Appendix E

Cultural Resources

PROPOSED RUNWAY 6L-24R AND RUNWAY 6R-24L SAFETY AREA AND ASSOCIATED IMPROVEMENTS PROJECT

CULTURAL RESOURCES TECHNICAL REPORT

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TABLE OF CONTENTS

SECTIONS ***PAGE***

TABLE ***PAGE***

FIGURE ***FOLLOWS PAGE***

IMAGE ***PAGE***

APPENDICES

SECTION ES
SUMMARY OF FINDINGS

This Cultural Resources Technical Report (CRTR) documents the results of a cultural resources assessment for the Proposed Runway Safety Area (RSA) and Associated Improvements of Runway 6L-24R and Improvements to the Runway 6R-24L RSA (proposed undertaking) at the Los Angeles International Airport (LAX), in Los Angeles County, California. Record searches and an intensive pedestrian survey of the proposed undertaking areas identified four historic period (greater than 50 years old) cultural resources, the Argo Ditch, El Manor Residential Neighborhood, Will Rogers Residential Neighborhood, and El Manor Avenue, within the area of potential effects (APE). A third historic period cultural resource, Runway 6R-24L, was identified outside of the APE. Runway 6L-24R was also evaluated, even though it is less than 50 years old. All the historic period cultural resources within the APE do not retain the required historical integrity to make them eligible for inclusion into the National Register of Historic Places (NRHP).

The results of records searches and archival research suggest a potential for the unanticipated discovery of buried cultural deposits if construction activities extend into native or undisturbed soil. Construction activities associated with the proposed undertaking are not anticipated to extend beyond 3 feet below ground surface. However, if undertaking plans are modified so that ground disturbances occur in areas or at depths that do not consist of redeposited fill or have not previously been disturbed, unanticipated discoveries of archaeological resources may occur. The disturbance or destruction of potentially significant undiscovered resources by construction-related activities would be considered a significant effect unless mitigated. It is recommended that procedures outlined in the Archaeological Treatment Plan[1] completed pursuant to Mitigation Measure HA-4 of the LAX Master Plan Mitigation Monitoring and Reporting Program (MMRP) be followed to ensure the long-term protection and proper treatment of those unexpected archaeological discoveries of federal, state, and/or local significance found within the APE.

[1] Los Angeles World Airports. June 2005. *Archaeological Treatment Plan*. Prepared by: Brian F. Smith and Associates, San Diego, CA.

SECTION 1.0
INTRODUCTION

This Cultural Resources Technical Report (CRTR) documents the results of a cultural resources assessment for the Proposed Runway Safety Area (RSA) and Associated Improvements of Runway 6L-24R and Improvements to the Runway 6R-24L RSA (proposed undertaking) at the Los Angeles International Airport (LAX), in Los Angeles County, California. Information obtained from archival records searches and a Phase I survey was used to identify cultural resources that may be affected by the implementation of the proposed undertaking. This report presents the findings of these efforts and provides impact analyses and management recommendations related to cultural resources within the proposed undertaking area.

This CRTR consists of a brief description of the proposed undertaking, a summary of the regulatory frameworks that guide the decision-making process with respect to historic properties, a description of the methods employed to support the characterization and evaluation of cultural resources within the proposed undertaking area, the results for baseline conditions for cultural resources, the potential for the proposed undertaking to affect cultural resources, and, if appropriate, opportunities to avoid and minimize the potential effects of the proposed undertaking.

1.1 PURPOSE OF THE CULTURAL RESOURCES TECHNICAL REPORT

This CRTR was prepared to characterize the cultural resources that would potentially be affected by construction, operation, and maintenance of the proposed undertaking. As such, the document presents data and information to be used in making a determination of effects to cultural resources resulting from the proposed undertaking and will provide the substantial evidence required with respect to cultural resources for environmental documentation under the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA).

1.2 SOURCES OF RELEVANT INFORMATION

A literature review was conducted at the South Central Coastal Information Center (SCCIC), at California State University, Fullerton, and was the primary source of relevant information used in the preparation of this CRTR. Additional information was gathered through a Phase I survey, informal coordination with cooperating agencies, and spatial analysis based on geographic information system data. Sources of relevant information are cited in footnotes and compiled in Section 6, *References*.

1.3 WORKING DEFINITIONS

There are a number of technical terms used in the characterization of baseline conditions and assessment of the potential for the proposed undertaking to effect cultural resources.

Archaeological site is defined by the NRHP as the place or places where the remnants of a past culture survive in a physical context that allows for the interpretation of these remains. Archaeological remains usually take the form of artifacts (e.g., fragments of tools, vestiges of utilitarian or non-utilitarian objects), features (e.g., remnants of walls, cooking hearths, or midden deposits), and ecological evidence (e.g., pollen remaining from plants that were in the area when

the activities occurred).[1] Prehistoric archaeological sites represent the material remains of Native American groups and their activities. These sites are generally thought to date to the period before European contact but, in some cases, may contain evidence of trade contact with Europeans. Historic archaeological sites reflect the activities of nonnative populations during the historic period.

Area of Potential Effect (APE) consists of the portions of the proposed undertaking area that have the potential to be subjected to direct effects, such as ground disturbances associated with grading, leveling, and excavation. The APE also includes a 100-foot buffer area surrounding the loci of direct ground disturbance that accounts for indirect effects such as accidental vehicular and foot traffic.

Cultural Resources Study Area is a half-mile buffer placed around the APE from which the relevant sources of information are collected and reviewed in order to determine the potential cultural sensitivity of the APE.

Historic period is defined as the period that begins with the arrival of the first nonnative population and thus varies by area. Most southern California archaeologists use AD 1542 as the date to mark the beginning of the historic period, following the beginning of the Spanish contact with coastal California.

Isolate is defined as an isolated artifact or small group of artifacts that appear to reflect a single event, loci, or activity. It may lack identifiable context but has the potential to add important information about a region, culture, or person. Isolates do not require avoidance or mitigation under NHPA because they lack contextual integrity and, therefore, are unlikely to meet the criteria for inclusion in the NRHP.

Native American sacred site is defined as an area that has been, and often continues to be, of religious significance to Native American peoples, such as an area where religious ceremonies are practiced or an area that is central to their origins as a people.

[1] U.S. Department of the Interior, National Park Service. 2000. *National Register Bulletin: Guidelines for Evaluating and Registering Archeological Properties*. Available at: http://www.cr.nps.gov/nr/publications/bulletins/arch/

SECTION 2.0
DESCRIPTION OF THE PROPOSED UNDERTAKING

The description of the proposed undertaking includes its precise location and boundaries, the project elements that constitute the proposed undertaking, and a brief characterization of the existing conditions at the proposed undertaking area.

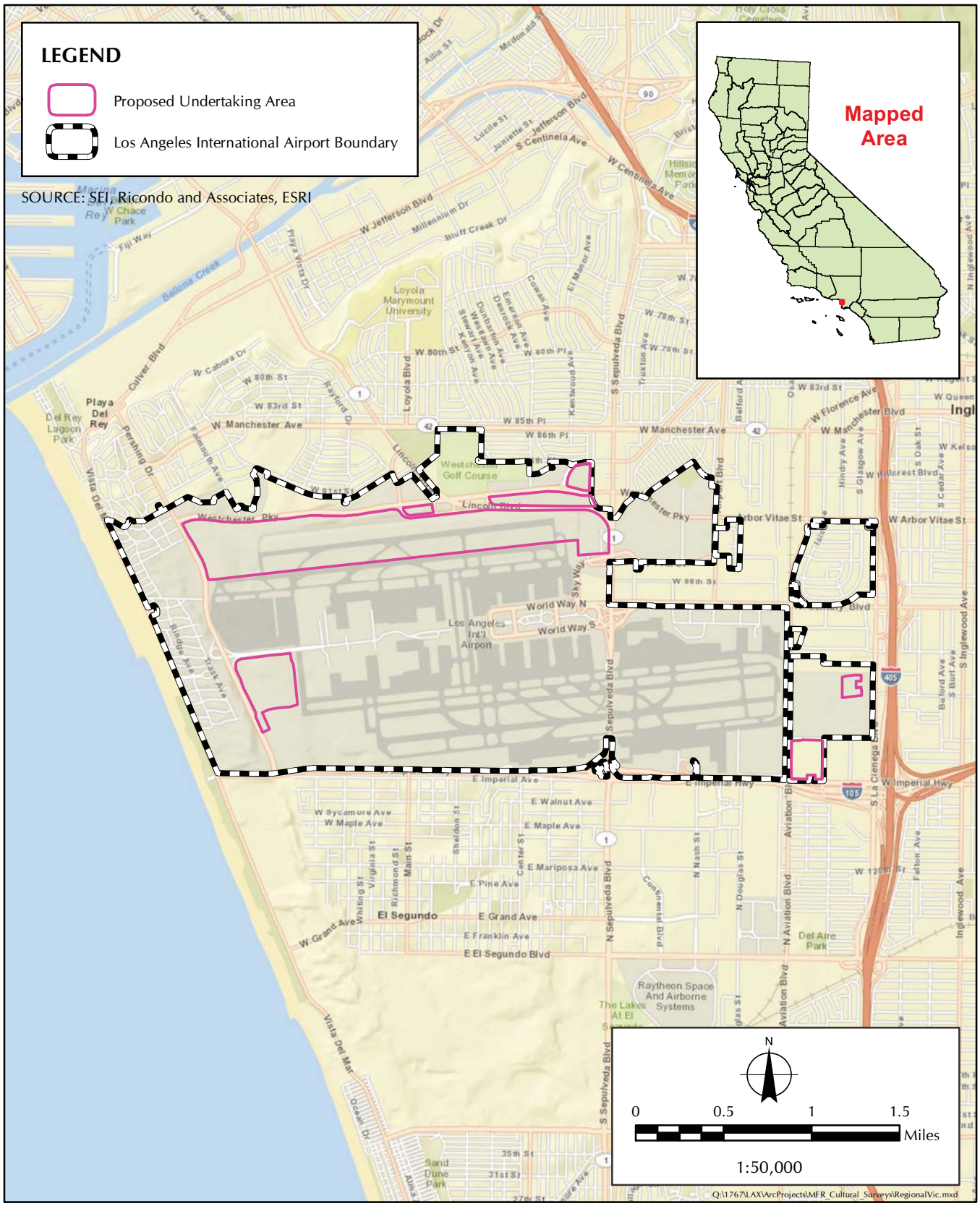
2.1 PROPOSED UNDERTAKING LOCATION

The proposed undertaking is located within the north airfield on LAX property within the City of Los Angeles, Los Angeles County (Figure 2.1-1, *Regional Vicinity Map*). The area around LAX is highly urbanized and consists of transportation infrastructure (airport and interstate highways), commercial, and residential uses. To the north of LAX is the community of Westchester in the City of Los Angeles, to the east is the City of Inglewood, to the south is the City of El Segundo, and to the west is the Pacific Ocean. Highway access to LAX is provided by the San Diego Freeway (Interstate 405), which is a north-south freeway east of LAX, and the Century Freeway (Interstate 105), which is an east-west freeway south of LAX. Major roadways that serve LAX include Sepulveda Boulevard, Century Boulevard, Imperial Highway, and Lincoln Boulevard.

The northern airfield complex at LAX includes Runway 6L-24R, the northernmost runway, and Runway 6R-24L, as well as a system of parallel and connecting taxiways (Figure 2.1-2, *Proposed Undertaking Location*). In addition, there are a number of airfield operations roadways located within the north airfield area. The Argo Ditch lies just north of Runway 6L-24R. This CRTR addresses improvements to the runway safety area (RSA) of Runway 6L-24R, as well as some associated improvements with this runway and improvements to the Runway 6R-24L RSA. The undertaking properties are within the U.S. Geological Survey (USGS) 7.5-minute series, Venice, California, topographic quadrangle in unsectioned portions of Township 2, South, Range 15 West. The elevation ranges from 126 feet above mean sea level (MSL) to 86 feet above MSL.

2.2 EXISTING CONDITIONS

The undertaking area consists of the paved Runways 6L-24R and 6R-24L and shoulder areas, and includes taxiways and service roadways separated by unpaved sections of maintained grass and low scrub vegetation (Image 2.2-1, *Proposed Undertaking Area, Showing [Left to Right] Runway 6L-24R, Road Segment No. 2, the Eastern End of Argo Ditch, and the Airport Operations Area Fence, facing east*). The northern edge of the proposed undertaking area encompasses the Argo Ditch, a man-made flood control structure that was constructed in the late 1940s (Image 2.2-2, *Argo Ditch, facing northeast*). The eastern portion of the proposed undertaking includes on-airport parking areas for construction vehicles and other equipment used at LAX, a partially graveled area, and a grassy area at the east end of Runway 24R (Figure 2.1-2). This area also includes the Air Operations Area (AOA) fence and a service road (El Manor Avenue, previously a residential street), both of which are now located on airport property and closed to the public.



RICONDO & ASSOCIATES

FIGURE 2.1-1

Regional Vicinity Map

FIGURE 2.1-2

Proposed Undertaking Location

Image 2.2-1. *Proposed Undertaking Area, Showing (Left to Right) Runway 6L-24R, Road Segment No. 2, the Eastern End of Argo Ditch, and the Airport Operations Area Fence, facing east*

Image 2.2-2. *Argo Ditch, facing northeast*

Image 2.2-3. *El Manor Avenue, Located at the Eastern End of Runway 6R-24L, facing south. FAA localizer equipment (navigational aid) is housed in the structure shown in the upper right portion of the photo.*

2.3 PROPOSED UNDERTAKING ELEMENTS

LAWA is proposing to improve the RSA of Runways 6L-24R and improvements to the RSA of Runway 6R-24L at LAX in response to *The Transportation, Treasury, Housing and Urban Development, the Judiciary, the District of Columbia, and Independent Agencies Appropriations Act* (Public Law 109-115).[1] This act requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, CFR, Part 139, Certification and Operations: Land Airports Serving Certain Air Carriers, to comply with FAA design standards by December 31, 2015.

The common components of the proposed undertaking related to Runway 6L-24R and 6R-24L RSAs improvements are:

- Relocate AOA Fence
- Relocate security gate(s)
- LAWA equipment parking area closures
- Construction staging areas
- Navaid service roads

1 *The Transportation, Treasury, Housing and Urban Development, the Judiciary, the District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), 30 November 2005.

Relocation of the AOA Fence. The relocation of the AOA Fence is proposed as part of the undertaking. The proposed realignment of the AOA Fence would be east of the Runway 24R and 24L threshold, between Road Segment 4 (El Manor Avenue) on the west and Sepulveda Boulevard on the east. The fence realignment would include the construction of a new 12-foot-high fence, made from steel chain-link panels that span 10 feet from post to post. The fence's metal posts would be footed in poured concrete and would extend to a depth of approximately 3 feet below ground surface.

Relocate Security Gates. Two security gates along the eastern portion of the north runway complex may need to be relocated or closed in order to realign sections of the service road and comply with RSA standards. Should these security gates be relocated, the future gate locations would be outside the RSA.

LAWA Equipment Parking Area Closures. The realignment of service roads outside the RSA along the eastern side of the north runway complex along with the relocated AOA fence would make it necessary to close four parking areas located east of the north runway complex. These parking areas are located inside the LAX property boundary, east of El Manor Avenue; they are not open to the public. The pavement will remain in place but the site will no longer be used for construction vehicle staging. These parking areas total approximately 300,000 square feet in area and contain paved surface parking for construction vehicles and other equipment used at LAX.

Construction Staging Areas. Construction staging areas would be necessary due to the limited space available for storage of materials and equipment within the airfield area. Only a portion of these construction staging areas would be used during construction of the proposed project. However, specific construction staging areas for this project have not been determined at the present time; therefore, all potential staging areas are being considered in the analysis for this Biological Assessment. Construction staging areas would be located in previously disturbed areas and would result in minimal ground disturbance.

Navaid Service Roads. Two service roads would be constructed to provide access to navaids located east of the north runways. The service road providing access to the navaids east of Runway 6L-24R would be approximately 504 linear feet in length. The service road providing access to the navaids east of Runway 6R-24L would be approximately 403 linear feet in length.

2.3.1 Runway 6L-24R

The components of the proposed undertaking related to Runway 6L-24R RSA improvements are:

- Implementation of declared distances on Runway 6L
- Service roads would be relocated or realigned outside the RSA
- Pavement rehabilitation
- Cover a segment of the Argo Ditch
- Realignment of taxiway holdbars

Declared Distances. Declared distances are "the distances the airport operator declares available and suitable for satisfying an aircraft's takeoff run, take-off distance, accelerate-stop distance, and landing distance requirements." The FAA defines four types of declared distances: the Take-Off Run Available (TORA), the Take-Off Distance Available (TODA), the Accelerate-Stop Distance Available (ASDA), and the Landing Distance Available (LDA). Essentially, declared distances

represent the maximum runway distances available to safely takeoff or reject a takeoff (TORA, TODA, and ASDA), or to land (LDA). Implementation of declared distances on Runway 6L would shorten the ASDA and LDA for aircraft landing on Runway 6L by 359 feet.

Service Roads. LAWA has identified a total of five road segments for relocation, realignment, or removal to meet RSA standards and to ensure that service vehicles operate outside of the Runway 6L-24R RSA. For the sake of clarity, Sapphos Environmental, Inc. assigned arbitrary numbers to each of the proposed road segments discussed herein; the locations of the numbered road segments are shown in Figure 2.1-2. The five road segments associated with Runway 6L-24R RSA to be relocated, realigned, or demolished are:

- Segment 1: An approximately 3,500-foot-long service road located north of the eastern end of Runway 6L-24R. This service road segment would be relocated north, outside of the RSA, beginning north of the Runway 6L-24R RSA where the current service road intersects the RSA and would continue eastward towards El Manor Avenue, then directly south through portions of existing parking lots (see below), before tying into an existing vehicle service road. A portion of this road will intersect the Argo Ditch. As a result, an approximately 10,000-square-foot area of the eastern portion of the ditch will be covered (see Figure 2.1-2). The service roadway will be placed on top of the covered drainage ditch.

- Segment 2: This existing, approximately 970-foot-long service road and segment located south of Runway 6L-24R will be demolished. The road segment is parallel to and located between Runways 6L-24R and 6R-24L.

- Segment 3: This approximately 240-foot-long service road west of and parallel to El Manor Avenue, a previous residential street now owned and maintained by LAWA, will be demolished. The road is located east of the Runway 24R threshold.

- Segment 4: An approximate 900-foot long service road located west of the Runway 6L threshold will be demolished.

- Segment 5: Approximately 300 feet of service road located north of the Runway 6L end will be demolished.

Pavement Rehabilitation. Pavement rehabilitation activities would also be undertaken for Runway 6L-24R. No major pavement renovation or rehabilitation of this runway has occurred since it was constructed in 1969. These would include, but are not limited to, demolition and removal of existing pavement and base materials, placement of new sub-base and/or base materials, installation of new Portland Cement Concrete (PCC) pavement, and application of runway and taxiway markings on the new pavement segments. Up to 7,250 feet of the eastern portion of Runway 6L-24R would be demolished and reconstructed. Runway pavement rehabilitation would include the replacement of runway centerline lighting and touchdown lighting as well as runway pavement markings. Pavement rehabilitation of Taxiway AA would also be undertaken; approximately 116,000 square feet of taxiway pavement would be rehabilitated.

Argo Ditch. A portion of the Argo Ditch located north of the Runway 24R threshold would need to be covered in order to relocate a segment of the service road on top of it. The relocation of the service road would ensure that service vehicles stay clear of the RSA. Additionally, the cover/structure over the Argo Ditch must be capable of supporting the passage of the airport's

critical aircraft in the event the aircraft veers off the runway. The proposed portion of the Argo Ditch to be covered is approximately 720 linear feet in length.

Realignment of Taxiway Holdbars. The taxiway hold bars on Taxiways Y, Z, and AA need to be realigned to meet FAA standards. The hold bars consist of pavement striping/markings, in-pavement hold position lights, elevated guard lights, runway status lights, and hold position airfield signage. The lights and signage, as well as in-pavement taxiway centerline lights, would need to be relocated along with the realigned taxiway hold bars.

2.3.2 Runway 6R-24L

The components of the proposed undertaking related to the Runway 6R-24L RSA improvements are:

- Implementation of declared distances on Runway 6R-24L
- Relocation, realignment, or closure of service roads

Declared Distances. The Runway 6R ASDA and LDA would be reduced by 115 feet to provide a 1,000-foot RSA from the Runway 6R localizer. The Runway 24L ASDA and LDA would be reduced by 835 feet to provide a 1,000-foot RSA from the existing blast fence.

Service Roads. LAWA has identified a road segment for relocation or realignment to meet RSA standards and to ensure that service vehicles operate outside of the Runway 6R-24L RSA. Approximately 9,900 linear feet of service road located along the northern boundary of the Runway 6R-24L RSA would be constructed between the Runway 6L-24R RSA and Runway 6R-24L RSA. A portion of this new service road would replace the 970-foot section of service road located within the Runway 6L-24R RSA to be demolished. The existing service roads would be closed and pavement left in place.

Approximately 600 feet of service road located east of the Runway 24L end, within the RSA, would be closed.

2.4 AREA OF POTENTIAL EFFECT

The APE for archaeology and historic architecture for the proposed undertaking includes boundaries of the entire area that will have physical disturbance, including construction staging areas. The APE includes the various construction work described in the previous section, such as relocating and constructing service roads, pavement rehabilitation, relocation of the AOA fence, realignment of taxiway holdbars, and construction staging areas. LAWA delineated the APE boundaries through consultation with FAA. As the proposed undertaking would not increase the operational capacity of LAX, increase aircraft operations, or change the fleet mix or flight paths of aircraft operating at LAX, delineation of an indirect APE is not required.

The Cultural Resources Study Area, which includes the APE, is located within the U.S. Geological Survey (USGS) 7.5-minute series, Venice, California, topographic quadrangle in unsectioned portions of Township 2, South, Range 15 West. The APE is roughly bounded by West 88th Street on the north, La Cienega Boulevard on the east, Imperial Highway on the south, and Pershing Drive on the west (Figure 2.4-1, *Area of Potential Effects and the Cultural Resources Study Area*). Direct impacts from earth-moving activities in these areas could include minor grading and leveling in order to prepare the roadbed for paving. It is anticipated that more extensive ground

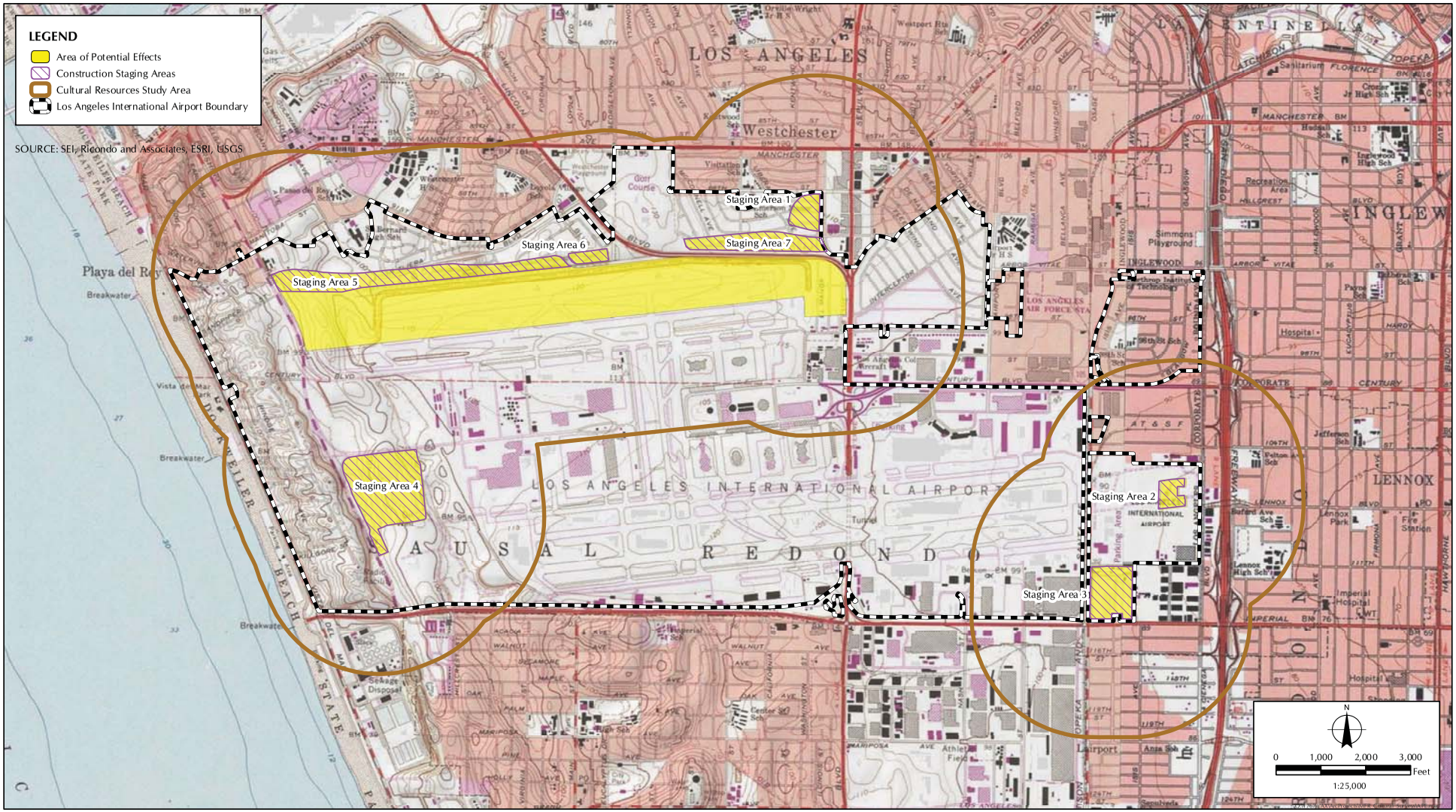


FIGURE 2.4-1

Area of Potential Effects and the Cultural Resources Study Area

disturbance will occur in the vicinities of the Argo Ditch and in the construction staging areas. In the Argo Ditch, the installation of a concrete box culvert may disturb the base and side walls of the drainage channel. The APE is primarily covered with maintained grasses, pavement, and graded spaces surrounding the construction staging areas; airfield pavement; graded, maintained grassed areas surrounding the airfield pavement; and paved areas to the east.

SECTION 3.0
REGULATORY FRAMEWORK

This section identifies the federal statutes, ordinances, or policies that govern the conservation and protection of cultural resources that must be considered during the decision-making process for projects that have the potential to affect cultural resources.

3.1 FEDERAL

3.1.1 National Historic Preservation Act of 1966[1]

Enacted in 1966, the National Historic Preservation Act (NHPA) declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the NRHP and that the ACHP must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800, on such undertakings.

3.1.1.1 National Register of Historic Places

The NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[2] The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:[3]

Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: It is associated with the lives of persons who are significant in our past.

[1] *United States Code*, 16 USC 470.

[2] *Code of Federal Regulations*, 36 CFR 60.2.

[3] *Code of Federal Regulations*, 36 CFR 60.4.

Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

3.1.2 Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

SECTION 4.0
METHODS

This section of the CRTR describes the methods employed in the characterization and evaluation of historic properties within the APE for the proposed undertaking. This report describes the results of records searches and field investigations conducted for the proposed undertaking at LAX.

4.1 CULTURAL RESOURCES

4.1.1 Records Search and Literature Review

A cultural resources records search was conducted at the SCCIC, housed at California State University, Fullerton, on November 20, 2012, and a supplemental records search was conducted on December 16, 2013. These searches included reviews of all known relevant cultural resources survey reports to ascertain the presence of previously recorded prehistoric and historic archaeological resources within a 0.5-mile radius of the north airfield (Figure 2.4-1).

4.1.2 Phase I Cultural Resources Survey

The Phase I cultural resources surveys of the APE were conducted on May 8, 2013; June 14, 2013; July 27, 2013; and December 18, 2013, by Sapphos Environmental, Inc. staff archaeologists (Dr. Tiffany Clark, Mr. Clarus Backes, and Mr. Christopher Purtell) and architectural historian (Ms. Marilyn Novell) (Appendix B, *Resumes*; Figure 4.1.2-1, *Cultural Survey Area Map*). LAWA escorts accompanied the archaeologists and architectural historian during the duration of the field visits. The goal of the pedestrian survey was to identify all prehistoric and historic period sites and isolates within the APE. An Ashtech handheld global positioning system (GPS) unit was used to locate the APE boundary and to record the location of identified cultural resources. Sites, isolates, and built-environment resources were documented on State of California Department of Parks and Recreation (DPR) 523 series forms with preliminary sketch maps and photographs providing supplemental documentation. No artifacts were collected during the Phase I survey.

4.1.2.1 Runway 6L-24R and Runway 6R-24L Safety Area Improvements

To inspect the APE, the archaeologists walked a total of four parallel transects spaced approximately 15 meters apart, including two on either side of each road segment. The construction staging areas were systematically inspected by an archaeologist and an architectural historian, who walked between two and four parallel transects spaced approximately 10 meters apart, depending on the physical size and shape of the staging area. The AOA fence located in the northeastern corner of the APE was thoroughly inspected by an archaeologist, who walked a total of three transects that paralleled the fence realignment. The Phase I surveys showed that large portions of the APE are graded dirt roads and managed (mowed) vegetation consisting of non-native grasses and small scrubs; these areas exhibited good to excellent ground visibility. Exceptions to this were the APE for El Manor Avenue, portions of the AOA fence that are located east of Runway 24R, the construction staging area located north of Westchester Parkway, and the construction staging area located west of La Cienega Boulevard (see Figure 2.1-2). El Manor Avenue is in an area that is largely paved, although archaeologists were able to inspect the unpaved shoulders immediately adjacent to the roadbed. Ground visibility in the area of the proposed AOA fence realignment can be characterized as fair to good; the area is unpaved and disturbed, and a moderately dense vegetation growth covers the area to a height of approximately

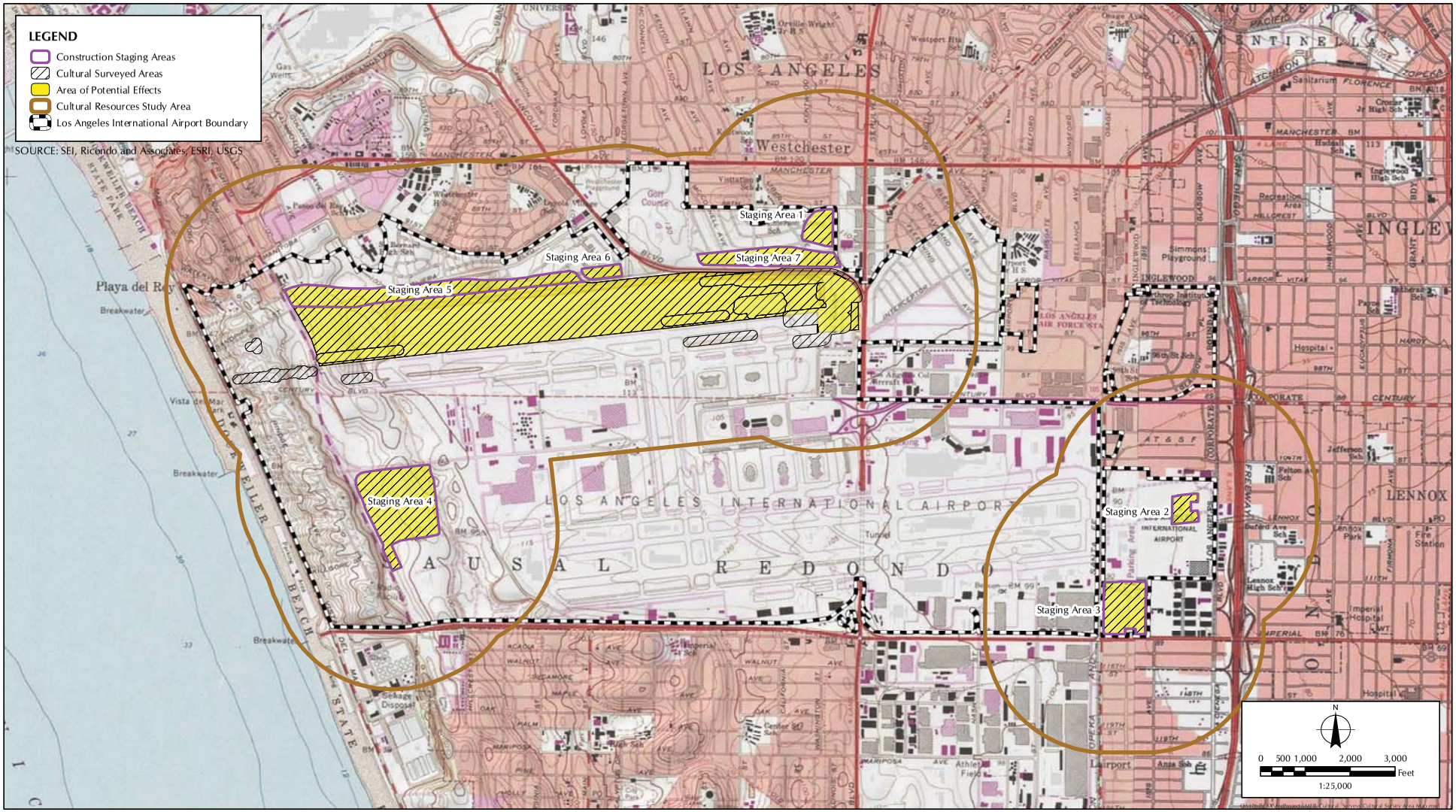


FIGURE 4.1.2-1
Cultural Survey Area Map

1 to 2 feet. Denser stands of vegetation were observed near the Argo Ditch, where ground visibility also ranged from fair to good. Finally, Construction Staging Area No.1 located north of Westchester Parkway and Construction Staging Area No. 2 located west of La Cienega Boulevard are largely paved; however, the archaeologist and architectural historian were able to inspect small unpaved sections in these areas and found ground visibility to be good.

Because the APE includes an active Aircraft Movement Area with frequent arrivals of turbojet aircraft on Runway 6L-24R and taxiing on the taxiways, several portions of the APE could not be thoroughly inspected during the Phase I surveys. The areas that were not fully surveyed on the eastern end of the runway total 2.3 acres, and include portions of the service road segments. Each of these areas was examined from a distance by an archaeologist walking along the edge of the RSA perimeter. Given the high level of ground visibility in these areas, it is unlikely that significant cultural resources were missed during this inspection. Similarly, the western portion of the APE was not thoroughly inspected during the Phase I surveys; proposed work in this area is limited to pavement rehabilitation of a taxiway, the realignment of three holdbar lights, and the removal of two service road segments.

5.1 CULTURAL RESOURCES

5.1.1 Cultural Resources Setting

5.1.1.1 Prehistoric Context

Several prehistoric cultural chronologies have been proposed for the southern California coast with two of the most frequently cited sequences developed by William Wallace[1] and Claude Warren.[2] The chronological sequence presented herein represents an updated synthesis of these schemes as compiled by Glassow and others[3] for the Northern California Bight. This geographic area consists of the coastal area from Vandenberg Air Force Base south to Palos Verdes, as well as the Channel Islands and adjacent inland areas, including the Los Angeles Basin.[4] The prehistoric sequence of the Los Angeles Basin can be divided into four broad temporal categories (Table 5.1.1.1-1, *California Coastal Regional Chronology*). It should be noted that the prehistoric chronology for the region is being refined on a continuing basis, with new discoveries and improvements in the accuracy of dating techniques.

TABLE 5.1.1.1-1
CALIFORNIA COASTAL REGIONAL CHRONOLOGY

Epoch	Coastal Region	Dates
Late Pleistocene / Early Holocene	Paleo-Coastal Period	Circa 9500 to 7000/6500 BC
Middle Holocene	Millingstone Period	Circa 7000/6500 to 1500/1000 BC
Late Holocene	Intermediate Period	1500/1000 BC to AD 750
Late Holocene	Late Period	AD 750 to Spanish contact

Terminal Pleistocene and Early Holocene: Paleo-Coastal Period (Circa 9500 to 7000/6500 BC)

Although data on early human occupation for the Southern California coast are limited, archaeological evidence from the northern Channel Islands suggests initial settlement within the region occurred at least 12,000 years before present (BP). At Daisy Cave (CA-SMI-261) on San Miguel Island, radiocarbon dates indicate an early period of use in the terminal Pleistocene,

[1] Wallace, William J. 1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-230.

[2] Warren, Claude M. 1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by Cynthia Irwin-Williams, pp. 1-14. Eastern New Mexico University Contributions in Anthropology No. 1. Portales.

[3] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 191-213. Altamira Press, New York.

[4] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 191. Altamira Press, New York.

sometime between 9600 and 9000 calibrated (cal) BC.[5] Evidence of early human occupation in the Northern California Bight has also been found on nearby Santa Rosa Island, where human remains from the Arlington Springs Site (CA-SRI-1730) have been dated between 11,000 and 10,000 cal BC.[6] Archaeological data recovered from these and other coastal Paleoindian sites indicate a distinctively maritime cultural adaptation, termed the "Paleo-Coastal Tradition,"[7] which involved the use of seafaring technology and a subsistence regime focused on shellfish gathering and fishing.[8]

Relatively few sites have been identified in the Los Angeles Basin that date to the terminal Pleistocene and early Holocene. Currently, the earliest reliable date for human occupation in the area derives from the La Brea Tar Pits (CA-LAN-159), where human bone has been dated to 8520 cal BC.[9] Evidence of possible early human occupation has also been found at the sand dune bluff site of Malaga Cove (CA-LAN-138), located between Redondo Beach and Palos Verdes.[10] Researchers have proposed that archaeological remains recovered from the lowermost cultural stratum at the site, which include shell, animal bone, and chipped stone tools, may date as early as 8000 cal BC.[11,12]

Middle Holocene: Millingstone Period (Circa 7000/6500 to 1500/1000 BC)

The Millingstone Period or Horizon, also referred to as the "Encinitas Tradition,"[13,14] is the earliest well-established cultural occupation of the coastal areas of the region. The onset of this period, which began sometime between 7000 and 6500 cal BC, is marked by the expansion of populations throughout the Northern California Bight. Regional variations in technology, settlement patterns, and mortuary practices among Millingstone sites have led researchers to define several local manifestations or "patterns" of the tradition.[15] In coastal Los Angeles and Orange counties, the Encinitas Tradition is represented by the "Topanga Pattern." Topanga groups are thought to have been relatively small and highly mobile, with a general subsistence economy

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

[6] 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 Browne, D., K. Mitchell and H. Chaney, pp. Pages 541–545. USDI Minerals Management Service and The Santa Barbara Museum of Natural History, Santa Barbara, CA.

[7] Moratto, M.J. 1984. California Archaeology, pp. 103-113. Academic Press, New York.

[8] Rick, T.C., J.M. Erlandson, and R.L. Vellanoweth. 2001. Paleocoastal Fishing Along the Pacific Coast of the Americas: Evidence from Daisy Cave, San Miguel Island, California. *American Antiquity* 66:595-614.

[9] Berger, R., Protsch, R., Reynolds, R., Rozaire, C., Sackett, J.R., 1971. *New Radiocarbon Dates Based on Bone Collagen of California Indians*, pp. 43–49. Contributions to the University of California Archaeological Survey, Los Angeles.

[10] Walker, Edwin Francis. 1951. *Five Prehistoric Archaeological Sites in Los Angeles County, California*. Southwest Museum, F. W. Hodge Anniversary Publication Fund VI, Los Angeles.

[11] Moratto, M.J. 1984. California Archaeology, pp. 132. Academic Press, New York.

[12] Wallace, W.J. 1986. Archaeological Research at Malaga Cove. In *Symposium: A New Look at Some Old Sites*, edited by G.S. Breschini and T. Haversat. Coyote Press Archives of California Archaeology 6:21-27. Coyote Press, Salinas.

[13] Sutton, Mark Q. 2010. The Del Rey Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 44(2): 1-54.

[14] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 42(4): 1-64.

[15] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 42(4): 1-64.

focused on the gathering of shellfish and plant foods, particularly hard seeds, with hunting being of less importance.[16]

Two temporal subdivisions have been defined for the portion of the Topanga Pattern falling within the Millingstone Period: Topanga I (circa 6500 to 3000 BC) and Topanga II (circa 3000 to 1000 BC).[17] Topanga I assemblages are characterized by abundant manos and metates, core tools and scrapers, charmstones, cogged stone, and discoidals; projectile points are quite rare with those present resembling earlier, large, leaf-shaped forms.[18] Secondary inhumations with associated cairns are the most common burial form at Millingstone sites with small numbers of extended inhumations also identified. The subsequent Topanga II phase largely represents a continuation of the Topanga pattern with site assemblages characterized by numerous manos and metates, charmstones, cogged stones, discoidals, and some stone balls. A significant technological change in ground stone occurs at this time with the appearance of mortars and pestles at Topanga II sites suggesting the adoption of balanophagy by coastal populations.[19] The quantity of projectile points also notably increases in Topanga II site deposits indicating that the hunting of large game may have played a greater role in the subsistence economy than in earlier times. While secondary burials continue to be quite common, a few flexed inhumations have also been recovered from archaeological contexts dating to the Topanga II phase.

A number of Millingstone sites have been identified in the Los Angeles Basin. Within the vicinity of the current project area, evidence of long-term Topanga occupation has been found in the Ballona Lagoon near Marina del Rey. Data obtained from survey and excavation projects in the Ballona Lagoon indicate that during the Topanga I phase, the bluff tops overlooking the lagoon were used as temporary campsite locales by coastal groups who exploited marine and lagoonal fish and shellfish resources.[20] During the Topanga II phase, use of the area intensified with small, limited-use settlements established along the edges of the lagoon. Faunal remains from these latter sites suggest Topanga II groups practiced a more generalized subsistence strategy which emphasized the exploitation of small terrestrial mammals, in addition to fish and shellfish resources.[21]

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[16]Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 196. Altamira Press, New York.

[17]Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 42(4): 8.

[18]Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 194. Altamira Press, New York.

[19] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 42(4): 41.

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

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

Late Holocene: Intermediate Period (1500/1000 BC to AD 750)

The Intermediate Period, which encompasses the early portion of the "Del Rey Tradition" as defined by Sutton,[22] begins around 3500 BP. At this time, significant changes are seen throughout the coastal areas of Southern California in material culture, settlement systems, subsistence strategies, and mortuary practices. These new cultural traits have been attributed to the arrival of Takic-speaking people from the southern San Joaquin Valley.[23] Biological, archaeological, and linguistic data indicate that the Takic groups who settled in the Los Angeles Basin were ethnically distinct from the preexisting Hokan-speaking Topanga populations and are believed to be ancestral to ethnographic Gabrielino groups.[24] While archaeological evidence indicates that "relic" Topanga III populations continued to survive in isolation in the Santa Monica Mountains, these indigenous groups appear to have been largely replaced or absorbed by the Gabrielino or Chumash by 2000 BP.[25]

Intermediate Period sites within the Los Angeles Basin are represented by the "Angeles Pattern" of the Del Rey Tradition.[26] Three temporal subdivisions have been defined for the portion of the Angeles Pattern that falls within the Intermediate Period: Angeles I (1500 to 600 BC), Angeles II (600 BC to AD 400), and Angeles III (AD 400 to 750).[27] The onset of the Angeles I phase is characterized by the increase and aggregation of regional populations and the appearance of the first village settlements. The prevalence of projectile points, single-piece shell fishhooks, and bone harpoon points at Angeles I sites suggests a subsistence shift in the Intermediate Period with an increased emphasis on fishing and terrestrial hunting and less reliance on the gathering of shellfish resources. Regional trade or interaction networks also appeared to develop at this time with coastal populations in the Los Angeles Basin obtaining small steatite artifacts and *Olivella* shell beads from the southern Channel Islands and obsidian from the Coso Volcanic Field.[28] Finally, marked changes are seen in mortuary practices during the Angeles I phase with flexed primary inhumations and cremations replacing extended inhumations and cairns.

The Angeles II phase largely represents a continuation and elaboration of the Angeles I technology, settlement, and subsistence systems. One exception to this pattern is the introduction of a new funerary complex around 2600 BP consisting of large rock cairns or platforms which contain abundant broken tools, faunal remains, and cremated human bone. These mortuary features have generally been thought to represent the predecessor of the Southern California Mourning

[22] Sutton, Mark Q. 2006. The Del Rey Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 44(2&3): 31-93.

[23] Sutton, Mark Q. 2009. People and Language: Defining the Takic Expansion in Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 41(2&3): 31-93.

[24] Sutton, Mark Q. 2009. People and Language: Defining the Takic Expansion in Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 41(2&3): 31-93.

[25] Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 42(4): 17.

[26] Sutton, Mark Q. 2006. The Del Rey Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 44(2&3): 31-93.

[27]Sutton, Mark Q., and Jill K. Gardner. 2010. Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 42(4): 8.

[28] 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 on M. Erlandson and Terry L. Jones, pp. 63-81. University of California, Los Angeles, Institute of Archaeology, Perspectives in California Archaeology, Vol. 6. Los Angeles.

Ceremony.[29] Several important changes in the archaeological record mark the beginning of the Angeles III phase. At this time, larger seasonal villages characterized by well-developed middens and cemeteries were established along the coast or inland areas. Archaeological data from Angeles III sites indicate that residents of these settlements practiced a fairly diverse subsistence strategy which included the exploitation of both marine and terrestrial resources.[30] Notable technological changes occurred at this time with the introduction of the plank canoe and bow and arrow.[31] The appearance of new *Olivella* bead types at Angeles III sites indicates a reconfiguration of existing regional exchange networks with increased interaction with populations in the Gulf of California.[32] Finally, cremations increase slightly in frequency at this time with inhumations no longer placed in an extended position.[33]

In the Ballona Lagoon near Marina del Rey, several large residential sites (CA-LAN-63, CA-LAN-64, and CA-LAN-206A) were established within the wetlands and surrounding bluffs at the beginning of the Intermediate Period.[34] These sites contained a diversity of features including hearths, burials, and houses. Faunal remains indicate a broad-spectrum collecting strategy that included the exploitation of terrestrial mammals and birds, as well as fish and shellfish. The presence of particular species of migratory waterfowl in the faunal assemblage indicates primary occupation of these sites may have occurred in the late fall to early spring. These data suggest that while residential mobility in the Intermediate Period was greatly reduced from previous times, a fully sedentary occupation of the Ballona Lagoon locale is still not indicated.[35]

Late Holocene: Late Period (AD 750 to Spanish Contact)

The Late Period dates from approximately AD 750 until Spanish contact at AD 1542. Sutton[36] has divided this period, which falls within the larger Del Rey Tradition, into two phases: Angeles IV (AD 750–1200) and Angeles V (AD 1200–1550). The Angeles IV phase is characterized by the continued growth of regional populations and the development of large, sedentary villages. Recent archaeological research indicates that Late Period habitation sites within the Los Angeles Basin may

[29] Sutton, Mark Q. 2006. The Del Rey Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 44(2&3): 14-16.

[30] Sutton, Mark Q. 2006. The Del Rey Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 44(2&3): 18-20.

[31] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 203-204. Altamira Press, New York.

[32] 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 on M. Erlandson and Terry L. Jones, pp. 63-81. University of California, Los Angeles, Institute of Archaeology, Perspectives in California Archaeology, Vol. 6. Los Angeles.

[33] Sutton, Mark Q. 2006. The Del Rey Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 44(2&3): 18.

[34] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles. *Proceedings for the Society for California Archaeology*, Volume 20:37-38.

[35] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles. *Proceedings for the Society for California Archaeology*, Volume 20:38.

[36] Sutton, Mark Q. 2006. The Del Rey Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 44(2&3): 26.

have been hierarchically organized around estuarine locales with more productive locales supporting large residential populations.[37] Although chiefdoms appear to have developed in the northern Channel Islands and Santa Barbara region after 850 BP,[38,39] little direct evidence has been found to suggest this level of social complexity existed in the Los Angeles Basin during the late prehistoric period.[40]

Several new types of material culture appear during the Angeles IV phase including Cottonwood series points, birdstone and "spike" effigies, *Olivella* cupped beads, and *Mytilus* shell disk beads. The presence of Southwestern pottery, Patayan ceramic figurines, and Hohokam shell bracelets at Angeles IV sites suggests some interaction between groups in the Los Angeles Basin and the Southwest. Notable changes are seen in regional exchange networks after 800 BP with an increase in the number and size of steatite artifacts, including large vessels, elaborate effigies, and *comals*, recovered from Angeles V sites. The presence of these artifacts suggests a strengthening of trade ties between populations in the Los Angeles Basin and the southern Channel Islands.[41] Finally, Late Period mortuary practices remain largely unchanged from the Intermediate Period with flexed primary inhumations continuing to be the preferred burial method.

Marked changes occurred in the occupation of the Ballona Lagoon during the Late Period. Paleoenvironmental reconstructions indicate that by 1000 BP, much of the lagoon had silted in and become a sediment-choked estuary.[42] At this time, most of the Intermediate Period settlements in the area were abandoned as the local population aggregated into a few large settlements along lower Centinela Creek and at the edge of the lagoon.[43] Faunal remains recovered from these Late Period sites indicate a generalized subsistence strategy focused on a broad mix of terrestrial and marine resources with a shift from lagoon to sandy shoreline shellfish species as the estuary silted in.[44,45]

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[37] Grenda, D.R., and J.A. Altschul. 2002. Complex Cultures, Complex Arguments: Sociopolitical Organization in the Blight. In *Islanders and Mainlanders, Prehistoric Context for the Southern California Blight*, edited by J.H. Altschul and D.R. Grenda, pp. 147-178. SRI Press, Tucson.

[38] Arnold, Jeanne E. 1992. Complex Hunter-Gatherer-Fishers of Prehistoric California: Chiefs, Specialists, and Maritime Adaptations of the Channel Islands. *American Antiquity* 57(1): 60-84.

[39] Gamble, Lynn H. 2005. Culture and Climate: Reconsidering the Effect of Palaeoclimatic Variability Among Southern California Hunter-Gatherer Societies. *World Archaeology* 37(1):92-108.

[40] Sutton, Mark Q. 2006. The Del Rey Tradition and Its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly*, Volume 44(2&3): 26.

[41] 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 on M. Erlandson and Terry L. Jones, pp. 69. University of California, Los Angeles, Institute of Archaeology, Perspectives in California Archaeology, Vol. 6. Los Angeles.

[42] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles. *Proceedings for the Society for California Archaeology*, Volume 20:39.

[43] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles. *Proceedings for the Society for California Archaeology*, Volume 20:39.

[44] Maxwell, D. 2003. Vertebrate Faunal Remains. In *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, edited by J.H. Altschul, A.Q. Stoll, D.R. Grenda, and R. Ciolek-Torrello, pp. 145-177. Statistical Research, Tucson, Arizona.

5.1.1.2 Regional Ethnography

At the time of contact, the Native Americans subsequently known as the Gabrielino Indians occupied lands around the Los Angeles International Airport and whose territories comprised nearly the entire basin comprising the Counties of Los Angeles and Orange They belonged to the Takic family of the Uto-Aztecan linguistic stock. Named after the Mission San Gabriel, the Gabrielino are considered to have been one of the two wealthiest and largest ethnic groups in aboriginal southern California,[46] the other being the Chumash. This was largely due to the many natural resources within the land base they controlled, primarily the rich coastal section from Topanga Canyon to Aliso Creek, and the offshore Channel Islands of San Clemente, San Nicholas, and Santa Catalina.

The Takic-speaking ancestors of the Gabrielino arrived in the Los Angeles basin around 1500 BC and spread throughout the area, displacing a preexisting Hokan-speaking population.[47] The first Spanish contact with the Gabrielino took place in 1520, when Juan Rodriguez Cabrillo arrived in Santa Catalina Island. In 1602, the Spanish returned to Santa Catalina under Sebastián Vizcaíno, and in 1769, Gaspar de Portolá made the first attempt to colonize Gabrielino territory. By 1771, the Spanish had built four missions, and the decimation of the Gabrielino had already begun.[48] European diseases and conflicts among the Gabrielino population, as well as conversion to Christianity, carried a toll in their numbers, traditions, and beliefs.

Although determining an accurate account of the population numbers is difficult, Bean and Smith[49] state that by AD 500, the Gabrielino established permanent settlements and their population continued to grow. Early Spanish accounts indicate that the Gabrielino lived in permanent villages with a population ranging from 50 to 200 individuals. The Gabrielino population surpassed 5,000 people by around 1770.

Several types of structures characterized the Gabrielino villages. They lived in domed circular structures covered with tule, ferm, or carrizo. Communal structures measured over 60 feet in diameter and could house three or four families. Sweathouses, menstrual huts, and a ceremonial enclosure were also part of the village arrangements.[50]

The Gabrielino practiced different subsistence strategies that included hunting, fishing, and gathering. Hunting activities in land were carried out with the use of bow and arrow, deadfalls, snares, and traps. Smoke and throwing clubs also were used to assist with the hunt of burrowing animals. Aquatic animals were hunted with harpoons, spear-throwers, and clubs. Although most fishing activities took place along rivers and from shore, open water fishing trips between mainland

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[45] Becker, K.M. 2003. Invertebrate Faunal Remains.In *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, edited by J.H. Altschul, A.Q. Stoll, D.R. Grenda, and R. Ciolek-Torrello, pp. 179-200. Statistical Research, Tucson, Arizona.

[46] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, ed. R.F. Heizer. Washington, DC: Smithsonian Institution, 538.

[47] Sutton, Mark Q. 2005. People and Language: Defining the Takic Expansion into Southern California. *Pacific Coast Archaeological Society Quarterly* 41(2&3):31-94.

[48] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, ed. R.F. Heizer. Washington, DC: Smithsonian Institution, 540–541.

[49] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, ed. R.F. Heizer. Washington, DC: Smithsonian Institution, 540.

[50] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, ed. R.F. Heizer. Washington, DC: Smithsonian Institution, 542.

and the islands also took place using boats made from wood planks and asphaltum. The Gabrielino fishing equipment included fishhooks made of shells, nets, basketry traps, and poison substances obtained from plants.[51]

The Gabrielino diet included a large number of animals, such as deer, rabbit, squirrel, snake, and rats, as well as a wide variety of insects. However, some meat taboos also existed. The meat of bears, rattlesnakes, stingrays, and ravens were not consumed; these animals were believed to be messengers of the god Chengiichngech. Aquatic animals such as fish, whales, seals, sea otters, and shellfish were also an important part of the diet, mainly among the coastal population.[52]

A variety of plant foods were consumed by the Gabrielino, the main one being acorns. These nuts are rich in nutrients and have a high content of fiber and fat. Other plants used for consumption by the Gabrielino include the seeds of the Islay (*Prunus ilicifolia*), which were ground into a meal, and the seeds and shoots of the Chía (*Salvia columbariae*), which were eaten raw, made into loaves, or mixed with water to make a beverage. Roots and bulbs were also part of the diet among the mainland and island groups, as well as clover, wild sunflower seeds, and cholla seeds. Wild tobacco was used for medicinal purposes and as a sedative and narcotic.[53]

The Gabrielinos were involved in trade among themselves and with other groups. Coastal Gabrielinos exchanged steatite, shell and shell beads, dried fish, sea otter pelts, and salt with inland groups for acorns, seeds, obsidian, and deerskins.[54] During the late prehistoric period, the principal trade item, both among the Gabrielino and for export to other groups, was steatite. Also known as soapstone or soaprock, major outcroppings of steatite are found on Santa Catalina Island. Steatite was widely used among the Gabrielino to make arrow straighteners and artistic or ritualistic objects. In addition, this rock was used in the making of functional objects for food preparation such as bowls, mortars, pestles, and comals.[55] Archaeological data indicate that a steatite "industry" developed prehistorically on the island that involved the large-scale trade of both raw materials and finished artifacts to mainland communities.[56]

[51] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, ed. R.F. Heizer. Washington, DC: Smithsonian Institution, 546.

[52] McCawley, W. 1996. The First Angelinos: The Gabrielino Indians of Los Angeles. Banning, CA: Malki Museum Press, 116–117, 121, 126.

[53] McCawley, W. 1996. The First Angelinos: The Gabrielino Indians of Los Angeles. Banning, CA: Malki Museum Press, 128–131.

[54] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In Handbook of North American Indians, Vol. 8, ed. R.F. Heizer. Washington, DC: Smithsonian Institution, 547.

[76] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In Handbook of North American Indians, Vol. 8, ed. R.F. Heizer. Washington, DC: Smithsonian Institution, 547.

[56] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In Handbook of North American Indians, Vol. 8, ed. R.F. Heizer. Washington, DC: Smithsonian Institution, 547

5.1.1.3 Historic Context[57]

The land occupied by LAWA constituted part of Rancho Sausal Redondo, which had been granted to Antonio Ygnacio Avila by the Mexican government in 1837. The land was used for cattle ranching and sheep grazing. Later, when it was known as the Bennett Rancho, the land held fields of lima beans, barley, and wheat until the late 1920s. By the mid-1920s, pilots utilized the flat farmland of the Bennett Rancho near the current intersection of Imperial and Aviation Boulevards as a safe location for practice and emergency landings. Around this time, industrial and business leaders of Los Angeles recognized the need for a municipal airport with facilities that exceeded those of the existing airports in Burbank, Glendale, and Santa Monica. Meanwhile, the Bennett Rancho was promoted as a location for a Los Angeles municipal airport by realtor William W. Mines, earning the site the moniker "Mines Field." After Mines Field was selected as the location for the 1928 National Air Races, the City of Los Angeles (City) leased 640 acres of the field for the Los Angeles Municipal Airport in August 1928.

To administer the airport, the City created the Department of Airports on October 1, 1928. With little infrastructure and no office space at the airport, most employees worked at City Hall. Airport attendants stayed at the field working out of a small shed. Flagmen signaled to pilots with red and white cloth banners when it was safe for takeoff and landing. Air traffic was light.

The first permanent building at the airport, Hangar One[58], opened in 1929 on the south side of the airfield. The City expanded the airport later that year with the construction of administrative offices, an all-weather runway, and additional hangars. Despite the city's hopes and intentions, the airport served private pilots and flying schools rather than commercial airlines. After a 1934 study of the aviation benefits of the Los Angeles Municipal Airport, the airport successively convinced Trans World Airways (TWA) and American Airlines to relocate their services if the facility was upgraded to accommodate passenger service. Subsequently, in 1935, under the direction of the Emergency Relief Administration, the airport was upgraded with grading, runway construction, and the installation of a new sewer line. In 1937, the Works Progress Administration approved major improvements to the north side of the airfield, including a new east-west runway and sewer, water line, grading, and drainage construction. Meanwhile, the City funded runway light and field light installation.

In the early 1940s, architects Sumner Spaulding and John Austin with city engineer Lloyd Aldrich prepared plans for the airport to attract modern commercial airline services. However, these plans were shelved with the onset of World War II. During the war, the airport served the military effort after the federal government took control of it in January 1942.

The Los Angeles City Department of Airports created a master plan for the airport in early 1943, including eastward expansion of the airfield and construction of new terminals and administration buildings. The plan garnered the commitment of United Airlines, TWA, Western Air, American Airlines, and Pan American Airways to relocate to the airport after the war and the completion of the proposed upgrades. A revised master plan, released in August 1944, proposed two phases of development: (1) immediate accommodations for commercial operations and (2) long-range westward expansion of the airfield. In 1945, Los Angeles voters approved a $12.5 million bond

[57] This section is drawn from the LAX Master Plan EIS/EIR: Los Angeles World Airports. January 2001. Master Plan Final Environmental Impact Statement/Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements. Appendix I, Section 106 Report. Prepared by: PCR Services Corporation. Pages 16-35.

[58] Hangar One is listed on the NRHP.

measure to fund these improvements. Soon after, construction began on temporary accommodations for the airlines called the Intermediate Facilities, including four buildings, three of which served as terminals. Airlines then constructed their own hangars. In December 1946, four of the five major airlines began operations at Los Angeles Municipal Airport and Pan American Airways followed in January 1947.

On October 11, 1949, the airport received a new name, Los Angeles International Airport, after the Civil Aeronautics Administration declared the facility sufficient for international, intercontinental, and long-haul nonstop domestic flights and classified it as an "international-express-class" port.

Meanwhile, the temporary Intermediate Facilities were overwhelmed by passenger and cargo traffic. In the first 5 years of operation, passenger traffic increased 80 percent and freight traffic increased nearly 400 percent. Even after the completion of an air freight building in 1951 alleviated some of the constrained space and opened it to passenger services, the facilities were still cramped. In 1951, architects William L. Pereira and Charles Luckman developed a master plan for the airport in order to expand its facilities. The bond issue that would have paid for these improvements failed in May 1953. However, the airport continued with some upgrades with its own revenue and federal funds, including terminal expansions, parking facility expansion, construction of maintenance facilities, and runway expansions including a tunnel for vehicle traffic in order to accommodate larger planes on expanded runways.

The innovation of long-range commercial jet planes, particularly the Boeing 707 and DC-8 in 1958 and 1959, dramatically shaped the national system of airports, ushering in the era of the Jet Age. These new larger, more efficient jets precipitated a rapid rise in air travel. Between 1960 and 1970, air travel nearly tripled and many airports were not equipped to handle the new jets or the amount of traffic they generated.

Recognizing the limitations of the existing infrastructure, airport officials again hired Pereira and Luckman to master plan its Jet Age facilities. Pereira and Luckman teamed with Welton Becket & Associates and Paul R. Williams for the proposed improvements funded by a $60 million bond approved by voters in June 1956. The innovative design distributed passengers through six ticketing buildings facing onto a U-shaped access road around a sunken half-mile-long mall containing parking for 5,000 cars, a restaurant, an employee cafeteria, electrical and heating plants, and the airport administration building. The ticketing buildings connected via underground passageways to satellites—large concourses that housed waiting areas, cocktail lounges, dining facilities, gift shops, and newsstands. Each of the seven oval-shaped satellite concourses was larger than a football field and contained 10 gates with bridges to connect to planes.

The first phase of construction began in 1957, which included field improvements and runway extensions, and was followed by excavations for the underground components. The final phase included the construction of the terminal buildings and the Airport Traffic Control Tower (ATCT). Completed in 1961, the ATCT was the highest in the world at 172 feet and sat above the administration offices. On June 25, 1961, Vice President Lyndon B. Johnson dedicated the new airport facilities, although only the United Airlines ticketing terminal and its two satellites were open at the time. United began passenger service from the new facility in August, and American, Western, Continental, Delta, Pacific, and Pacific Southwest Airlines followed suit in the following months in their new buildings on the south side of the access road. Meanwhile, TWA and Bonanza Airlines began operating from new buildings on the north side of the access road. The last passenger terminal and satellite complex completed was the $5 million international facility in

1962, which included the usual ticketing, boarding, and baggage areas as well as customs, immigration, and agriculture and public health inspectors.

On January 13, 1962, the Theme Building, the centerpiece of the new airport design, opened to the public. Reminiscent of Pereira and Luckman's earlier schemes for the airport and reflecting the Jet Age mentality, the modern-styled parabolic arch's four legs rise 135 feet from the ground and 340 feet across the base in the center of the terminal area. At the top of the structure is an observation deck and restaurant with a view 70 feet above the parking lot. The central kitchen and commissary is at ground level. The Theme Building was designated City of Los Angeles Historic-Cultural Monument #570 in 1992 and is on the National Register of Historic Places (NRHP).

In response to the 1964 air freight boom where freight traffic increased nearly 400 percent, the airport built a new air cargo center. Cargo City was built on a 96-acre site that had been the Intermediate Facilities, which was demolished to make way for Flying Tigers Airlines, TWA, and Atlantic Transfer's cargo terminals.

As the airport expanded, it faced increasing complaints from its residential neighbors who had moved into suburban tract homes surrounding the airport following World War II. In order to expand a noise buffer zone around the airport, the Department of Airports spent more than $145 million between 1965 and 1985 purchasing homes and property in Palisades del Rey, West Westchester, Emerson Manor, North Westchester, and North Playa del Rey.

In 1967, the Department of Airports released a new master plan authored by William Pereira & Associates. The plan focused on alleviating traffic at the airport by proposing new roadway construction to serve up to 48 million passengers annually, a new terminal at the west end of the airport, and construction of small localized metroports throughout the Los Angeles metropolis. While the metroports did not materialize, a new terminal for commuter traffic and air taxis at the western edge of World Way opened in 1970. In 1968, the World Way Postal Center, designed by Cesar Pelli and Anthony Lumsden of Daniel, Mann, Johnson, and Mendenhall (DMJM) opened on Century Boulevard. In 1974, a $410,000 sound barrier was installed along a 1,500-foot portion of the northern airport boundary.

By the late 1970s, demands on the airport had exceeded its facilities' operation capacity. Expectations of the 1984 Summer Olympic Games in Los Angeles also added to the urgency. In 1981, ground was broken on an expansion, which included a new double-deck roadway, an addition of more than 1 million square feet of terminal space, remodeling of existing terminal buildings, 8,800 new parking spaces, runway reconstruction, and reconstruction of the central utility plant. Gin Wong was the supervising architect and Bechtel Civil & Minerals, Inc. and DMJM oversaw construction. At the same time, the new Tom Bradley International Terminal was designed by a joint venture of William Pereira & Associates, Daniel Dworsky and Associates, Bonito A. Sinclair and Associates, and John Williams and Associates. Deleuw, Cather and Company and the Ralph M. Parsons Company designed the 2.8-mile elevated roadway as part of the expansion.

The airport has continued expansion. In the 1980s, the Gateway Cargo Center and several other cargo terminals and buildings replaced the airport's original hangars and ATCT in the southeast corner of the airport. A new airport traffic control tower, designed by Kate Diamond of Siegel Diamond Architects and Adrianna Levinescu of Holmes & Narver, opened in 1996. The $26 million, 289-foot-tall ATCT complements the neighboring Theme Building.

5.1.2 Cultural Resources Characterization

5.1.2.1 Previous Cultural Resources Inventories in the Study Area

The results of the literature review indicate that 14 cultural resources studies have been conducted within 0.5 mile of the North Airfield (Table 5.1.2.1-1, *Previous Surveys within the Proposed Undertaking Study Area*). Locations of these previous surveys are shown in Figure 5.1.2.1-1, *Topographic Map with USGS 7.5-Minute Quadrangle Index Showing Previously Surveyed Areas in the Cultural Resources Study Area*). Figure 5.1.2.1-1 indicates that much of the APE associated with the proposed undertaking was previously evaluated in 1995 as part of a larger archaeological resources reconnaissance survey of the LAX property.[59]

TABLE 5.1.2.1-1
PREVIOUS SURVEYS WITHIN THE PROPOSED UNDERTAKING STUDY AREA

Report No.	Year	Report Title	Authors
LA 309	1987	Archaeological Reconnaissance Report for Areas Relating to the North Outfall Replacement Sever Project, Los Angeles County, California.	Myra L. Frank & Associates
LA 3673	1987	Historic Property Survey Report, North Outfall Relief Sewer (NORS)	Myra L. Frank & Associates
LA 4910	1995	Paleontological and Archaeological Resources Reconnaissance of LAX Property, Los Angeles County, California	Raschke, Rod, RMW Paleo Associates, Inc.
LA 5558	2000	Cultural Resources Assessment for Pacific Bell Wireless Facility LA913-11, County of Los Angeles, California	LSA Associates, Inc.
LA 5564	1999	A Neighborhood History and Predications of Archaeological Potential	Sue Verity
LA 6248	2002	Phase I Archaeological Survey Fire Station Number 5, Westchester, California	Greenwood and Associates
LA 7851 & LA 11560	2006	Archaeological and Historic Evaluations for the Proposed Airport Surveillance Detection Equipment, Model 3X (ASDE-3X), to Serve LAX, Los Angeles, Los Angeles County, California	PAST, Inc.
LA 9923	2009	Cultural Resources Analysis for T-Mobile Site Number LA03358D "Intercom Building" 9800 South Sepulveda Avenue, Los Angeles, California	Archaeological Resources Technology
LA 10826	2008	Section 106 Consultation for Three-Hole Expansion and Two-Hole Course Modification, Westchester Golf Course and Los Angeles International Airport, Los Angeles, CA	Federal Aviation Administration, U.S. Department of Transportation
LA 10857	2005	The Final LAX Master Plan Mitigation Monitoring & Reporting Program	Brian F. Smith and Associates

[59] Roschke, Rod. 1995. Paleontological and Archaeological Resources Reconnaissance of LAX Property, Los Angeles County, California. RMW Paleo Associates, Inc., Mission Viejo, CA.

TABLE 5.1.2.1-1
PREVIOUS SURVEYS WITHIN THE PROPOSED UNDERTAKING STUDY AREA,
Continued

Report No.	Year	Report Title	Authors
LA 11546	1980	Cultural Resources Records Search, Site Visit Results, and Direct APE Historic Architectural Assessment for Clearwire Candidate CA-LOS2026B/LA03XC087, 9800 South Sepulveda Boulevard, Los Angeles, Los Angeles County, California. EBI Project 61103316	Michael Brandman Associates
LA 11561	2005	Proposed Federal Aviation Administration (FAA) Airport Surface Detection Equipment, Model X (ASDE-3X) to serve LAX Los Angeles, CA – Case # FAA040625A	SRI International
PCR 2012	2012	LAX Specific Plan Amendment Study	PCR Services Corporation
1767-001	2012	LAX Midfield Satellite Concourse Project, Cultural Resources Technical Report	Sapphos Environmental, Inc.
	2001	Section 106 Report, Appendix I, LAX Master Plan Final EIS/EIRLAX Specific Plan Amendment Study	PCR Services Corporation
	2003	Supplemental Section 106 Report, Appendix S-G, LAX Master Plan Supplement to the Draft EIS/EIR	PCR Services Corporation

LA 309. This project involved a reconnaissance survey of five areas within Los Angeles County for the North Outfall Replacement Sewer Project. One of these areas (Survey Area #4) was located within 0.5 mile of the proposed project area. Results of the evaluation found no cultural resources within the areas of proposed surface modification.

LA 3673. This is a Historic Properties Survey Report prepared as part of a Supplemental Environmental Impact Statement for the proposed North Outfall Replacement Sewer project that would run through the airport and surrounding areas. The survey found no archaeological or built-environment resources eligible for listing on the NRHP within the project area.

LA 4910. This project involved a paleontological and archaeological resources reconnaissance survey of undeveloped areas of the LAX property. The study included a pedestrian survey of the entire LAX property, with the exception of a few restricted areas. Several newly identified prehistoric and historic sites were identified during the survey with a small number of previously recorded resources relocated and updated.

LA 5558. This project included an assessment of cultural resources for a proposed telecommunications facility to be installed on the façade of an existing building. Results of a records search indicate that no historic properties would be impacted by the proposed project.

LA 5564. This document provides a summary of the history of the Westchester neighborhood. In addition, it includes predications regarding the nature and extent of archaeological remains within the area that borders the intersection of Manchester Avenue and Sepulveda Boulevard.

LA 6248. This report discusses the results of a cultural resources study for the City of Los Angeles' proposed Fire Station No. 5, in the community of Westchester. A pedestrian survey of the

proposed site identified samples of shell that were consistent with prehistoric use of the area. Given this finding, along with the project's proximity to an extensive prehistoric occupation complex, Greenwood and Associates recommended that a qualified archaeological monitor be present during earth-moving activities.

LA 7851 & LA 11560. In support of a proposed project to install airport surveillance detection equipment, archaeological and historical evaluations were undertaken. The evaluations included a records search and field surveys in three separate sites.

LA 9923. This report provided results of records search and field investigation to identify cultural resources and make recommendations regarding the installation of antennae and other cellular equipment. No historic properties were identified within the APE.

LA 10826. This document includes a letter exchange between the FAA and the Office of Historic Preservation (OHP) regarding a proposed expansion of the Westchester Golf Course located on LAX property. The FAA states that there are no documented cultural resources within the APE. The California State Historic Preservation Officer responded that he cannot concur that the undertaking will not affect historic properties because no information specific to the project area was provided by the FAA. The OHP recommends that a records search be conducted at the California Historical Resources Information Center in order to obtain information on previously identified cultural resources within the project area.

LA 10857. This report provides the Archaeological Treatment Plan as part of the LAX Master Plan Mitigation Monitoring and Reporting Program in compliance with federal and state laws and guidelines for the protection of archaeological resources discovered at the airport.

LA 11546. This project involved a cultural resources records search, site visit, and historic architectural assessment for the proposed placement of antennas on the roof of an existing building. Results of this work indicate that no historic properties are located within the APE.

LA 11561. This memo provides an analysis of potential effect of a project to install airport surveillance detection equipment. On behalf of the FAA, the consultants requested the California Office of Historic Preservation concur with a finding that the project was not likely to adversely affect historic resources.

PCR 2012. The letter report details the findings of a records search conducted by PCR Services Corporation for the LAX Specific Plan Amendment Study. Results of this study indicate that ten cultural resources, including built-environment resource, historic and prehistoric archaeological sites, and prehistoric isolate resources, were recorded within the proposed project area.

1767-001. Sapphos Environmental, Inc. recently conducted a cultural resources investigation for the proposed LAX Midfield Satellite Concourse Project. This assessment found no paleontological, archaeological, Native American sacred sites, or cemeteries within the proposed project property. Although 10 buildings and structures were recorded within the project area, none of these resources were determined to be historic resources under CEQA.

Section 106 Report, Appendix I, LAX Master Plan Final EIS/EIR. A Section 106 report identifying the historic resources present and potentially affected by the proposed 2004 Master Plan improvements was prepared for the LAX Master Plan Final EIS/EIR.

Supplemental Section 106 Report, Appendix S-G, LAX Master Plan Supplement to the Draft EIS/EIR. A supplemental Section 106 report identifying the historic resources present and potentially affected by the proposed Alternative D identified in the 2004 Master Plan improvements was prepared for the LAX Master Plan Final EIS/EIR.

5.1.2.2 Supplemental Literature Review: Previous Cultural Resources Inventories in the Study Area

The results of the supplemental literature review indicate that 19 cultural resources studies have been conducted within 0.5 mile of the APE of the proposed undertaking (Table 5.1.2.2-1, *Previous Cultural Resources Inventories within the Proposed Undertaking Study Area*). Locations of these previous surveys are shown in Figure 5.1.2.1-1). Brief summaries of each of these cultural resource studies are pending.

TABLE 5.1.2.2-1
PREVIOUS CULTURAL RESOURCES INVENTORIES WITHIN THE PROPOSED UNDERTAKING STUDY AREA

Report No.	Year	Report Title	Authors
LA 2904	1993	Draft Report a Phase I Cultural Literature Search for the West Basin Water Reclamation Project, Los Angeles, County, California	Stickel, Gary. E., Enviornmental Research Archaeologists: A Scientific Consortium
LA 3583	1974	The Los Angeles Basin and Vicinity: a Gazetteer and Compilation of Archaeological Site Information	Bucknam, Bonnie, M., Archaeological Research, Inc.
LA 3673	1987	Historic Property Survey Report North Outfall Relief Sewer (NORS)	Myra L. Franks & Associates
LA 4560	1999	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 436-03, County of Los Angeles, California	Duke, Curt, LSA Associates, Inc.
LA 4748	1999	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 436-03, County of Los Angeles, California	Duke, Curt, LSA Associates, Inc.
LA 4836	2000	Phase I Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project	Science Applications International Corporation
LA 5499	2000	Negative Archaeological Survey Report: To Cold Plane the Existing Pavement on Route 405 Overlay with 30mm of Rubberized Asphalt Concrete at Selected On/off-ramps from Vermont Avenue to Manchester Blvd.	Smith, Pilomene, C., Caltrans District 7
LA 5709	2002	Review of Cultural Resource Assessment/Evaluation for Nextel Communications Site CA-7534-a, Los Angeles, Los Angeles County, California	McKenna, Jeanette A., McKenna et al.
LA 5710	2002	Cultural Resources Assessment AT&T Wireless Facility No. D432 Los Angeles, County, California	Duke, Curt, LSA Associates, Inc.
LA 6239	2000	El Segundo Power Redevelopment Project Cultural Resources (Archaeological Resources) Appendix J of Application for Certification	Wesson, Alex, Bass, Bryon, and Hatoff, Brian, URS Corporation
LA 6240	2000	El Segundo Power Redevelopment Project	Bunse, Meta, and Mikesell,

TABLE 5.1.2.2-1
PREVIOUS CULTURAL RESOURCES INVENTORIES WITHIN THE PROPOSED UNDERTAKING STUDY AREA, *Continued*

Report No.	Year	Report Title	Authors
		Historic Resources (Built Environment), Appendix K of Application for Certification	Stephen, D., JRP Historical Consulting Services
LA 8255	2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California: Volumes I and II	Arrington, Cindy, Sikes, Nancy, SWCA Environmental Consultants, Inc.
LA 9925	2009	A Report of the Monitoring During Trench Excavation, Light Grading, and Plan for the Imperial Highway Stormwater Best Management Practices Project, near the Los Angeles International Airport (LAX) in the City of Los Angeles, California	Richards, Michael, D., ASM Affiliates
LA 10160	2008	Preliminary Cultural Resource Survey for the Formation of the Wiseburn Unified School District Project, Cities of El Segundo and Hawthorne, and Unincorporated Los Angeles County, California	Harper, Caprice D., and Smith Francesca, SWCA Environmental Consultants, Inc.
LA 10857	2005	Final-LAX Master Plan Mitigation Monitoring & Report Program-Archaeological Treatment Plan	Smith, Brian, F., Earth Tech
LA 10935	2008	Supplemental Historic Property Survey Report-Interstate 405 at Arbor Viate Street.	Stewart, Noah, Caltrans
LA 11973	2011	Crenshaw/LAX Transit Corridor Project Final Environmental Impact Report/Final Environmental Impact Statement	Metro
LA 12267	2013	LAX Midfield Satellite Concourse Project Cultural Resources Technical Report	Frank, Stephanie and Holland, Karl, Sapphos Environmental
LA 12322	2009	Phase I Cultural Resources Study Avaiation Station Project, County of Los Angeles, California	Brown, Joan and Maxon, Patrick, Bon Terra

5.1.2.3 Previously Recorded Cultural Resources within the Study Area

The results of the records search determined that three archaeological sites, two archaeological isolates, and five built environment resources had previously been recorded within 0.5 mile of the North Airfield (Table 5.1.2.3-1, *Previously Recorded Cultural Resources within the Study Area)*; locations of the cultural resources are shown in Figure 5.1.2.3-1, *Previously Recorded Cultural Resources in the Cultural Resources Study Area*. A brief summary of each of these cultural resources is provided below. None of these previously documented cultural resources are located within the APE of the proposed undertaking.

TABLE 5.1.2.3-1
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN THE STUDY AREA

Historic/Archaeological Resource	Resource Type	NRHP Eligibility
CA-LAN-202	Site	Ineligible
CA-LAN-1118	Site	Ineligible
CA-LAN-2358H/ CA-LAN-*1H	Site	Ineligible
P-19-100115	Isolate	Ineligible
P-19-100116	Isolate	Ineligible
P-19-150442 (Milliron's Department Store)	Building	Ineligible due to age (in 1998)
P-19-150445 (Syad Realty Building)	Building	Ineligible
P-19-189869 (Clearwire CA-LOS2026B/LA03XC087)	Building	Ineligible
Loyola Theater (LAHCM No. 259)	Building	Not evaluated
Theme Building (LAHCM No. 570)	Structure	Eligible

KEY:
NRHP = National Register of Historic Places

CA-LAN-202. This prehistoric site, which measured 61 meters in diameter, was originally recorded in 1953 by Eberhart. Residential development of the area in the 1960s appears to have extensively disturbed the site. Although later revisits to the area identified isolated fragments of *Mytilus* shell, no other cultural materials were identified in the vicinity.[60] Based on these findings, it was concluded that the site is ineligible for the NRHP.[61]

CA-LAN-1118. This site was originally recorded by Stickel and Appier in 1981.[62] The remains were described as a shell midden with associated lithic debitage that covered a 250- by 100-meter area. Grading and road construction in this area has destroyed large portions of the site since its original recording.[63] Due to its lack of integrity, the site was determined to be ineligible for the NRHP.

CA-LAN-2258H/CA-LAN-*1H. This site was recorded by Raschke and others in 1995 in the area immediately west of the northernmost runway.[64] The site consists of a large scatter of historic debris that included concrete, asphalt, glass, brick fragments, plaster, linoleum fragments,

[60] California Department of Parks and Recreation. 1980. Update to Primary Record for CA-LAN-202. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[61] City of Los Angeles, Los Angeles World Airports. April 2004. Section 4.9.1 Historic/Architectural and Archaeological/Cultural Resources. In *Master Plan Final Environmental Impact Statement/Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements*.

[62] California Department of Parks and Recreation. 1981. Primary Record for CA-LAN-1118. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[63] Raschke, Rod, Carol Stadum, and Ronald M. Bissell. 1995. Paleontological and Archaeological Resources Reconnaissance of the Los Angeles International Airport (LAX) Property, Los Angeles County, California. RMW Paleo Associates, Incorporated, Mission Viejo, CA.

[64] Raschke, Rod, Carol Stadum, and Ronald M. Bissell. 1995. Paleontological and Archaeological Resources Reconnaissance of the Los Angeles International Airport (LAX) Property, Los Angeles County, California. RMW Paleo Associates, Incorporated, Mission Viejo, CA.

countertop tiles, and metal fragments. Historic documents indicate that these deposits likely represent the remains of a Nike Missile testing site, which was constructed in 1954. The facility was demolished in 1993 in preparation of the construction of Westchester Parkway. Because the site largely consists of redeposited materials, the resource is not considered eligible for the NRHP.

P-15-100115. This isolated occurrence consists of a large flake of reddish quartzite. The isolate is not eligible for the NRHP.

P-19-100116. This isolated find consists of a large felsite porphyry flake. The isolate is not eligible for the NRHP.

P-19-150442 / Milliron's Department Store. Also known as the Broadway-Westchester Department Store, this building is located at the northwest corner of Sepulveda Boulevard and La Tijera Boulevard. Constructed in 1948, the building is considered to be a prime example of the International Style. The building was originally recorded in 1987 by Starzak, who noted that the cultural resource was not eligible for inclusion on the NRHP because of its age; it was recommended that the building be reconsidered for eligibility in 1998, when the structure is 50 years old.[65]

P-19-150455 / Syad Realty Building. This single-story commercial structure is located at the southwest corner of 89th Street and Sepulveda Boulevard. It was constructed in 1950 in a variation of a Utilitarian Style. Starzak argued that the structure does not appear to be eligible for individual listing on the NRHP on the basis of architectural merit or historic significance.[66]

P-19-189869 / Clearwire CA-LOS2026B/LA03XC087. This building is located at the southwest corner of 98th Street and Sepulveda Boulevard. The building is a Modern Style commercial building that was constructed as the United Savings and Loan building in 1964. An evaluation of the property found that the property does not appear to qualify for the NRHP.[67]

Loyola Theater. This theater building is located on Sepulveda Boulevard south of Manchester Avenue. Designed by Clarence J. Smale, the Baroque Modern style theater was built in 1948. In 1982, it was designated City of Los Angeles Historic-Cultural Monument #259.

Theme Building. Built in 1961 and 1962, the Theme Building was the centerpiece of the large expansion of LAX that converted it into a "jet-age airport." The building was designed by architects William Pereira, Charles Luckman, Welton Becket, and Paul Williams, and is composed of sets of parabolic arches from which a flying saucer–shaped restaurant is suspended. The Theme Building was found eligible for the NRHP under Criterion C. The Theme Building was also designated City of Los Angeles Historic-Cultural Monument #570 in 1992.

[65] California Department of Parks and Recreation. 1987. Primary Record for P-19-150442. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[66] California Department of Parks and Recreation. 1987. Update to Primary Record for P-19-150445. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[67] California Department of Parks and Recreation. 2010. Primary Record for P-19-189869. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

5.1.2.4 Supplemental Records Search: Previously Recorded Cultural Resources within the Study Area

The results of the supplemental records search determined that one archaeological site, two archaeological isolates, and four built environment resources had previously been recorded within 0.5 mile of the APE of the proposed undertaking (Table 5.1.2.2-4, *Previously Recorded Cultural Resources within the Study Area Identified in the Supplemental Records Search*); locations of the cultural resources are shown in Figure 5.1.2.3-1. A brief summary of each of these cultural resources is provided below. None of these previously documented cultural resources are located within the APE of the proposed undertaking.

TABLE 5.1.2.4-1
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN THE STUDY AREA IDENTIFIED IN THE SUPPLEMENTAL RECORDS SEARCH

Historic/Archaeological Resource	Resource Type	NRHP Eligibility
CA-LAN-2386H	Observation bunker	Not evaluated
CA-LAN-2345	Site	Not evaluated
P-19-004353	Isolate	Ineligible
P-19-004354	Isolate	Ineligible
P-19-174101 Hangar One (NRHP No. 073727)	Building	NRPH Listed: 1992
P-19-188005	Multi-Family Residence	Ineligible
P-19-188006	Single Family Residence	Ineligible

KEY:
NRHP = National Register of Historic Places

CA-LAN-2386H. This is an intact World War II–era observation bunker. The bunker is constructed of concrete with a fronting concrete apron. The cultural resource has not been evaluated for inclusion for the NRHP. However, the cultural resource could be eligible for inclusion on the NRHP because of its historic significance under Criterion A.[68]

CA-LAN-2345. This is a prehistoric site that contained hundreds of stone tools, bones, shell fragments and thermally affected stones. The site's Locus 4 appears to be roughly circular and constructed of stones, which suggests a possible fire hearth. The site is disturbed and is located adjacent to a large pit from which sedimentary materials were removed to build up a hill on which airport instruments are located. Due to its lack of integrity, the site was determined to be ineligible for the NRHP.[69]

P-19-004353. This is a historic isolate. The isolate consisted of a single 7-Up bottle base with embossments, which exhibits a manufacturing date circa 1955. Additionally, five small mammal

[68] California Department of Parks and Recreation. 195. Primary Record for CA-LAN-2386H. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[69] California Department of Parks and Recreation. 1995. Primary Record for CA-LAN-2345. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

bone fragments, with no cut marks; and a single shell fragment were also observed, but were determined to be modern. The isolate is not eligible for the NRHP.[70]

P-19-004354. This is a historic isolate, consisting of a historic trash dump that contained approximately seven intact glass bottles of various sizes and colors and included several glass bottle fragments. The bottles were dated from 1946 to 1950 and were discovered partially submerged. The isolate is not eligible for the NRHP.[71]

P-19-174101/ Hangar One. Built in 1942, Hangar One was the first hangar built as part of the Los Angeles Municipal Airport, which later became the Los Angeles International Airport (LAX). Hangar One is the only structure remaining from the original airport site. Hangar One is a two story rectangular brick and concrete industrial structure with flanking one story bays and corner towers designed in the Spanish Colonial Revival Style. Hangar One was listed on the NRHP on June 23,1992, HR No. 073727.[72]

P-19-188005. This is a multi-family residence built between 1921 and 1925, with improvements dating to 1956. The original structure was a small wood frame rectangular shape house, with a hipped roof, and vertical plank sidings. The 1956 improvements consisted of a second residence in the center of the property. This structure, with a cross-gabled roof, exhibiting stucco siding and numerous patchwork additions to the rear. Due to its lack of integrity, the cultural resource was determined to be ineligible for the NRHP.[73]

P-19-188006. This is a single family residence built in 1927, with improvements/alternations made between 1945 and 1965. This cultural resource is a single story, wood frame house, with an irregularly shaped on a slightly raised foundation. The roof is cross-hipped with exposed beams and eaves. A single car garage is located south of the residence that was remodeled into a rumpus room in 1952. Due to its lack of integrity, the cultural resource was determined to be ineligible for the NRHP.[74]

5.2 PHASE I CULTURAL RESOURCES SURVEY

5.2.1 Description of Cultural Resources

The Phase I survey identified no archaeological resources within the APE. However, four historic-period cultural resources were recorded within the APE of the proposed undertaking during the cultural resources assessment. These are Argo Ditch, El Manor Avenue Residential Neighborhood (Construction Staging Area No. 1), Will Rogers Street Residential Neighborhood (Construction Staging Area No. 7), and El Manor Avenue (see Figure 5.2.1-1, *Newly Recorded Cultural Resources in the Cultural Resources Study Area*). Descriptions and significance evaluations of the four

[70] California Department of Parks and Recreation. 2013. Primary Record for P-19-004353. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[71] California Department of Parks and Recreation. 2013. Primary Record for P-19-004354. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[72] United States Department of the Interior National Park Service. 1992 National Register of Historic Places Registration Form. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[73] California Department of Parks and Recreation. 2006. Primary Record for P-19-188005. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[74] California Department of Parks and Recreation. 2006. Primary Record for P-19-188006. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

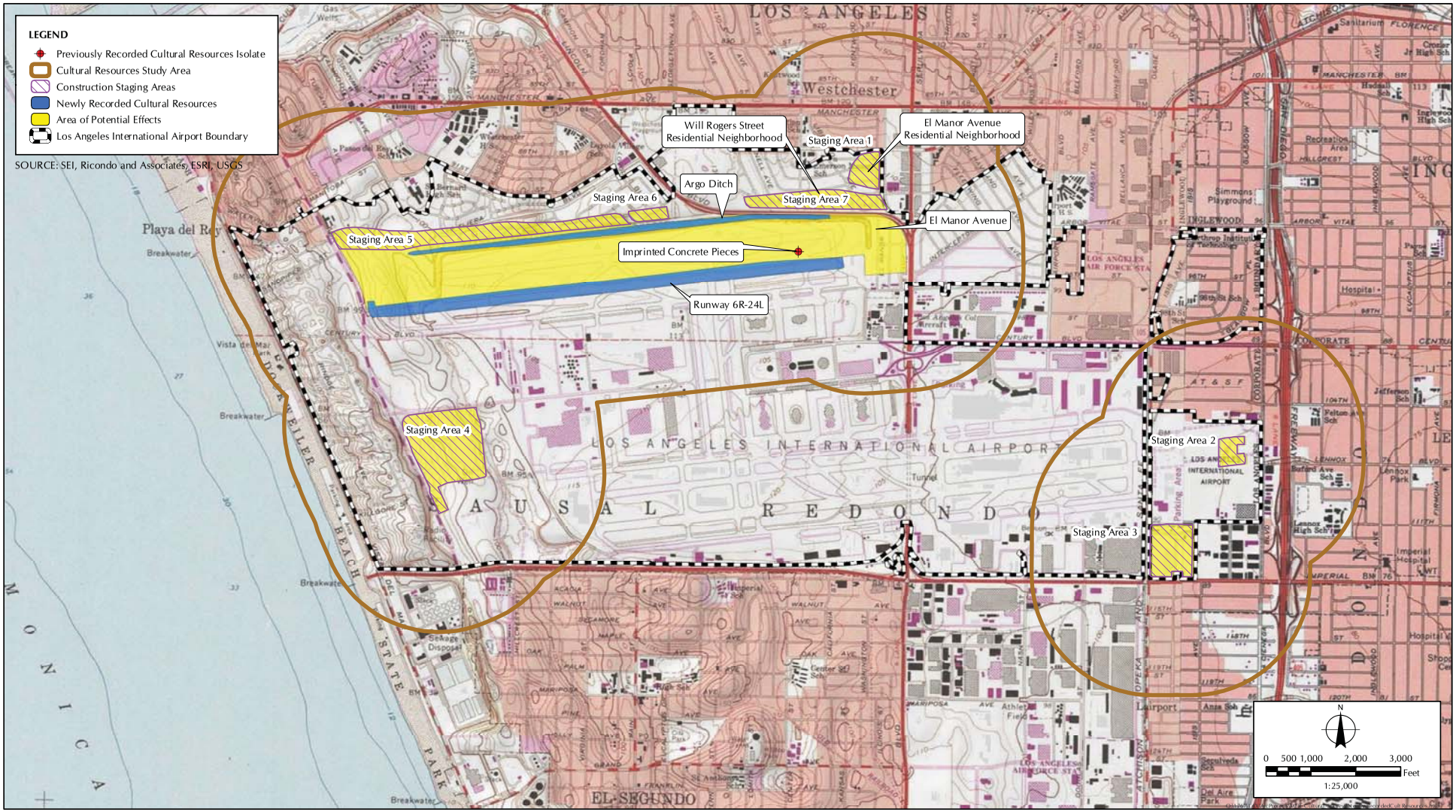

FIGURE 5.2.1-1

Newly Recorded Cultural Resources in the Cultural Resources Study Area

identified historic-period cultural resources, as well as two resources identified as non-historic, are presented below. For more detailed information on these sites, the reader is referred to the completed DPR 523 site forms provided in Appendix A, *DPR 523 Forms*.

Argo Ditch. Argo Ditch is located along the northern extent of the LAX property and runs approximately parallel to Runway 6L-24R before emptying into the LAX storm water drainage system (Image 5.2.1-1, *East End of Argo Ditch, looking east*). The channel measures 9,857 feet in length. The ditch bottom width ranges from 12 to 43 feet with a maximum depth of 35 feet. The width and depth of the ditch vary across its length, with the widest and deepest portions found along the eastern extent of the linear feature. The ditch is unlined and uncovered across most of the North Airfield, although subsurface box culverts are located at both the east and west ends of the airfield. The ditch bottom is characterized by either unvegetated sand or areas vegetated with various herbaceous upland species.[75]

A review of historic topographic maps and aerial photographs conducted for the LAX Master Plan Environmental Impact Statement / Environmental Impact Report indicates that Argo Ditch is a man-made flood control structure that was constructed circa 1949.[76] Argo Ditch does not connect to any river, stream, or lake, but has been determined to flow into the Pacific Ocean through connections with the City of Los Angeles' storm drain system. The ditch has been subject to routine maintenance activities involving the removal of vegetation and debris.

[75] Glenn Lukos Associates. 2012. *Appendix D-2. LAX Specific Plan Amendment Study*. Prepared for Los Angeles World Airports, Los Angeles, CA.

[76] Sapphos Environmental, Inc. 1997. *Memorandum for the Record (JN 1067-004.M18), Recommendations for Addressing Regulatory Compliance Issues Related to Areas Subject to the Jurisdiction of the U.S. Army Corps of Engineers and the California Department of Fish and Game at Los Angeles Airport*. City of Los Angeles, CA.

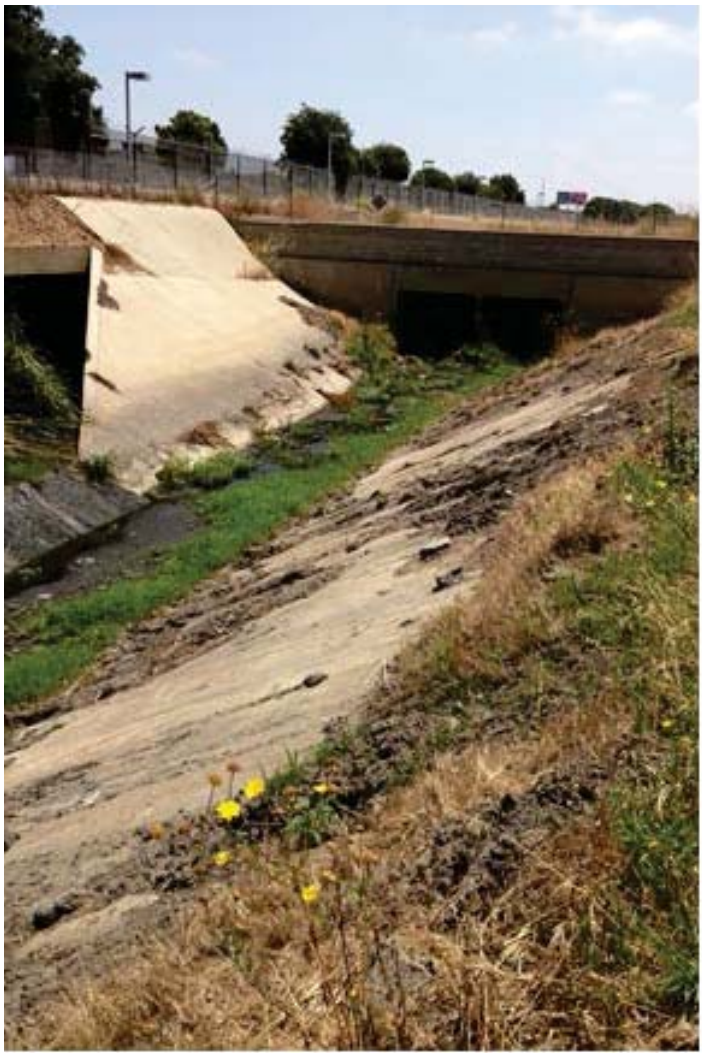

Image 5.2.1-1. *East End of Argo Ditch, looking east*

El Manor Avenue Residential Neighborhood. El Manor Avenue Residential Neighborhood is located in Construction Staging Area No.1 within the proposed APE. The site is located outside of the Los Angeles International Airport operations at the corner of Westchester Parkway and Sepulveda Westway approximately 1,500 feet northeast of Runway 6L-24R. This site is currently fenced and is being used to temporarily house trailers/offices for the Los Angeles International Airport's Elevator Maintenance Operations Department and as a lay-down yard (Image 5.2.1-2, *El Manor Avenue Residential Neighborhood, looking south*).

El Manor Avenue Residential Neighborhood consisted of single-family homes located along 90th Street, 88th Place, and 89th Street in an east-west direction and along the west side of El Manor Avenue in a north-south direction; duplexes were located along the east side of El Manor Avenue. The eastern ends of the east-west streets of 88th Place, 89th Street, and 90th Street terminated at El Manor Avenue, which was the major cross street (north-south) for this area.

A historic review of El Manor Avenue Residential Neighborhood was conducted as part of the proposed undertaking's cultural resources study. The study used physical evidence, historic topographic maps, historic newspaper ads, and Sanborn Fire Insurance maps, which indicated that

El Manor Avenue Residential Neighborhood houses and sidewalks were constructed between 1940 and 1945. A Sanborn Fire Insurance Map dated 1951 showed residential neighborhoods within the APE. Airport operations over the years have modified El Manor Avenue Residential Neighborhood to include the removal of its housing structures, most of its street lights, and street signs, as well as alterations to the streets.

Image 5.2.1-2. *El Manor Avenue Residential Neighborhood, looking south*

Will Rogers Street Residential Neighborhood. Will Rogers Street Residential Neighborhood is located in Construction Staging Area No. 7 within the proposed APE. The site is outside of the Los Angeles International Airport operations at the corner of Lincoln Boulevard and Sepulveda Westway approximately 800 feet north of Runway 6L-24R. This site is currently fenced and inaccessible to the public (Image 5.2.1-3, *Will Rogers Street Residential Neighborhood, looking west*).

Will Rogers Street Residential Neighborhood consisted of single-family homes located along the major cross street of Will Rogers Street in an east-west direction and along El Manor Avenue, Liberator Avenue, and Emerson Avenue in a north-south direction.

A historic review of Will Rogers Street Residential Neighborhood was conducted as part of the proposed undertaking's cultural resources study. The study used physical evidence, historic topographic maps, and a sidewalk imprint, which indicated that Will Rogers Street Residential Neighborhood houses and sidewalks were constructed circa 1948 (a sidewalk imprint reads "J.A. Thompson Contractor 1948"). Airport operations over the years have modified Will Rogers Street

Residential Neighborhood to include the removal of its houses, most of its street lights, and street signs, as well as alterations to the streets.

Image 5.2.1-3. *Will Rogers Street Residential Neighborhood, looking west*

El Manor Avenue. Located within the proposed APE, El Manor Avenue is situated east of Runways 6L-24R and 6L-24L, within the confines of Los Angeles International Airport operations and is currently being used as a service road (Image 5.2.1-4, *El Manor Avenue, looking north*). The avenue runs along a north-south direction and measures approximately 1,290 feet long by 32 feet wide (from curb to curb). Approximately 550 feet of the avenue is expected to be realigned by the proposed undertaking.

A historic review of El Manor Avenue was conducted as part of the proposed undertaking's cultural resources study. The study used physical evidence, historic topographic maps and Sanborn Fire Insurance maps, which indicated that El Manor Avenue's street and sidewalks were constructed circa 1945.[77] A Sanborn Fire Insurance Map dated 1950 showed a residential neighborhood within the APE.[78] Airport operations over the years have modified El Manor Avenue to include the removal of its residential housing, street lights, and street signs, as well as making alterations to the street.

[77] U.S. Geological Survey Topographic Map. 1950. 7.5-minute series, Quadrant: Venice, California

[78] Sanborne Fire Insurance Map 1950. Section 4413.

Image 5.2.1-4. *El Manor Avenue, looking north*

Runway 6L-24R. Runway 6L-24R is the northernmost runway at LAX (Image 5.2.1-5, *Runway 6L-24R, facing west*). Historic documents and USGS topographic maps indicated that Runway 6L-24R was constructed in 1969. The grooved, concrete runway measures 8,925 feet in length with a width of 150 feet; it is surrounded by a paved shoulder and blast pad, the latter of which is located on its eastern end. Related features associated with Runway 6L-24R include a number of taxiways, service roads, and approach lighting systems. Runway 6L-24R is less than 50 years old and, therefore, was not identified as a historic-period cultural resource during this study.

Image 5.2.1-5. *Runway 6L-24R, facing west*

Runway 6R-24L. Runway 6R-24L is one of two runways in the north runway complex at LAX (Image 5.2.1-6, *Runway 6R-24L, facing west*). It is located outside of the proposed undertaking area, just south of the APE. Historic documents and USGS topographic maps indicate that the runway was built sometime between 1958 and 1962 as part of the Jet Age improvement project at LAX.[79,80] The grooved, concrete runway measures 10,285 feet in length with a width of 150 feet; it is surrounded by a paved shoulder and blast pad, the latter of which is located on its eastern end. Related features associated with Runway 6R-24L include a number of taxiways, service roads, and approach lighting systems.

[81] Los Angeles World Airports. June 2005. *Archaeological Treatment Plan*. Prepared by: Brian F. Smith and Associates, San Diego, CA.

[81] Los Angeles World Airports. June 2005. *Archaeological Treatment Plan*. Prepared by: Brian F. Smith and Associates, San Diego, CA.

Image 5.2.1-6. *Runway 6R-24L, facing west*

Over the years, Runway 6R-24L has undergone numerous improvements and modifications in response to the increasing demands of air traffic at LAX. The runway is paved with modern concrete; striping and other marking elements are painted on its surface. Although no identifiable historic materials were found in association with Runway 6R-24L, a broken piece of concrete with stamped lettering was identified in the immediate vicinity of the feature. Recorded in the APE, the imprinted concrete fragments (possibly an identifier from a FAA navigational aid) appear to read, "FAA G5" and "C...IF." No information could be found as to the exact function or age of the remains (Image 5.2.1-7, *Concrete Fragments with Imprinting, Located North of Runway 6R-24L*).

Image 5.2.1-7. ***Concrete Fragments with Imprinting, Located North of Runway 6R-24L***

5.2.2 Significance Evaluation of Cultural Resources

The historical significance of Argo Ditch, El Manor Avenue Residential Neighborhood, Will Rogers Street Residential Neighborhood, El Manor Avenue, and Runway 6R-24L was determined by applying the procedures and criteria for the NRHP.

Argo Ditch. Archival documents indicate that Argo Ditch was constructed in the late 1940s as a flood control structure. No information was found to indicate that the construction of the ditch was associated with either a historic event or person (Criteria A and B of the NRHP). Moreover, the ditch does not significantly embody the distinctive characteristics of an engineering structure or architectural style, type, or period, which would make it eligible for inclusion under Criterion C of the NRHP. Finally, research has provided no indication that the channel has the potential to yield potentially important information (Criterion D of the NRHP). Taken together, the cultural resource does not meet any of the criteria for listing to the NRHP and, thus, cannot be considered a historic property.

The integrity of Argo Ditch has also been significantly affected by maintenance activities conducted along the flood control structure over the last 50 years. These activities, which included the cleanout of vegetation and debris, have altered its original design. Moreover, the continual development and expansion of the immediate area has resulted in a loss of integrity of setting and feeling. Taken together, the data suggest that Argo Ditch does not retain a level of integrity that is needed to make it eligible for listing on the NRHP and, thus, cannot be considered a historic property.

El Manor Avenue Residential Neighborhood. Archival documents indicate that El Manor Avenue Residential Neighborhood's street and sidewalks were constructed between 1940 and 1945 as part of a residential housing tract. No information has been found to indicate that the streets and adjoining neighborhoods were associated with either a historic event or person (Criteria A and B of the NRHP). Moreover, El Manor Avenue Residential Neighborhood does not significantly embody the distinctive characteristics of an engineering structure or architectural style, type, or period, which would make it eligible for inclusion under Criterion C of the NRHP. Finally, research has provided no indication that El Manor Avenue Residential Neighborhood has the potential to yield potentially important information (Criterion D of the NRHP). Taken together, the cultural resources do not meet any of the criteria for listing to the NRHP and, thus, cannot be considered a historic property.

The integrity of El Manor Avenue Residential Neighborhood has also been significantly affected by airport operations and activities over the last 50 years. These activities include the removal of the housing, landscape, street lights, and street signs, and the construction of temporary offices and laid-down yards have altered its original design. Moreover, the continual development and expansion of the immediate area has resulted in a loss of integrity of setting and feeling. Taken together, the data suggest that El Manor Avenue Residential Neighborhood does not retain a level of integrity that is needed to make it eligible for listing on the NRHP and, thus, cannot be considered a historic property.

Will Rogers Street Residential Neighborhood. Archival documents indicate that Will Rogers Street Residential Neighborhood's street and sidewalks were constructed circa 1948 as part of a residential housing tract. No information has been found to indicate that the streets and adjoining neighborhoods were associated with either a historic event or person (Criteria A and B of the NRHP). Moreover, Will Rogers Street Residential Neighborhood's do not significantly embody the distinctive characteristics of an engineering structure or architectural style, type, or period, which would make it eligible for inclusion under Criterion C of the NRHP. Finally, research has provided no indication that Will Rogers Street Residential Neighborhood has the potential to yield potentially important information (Criterion D of the NRHP). Taken together, the cultural resources do not meet any of the criteria for listing to the NRHP and, thus, cannot be considered a historic property.

The integrity of Will Rogers Street Residential Neighborhood has also been significantly affected by airport operations and activities over the last 50 years. These activities include the removal of the housing, landscape, street lights, and street signs, which have altered its original design. Moreover, the continual development and expansion of the immediate area has resulted in a loss of integrity of setting and feeling. Taken together, the data suggest that Will Rogers Street Residential Neighborhood does not retain a level of integrity that is needed to make it eligible for listing on the NRHP and, thus, cannot be considered a historic property.

El Manor Avenue. Archival documents indicate that El Manor Avenue's street and sidewalks were constructed circa 1945 as part of a residential housing tract. No information has been found to indicate that the street was associated with either a historic event or person (Criteria A and B of the NRHP). Moreover, El Manor Avenue does not significantly embody the distinctive characteristics of an engineering structure or architectural style, type, or period, which would make it eligible for inclusion under Criterion C of the NRHP. Finally, research has provided no indication that El Manor Avenue has the potential to yield potentially important information (Criterion D of the NRHP). Taken together, the cultural resource does not meet any of the criteria for listing to the NRHP and, thus, cannot be considered a historic property.

The integrity of El Manor Avenue has also been significantly affected by airport operations and activities over the last 50 years. These activities include the removal of the housing, street lights, and street signs, and the construction of storm drains and landing light standards have altered its original design. Moreover, the continual development and expansion of the immediate area has resulted in a loss of integrity of setting and feeling. Taken together, the data suggest that El Manor Avenue does not retain a level of integrity that is needed to make it eligible for listing on the NRHP and, thus, cannot be considered a historic property.

Runway 6R-24L. Archival data indicate that Runway 6R-24L was first constructed between 1958 and 1962. Initial research has yielded no information suggesting an association of the runway with either significant historic events or people (Criteria A and B of the NRHP). Although the runway does appear to be associated with aviation history, it does not illustrate any significant association with the development of the commercial airline and airport industry in the early 20th century. Moreover, the runway has been heavily altered since its initial construction and thus no longer retains its original or historic appearance, visual narrative, or characteristics from a specific period that would make the resource eligible under Criterion C of the NRHP. Finally, research has provided no indication that the runway has the potential to yield potentially important information (Criterion D of the NRHP). Taken together, the cultural resource does not meet any of the criteria for listing to the NRHP and, thus, cannot be considered a historic property.

In order for a property to be eligible for listing in the NRHP, it must also retain its historic integrity. As mentioned above, Runway 6R-24L has been subjected to a number of improvements and alterations over the last 50 years. These modifications have significantly affected the runway's integrity in design, materials, and workmanship. Moreover, the continual development and expansion of LAX has resulted in a loss of integrity of setting and feeling. As such, it may be concluded that Runway 6R-24L does not retain a level of integrity needed to make it eligible for listing on the NRHP and, thus, cannot be considered a historic property.

Runway 6L-24R. Archival records indicate that Runway 6L-24R was constructed in 1969. The runway's construction date (1969) shows that the feature is less than 50 years old and is not considered eligible for the NRHP (Sec. 60.4 Criteria for Evaluation of the NRHP). The literature review has yielded no information that the runway has achieved significance within the past 50 years due to its exceptional importance (Sec. 60.4(g) of the NRHP). The runway is not associated with historic events, people, the history of aviation, the development of commercial airline travel, or the airport industry in the early 20th century (Criteria A, B, and C of the NRHP). Finally, research has provided no indication that the runway has the potential to yield potentially important information (Criterion D of the NRHP). Taken together the cultural resource does not meet the criteria for listing to the NRHP and, thus, cannot be considered a historic property.

5.3 SUMMARY OF FINDINGS

5.3.1 Cultural Resources

Five built-environment resources, Argo Ditch, El Manor Avenue Residential Neighborhood, Will Rogers Street Residential Neighborhood, El Manor Avenue, and Runway 6L-24R, were documented in the proposed undertaking APE. One additional built-environment resource, Runway 6R-24L, was documented outside of the APE. None of these historic-period resources meets the eligibility requirements for national, state, or local designation. Furthermore, all of the ground-disturbing activities associated with this undertaking will be located in previously disturbed areas that are not anticipated to contain intact subsurface deposits. Therefore, the proposed undertaking is not expected to have any effects on historic properties or historic resources.

Results of the records search and archival research, however, suggest that a number of archaeological sites are located within the larger cultural resources study area. Additionally, the records search of the NAHC Sacred Lands File indicates that Native American traditional cultural places are also present in the immediate vicinity of the proposed undertaking. These findings suggest a potential for the unanticipated discovery of buried cultural deposits if construction activities extend into native or undisturbed soil.

If undertaking plans are modified so that ground disturbances occur in areas that do not consist of redeposited fill or that have not been previously disturbed, it is recommended that an archaeological construction monitoring program be implemented in accordance with Mitigation Measure (MM) HA-5 of the MMRP and that procedures outlined in the Archaeological Treatment Plan[81] completed pursuant to MM HA-4 of the MMRP be followed to ensure the long-term protection and proper treatment of any unexpected archaeological discoveries of federal, state, and/or local significance found within the APE.

[81] Los Angeles World Airports. June 2005. *Archaeological Treatment Plan*. Prepared by: Brian F. Smith and Associates, San Diego, CA.

SECTION 6.0
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APPENDIX A
DPR 523 FORMS

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code | Reviewer | Date

***Resource Name or #:** Argo Drainage Channel

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Venice **Date:** 1964 **T** 3S; **R** 15W; UNSECTIONED**;** S.B. **B.M.**

c. Address: 1 World Way West City: Los Angeles Zip: 90045

d. UTM: Zone: 11S; 369635mE/ 375788 mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: The Argo Drainage Channel is located north of the northernmost runway (6L-24R Runway) at the Los Angeles International Airport (LAX) and south of Westchester Parkway and Lincoln Boulevard.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) The Argo Drainage Channel is a flood control structure that measures 9,857 feet in length. Archival information suggests that the channel was constructed circa 1949. The channel bottom width ranges from 12 to 43 feet with a maximum depth of 35 feet. The width and depth of the channel vary across its length with the widest and deepest portions found along with eastern extent of the linear feature. The channel is unlined and uncovered across most of the north airfield, becoming a subsurface box culvert at the west end of the airfield before emptying into Santa Monica Bay. The channel bottom is characterized by either unvegetated sand or areas vegetated with various herbaceous upland species.

