moratto, pp. 339–430. Academic Press, Orlando.

Warren, Claude N., and D. L. True
1961 The San Dieguito Complex and its Place in California Prehistory. In *Archaeological Survey Annual Report for 1960-1961*, pp. 246–337. University of California, Los Angeles.

Weber, Francis J.
1980 Nuestra Señora de Los Angeles (1966). In *The Old Plaza Church*, *A Documentary History,* compiled and edited by Francis J. Weber, pp. 203–211. Libra Press Limited, Hong Kong.

Weltz, Alan W.
1962 *The Gabrielino Indians at the Time of the Portola Expedition*. Southwest Museum, Los Angeles, California.

Wigand, Peter E.
2005 Pollen and Macrobotanical Analysis. In *Overlooking the Wetlands: Archaeological Investigations at the West Bluffs Project, CA-LAN-63, CA-LAN-64, and CA-LAN-206A, Playa del Rey, California*, Vol. 2, edited by John G. Douglass, Jeffrey H. Altschul, and Richard Ciolek-Torrello, pp. 12.1–12.64. Draft. Technical Report 05-93. Statistical Research, Inc., Redlands, California.

Woodman, Craig
1996 CA-SDI-812/H Preliminary Results of Test Excavation and a Determination of NRHP Eligibility. Science Applications International Corporation. Prepared for the U.S. Army Corps of Engineers.

Yohe, Robert M., II, and Jill K. Gardner
2016 Recently Discovered Clovis Points in Indian Wells Valley on the Naval Air Weapons Station China Lake, Southeastern Alta California. *California Archaeology* 8(1):91–109.

ATTACHMENT A

South Central Coastal Information Center
Records Search Results

CONFIDENTIAL—NOT FOR PUBLIC DISTRIBUTION

CONTENT FROM THIS SECTION HAS BEEN REMOVED FROM PUBLICLY CIRCULATED DRAFTS

Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location. This document contains sensitive information regarding the nature and location of archaeological sites, which should not be disclosed to the general public or unauthorized persons pursuant to California Government Code 6254(r) and 6254.10.

Information regarding the location, character, or ownership of a cultural resource is exempt from the Freedom of Information Act pursuant to 54 USC 307103 (National Historic Preservation Act) and 16 USC Section 470(h) (Archaeological Resources Protections Act)