The Argo Drainage Channel does not connect to any river, stream, or lake, but has been determined to flow into the Pacific Ocean through connections with the City of Los Angeles' storm drain system. The channel has been subject to routine maintenance activities involving the removal of vegetation and debris.

***P3b. Resource Attributes:** (List attributes and codes) HP20. Canal/Aqueduct

***P4. Resources Present:** ☐ Building ■ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) Argo Drainage Channel, facing east, 5/8/2013

***P6. Date Constructed/Age and Sources:** ■ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**
Los Angeles World Airports
1 World Way
Los Angeles, CA 90045

***P8. Recorded by:** (Name, affiliation, and address)

Tiffany Clark
Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, CA 91107

***P9. Date Recorded:** May 8, 2013

***P10. Survey Type:** (Describe) Pedestrian

***P11. Report Citation:** Sapphos Environmental, Inc. 2013. Memorandum for the Record: Results of the Cultural Resources Assessment for the Proposed LAX North Runway Safety Area Improvements Project. Pasadena, CA.

***Attachments:** ☐ NONE ■ Location Map ☐ Sketch Map ☐ Continuation Sheet ■ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ■ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code

 ***Resource Name or #** Argo Drainage Channel, Los Angeles International Airport

B1. Historic Name: Argo Drainage Channel
B2. Common Name: Argo Drainage Channel
B3. Original Use: Flood Constrol Structure B4. Present Use: Flood Constrol Structure
***B5. Architectural Style:** Not applicable
***B6. Construction History:** (Construction date, alterations, and date of alterations)
Archival information suggests that the channel was constructed circa 1949 (Sapphos Environmental, Inc. 1997). The channel has been subject to routine maintenance activities involving the removal of vegetation and debris.

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:** Not applicable

***B8. Related Features:** None

B9a. Architect: Unknown b. Builder: Unknown

***B10. Significance: Theme:** Water **Area:** City of Los Angeles

Period of Significance: **Property Type:** **Applicable Criteria:**
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Argo Drainage Channel is part of the larger flood control system for the City of Los Angeles. The Argo Drainage Channel does not meet any of the evaluative criteria for inclusions on the National Register of Historic Places (Criteria A–D) or the California Register of Historical Resources (Criteria 1–4). In addition, the channel has been subjected to a number of alterations and improvements and as such, does not possess much of its original integrity.

B11. Additional Resource Attributes: (List attributes and codes) HP20. Canal/Aqueduct.

***B12. References:**

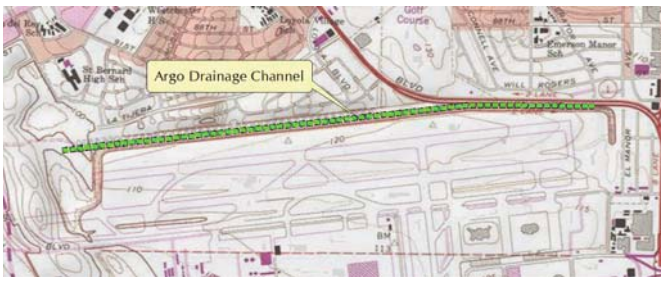
Sapphos Environmental, Inc. 1997. *Memorandum for the Record (JN 1067-004.M18), Recommendations for Addressing Regulatory Compliance Issues Related to Areas Subject to the Jurisdiction of the U.S. Army Corps of Engineers and the California Department of Fish and Game at Los Angeles Airport*. Prepared for: City of Los Angeles, CA. Pasadena, CA.

B13. Remarks: None

***B14. Evaluator:** Tiffany Clark, Sapphos Environmental, Inc., Pasadena

***Date of Evaluation:** June 14, 2013

(Sketch Map with north arrow required.)



North Arrow

(This space reserved for official comments.)

L1. Historic and/or Common Name: Argo Drainage Channel

L2a. Portion Described: ■ Entire Resource ☐ Segment ☐ Point Observation **Designation:** Argo Drainage Channel

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map)

The entirety of the Argo Drainage Channel has been field inspected. See map for location of drainage channel.

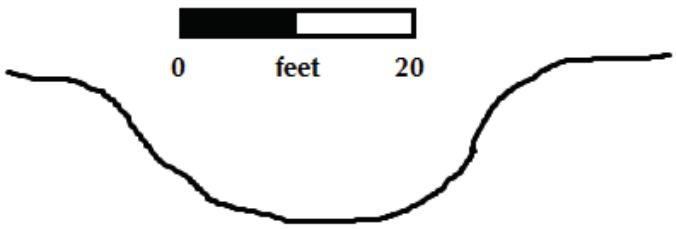
L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)

The Argo Drainage Channel is located along the northern extent of the LAX property and runs approximately parallel to Runway 6L-24R. The width and depth of the channel vary across its length with the widest and deepest portions found along with eastern extent of the linear feature. The channel is unlined and uncovered across most of the north airfield, becoming a subsurface box culvert at the west end of the airfield before emptying into Santa Monica Bay. The channel bottom is characterized by either unvegetated sand or areas vegetated with various herbaceous upland species.

A review of historic topographic maps and aerial photographs conducted for the LAX Master Plan Environmental Impact Study / Environmental Impact Report indicates that the Argo Drainage Channel is a man-made flood control structure that was constructed circa 1949. The Argo Drainage Channel does not connect to any river, stream, or lake, but has been determined to flow into the Pacific Ocean through connections with the City of Los Angeles' storm drain system. The channel has been subject to routine maintenance activities involving the removal of vegetation and debris.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
- **a. Top Width:** 10–80 feet (approximate)
- **b. Bottom Width:** 12–43 feet
- **c. Height or Depth:** 35 feet (maximum)
- **d. Length of Segment:** 9,857 feet

L4e. Sketch of Cross-Section (include scale) **Facing:** East



L5. Associated Resources: None.

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) The channel slopes down slightly from east to west.

L7. Integrity Considerations: The channel has been subjected to maintenance activities since its construction. As such, it does not possess much of its original integrity

L8a. Photograph, Map or Drawing

L8b. Description of Photo, Map, or Drawing (View, scale, etc.)
Eastern end of Argo Drainage Channel, facing east.

L9. Remarks: None

L10. Form Prepared by: (Name, affiliation, and address)

Tiffany Clark
Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, CA 91107

L11. Date: June 20, 2013

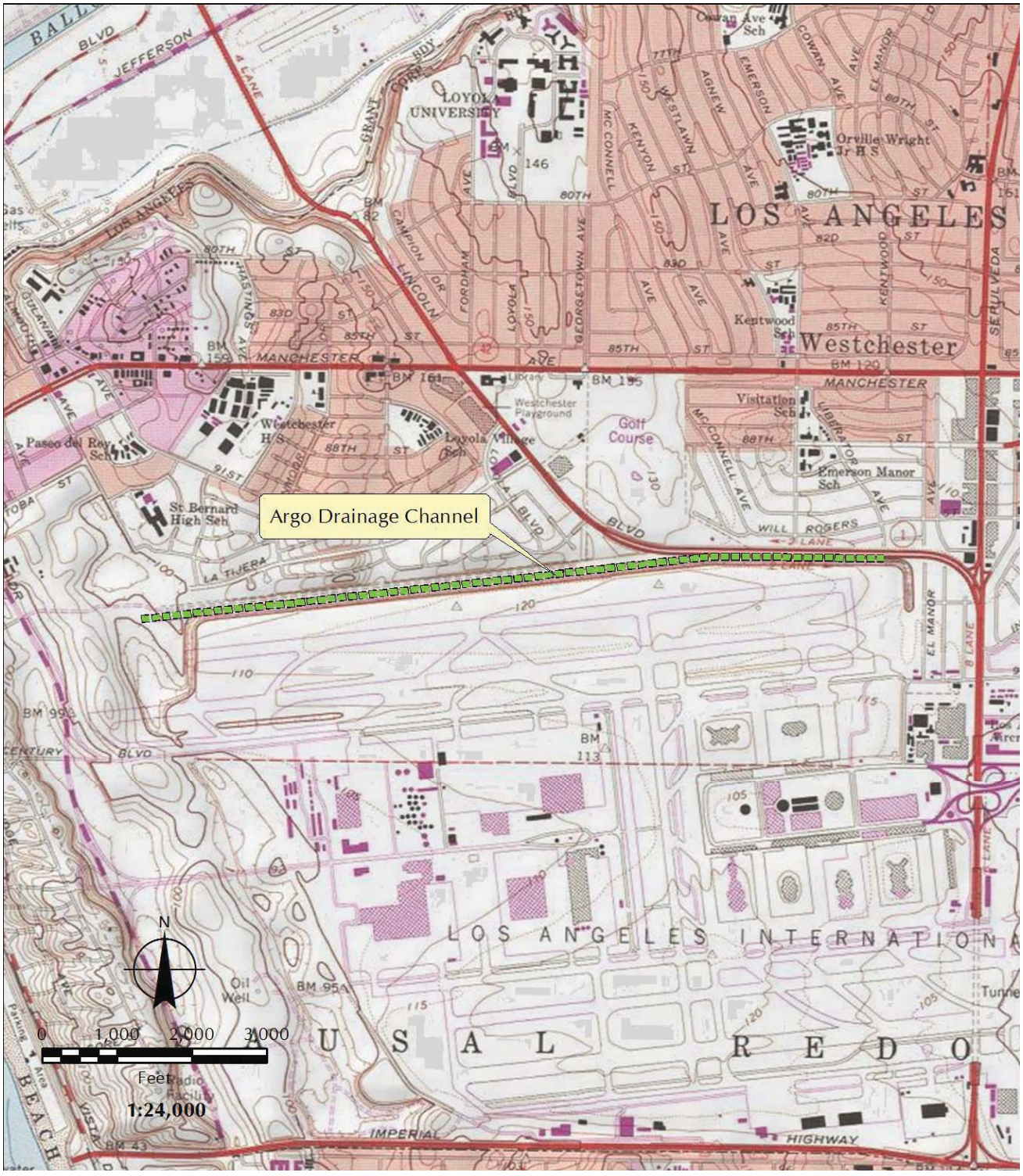
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

***Resource Name or #:** Argo Drainage Channel

***Map Name:** Venice, California ***Scale:** 1:24,000 ***Date of Map:** 1964



*Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

 ***Resource Name or #:** Runway 6R-24L, Los Angeles International Aiport

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Venice **Date:** 1964 **T** 3S; **R** 15W; UNSECTIONED**;** S.B. **B.M.**

c. Address: 1 World Way West City: Los Angeles Zip: 90045

d. UTM: Zone: 11S; 369000mE/ 3757350mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: Runway 6R-24L is the southernmost runway in the North Airfield at the Los Angeles International Airport.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Runway 6R-24L is one of two runways in the North Runway Complex at Los Angeles International Airport (LAX). Historic documents and U.S. Geological Survey (USGS) topographic maps indicate that the runway was built sometime between 1958 and 1962 as part of the jet-age improvement project at LAX (*Los Angeles Times*, 1957; USGS, 1964). The grooved, concrete runway measures 10,285 feet in length with a width of 150 feet; the runway is surrounded by a paved shoulder and blast pad, the latter of which is located on its eastern end. Related features associated with Runway 6R-24L include a number of taxiways, service roads, and approach lighting systems.

***P3b. Resource Attributes:** (List attributes and codes) HP11. Engineering Structure

***P4. Resources Present:** ☐ Building ■ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) Runway 6R-24L, facing east, 6/14/2013

***P6. Date Constructed/Age and Sources:** ■ Historic
☐ Prehistoric ☐ Both

***P7. Owner and Address:**

Los Angeles World Airports
1 World Way
Los Angeles, CA 90045

***P8. Recorded by:** (Name, affiliation, and address)

Tiffany Clark
Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, CA 91107

***P9. Date Recorded:** June 14, 2013

***P10. Survey Type:** (Describe) Pedestrian

***P11. Report Citation:** Sapphos Environmental, Inc. 2013. Memorandum for the Record: Results of the Cultural Resources Evaluation for the Proposed LAX North Runway Safety Area Improvements Project. Pasadena, CA.

***Attachments:** ☐ NONE ■ Location Map ☐ Sketch Map ☐ Continuation Sheet ■ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ■ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code

 ***Resource Name or #** (Assigned by recorder) Runway 6R-24L, Los Angeles International Airport

B1. Historic Name: North Runway, Los Angeles International Airport
B2. Common Name: Runway 6R-24L
B3. Original Use: Airport Runway B4. Present Use: Airport Runway
***B5. Architectural Style:** Not applicable
***B6. Construction History:** (Construction date, alterations, and date of alterations)
Runway was originally built between 1958 and 1962 as part of the jet-age improvement project at LAX (*Los Angeles Times*, 1957; U.S. Geological Survey, 1964). The runway had been subject to an unknown number of alterations and improvements since its construction.

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:** Not applicable

***B8. Related Features:**
Related features associated with Runway 6R-24L include a number of taxiways, service roads, and approach lighting systems.

B9a. Architect: Unknown b. Builder: Unknown

***B10. Significance: Theme:** Airports **Area:** City of Los Angeles

Period of Significance: **Property Type:** **Applicable Criteria:**
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The construction of Runway 6R-24L was part of the jet-age improvement project that was began at LAX in the late 1950s. The first phase of construction began in 1957, and involved field improvements and the extension of existing runways, followed by excavations for the underground components. The final phase included the construction of the North Runway (Runway 6R-24L), new passenger terminal buildings and airline maintenance areas, and the control tower. During this time, the Theme Building was also constructed at LAX. Considered to be the centerpiece of the new airport design, the building reflected the Jet Age mentality with its modern-styled parabolic arch's four legs rise 135 feet from the ground and 340 feet across the base in the center of the terminal area.

Runway 6R-24L does not meet any of the evaluative criteria for inclusions on the National Register of Historic Places (Criteria A–D) or the California Register of Historical Resources (Criteria 1–4). In addition, the runway has been subjected to a number of alterations and improvements and as such, does not possess much of its original integrity.

B11. Additional Resource Attributes: (List attributes and codes) HP11. Engineering Structure

***B12. References:** *Los Angeles Times*. 25 November 1957. "Airport Project Will Start Soon: Ground-Breaking Ceremonies Slated Dec. 8 for $46,000,000 Expansion Project."

U.S. Geological Survey. 1964. *7.5-Minute Series, Venice, California, Topographic Quadrangle*. Reston, VA.

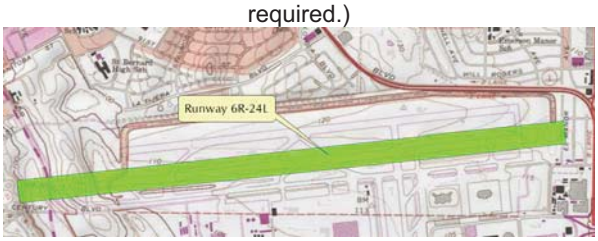
B13. Remarks: None

***B14. Evaluator:** Tiffany Clark, Sapphos Environmental, Inc., Pasadena, CA

***Date of Evaluation:** June 14, 2013

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



North Arrow

L1. Historic and/or Common Name: Runway 6R-24L

L2a. Portion Described: ■ Entire Resource ☐ Segment ☐ Point Observation **Designation:** Runway 6R-24L

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) The entirety of Runway 6R-24L has been field inspected. See map for location of runway.

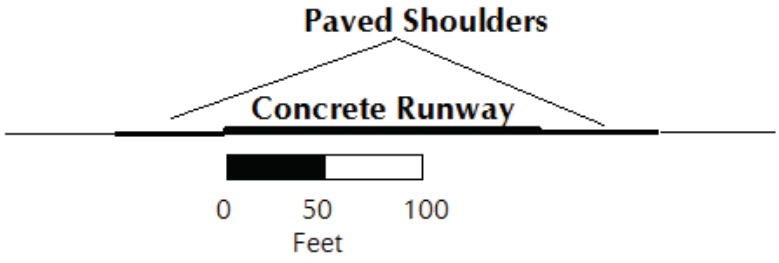
L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)

Runway 6R-24L is one of two runways in the North Runway Complex at LAX. Historic documents and U.S. Geological Survey topographic maps indicate that the runway was built sometime between 1958 and 1962 as part of the jet-age improvement project at LAX (*Los Angeles Times*, 1957; U.S. Geolgoical Survey, 1964). The grooved, concrete runway measures 10,285 feet in length with a width of 150 feet; the runway is surrounded by a paved shoulder and blast pad, the latter of which is located on its eastern end. Related features associated with Runway 6R-24L include a number of taxiways, service roads, and approach lighting systems.

Over the years, Runway 6R-24L has undergone numerous improvements and modifications in response to the increasing demands of air traffic at LAX. The runway is paved with modern concrete; striping and other marking elements are painted on its surface. Although no identifiable historic materials were found in association with Runway 6R/24L, a broken piece of concrete with stamped lettering was identified in the immediate vicinity of the feature (see photograph below) (11S 370233mE, 3757589 mN). The imprinted concrete fragments appear to read “FAA G5” and “C…IF.” No information could be found as to the possible function or age of the remains.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
a. Top Width: 150 feet
b. Bottom Width: Not applicable
c. Height or Depth: Not applicable
d. Length of Segment: 10,285 feet

L4e. Sketch of Cross-Section (include scale) **Facing:** East



L5. Associated Resources: Taxiways, service roads, and approach lighting systems.

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) Runway is located on a level area west of the El Segundo Dunes.

L7. Integrity Considerations: The runway has been subjected to a number of alterations and improvements since its construction. As such, it does not possess much of its original integrity.

L8a. Photograph, Map or Drawing

L8b. Description of Photo, Map, or Drawing (View, scale, etc.)

Stamped concrete piece found in association with Runway 6R-24L.

L9. Remarks: None

L10. Form Prepared by: (Name, affiliation, and address)

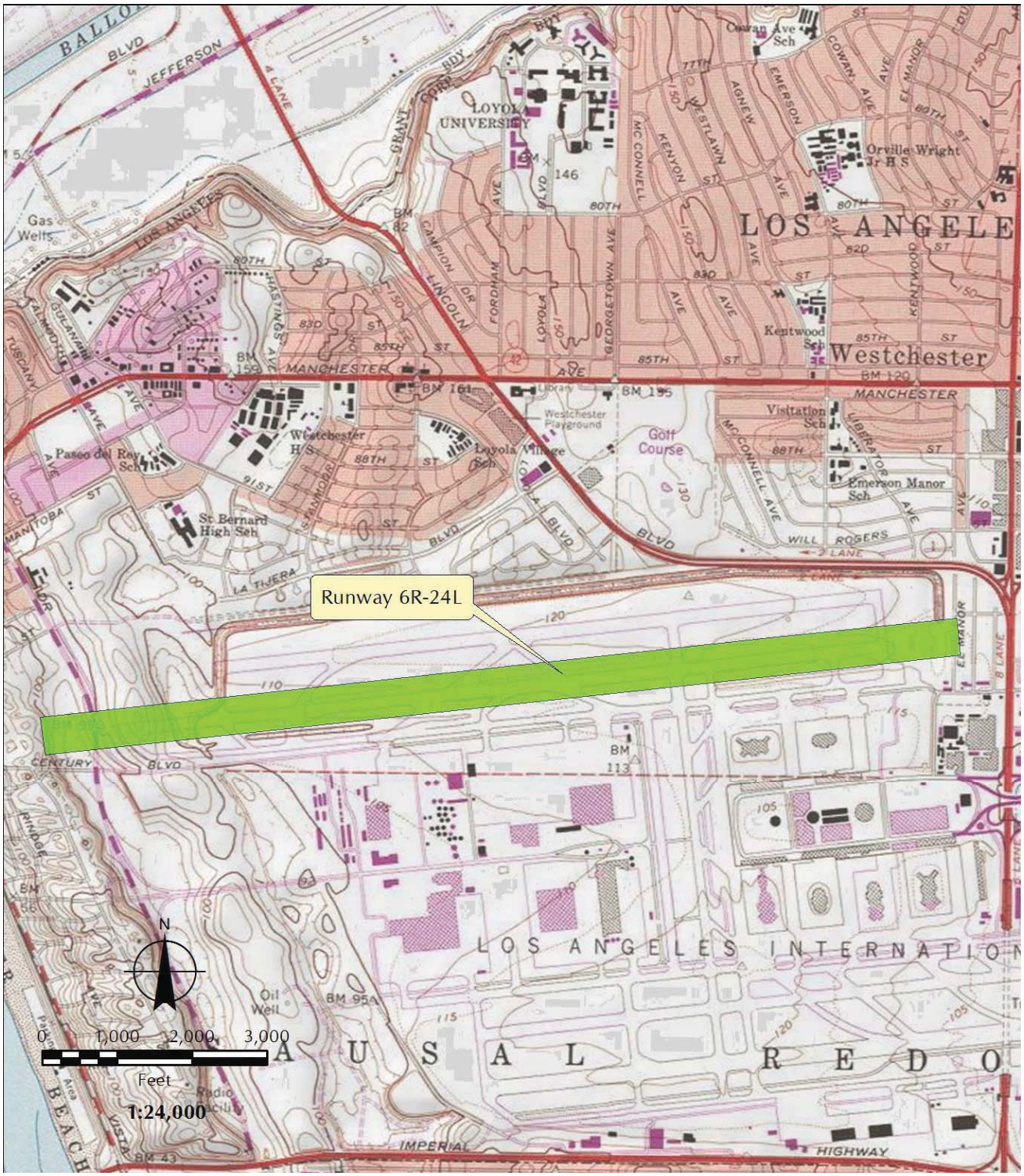
Tiffany Clark
Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, CA 91107

L11. Date: June 20, 2013

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **LOCATION MAP**	Primary # HRI# Trinomial

Page 5 **of** 5 ***Resource Name or #:** Runway 6R-24L

***Map Name:** Venice, California ***Scale:** 1:24,000 ***Date of Map:** 1964



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code | Reviewer | Date

 ***Resource Name or #:** El Manor Avenue

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Venice **Date:** 1964 **T** 3S; **R** 15W; UNSECTIONED**;** S.B. **B.M.**

c. Address: 1 World Way West City: Los Angeles Zip: 90045

d. UTM: Zone: 11S; 370760mE/ 3757681 mN (G.P.S.)

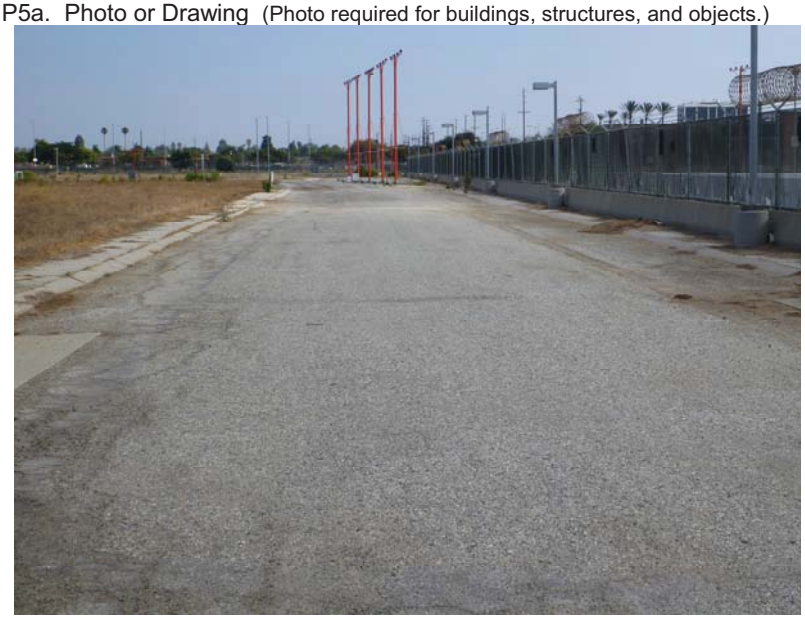
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: El Manor Avenue is located at the east end of runways 6L-24R and 6R-24L at the Los Angeles International Airport (LAX) and south of Westchester Parkway and Lincoln Boulevard.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This section of El Manor Avenue is located within the confines of Los Angeles International Airport, where it is no longer accessible to the public and is used as a service road. The avenue runs in a north-south direction and is immediately east of the unpaved thresholds of Runways 6L-24R and 6R-24L. The northern portion of the avenue currently contains a 30-foot landing light standard. The avenue measures approximately 1,290 feet long by 32 feet wide (from curb to curb). The concrete of the avenue's eastern sidewalk is stamped with: "J.A. Thompson 1945 Contractor," and "P.B. Wright-Inspector," which suggests that the concrete sidewalk and curbs and asphalt street were constructed in 1945. The street is sparsely covered with sediment from the unpaved runway threshold to the west, and contains a few potholes, superficial surface cracking, and discoloration of the asphalt. The sidewalk on the westside of the avenue is cracked and is partially covered with sediment ranging from 6 to 12 inches thick. The eastside sidewalk is cracked but appears to be intact, although modern airport lighting and chain-link fencing have been installed on the sidewalk. The curbs are sloped at an approximately 35-degree angle, except near street corners and storm drains, where the curbs are perpendicular to the street. There are no street signs or painted markings on the street or curbs. It appears the street receives little to no routine maintenance.

***P3b. Resource Attributes:** (List attributes and codes) HP7. Roads/trails/railroad grades

***P4. Resources Present:** ☐ Building ■ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #)
El Manor Avenue, looking north, 7/29/2013

***P6. Date Constructed/Age and Sources:**
■ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**
Los Angeles World Airports
1 World Way
Los Angeles, CA 90045

***P8. Recorded by:** (Name, affiliation, and address)
Chris Purtell
Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, CA 91107

***P9. Date Recorded:** July 29, 2013

***P10. Survey Type:** (Describe)
Pedestrian

***P11. Report Citation:** Sapphos Environmental, Inc. 2013. *Runway 6L-24R Safety Area and Associated Improvements Project.* Pasadena, CA.

***Attachments:** ☐ NONE ■ Location Map ☐ Sketch Map ■ Continuation Sheet ■ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ■ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code

 ***Resource Name or #** El Manor Avenue

B1. Historic Name: El Manor Avenue
B2. Common Name: El Manor Avenue
B3. Original Use: Public Avenue/Street B4. Present Use: Airport service and maintenance road
***B5. Architectural Style:** Not applicable
***B6. Construction History:** (Construction date, alterations, and date of alterations)
Sidewalk construction marks indicate that EL Manor Avenue's sidewalks were constructed in 1945. By the early 1960s the area was incorporated into LAX, and the evanue was used for vehicle staging.

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:** Not applicable

***B8. Related Features:** None

B9a. Architect: Unknown b. Builder: J.A. Thompson-Contractor (1945)

***B10. Significance: Theme:** Residential development **Area:** City of Los Angeles

Period of Significance: **Property Type:** **Applicable Criteria:**
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

El Manor Avenue is part of the road system for the City of Los Angeles. This section of El Manor Avenue located within the confines of Los Angeles International Airport and does not meet any of the evaluative criteria for inclusions on the National Register of Historic Places (Criteria A–D) or the California Register of Historical Resources (Criteria 1–4). In addition, El Manor Avenue has been subjected to a number of alterations specifically geared towards airport operations and as such, does not possess much of its original integrity.

B11. Additional Resource Attributes: (List attributes and codes) HP7. Road/trails/railroad grades

***B12. References:**

Sapphos Environmental, Inc. 2013. *Runway 6L-24R Safety Area and Associated Improvements Project*. Pasadena, CA.

B13. Remarks: None

***B14. Evaluator:**

Chris Purtell, Sapphos Environmental, Inc., Pasadena, CA

***Date of Evaluation:** July 29, 2013

(This space reserved for official comments.)

L1. Historic and/or Common Name: El Manor Avenue

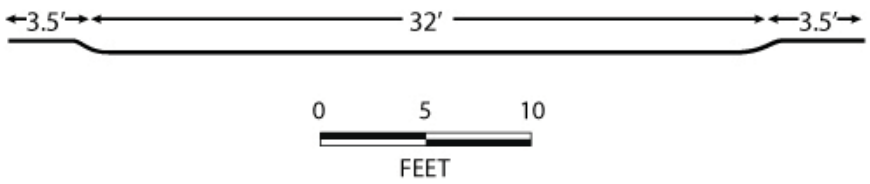
L2a. Portion Described: ☐ Entire Resource ■Segment ☐ Point Observation **Designation:** El Manor Avenue

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) Site datum point UTM coordinates: 370760mE/3757681mN. The entirety of this section of El Manor Avenue, which is situated within the confines of the Los Angeles International Airport has been field inspected. See map for location of El Manor Avenue.

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.) This section of El Manor Avenue is located within the confines of Los Angeles International Airport (LAX), where it is no longer accessible to the public and is used as a service road.. The avenue runs in a north-south direction and is immediately east of the unpaved thresholds of Runways 6L-24R and 6R-24L. The northern portion of the avenue currently contains a 30-foot landing light standard. The avenue measures approximately 1,290 feet long by 32 feet wide (from curb to curb). The concrete of the avenue's eastern sidewalk is stamped with: "J.A. Thompson 1945 Contractor," and "P.B. Wright-Inspector" which suggests that the concrete sidewalk and curbs and asphalt street were constructed in 1945. The street is sparsely covered with sediment from the unpaved runway threshold to the west, and contains a few potholes, superficial surface cracking, and discoloration of the asphalt. The sidewalk on the westside of the avenue is cracked and is partially covered with sediment ranging from six to twelve inches thick. The eastside sidewalk is cracked but appears to be intact, although modern airport lighting and chain-link fencing have been installed on the sidewalk. The curbs are sloped at an approximately 35-degree angle, except near street corners and storm drains, where the curbs are perpendicular to the street. There are no street signs or painted markings on the street or curbs. It appears the street receives little to no routine maintenance.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
a. Top Width: 3.5 feet (Sidewalk width)
b. Bottom Width: 32 feet (Street width)
c. Height or Depth: 8 inches (from the top of the crub to street level)
d. Length of Segment: 550 feet (area to be distributed)

L4e. Sketch of Cross-Section (include scale) **facing:** north



L5. Associated Resources: None

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) This section of El Manor Avenue is located on a flat section of ground located within LAX. The environment is largely paved over and lacks natural landscaping. However, on the west side El Manor Avenue there is an unpaved open section of ground (the runway threshold), with a few small structures and light standards that run parallel to Runways 6L-24R and 6R-24L. Vegetation in this area consists of small shrubs, wild plants, and grasses. The eastern sidewalk holds a chain-link fence, behind which are parking lots for LAX service vehicles.

L7. Integrity Considerations: El Manor Avenue has been subjected to new construction associated with airport operations since its original construction circa 1945. As such, it has lost most of its original integrity.

L8a. Photograph, Map or Drawing

L8b. Description of Photo, Map, or Drawing (View, scale, etc.)
El Manor Avenue, view towards the north.

L9. Remarks: None

L10. Form Prepared by: (Name, affiliation, and address)

Chris Purtell
Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, CA 91107

L11. Date: July 29, 2013

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

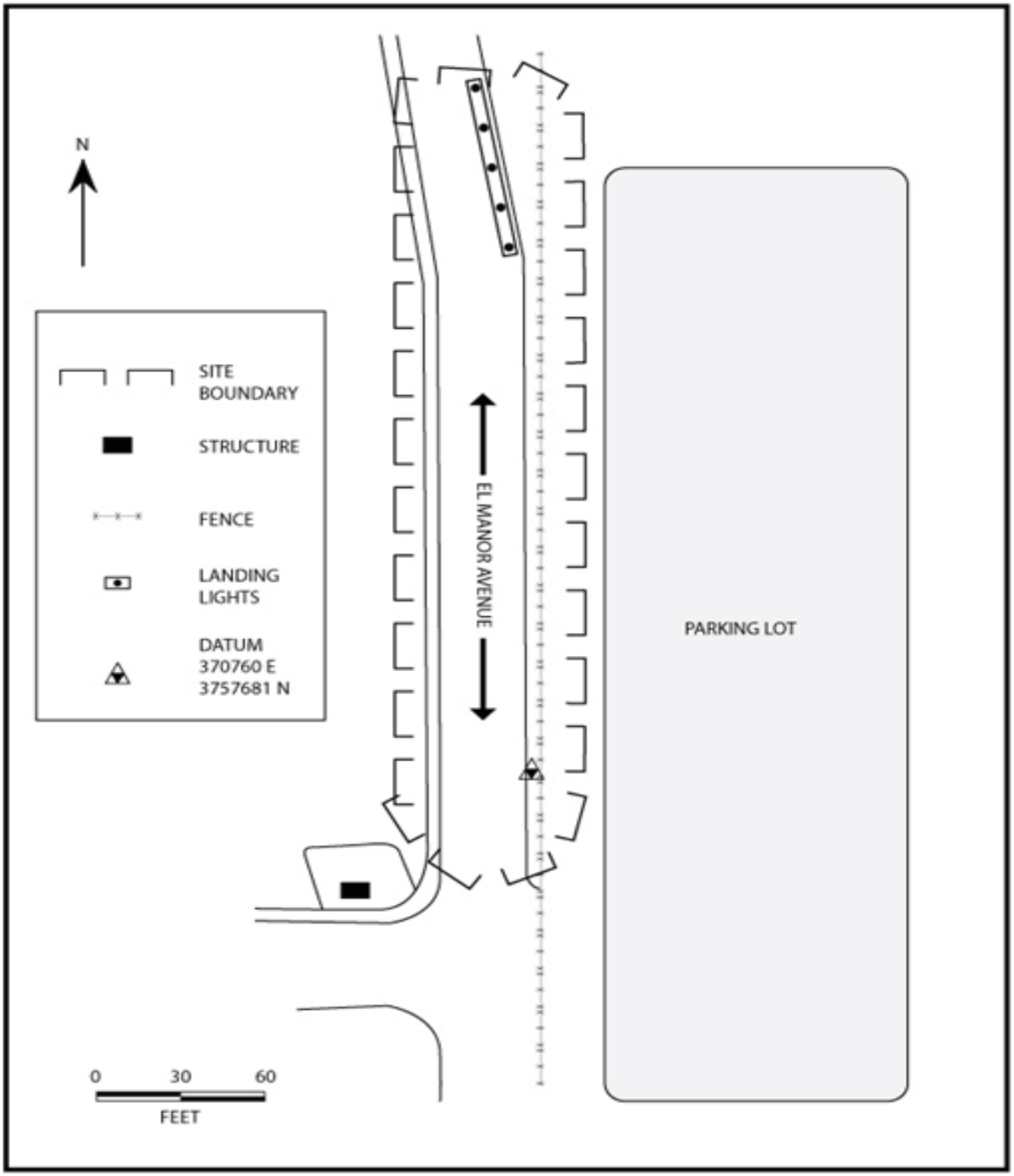
SKETCH MAP

Primary #
HRI#
Trinomial

***Resource Name or #** (Assigned by recorder) El Manor Avenue

***Drawn By:** Chris Purtell

***Date:** July 29, 2013



*Required information

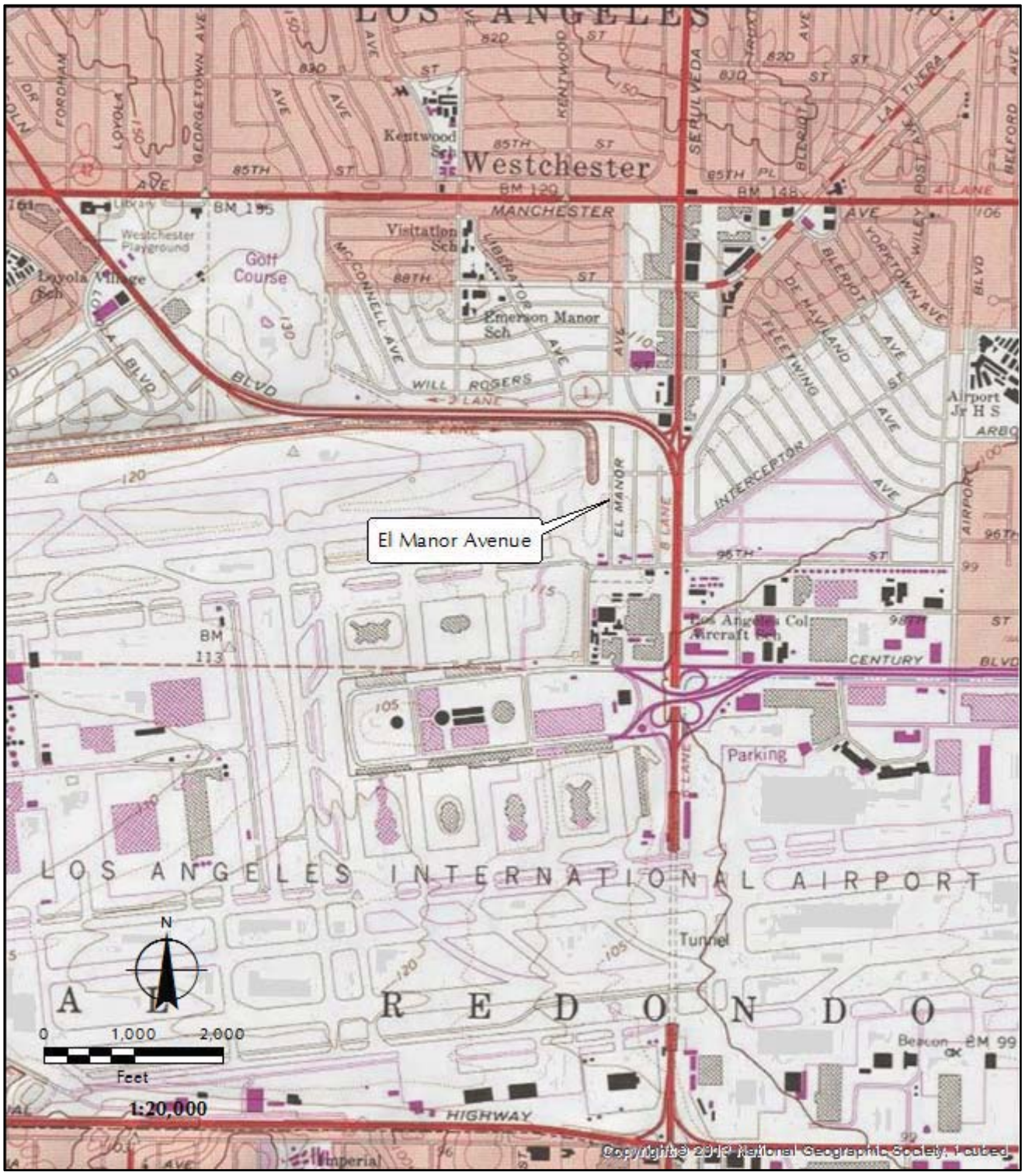
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

*Resource Name or #: El Manor Avenue

*Map Name: Venice, California *Scale: 1:24,000 *Date of Map: 1964



*Required information

Site Overview: view towards the north

Site Overview: view towards the north

Site Overview: view towards the southwest

Sidewalk construction mark: closeup

Sidewalk construction mark: closeup

APPENDIX B
RESUMES

CLARUS J. BACKES JR., RPA
ARCHAEOLOGICAL RESOURCES MANAGER

Mr. Clarus Backes, a professional archaeologist and archaeological resources manager for Sapphos Environmental, Inc., has 13 years of experience and has supervised numerous projects in California in support of compliance with the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and Sections 106 and 110 of the National Historic Preservation Act (NHPA). He has participated in a wide range of projects involving archaeological survey, testing, data recovery, monitoring, laboratory analysis, and the development of mitigation and treatment plans, and has over 10 years of experience in a decision-making capacity on cultural resources projects in California. His training and background meet the U.S. Secretary of the Interior's Professional Qualifications Standards for prehistoric and historic archaeology.

Mr. Backes specializes in the prehistoric archaeology of Southern California. His research interests include hunter-gatherer subsistence and technology; archaeological applications of evolutionary theory; rock art technology, including pigment manufacture and exchange; and the application of physical science techniques to archaeological questions.

Mr. Backes's current research includes compositional and provenance analysis of pigments, ceramics, obsidian, and other archaeological materials via laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS). This research is conducted in association with the Institute for Integrated Research on Materials, Environment and Society (IIRMES) at California State University, Long Beach (CSULB), and supports several ongoing North American and Mesoamerican archaeological projects.

Mr. Backes also specializes in rock art recording and analysis, including in situ and laboratory pigment compositional analyses. He has conducted detailed, high-resolution baseline conditions assessments at numerous rock art sites in Southern California using analog and digital formats, ultraviolet and infrared photography, and digital enhancement. He has also pioneered techniques for ultraviolet fluorescence analysis of damaged pictograph sites. He regularly conducts rock art research in the western Mojave Desert, at China Lake Naval Air Weapons Station, and as part of the University of California, Los Angeles (UCLA), Little Lake Rock Art Digital Conservation Project.

Mr. Backes is a member of the Society for American Archaeology (SAA), Society for California Archaeology (SCA), and the American Rock Art Research Association (ARARA). He has authored or coauthored numerous professional reports, peer reviewed publications and monographs, and routinely presents papers at professional meetings.

Professional History

- Archaeological Resources Manager, Sapphos Environmental, Inc.
- Cultural Resources Project Manager, SCWA Environmental Consultants, 2009–2011
- Cultural Resources Specialist, Sapphos Environmental, Inc., 2007–2009
- Lecturer, Department of Anthropology, California State University, Long Beach, 2005–2007
- Research Assistant, Institute for Integrated Research in Materials, Environments and Society (IIRMES), California State University, Long Beach, 2005–2007
- Field Director, Ancient Enterprises, Inc., 1999–2005

Education

- California State University, Long Beach, 2009, Master of Arts Degree in Anthropology; Thesis: Chemical Characterization of Early Formative Ceramic Pigments from Canton Corralito and San Lorenzo, Mexico
- California State University, Los Angeles, 2002–2004, Bachelor of Arts Degree awarded in Anthropology, Magna Cum Laude; Areas of Concentration: Archaeology, Linguistics
- University of California, Los Angeles (Extension), 1999–2001; Areas of Concentration: Archaeology, Cultural Anthropology
- California Institute of the Arts, 1983–1984; Areas of Concentration: Photography, Graphic Design, Film Production
- University of Colorado, Boulder, 1981–1983; Areas of Concentration: Cultural Anthropology, Sociology

Professional Affiliations

- Register of Professional Archaeologists (ID No. 1673640)
- Certified Archaeological Consultant, County of Riverside, California (Certification No. 247)
- Society for California Archaeology (SCA)
- Society for American Archaeology (SAA)
- American Rock Art Research Association (ARARA)

Publications

Backes, C.J. Jr., D. Cheetham, and H. Neff. 2012. The Color of Influence: A Provenance Study of Hematite-Based Paints on Early Olmec Carved Pottery. *Latin American Antiquity*, 23:70-92.

Backes, C.J., Jr. 2004. More Than Meets the Eye: Fluorescence Photography for Enhanced Analysis of Pictographs. *Journal of California and Great Basin Anthropology,* 24(2): 193–206.

Clewlow, C.W., Jr., C.J. Backes, Jr. and H. F. Wells. 2012. Rock Art at CA-RIV-981: Chronology, Imagery and Function. *Pacific Coast Archaeological Society Quarterly,* in press.

Dietler, S., C.J. Backes, Jr., C.W. Clewlow, Jr., and M.D. Richards. 2002. Archaeology of the Bureau of Land Management Open Areas within the Jawbone/Butterbredt Area of Critical Environmental Concern. MS on file with the Bureau of Land Management, Sacramento, California.

Sapphos Environmental, Inc. 2008. Hoffman Summit Wind Project, Cultural Resources Technical Report, Volumes I and II (Coauthor). Prepared for Hoffman Wind project, LLC and Kern County.

Sapphos Environmental, Inc. 2008. Phase I Archaeological Survey and Rock Art Inventory of Vasquez Rocks Natural Area Park, Volumes I and II (Coauthor). Prepared for County of Los Angeles Department of Parks and Recreation.

Van Tilburg, J., and C.J. Backes, Jr. 2012. Pained Rock Art and Stahl Site Pigments. In: *Rock Art at Little Lake: An Ancient Crossroads in the California Desert*. Cotsen Institute of Archaeology, University of California, Los Angeles.

Walsh, M.R., and C.J. Backes, Jr. 2004. Documentation and Evaluation of Prehistoric Resources at Seep Spring, China Lake Naval Air Weapons Station, California. Report submitted to China Lake Naval Air Weapons Station, Environmental Area, China Lake, California.

Walsh, M.R., C.J. Backes, Jr., and A.N. Tabares. 2005. Archaeological Investigations at Echo Range Gunline Target, Southern Buffer Area, China Lake Naval Air Weapons Station, California. Report submitted to China Lake Naval Air Weapons Station, Environmental Area, China Lake, California.

Wells, H.F., and C.J. Backes, Jr. 2007. Robbers Mountain: Revisiting the Archaeology and Rock Art of Bierman Caves. *San Bernardino County Museum Quarterly* 53(4).

Wells, H.F. and C.J. Backes, Jr. 2009. Living on the Edge: Late Prehistoric Foragers on the South Range. *Pacific Coast Archaeological Society Quarterly,* 43:113-134.

Wells, H.F., and C.J. Backes, Jr. 2004. Bierman Caves Revisited: A Survey on the South Range, China Lake Naval Air Weapons Station, San Bernardino County, California. Report submitted to China Lake Naval Air Weapons Station, Environmental Area, China Lake, California.

Wells, H.L., C.J. Backes, Jr., and C.W. Clewlow, Jr. 2003. The Pothunter Spring Site Complex. National Register of Historic Places Nomination.

Conference Presentations

Backes, C.J. Jr. 2011. The Baby in the Bath Water: Revisiting Heizer and Clewlow's "Prehistoric Rock Art of California." Paper presented at the 76th Annual Meeting of the Society for American Archaeology, Sacramento.

Backes, C.J. Jr. 2008. Enhancing Efficiency: Predictive Modeling for Cultural Resources Analysis. Paper presented at the Annual Conference of the Association of Environmental Professionals, San Francisco.

Backes, C.J., Jr. 2007. Chemical Characterization of Rock Art Pigments by LA-ICP-MS. Paper presented at the 41st Annual Meeting of the Society for California Archaeology, Riverside.

Backes, C.J., Jr. 2005. Alternative Photographic Technologies for Rock Art Analysis. Paper presented at the 25th Annual James C. Young Colloquium, University of California, Riverside.

Backes, C.J., Jr. 2004. Fluorescence Photography for Pictograph Analysis. Paper presented at the 38th Annual Meeting of the Society for California Archaeology, Riverside.

Clewlow, C.W., Jr., H. Wells, and C.J. Backes, Jr., 2010. Rock Art at CA-RIV-981: Chronology, Imagery and Function. Paper presented at the 44th Annual Meeting of the Society for California Archaeology, Riverside.

Richards, M.D., C.J. Backes, Jr., and A.N. Tabares. 2003. Preliminary Investigations of Two Spring Sites in Dove Springs Canyon. Paper presented at the 37th Annual Meeting of the Society for California Archaeology, Sacramento.

Tabares, N., C. J. Backes, Jr., C.W. Purtell. 2008. Vasquez Rocks: Cultural Interaction between Coast and Desert. Paper presented at the 31st Great Basin Anthropological Conference, Portland, Oregon.

Walsh, M.R., and C.J. Backes, Jr. 2005. Disputed Lands: Marking Borders in the Northwestern Mojave Desert. Paper presented at the 39th Annual Meeting of the Society for California Archaeology, Sacramento.

Wells, H.L., and C.J. Backes, Jr. 2010. The Same Thing, Only Different: Four Rockshelters on the South Range, NAWS China Lake, California. Paper presented at the 44th Annual Meeting of the Society for California Archaeology, Riverside.

Wells, H.L., and C.J. Backes, Jr. 2006. Bierman Caves Revisited. Paper presented at Southern California Data Sharing Meeting of the Society for California Archaeology, Ridgecrest.

Wells, H.L., C.J. Backes, Jr., and A.N. Tabares. 2004. Prehistoric Use of the Southern Searles Valley: Survey Data from the Christmas Canyon Area. Paper presented at the 29th Great Basin Anthropological Conference, Sparks, Nevada.

CHRISTOPHER W. PURTELL, M.A., RPA
SENIOR ARCHAEOLOGICAL RESOURCES COORDINATOR

Mr. Christopher Purtell is a project archeologist (senior archaeological resources coordinator) for Sapphos Environmental, Inc. Mr. Purtell has eight years of experience in project management, environmental compliance, archaeological survey, excavation, monitoring, laboratory analysis, and documentation. As a senior archaeological resources coordinator, Mr. Purtell has undertaken and contributed to work efforts for prehistoric and historic archaeology in the Great Basin, Mojave Desert and Northern California pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). As a field director, Mr. Purtell has managed field crews in intensive pedestrian surveys, surface collections, shovel test pits, excavations, and laboratory analyses. He has authored and co-authored cultural analyses for Fatal Flaw studies; environmental compliance documents, such as Initial Studies, Environmental Impact Reports, and Cultural Resources Technical Reports; and has compiled California Department of Parks and Recreation (DPR) site records. He has successfully coordinated with a variety of lead and regulatory agencies, including Los Angeles County, Kern County, and the Bureau of Land Management (BLM) among others. His training and background meet the U.S. Secretary of the Interior's Professional Qualifications Standards for prehistoric and historic archaeology.

Mr. Purtell has conducted archaeological research in California, Western Mexico, Baja California, and the North Coast of Peru. He specializes in lithic trajectories and technologies, and received the 2007–2008 Professional Distinction Award for Field and Laboratory Analysis from the California State University, Fullerton, Graduate School of Anthropology. Additional research interests include geographic information system (GIS) studies on prehistoric migration patterns, the archaeology of San Nicolas Island and Baja California, and California rock art. Mr. Purtell's recent work assignments have included principle investigator, field director, and cultural resources task manager at the Phase II and Phase III investigations at Vasquez Rocks Natural Area Park Interpretive Center; project manager and cultural resources monitoring coordinator at the Vasquez Rocks Natural Area Park Interpretive Center Project; principle investigator, field director, and cultural resources task manager at the 7,472-acre Catalina Renewable Energy Project, the 360-acre Community Recycling and Resource Recovery Project; the 8,300-acre Avalon Renewable Energy Project; the 745-acre Jawbone Wind Energy Project; cultural resources task manager and cultural resources monitoring coordinator at the 9,212-acre site of the 2008 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan in Inyo County, California, for the Great Basin Unified Air Pollution Control District, and project manager and cultural resources monitoring coordinator for cultural resources monitoring at LA Plaza de Cultura y Artes in El Pueblo de Los Angeles Historic District in downtown Los Angeles.

Mr. Purtell's professional experience includes over 20 years as a business director and program manager in the manufacturing of complex aerospace airframe and space components prior to his cultural resources management work. Mr. Purtell has extensive working knowledge in program management practices, quality management principles, and International Organization for Standardization 9002 quality procedures and applications, which are international in scope, and which have given him the necessary knowledge and expertise to manage complex cultural resources projects.

Professional History

- Sapphos Environmental, Inc., Senior Archaeological Resources Coordinator, August 2005–present
- Dasco Engineering Corporation, Business Director, May 2005–August 2005
- NC Dynamics Corporation, Contract Project and Shipping Manager, August 2003–February 2005
- Acromil Corporation, Contract Program Manager, September 2003–November 2003
- Dasco Engineering Corporation, Business Director, intermittently June 1993–September 2003

Education

- Master of Arts, Emphasis in Archaeology, California State University, Fullerton, 2013
- Bachelor of Arts, Anthropology/Archaeology (Honor in the Major), California State University, Dominguez Hills, 2005

Awards

- 2007–2008 Professional Distinction Award for Field and Laboratory Analysis, California State University, Fullerton, Graduate School of Anthropology

Conferences/Workshops/Training

- OSHA 24-hr HazWaste Operations Certification (Certificate No. 100052), Pasadena, California, by ABAG Training Center (Chanell Gumbs, Training Coordinator), 10, January 2013
- Writing the Perfect EA/FONSI, Pasadena, California, by Owen L. Schmidt, BA, MA, JA, 11, November 2011
- 5-Phase Project Management, Pasadena, California, by the UCLA Extension, Department of Engineering, Information Systems, and Technical Management, 1 April 2008.
- Basic CEQA Workshop Series, Los Angeles, California, by the Association of Environmental Professionals, 2 November 2005

Professional Affiliations

- Register of Professional Archaeologists (ID No. 990027)
- Society for American Archaeology
- Society for California Archaeology

Publications

Sapphos Environmental, Inc. 2012. Community Recycling and Resource Recovery Project, Cultural Resources Technical Report. Prepared for Kern County.

Sapphos Environmental, Inc. 2012. Vasquez Rocks Natural Area Park Interpretive Center, Archaeological and Paleontological Construction Monitoring Report. (In progress). Prepared for County of Los Angeles Department of Public Works.

Sapphos Environmental, Inc. 2011. Jawbone Wind Energy Project, Cultural Resources Technical Report. Prepared for Jawbone Wind Energy, LLC and Kern County.

Sapphos Environmental, Inc, 2011. Phase II and Phase III Archaeological Investigations, Vasquez Rocks Natural Area Park Interpretive Center, Phase II and Phase III Archaeological Investigation Technical Report. Prepared for County of Los Angeles Department of Parks and Recreation.

Sapphos Environmental, Inc., 2011. Catalina Renewable Energy Project, Cultural Resources Technical Report, Volume 1 and II. Prepared for EnXco Development Company and Kern County.

Sapphos Environmental, Inc, 2010. Avalon Renewable Energy Project, Cultural Resources Technical Report, Volume 1 and II. Prepared for EnXco Development Company and Kern County.

Sapphos Environmental, Inc, 2009. Pacific Wind Energy Project, Cultural Resources Technical Report, Volume 1 and II (Coauthor). Prepared for EnXco Development Company and Kern County.

Sapphos Environmental, Inc., 2009. Final LA Plaza de Cultura y Artes Shell and Core Project Cultural Resources Construction Monitoring Report. Prepared for County of Los Angeles Chief Executive Office.

Sapphos Environmental, Inc, 2009. Final Cultural Resources Construction Monitoring Report One Carter Avenue Project. Prepared for City of Sierra Madre Department of Public Works.

Sapphos Environmental, Inc. 2008. Hoffman Summit Wind Project, Cultural Resources Technical Report, Volumes I and II (Coauthor).Prepared for Hoffman Wind project, LLC and Kern County.

Sapphos Environmental, Inc. 2008. Cultural Resources Technical Report in Support of the 2008 Owens Valley PM10 Planning Area Demonstration of Attainment State Implementation Plan Subsequent Environmental Impact Report, Inyo County, California (Coauthor). Prepared for the Great Basin Unified Air Pollution Control District, California State Land Commission, and Los Angeles Department of Water and Power.

Sapphos Environmental, Inc. 2008. Phase I Archaeological Survey of Vasquez Rocks Natural Area Park, Volumes I and II (Coauthor). Prepared for County of Los Angeles Department of Parks and Recreation.

Sapphos Environmental, Inc. 2008. Final Cultural Resources Technical Report. Prepared for Communities in Schools, North Hills, California.

Sapphos Environmental, Inc, 2007. Final Archaeological and Paleontological Construction Monitoring Report for the Long Beach Memorial Medical Center Expansion Project, Los Angeles County, California. Prepared for CLEO Enterprises, LLC.

Sapphos Environmental, Inc 2006. Phase I Archaeological Survey of 510 Acres at Vasquez Rocks Natural Area Park, Los Angeles County, California (Coauthor). Prepared for County of Los Angeles Department of Parks and Recreation.

Sapphos Environmental, Inc, 2006. Final Archaeological Construction Monitoring Report Valley Bomb Squad Facility, Granada Hills, California. Prepared for City of Los Angeles Bureau of Engineering.

Conference Presentations

Purtell, C., Barter, D., Potts, C., and Fulsom, S. 2004. Rock Art and Social Rituals: Female Puberty Ceremonies and Petroglyph Motifs Among Native Californians. Paper presented at the Annual Meeting of the Southern California Academy of Sciences, Long Beach.

TIFFANY C. CLARK, PhD
SENIOR CULTURAL RESOURCES SPECIALIST

Dr. Tiffany Clark is a senior cultural resources specialist/archaeologist for Sapphos Environmental, Inc., has more than 16 years of experience in cultural resource management, archaeological survey and excavation, laboratory analysis, and report preparation. As a cultural resources project director, she has supervised and participated in a number of archaeological projects for compliance with local, state, and federal regulations. Her training and background meet the U.S. Secretary of the Interior's Professional Qualifications Standards in Archaeology. She has successfully coordinated with a variety of lead and regulatory agencies, including the Bureau of Land Management, U.S. Forest Service, U.S. Army Corps of Engineers, Federal Aviation Administration, and the U.S. Fish and Wildlife Services.

Dr. Clark has managed and contributed to work efforts for prehistoric and historic archaeology in California pursuant to the National Historic Preservation Act (NHPA), the California Environmental Quality Act (CEQA), and the National Environmental Policy Act (NEPA). She is experienced with State Historic Preservation Office (SHPO) standards, the completion of Department of Parks and Recreation (DPR) state resource forms, archival research, mapping, photography, and artifact analysis. She has directed intensive pedestrian survey, site testing, data recovery, and construction monitoring projects in California, Arizona, and New Mexico. She has authored numerous cultural resource documents including technical reports, site assessments, and mitigation and management plans. Dr. Clark has a thorough understanding of, and experience in, all aspects of cultural resources management, including historic preservation, archaeology, Native American consultation, and traditional cultural properties.

Dr. Clark specializes in the prehistoric archaeology of the interior deserts of the American Southwest. Her research interests include prehistoric economies in smaller-scale societies. She is especially interested in economic specialization and the organization of ceramic production and distribution systems. Her research incorporates a variety of compositional and technological analytical techniques to answer archaeological questions related to ceramic specialization and exchange. Dr. Clark has also conducted research on the organization of prehistoric subsistence practices and faunal resource procurement strategies. She has identified and analyzed animal remains from numerous archaeological sites throughout the American Southwest. Her research has addressed the effect of population aggregation on large-game availability, the impact of 17th century Spanish colonization on Native American hunting strategies, and the role of European domesticated animals in indigenous subsistence systems.

Dr. Clark is a member of the Society for American Archaeology and the Register of Professional Archaeologists. She has authored or coauthored numerous professional reports and routinely presents papers at professional meetings. She has published articles in a variety of peer-reviewed regional and national journals, including *Kiva, Ethnobiology*, and the *Journal of Archaeological Anthropology*.

Professional History

- Senior Cultural Resources Specialist/Archaeologist, Sapphos Environmental, Inc., February 2011–present
- Project Director and Analyst, Desert Archaeology, Inc., Tempe, AZ, 2002–2011
- Crew Chief, Desert Archaeology, Inc., Tempe, AZ, 2000–2002
- Teaching Assistant and Instructor, Department of Anthropology, Arizona State University, Tempe, AZ, 1998–2000
- Research Assistant, Department of Anthropology, Arizona State University, Tempe, AZ, 1995–1998
- Museum Aide, Anthropology Collections, Arizona State University, Tempe, AZ 1993–1995

Education

- Ph.D. Anthropology (emphasis Archaeology), Arizona State University, Tempe, AZ, 2007
- M.A. Anthropology (emphasis Bioarchaeology), Arizona State University, Tempe, AZ, 1997
- A.B. Biology (minor in Anthropology), Occidental College, Los Angeles, CA, 1992

Conferences/Workshops/Training

- NAEP Webinar. March 2012. "Using Avoidance Strategies to Facilitate Review of Renewable Energy Development Projects on Public Lands." Cultural Resources Presenter.
- Association of Environmental Professionals. October 2010. "CEQA Basics: Understanding the California Environmental Process." One-day training session, Orange, California.
- Cultural Resource Management Conference. February 2007. "Cultural Resource Management: What It Can Be, What It Is, What We Can Do About It", Thomas King, Organizer. Tempe, AZ.
- Society for American Archaeology. 26–30 March 2008. 73rd Annual Meeting. Vancouver, British Columbia.
- Society for American Archaeology 72nd Annual Meeting. April 2007. Austin, Texas.

Professional Affiliations

- Society for American Archaeology (SAA)
- Register of Professional Archaeologist (RPA)
- Phi Beta Kappa Society

Select Publications

Clark, Tiffany 2011.Crismon Ruin Fauna: A Study of Local and Regional Faunal Procurement Patterns. In *Crismon Ruin: A Hohokam Settlement at the Head of the Lehi Canal System*, edited by T. K. Henderson, pp. 379-400. Anthropological Papers No. 44. Center for Desert Archaeology, Inc., Tucson.

Clark, Tiffany, and Joshua Watts 2010. Ceramic Artifacts from the Gillespie Dam Site, AZ T:13:18 (ASM). In *Archaeology at the Gillespie Dam Site: Data Recovery Investigations for the Palo Verde to Pinal West 500 kV Transmission Line, Maricopa County, Arizona*, edited by T. Kathleen Henderson, pp. 83-96. Technical Report 2009-06, Desert Archaeology, Inc., Tucson.

Eckert, Suzanne, and Tiffany Clark 2009. The Importance of Birds in 14th-century Central New Mexico *Ethnobiology* 29(1):8-27.

Spielmann, Katherine, Tiffany Clark, Suzanne Fish, Diane Hawkey, and Katherine Rainey 2009. "...being weary, they had rebelled": Pueblo Subsistence and Labor under Spanish Colonization. *Journal of Anthropological Archaeology* 28:102-125.

Henderson, T. Kathleen, Tiffany Clark, and Michael W. Lindeman 2008. *Cultural Resources Survey for the Pinal West Dinosaur Extra-High Voltage Transmission Line, Pinal County, Arizona*. Project Report No. 08-109. Desert Archaeology, Inc., Tucson.

Henderson, T. Kathleen, and Tiffany Clark (co-editors) 2008. *Return to Siphon Draw: Archaeological Investigations along the Browning to Dinosaur 500 kV/230 kV Transmission Line, Pinal County, Arizona*, edited by Tiffany Clark and T.K. Henderson. Technical Report No. 2006-08. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2008. Ceramics from the Little Green Valley Section. In *Archaeological Investigations along State Route 260, Payson to Heber—Little Green Valley Section*, edited by Sarah Herr. Technical Report, Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2007. *Cultural Resources Survey for the SRP Dinosaur-to-Hunt Substations 12kV/69kV Electric Lines, Pinal County, Arizona*. Project Report No. 07-108. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2007.*Cultural Resources Survey for the SRP Pinal South Substation, Southwest of Coolidge, Pinal County, Arizona*. Project Report No. 07-102. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2007. *Archaeological Testing of a 3.3-acre Parcel on the Northwest Corner of McKellips Road and Stapley Drive, Mesa, Maricopa County, Arizona*. Technical Report No. 2007-04. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2006. *Cultural Resources Survey for the SRP Palo Verde to Pinal West 500 kV Transmission Lines, Maricopa and Pinal Counties, Arizona*. Project Report No. 06-146. Desert Archaeology, Inc., Tucson. [Coauthor: T. Kathleen Henderson].

Clark, Tiffany 2003. *An Archaeological Survey along Circle Mountain Road, 10th Street to 22nd Street, Maricopa County, Arizona*. Project Report No. 03-179. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2003. *An Archaeological Survey along Jackrabbit Trail, Thomas Road to Yuma Road, Buckeye, Maricopa County, Arizona*. Project Report No. 03-181. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2003. *An Archaeological Survey along Williams Field Road, Gilbert Road to the Eastern Canal, Gilbert, Maricopa County, Arizona*. Project Report No. 03-118. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2003. *Cultural Resource Survey along 571st Avenue at Hyder Road, Maricopa County, Arizona*. Project Report No. 03-214. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2002 . *Archaeological Survey and Reconnaissance along a Fiber Optic Cable Installation from Sells to Santa Rosa, Pima County, Arizona*. Project Report No. 02-110. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2002. *An Archaeological Survey of a 6.3-acre Parcel of the Estrella Roadway (S.R. 303), Reems Road to Lake Pleasant Road, Maricopa County, Arizona*. Project Report No. 02-173. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2002.*An Archaeological Survey of Select Portions of the Phelps Dodge Bagdad Waterline-12.5 KV Powerline Route North of Wikieup, Mohave County, Arizona*. Project Report No. 02-179. Desert Archaeology, Inc., Tucson.

Clark, Tiffany 2001.*Archaeological Monitoring and Testing for the Grand Avenue Overpass and 27th Avenue and Thomas Road Project, Phoenix, Arizona*. Technical Report No. 2001-10. Desert Archaeology, Inc., Tucson. [Coauthor: T. Kathleen Henderson].

Clark, Tiffany 1998. Assessing Room Function Using Unmodified Faunal Bone: A Case Study from East-Central Arizona. *Kiva* 64:27-52.

Clark, Tiffany 1998. Faunal Resource Depletion and Nutritional Stress in Aggregated Pueblo IV Communities. In *Migration and Reorganization: The Pueblo IV Period in the American Southwest*, edited by K. Spielmann, pp. 193-208. Anthropological Research Papers 51. Arizona State University, Tempe.

Marilyn Novell, MS

Master of Science, History of Architecture and Urbanism, University of California, Berkeley, 2010

Bachelor of Arts, American Studies, concentration in Cultural Landscapes, University of California, Berkeley, 2008

Historic Resources Coordinator/Architectural Historian/Technical Editor

- *Historic American Landscapes Survey documentation*
- *Architectural fieldwork, photography, and research*
- *Cultural landscapes research*

Years of Experience: 7

Relevant Experience

- *Historic Resource Inventory for the Los Angeles Unified School District*
- *Ute Mountain Ute Tribe Five-Year Integrated Resource Management Plan*
- *Application for Landmark Status: University YWCA, Berkeley, California*
- *Research and writing for SurveyLA's Historic Context Statement*
- *Management of architecture, housing, urbanism, mapping, and city planning content for social media–driven website*

Ms. Marilyn Novell has seven years of professional and academic experience in historic preservation, cultural resources documentation, and architectural history.

Ms. Novell has worked on historic and cultural resource assessments for projects in Los Angeles, Santa Monica, Berkeley, Utah/Colorado, and the Klamath River basin in California. As a member of the board of directors of the Julia Morgan-designed Berkeley City Club, she participated in documenting the building's grounds for the Historic American Landscapes Survey (HALS). Ms. Novell has experience in developing historical and cultural resources sections, technical reports, and secretarial determination overview reports, specifically those related to Native American tribal trust resources and cultural values.

Her professional background includes management and contributions to projects aimed at the evaluation of historic properties and districts. At Sapphos Environmental, Inc., Ms. Novell is providing research, writing, and field work for an ongoing district-wide Historic Resource Inventory for the Los Angeles Unified School District. She also contributed to the City of Los Angeles Historic Resources Survey project (SurveyLA), both in the City Office of Historic Resources and for consultant firms conducting the survey for the City. In this capacity, she assisted in developing the Historic Context Statement for the project, recording and evaluating properties in the field, researching identified properties, and writing summary reports.

During her years of working with Internet technology and content, she was instrumental in the development of a national online database of New Deal–era public projects including schools, post offices, airports, hospitals, and parks. In 2013, she founded the news-gathering web site 100% Built, focused on architecture, cities, and the built environment, which was adopted by *Places Journal* to enhance the periodical's online presence.

Ms. Novell's areas of interest include social and cultural factors in buildings and landscapes, suburban growth patterns, and Southern California history. Her master's thesis was a case study of a 1950 housing tract in the San Francisco Bay area that traced the histories of 63 originally nearly identical houses over time to their current highly individualized state, reflecting cultural, economic, and aesthetic changes in the residents and the community.

She is a member of the California Preservation Foundation, the Los Angeles Conservancy, the Society of Architectural Historians, the National Trust for Historic Preservation, and the Vernacular Architecture Forum.