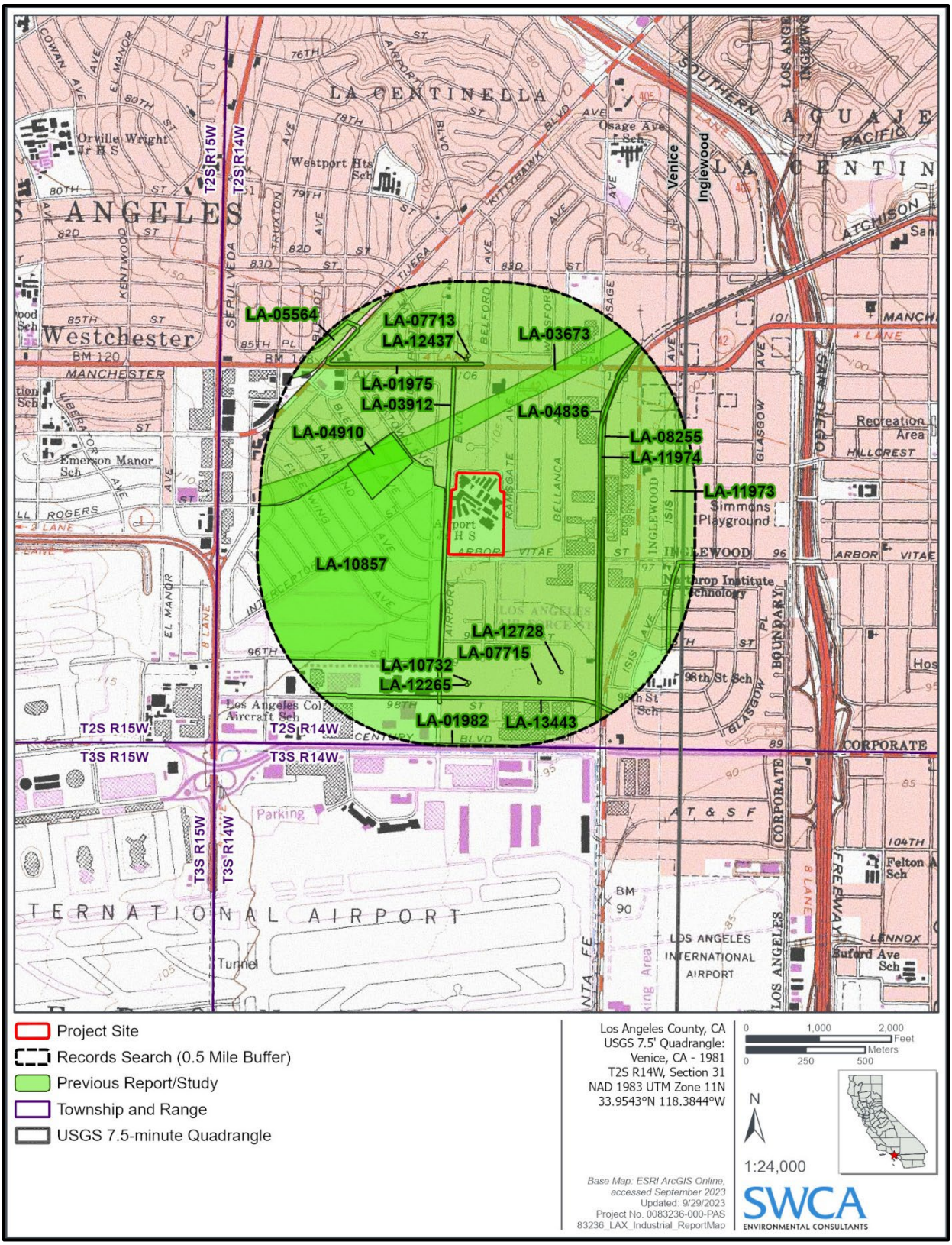

Figure A-1. CHRIS records search results: reports and studies.

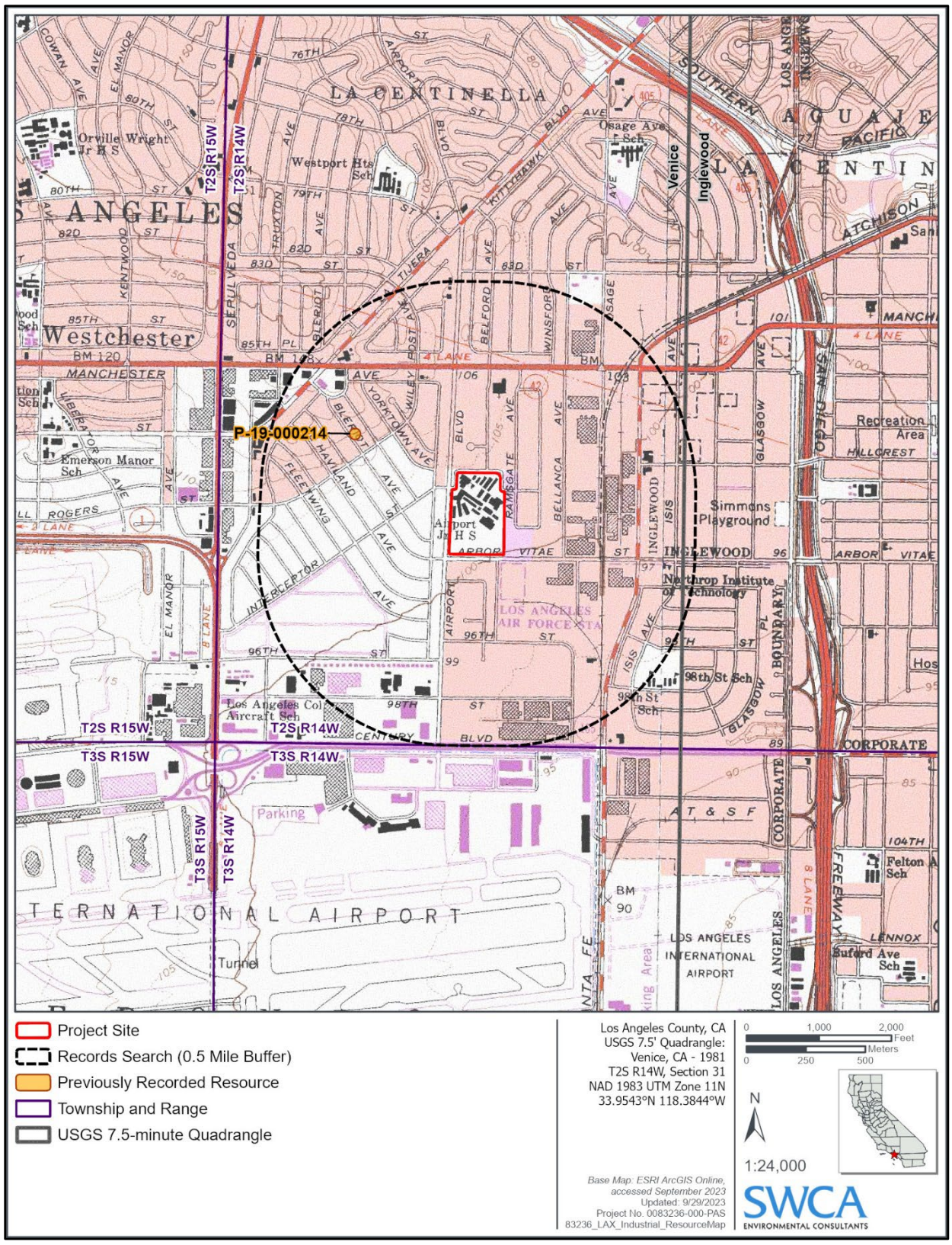

Figure A-2. CHRIS records search results: resources.

ATTACHMENT B

Sacred Lands File Search Results

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

September 1, 2023

David Sayre
SWCA Environmental Consultants

Via Email to: david.sayre@swca.com

Re: LAX Industrial Development at 9000 Airport Boulevard Project, Los Angeles County

Dear Mr. Sayre:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment