Michael Baker
INTERNATIONAL

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May 18, 2023

Jack Lac
Western Region Development Manager
NorthPoint Development

RE: CULTURAL AND PALEONTOLOGICAL RESOURCES IDENTIFICATION MEMORANDUM FOR THE SPR 23-004 PROJECT, CITY OF LANCASTER, LOS ANGELES COUNTY, CALIFORNIA

Dear Mr. Lac:

In support of the SPR 23-004 Project (project), located within the northeastern quadrant of the intersection of Avenue G and North 45th Street West in the City of Lancaster, California, Michael Baker International completed a cultural resources identification analysis. Drawing on an existing South Central Coastal Information Center (SCCIC) records search and field survey, Michael Baker International conducted a literature and historical map review and buried archaeological site sensitivity analysis of the project site to determine if the project site contains historical resources as defined in California Environmental Quality Act (CEQA) Guidelines Section 15064.5(a) that may be impacted by the project. Additionally, Michael Baker International requested a Natural History Museum of Los Angeles County (NHMLAC) paleontological records search, and conducted a search of online and published databases to identify paleontological localities and determine the paleontological sensitivity of the project site. The project is subject to CEQA review, and the City of Lancaster (City) is the lead agency. Methods, results, and recommendations are summarized below.

PROJECT DESCRIPTION

The SPR 23-004 project site is located in the County of Los Angeles, in the City of Lancaster. It is situated approximately 2 miles west of State Route 14 (SR-14), at the northeastern corner of Avenue G and 45th Street West. The proposed project would include construction of a distribution warehouse on approximately 37.5 acres. The new distribution center would consist of one 637,000-square-foot building, which includes approximately 40,000 square feet of office space. Ancillary improvements would include truck and passenger vehicle parking, lighting, utility improvements, landscaping, and drainage/water quality features, among others. Depth of excavation for the project will vary across the project site. Maximum depth of excavation is anticipated to reach approximately 20 feet below the present ground surface.

PROJECT SITE

The project site is located on the northeast corner of Avenue G and 45th Street West. The project site is identified as the boundaries of Assessor Parcel Numbers 3105-001-011 through 3105-001-014. The project would include ground disturbance to a maximum depth of 20 feet below the

ground surface. This includes the maximum extent of ground disturbance and project activities associated with site preparation and construction.

The project is mapped within *Lancaster West, California* USGS 7.5-minute topographic quadrangle map, within the southeast quarter of Section 36, Township 8 North, Range 13 West, of the San Bernardino Baseline Meridian (see **Attachment 1**). The project site is located in the City of Lancaster, California.

GEOLOGIC SETTING

California is divided into 11 geomorphic provinces, each defined by unique geologic and geomorphic characteristics. The project lies within the western Mojave Desert geomorphic province, a broad region of isolated mountains separated by expanses of desert plains (CGS 2002). The project site is situated in a geographic subregion of the southwestern Mojave Desert known as Antelope Valley. The region is commonly referred to as the "High Desert" due to its approximate elevation of 2,900 feet above sea level. The Mojave Desert is bounded to the west by the Tehachapi Mountains and to the south by the San Gabriel and San Bernardino Mountains. The project site and surrounding area are relatively flat.

The western Mojave Desert contains sedimentary (lake and river sourced) and volcanic rocks, ranging from Cenozoic to Quaternary deposition (Dibblee 1967; DeCourten 2010) and metamorphic and igneous rocks of Mesozoic and earlier ages (Hernandez 2010; Dibblee and Minch 2008). The Mojave block is a tectonic region in the western Mojave Desert defined by the nearby San Andreas and Garlock faults, with several accessory faults trending northwest that were active throughout the Quaternary period (Dibblee 1967).

The geology of the project site has been mapped by Dibblee and Minch (2008) at a scale of 1:62,500 and by Hernandez (2010) at a scale of 1:24,000. The coarser scale map (Dibblee and Minch 2008) indicates that the project site is entirely underlain by Quaternary alluvium (Qa), while the finer scale map (Hernandez 2010) shows the project site consists of Quaternary younger playa deposits (Qyp). Quaternary alluvium consists of unconsolidated to weakly consolidated fluvial gravel, sand, and silt. Quaternary alluvium is Holocene in age, a period that overlaps with archaeological concern, though Holocene deposits older than 5,000 years in age can possibly contain significant fossil resources (SVP 2010). Quaternary younger playa deposits in this region are described as moderate to well-consolidated clay with some silt and range from Holocene to late Pleistocene in age and possibly contain significant fossil resources.

The project site is located along the hypothesized high shoreline of Lake Thompson at the end of the Pleistocene epoch. At its height in the Pleistocene, Lake Thompson covered approximately 950 square kilometers within the Antelope Valley, and included within its area what are now two smaller dry lakes, Rogers Lake and Rosamond Lake. Today, these dry lakes only retain water for short periods during the rainy season. When the lake was at its height, the project site would have partially overlapped the lake (Dibblee and Minch 2008; Orme 2004).

The soil throughout the project site has been mapped as Pond-Oban complex (NRCS 2023). The Pond series consists of poor to moderately well-drained, fine-loamy, mixed soils that occur on nearly level to undulating alluvial fans formed from alluvium from granitic rock (NRCS 2023; USDA 2003). The Oban series consists of moderately well-drained, fine soils that occur on nearly level valley troughs and basins at elevations between 2,300 to 2,500 feet (NRCS 2023; USDA 2015). Like the Pond series, the Oban series formed in alluvium derived from granitic rock sources (USDA 2015).

The project site is within the Western Mojave Basins ecoregion, which includes alluvial fans and plains resulting from the drainage of nearby valleys and mountain ranges. This ecoregion receives little summer rainfall, and the vegetation is dominated by creosote bush and white bursage. Soil temperatures in this region are thermic and soil moisture is aridic (Griffith et al. 2016).

CULTURAL RESOURCES IDENTIFICATION

The methods and results of the SCCIC records search, literature and historical map search, field survey, and buried archaeological site sensitivity analysis are presented below. This portion of the study relies upon a previous study of the project site conducted by CRM TECH, which was prepared for a proposed development on the project site which was never completed (Tang and Hogan 2020; **Attachment 2**).

SOUTH CENTRAL COASTAL INFORMATION CENTER

On February 26, 2020, CRM TECH archaeologist Ben Kerridge completed a records search of the project site and 1-mile search radius at the SCCIC. The SCCIC, located at California State University, Fullerton, is part of the California Historical Resources Information System, an affiliate of the California Office of Historic Preservation (OHP). It is the official state repository of cultural resources records and reports for Los Angeles County.

Michael Baker International supplemented the CRM TECH records search with a review of the following federal and California inventories:

- Archaeological Resources Directory for Los Angeles County (OHP 2022)
- Built Environment Resource Directory for Los Angeles County (OHP 2023a)
- California Historical Resources (OHP 2023b)
- National Register of Historic Places (NPS 2020)

Report Results

The CRM TECH records search found that a total of 10 previous studies had taken place within a 1-mile of the project site. Of these 10 studies, two appear to partially overlap small portions of the project site (LA-6627 and LA-6638). However, the majority of the project site had never been studied archaeologically (Tang and Hogan 2020: 7-8).

Resource Results

The CRM TECH records search identified no resources recorded within the project site or a 1-mile radius. A search of the Built Environment Resources Directory for resources located on roads adjacent to the project site identified no additional resources (OHP 2023a).

LITERATURE AND HISTORICAL MAP REVIEW

Michael Baker International staff reviewed literature and historical maps for historical information about the project site and the vicinity. Below is a list of resources reviewed, followed by a narrative description of the results.

Historical Maps

- *Township 8 North Range 13 West, San Bernardino Meridian Plat map* (GLO 1856)
- *73. Part of Southern California* (Wheeler 1883)
- "Perris' Miners' Map of Southern California" (Perris 1896)
- *Elizabeth Lake, Calif,*. 1:96,000 scale topographic quadrangle (USGS 1915a)
- *Elizabeth Lake, Calif.*, 1:125,000 scale topographic quadrangle (USGS 1915b)
- *Elizabeth Lake, Calif.*, 1:250,000 scale topographic quadrangle (USGS 1917)
- *Esperanza School, Calif.*, 1:24,000 scale topographic quadrangle (USGS 1931)
- *Esperanza School, Calif.*, 1:24,000 scale topographic quadrangle (USGS 1934)
- *Los Angeles, Calif.*, 1:250,000 scale topographic quadrangle (USGS 1949)
- *Esperanza School, Calif.*, 1:24,000 scale topographic quadrangle (USGS 1951)
- *Los Angeles, Calif.*, 1:250,000 scale topographic quadrangle (USGS 1955)
- *Lancaster West, Calif.*, 1:24,000 scale topographic quadrangle (USGS 1958)
- *Los Angeles, Calif.*, 1:250,000 scale topographic quadrangle (USGS 1966)
- *Los Angeles, Calif.*, 1:250,000 scale topographic quadrangle (USGS 1975)
- *Lancaster West, Calif.*, 1:24,000 scale topographic quadrangle (USGS 2012)

Literature

- *A Guide to Historic Places in Los Angeles County* (Grenier, Nunis, and Poole 1978)
- *Historic Spots in California* (Hoover et al. 2002)
- "Aboriginal Society in Southern California" (Strong 1929)
- "A Brief Sketch of Serrano Culture" (Benedict 1924)
- "Serrano" (Bean and Smith 1978)
- "Handbook of the Indians of California" (Kroeber 1925)
- *An Introduction to the Archaeology of the Western Mojave Desert* (Sutton 1988)
- "The Desert Serrano of the Mojave River" (Sutton and Earle 2017)
- "General Wm. J. Fox Field" (Los Angeles County Public Works 2023)

Results

The ethnogeography of the western Antelope Valley is little documented. The project site does not appear in comprehensive maps of Native American sites in Southern California such as Kroeber's (1925), or even in maps focused on the Serrano and Desert Serrano (e.g., Benedict 1924:367; Strong 1929:7; Sutton and Earle 2017:22). The consulted sources identified no hamlets, villages, or named locations within or near the project site.

A middle nineteenth century GLO map depicts a completely unsettled area, devoid not only of buildings but also of roads and trails. No human-made features are visible in these maps (GLO 1856). By the late nineteenth century, Lancaster had been founded along the Southern Pacific Railroad line southwest of the project site. The project site itself remained undeveloped (Perris 1896; Wheeler 1883).

Development of the vicinity surrounding the project site began in earnest in the early twentieth century. The project site is exhibited in the 1915 and 1917 USGS topographic maps. These maps show the project vicinity as a very sparsely settled area. One road and one smaller track snake through the project vicinity. Houses are scattered across the landscape, but none are located within one-half mile of the project site, and only one house is located within 1 mile. The project site is undeveloped (USGS 1915a, 1915b, 1917).

The project site and project vicinity remain minimally developed into the 1950s. While by the 1930s houses are constructed and minor roads and wells are developed within the project vicinity, very little development exists within 1 mile of the project site, and no development exists within the project site (USGS 1931, 1934, 1951). The County of Los Angeles constructed General William J. Fox Field just north of the project site in 1959, but the project site remains undeveloped to this day (USGS 1958; NETR 2022).

FIELD SURVEY

On March 13, 2018, CRM TECH field director Daniel Ballester and project archaeologist Charly Sheldon conducted a pedestrian survey of the project site. The entire project site was walked over in transects spaced 15 meters apart. Ground visibility in most of the project site was poor due to dense vegetation. No resources greater than 45 years of age were observed as a result of the survey (Tang and Hogan 2020: 7).

ARCHAEOLOGICAL SITE SENSITIVITY ANALYSIS

The archaeological sensitivity for potential unknown prehistoric archaeological sites within the project site is moderate. No Native American place names are recorded within or near the project site, but this is true of the entire Lancaster area and is largely the result of a lack of contact between the local Desert Serrano population and European and European-American colonizers rather than a lack of ethnohistoric occupation of the area. Water has always been the most important resource determining the placement and intensity of settlement in the Antelope Valley. Late Pleistocene and Early Holocene inhabitants of the closed valley operated on the shores of vast inland lakes, including Lake Thompson. The project site was likely on the lake shore when Lake Thompson was

at its height, and people would have had access to the lake and its abundant tule swamps. Even as the Antelope Valley turned to desert, there still would have been wetter periods when the area was more suitable than today for human use if not occupation. Sporadic or seasonal use of the project site likely continued after the desertification of the valley. Today, the project site is devoid of permanent sources of water, but before groundwater exploitation began in the late nineteenth century, the water table would have been higher. No resources were observed during the field survey, but visibility was poor due to dense vegetation. Even those areas of the project site where sediment was visible may conceal buried deposits. The project site consists of Quaternary alluvium, which is coeval with the Antelope Valley's prehistoric human occupation and which may conceal buried archaeological deposits. The project site would have been an important resource procurement area, and significant archaeological sites may lie buried within the project site.

The sensitivity for potential undocumented historic period buildings, structures, and historic period archaeological sites is low. Historic maps and aerial photographs indicate that the project site has never been developed except for the construction of roads in the twentieth century. During the historic period, the project site may have been used for hunting, prospecting, and similar activities, but the potential for significant buried historic period resources appears low. No significant historic period archaeological sites or built features are anticipated within the project site.

NATIVE AMERICAN CONSULTATION

The Native American Heritage Commission was contacted and a Sacred Lands File search requested for the project site. The results of the Sacred Lands File search were negative. Three Native American tribes, the Fernandeño Tataviam Band of Mission Indians, the Gabrieleño Band of Mission Indians – Kizh Nation, and the Yuhaaviatam of San Manuel Nation, have formally requested to be notified of projects and given the opportunity to consult under Assembly Bill 52. Those three tribes have been notified by letter of the proposed project and consultation is ongoing.

PALEONTOLOGICAL RESOURCES IDENTIFICATION METHODS

The records search results, literature review, and paleontological sensitivity analysis are presented below.

PALEONTOLOGICAL RECORDS SEARCHES

Michael Baker International staff received a paleontology collection records search for locality and specimen data from the NHMLAC on February 26, 2023 (**Attachment 3**). The records search showed no previously identified fossil localities within the project site. However, several fossil localities from similar sedimentary deposits to those mapped within the project site occurred nearby. Localities are documented in **Table 1** and include Holocene and Pleistocene-aged mammal, reptile, and fish fossils.

Table 1 – Previously Recorded Paleontological Resources from NHMLAC Records Search

Collection Number	Taxa	Formation	Intervals	Depth	Location
LACM VP 7884	Camel (*Camelops hesternus*)	Unknown formation (fluvial brown clayey silt)	Pleistocene	4 feet below ground surface (bgs)	East of the southeast corner of the intersection of East 3rd Street and East Avenue H-13
LACM VP 7853	Rabbit (*Sylvagus*), camel family (Camelidae), antelope squirrel (*Ammospermophilus*), kangaroo rat (*Dipodymus*), pocket mouse (*Perognatus*), pack rat (*Neotoma*), deer mouse (*Peromyscus*), vole family (Microtinae), iguana (*Dipsosaurus*), pocket gopher (*Thomomys*), spiny lizard (*Sceloprus*), side blotched lizard (*Uta*), colubrid snakes (*Trimorphodon, Masticophis, Phyllorynchus*), night lizard (*Xantusia)*, western alligator lizard (*Elgaria*), toothy skinks (*Plestiodon*), whiptail lizard (*Aspidocelis*), spiny lizards (Phrynosomatidae), smelt (Osmeridae)	Unknown formation (sandy loess under a dune deposit strand, sandy siltstone, siltstone to clayey siltstone)	Pleistocene	3–11 feet bgs	Waste Management of North America Lancaster Landfill
LACM VP 5942-5950	Kingsnake (*Lampropeltis*), Lizard (Lacertilia), leopard lizard (*Gambelia*); snake (Ophidia), gopher snake (*Pituophis*); rabbit (*Lagomorpha*), rodent (Rodentia), Pocket	Unknown formation	Holocene	0-9 feet bgs	Along Avenue S from Palmdale to Lake Los Angeles

	gopher (*Thomomys*), pocket mouse (*Chaetodippus*), kangaroo rat (*Dipodomys*); birds (Aves)				
LACM VP 7891	Camel (*Hemiauchenia*)	Unknown formation	Pleistocene	21 feet bgs	Near the California Aqueduct between the Tehachapi Mountains and the Rosamond Hills north of Willow Springs
LACM VP CIT451	Mastodon (Mammutidae), horse family (Equidae)	Harold Formation	Pleistocene	Unknown	Near intersection of East Barrel Springs Road and 47th Street East (Palmdale Quadrangle)
LACM IP 445	Invertebrates (unspecified)	Unknown formation (upper Pleistocene lacustrine deposits)	Pleistocene	Unknown	Lake Rogers; Edwards Air Force Base

Michael Baker International conducted supplemental paleontological records searches within 3 miles of the project site using the following websites:

- University of California Museum of Paleontology Locality Search (UCMP 2023)
- San Diego Natural History Museum Collection Database (SDNHM 2023)
- The Paleobiology Database (PBDB 2023)
- FAUNMAP (FAUNMAP 2023)

While the databases showed no previously identified fossil localities within the project site, one locality is reported by the PBDB near the project site (**Table 2**). Upon further examination of this locality, it was discovered that the reported geologic formation (Juncal Formation) does not appear on the local geologic maps (Dibblee and Minch 2008; Hernandez 2010) and the source document for this locality (Squires 1988) reports fossil localities for Lockwood Valley in Ventura

County (approximately 50 miles west of the project). It is possible that the GPS coordinates for this PBDB record were entered incorrectly.

Table 2 – Previously Recorded Paleontological Resources from Online Databases

Collection	Taxa	Formation	Intervals
PBDB	Bivalves (clams, cockles), gastropods (turban snails, tower snails, cone snails)	Juncal Formation	Eocene

PALEONTOLOGICAL RESOURCES SENSITIVITY ANALYSIS

The NHMLAC paleontological records search and fossil locality searches of online databases (FAUNMAP, PBDB, SDNHM, and UCMP) did not identify any paleontological resources within the project site. However, localities have been found at shallow depths and near the project site from rock formations similar to those underlying the project, including one locality with several mammal, reptile, and fish fossils. Per mitigation impact guidelines set forth by the Society of Vertebrate Paleontology (SVP 2010), due to the fossil sensitivity of the rock formations present within the project site (younger playa deposits of Holocene to late Pleistocene age), the project has a high potential to disturb paleontological resources within undisturbed bedrock.

FINDINGS AND RECOMMENDATIONS

The SCCIC records search, literature and historical map review, field survey, and NAHC Sacred Lands File search identified no historical resources, as defined by CEQA Section 15064.5(a), within the project site. However, there is a moderate potential for disturbing previously unknown archaeological resources, and a high potential for disturbing previously unknown paleontological resources, during excavation into native soil.

Archaeological sensitivity is moderate. Visibility during the field survey was poor, and the survey was therefore inconclusive. However, the relatively undisturbed nature of the Holocene deposits within the project site and the ancient presence of the Lake Thompson shoreline within the project site indicate an elevated sensitivity for archaeological resources within the project site.

Paleontological resource sensitivity is high due to the fossil sensitivity of the rock formations present within the project site (younger playa deposits of Holocene to late Pleistocene age) and the relatively undisturbed nature of the project site.

ARCHAEOLOGICAL RESOURCES RECOMMENDATIONS

Impacts may be avoided or reduced to less-than-significant levels to unknown archaeological resources through implementation of the following mitigation measures:

CUL-1: If subsurface cultural resources are encountered during project-related earth-moving activities, excavations shall be halted in the vicinity of the discovery and a qualified archaeologist (who is a Registered Professional Archaeologist or eligible for listing on the Register of Professional Archaeologists) shall evaluate the resource in accordance with state guidelines, including those set forth in

the California Public Resources Code Section 21083.2, to assess the significance of the find and, if the resource is significant, identify appropriate treatment measures. If avoidance is not feasible then the City shall determine the appropriate treatment of the resource, which may include data recovery excavations, based upon the recommendations of the qualified archaeologist. Additionally, Health and Safety Code Section 7050.5, CEQA Guidelines Section 15064.5(e), and Public Resources Code Section 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of human remains in a location other than a dedicated cemetery.

PALEONTOLOGICAL RESOURCES RECOMMENDATIONS

Full-time paleontological monitoring is recommended during ground disturbance in undisturbed geologic contexts which have the potential to contain significant paleontological resources. Ground disturbance refers to activities that would impact subsurface geologic deposits, such as grading, excavation, and boring. Activities taking place in or on current topsoil or within previously disturbed fill sediments, e.g., clearing and grubbing, do not require paleontological monitoring. The following mitigation measures are recommended to be implemented such that in the event of any discovery of unknown paleontological resources during earthwork, impacts would be less than significant.

PALEO-1: The contractor shall retain a Society of Vertebrate Paleontology (SVP) qualified paleontologist to provide or supervise a paleontological sensitivity training to all personnel planned to be involved with earth-moving activities, prior to the beginning of ground-disturbing activities. The training session shall focus on how to identify paleontological localities such as fossils that may be encountered and the procedures to follow if identified.

PALEO-2: Prior to grading or excavation in sedimentary rock material other than topsoil, the contractor shall retain an SVP-qualified paleontologist to monitor these activities.

If any paleontological resources are encountered during construction or the course of any ground-disturbance activities, all such activities shall halt immediately. At this time, the applicant shall notify the City of Lancaster and consult with a qualified paleontologist to assess the significance of the find. The assessment will follow SVP standards as delineated in the *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (2010). If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined to be infeasible by the City. If avoidance is infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. The recommendations of the qualified paleontologist shall be implemented with respect to the evaluation and recovery of fossils, after which the on-site construction supervisor shall be notified and shall direct work to continue in the location of

the fossil discovery. Any fossils recovered during mitigation shall be cleaned, identified, catalogued, and permanently curated with an accredited and permanent scientific institution with a research interest in the materials.

If no fossils have been recovered after 50 percent of excavation has been completed, full-time monitoring may be modified to weekly spot-check monitoring at the discretion of the qualified paleontologist. The qualified paleontologist may recommend to the client to reduce paleontological monitoring based on observations of specific site conditions during initial monitoring (e.g., if the geologic setting precludes the occurrence of fossils). The recommendation to reduce or discontinue paleontological monitoring in the project site shall be based on the professional opinion of the qualified paleontologist regarding the potential for fossils to be present after a reasonable extent of the geology and stratigraphy has been evaluated.

A qualified professional paleontologist is a professional with a graduate degree in paleontology, geology, or related field, with demonstrated experience in the vertebrate, invertebrate, or botanical paleontology of California, as well as at least one year of full-time professional experience or equivalent specialized training in paleontological research (i.e., the identification of fossil deposits, application of paleontological field and laboratory procedures and techniques, and curation of fossil specimens), and at least four months of supervised field and analytic experience in general North American paleontology as defined by the SVP.

PALEO-3: If the fossils are determined to be significant, then the SVP-qualified paleontologist shall prepare and implement a data recovery plan. The plan shall include the following measures at a minimum:

- The paleontologist shall ensure that all significant fossils collected are cleaned, identified, catalogued, and permanently curated with an appropriate institution with a research interest in the materials (which may include the Natural History Museum of Los Angeles County);
- The paleontologist shall ensure that specialty studies are completed, as appropriate, for any significant fossil collected; and
- The paleontologist shall ensure that curation of fossils is completed in consultation with the City of Lancaster. A letter of acceptance from the curation institution shall be submitted to the City of Lancaster.

PREPARER QUALIFICATIONS

This memorandum was prepared by Michael Baker International Senior Archaeologist Marc Beherec, PhD, RPA, and incorporates analyses by Senior Paleontologist Peter Kloess, PhD. The memo was reviewed for quality control by Senior Cultural Resources Manager Margo Nayyar.

MARC BEHEREC, PHD, RPA, PRINCIPAL INVESTIGATOR/SENIOR ARCHAEOLOGIST

Marc has more than 20 years of experience in prehistoric and historical archaeology and cultural resources management. His experience includes writing technical reports, including National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), and CEQA compliance documents. He has supervised and managed all phases of archaeological fieldwork, including survey, Phase II testing and evaluations and Phase III data recovery, and monitoring at sites throughout Southern California. Dr. Beherec meets the Secretary of the Interior's Professional Qualification Standards for prehistory and historical archaeology.

PETER A. KLOESS, PHD, PRINCIPAL INVESTIGATOR/SENIOR PALEONTOLOGIST

Peter has over 20 years of experience in paleontology, with 7 years in paleontology mitigation. His experience includes private and public consultation, field monitoring, excavation, and laboratory research on projects across the western United States, predominantly in California. He has consulting experience with a range of projects, including construction, transportation, utility, transmission, monitoring, and surveys, as well as expertise recovering a diversity of fossils from project sites, such as marine invertebrates, microfossils, plants, small mammals, and birds, large marine and terrestrial mammals, and dinosaurs. He also has extensive experience in paleontological museum collections and lab settings. He has worked on and co-led scientific excavations of large mammals and dinosaurs in California, Utah, New Mexico, and Montana. Peter has served as a lab preparator and assistant curator for paleontology museums in California and Montana, where his duties included manual preparation of specimens, casting, jacketing, public outreach, cataloging, and curation. He meets the Society of Vertebrate Paleontology's standards for paleontological Principal Investigator.

MARGO NAYYAR, SENIOR CULTURAL RESOURCES MANAGER

Senior Cultural Resources Manager Margo Nayyar provided QA/QC review of this report and evaluation. Margo is an architectural historian with 13 years of cultural management experience in California, Nevada, Arizona, Texas, Idaho, and Mississippi. Her experience includes built environment surveys, evaluation of historic-era resources using guidelines outlined in the National and California Registers, and preparation of cultural resources technical studies pursuant to CEQA and Section 106 of the NHPA, including identification studies, finding of effect documents, memorandum of agreements, programmatic agreements, and Historic American Buildings Survey/Historic American Engineering Record/Historic American Landscapes Survey mitigation documentation. She prepares cultural resources environmental document sections for CEQA environmental documents including infill checklists, initial studies, and environmental impact reports, as well as NEPA environmental documents, including environmental impact statements and environmental assessments. She also specializes in municipal preservation planning, historic

preservation ordinance updates, Native American consultation, and provision of Certified Local Government training to interested local governments. She develops Survey 123 and Esri Collector applications for large-scale historic resources surveys, and authors National Register nomination packets. Margo meets the Secretary of the Interior's Professional Qualification Standards for history and architectural history.

Sincerely,

Marc Beherec, PhD, RPA
Senior Archaeologist

Margo Nayyar, MA
Senior Cultural Resources Manager

Attachments:

Attachment 1 – Figures

Attachment 2 – *Historical/Archaeological Resources Survey Report for the G40 Lancaster Project* (Tang and Hogan 2020)

Attachment 3 – Paleontological Record Search Results

REFERENCES

Bean, Lowell John and Charles R. Smith. 1978. "Serrano." In *California*, edited by Robert F. Heizer, pp. 570-574. *Handbook of North American Indians*, volume 8, William C. Sturtevant, general editor. Washington, DC: Smithsonian Institution.

Benedict, Ruth. 1924. "A Brief Sketch of Serrano Culture." *American Anthropologist* 26(3):366-392.

CGS (California Geological Survey). 2002. Revised Probabilistic Seismic Hazard Assessment California Fault Parameters.

Decourten, Frank. 2010. "Geology of Southern California." www.yumpu.com/en/document/view/10088307/geology-of-southern-californiapdfgrossmont-college.

Dibblee, Thomas W. 1967. "Areal geology of the western Mojave Desert California." US Geological Survey Professional Paper 522.

Dibblee, T. W., and J. A. Minch. 2008. Geologic map of the Lancaster and Alpine Butte 15 minute quadrangles, Los Angeles County, California. Dibblee Geological Foundation Map DF-386, scale 1:62,500.

FAUNMAP (FAUNMAP Database). 2023. Paleontological Database. Accessed January 2023. https://ucmp.berkeley.edu/faunmap/about/index.html.

GLO (Bureau of Land Management General Land Office). 1856. *Township 8 North Range 13 West, San Bernardino Meridian* Plat map. https://glorecords.blm.gov/details/survey/default.aspx?dm_id=286270&sid=viw3d0c4.vq4&surveyDetailsTabIndex=1

Grenier, Judson A., Doyce B. Nunis, Jr., and Jean Bruce Poole, eds. 1978. *A Guide to Historic Places in Los Angeles County*. Dubuque, IA: Kendall/Hunt Publishing.

Griffith, Glenn E., James M. Omernik, David W. Smith, Terry D. Cook, Ed Tallyn, Kendra Moseley, and Colleen B. Johnson. 2016. *Ecoregions of California*. Ecoregion map, 1:1,100,000. Washington DC. US Geological Open-File Report 2016-1021.

Hernandez, J. L. 2010. Geologic map of the Lancaster West 7.5' Quadrangle, Los Angeles County, California: A Digital Database. Preliminary Geologic Maps PGM-10-03. Sacramento: California Geological Survey Publications.

Hoover, Mildred Brooke, Hero Eugene Rensch, Ethel Graces Rensch, and William N. Abelow. 2002. *Historic Spots in California*. Stanford, CA: Stanford University Press.

Kroeber, A. L. 1925. "Handbook of the Indians of California." *Bureau of American Ethnography Bulletin* 78. Washington, DC: Government Printing Office.

Los Angeles County Public Works. 2023. "General Wm. J. Fox Field." Accessed March 2023. https://dpw.lacounty.gov/avi/airports/generalwmjfox.aspx

NETR (Nationwide Environmental Title Research). 2022. Aerial photographs of the project site and vicinity. Accessed November 2022. https://www.historicaerials.com/.

NPS (National Park Service). 2020. National Register of Historic Places database and map. Accessed November 2022. https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466.

NRCS (Natural Resources Conservation Service). 2023. Web-based soil mapping interface. Accessed March 2023. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

OHP (California Office of Historic Preservation). 2022. Archaeological Resources Directory for Los Angeles County. On file, South Central Coastal Information Center, California State University, Fullerton.

———. 2023a. Built Environment Resource Directory for Los Angeles County. Accessed November 2022. https://ohp.parks.ca.gov/?page_id=30338.

———. 2023b. "California Historical Resources." Accessed November 2022. https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=34.

Orme, Anthony R. 2004. *Lake Thompson, Mojave Desert, California: A Desiccating Late Quaternary Lake System*. Document prepared for United States Army Corps of Engineers. https://apps.dtic.mil/sti/pdfs/ADA424332.pdf.

PBDB (Paleobiology Database). 2023. Web-based mapping interface in 3-miles of project site. Accessed January 2023. https://paleobiodb.org/navigator/.

Perris, Fred T. 1896. "Perris' Miners' Map of Southern California Showing Specially The Desert Region Embraced In The Counties of San Bernardino, Riverside and Orange, and Portions of Adjacent Counties, Showing Mining Districts, Forest Reserves, Indian Reservations, And County Boundaries In Colors." Accessed November 2022. https://www.raremaps.com/gallery/detail/57775/perris-miners-map-of-southern-california-showing-specially-perris.

SDNHM (San Diego Natural History Museum). 2023. Paleontology Collections Database. Accessed January 2023. https://www.sdnhm.org/science/paleontology/resources/collection-database.

Squires, Richard L. 1988. "Eocene macropaleontology of northern Lockwood Valley, Ventura County, California." Natural History Museum of Los Angeles County, *Contributions in Science*, 398:1–23.

Strong, William D. 1929. "Aboriginal Society in Southern California." *University of California Publications in American Archaeology and Ethnology* 26(1):1-358.

Sutton, Mark Q. 1988. *An Introduction to the Archaeology of the Western Mojave Desert, California*. Coyote Press Archives of California Prehistory No. 14. Salinas, CA: Coyote Press.

Sutton, Mark Q., and Timothy Earle. 2017. "The Desert Serrano of the Mojave River." *Pacific Coast Archaeological Society Quarterly* 53(2&3): 1-61.

SVP (Society of Vertebrate Paleontology). 2010. "Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources." https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf.

Tang, Bai "Tom" and Michael Hogan. 2020. *Historical/Archaeological Resources Survey Report for the G40 Lancaster Project, Assessor's Parcel Numbers 3105-001-011 through -014, City of Lancaster, Los Angeles County, California.* Document prepared by CRM TECH for Antelope Valley Engineering, Inc.

UCMP (University of California Museum of Paleontology). 2023. Locality search. Accessed January 2023. https://ucmpdb.berkeley.edu/loc.html.

USDA (United States Department of Agriculture). 2003. Pond series soil description. https://soilseries.sc.egov.usda.gov/OSD_Docs/P/POND.html.

_____. 2015. Oban series soil description. https://soilseries.sc.egov.usda.gov/OSD_Docs/O/OBAN.html.

USGS (United States Geological Survey). 1915a. *Elizabeth Lake, Calif,.* 1:96,000 scale topographic quadrangle.

_____. 1915b. *Elizabeth Lake, Calif.,* 1:125,000 scale topographic quadrangle.

_____. 1917. *Elizabeth Lake, Calif.,* 1:125,000 scale topographic quadrangle.

_____. 1931. *Esperanza School, Calif.*, 1:24,000 scale topographic quadrangle.

_____. 1934. *Esperanza School, Calif.*, 1:24,000 scale topographic quadrangle.

_____. 1949. *Los Angeles, Calif.,* 1:250,000 scale topographic quadrangle.

_____. 1951. *Esperanza School, Calif.*, 1:24,000 scale topographic quadrangle.

_____. 1955. *Los Angeles, Calif.,* 1:250,000 scale topographic quadrangle.

_____. 1958. *Lancaster West, Calif.,* 1:24,000 scale topographic quadrangle.

_____. 1966. *Los Angeles, Calif.,* 1:250,000 scale topographic quadrangle.

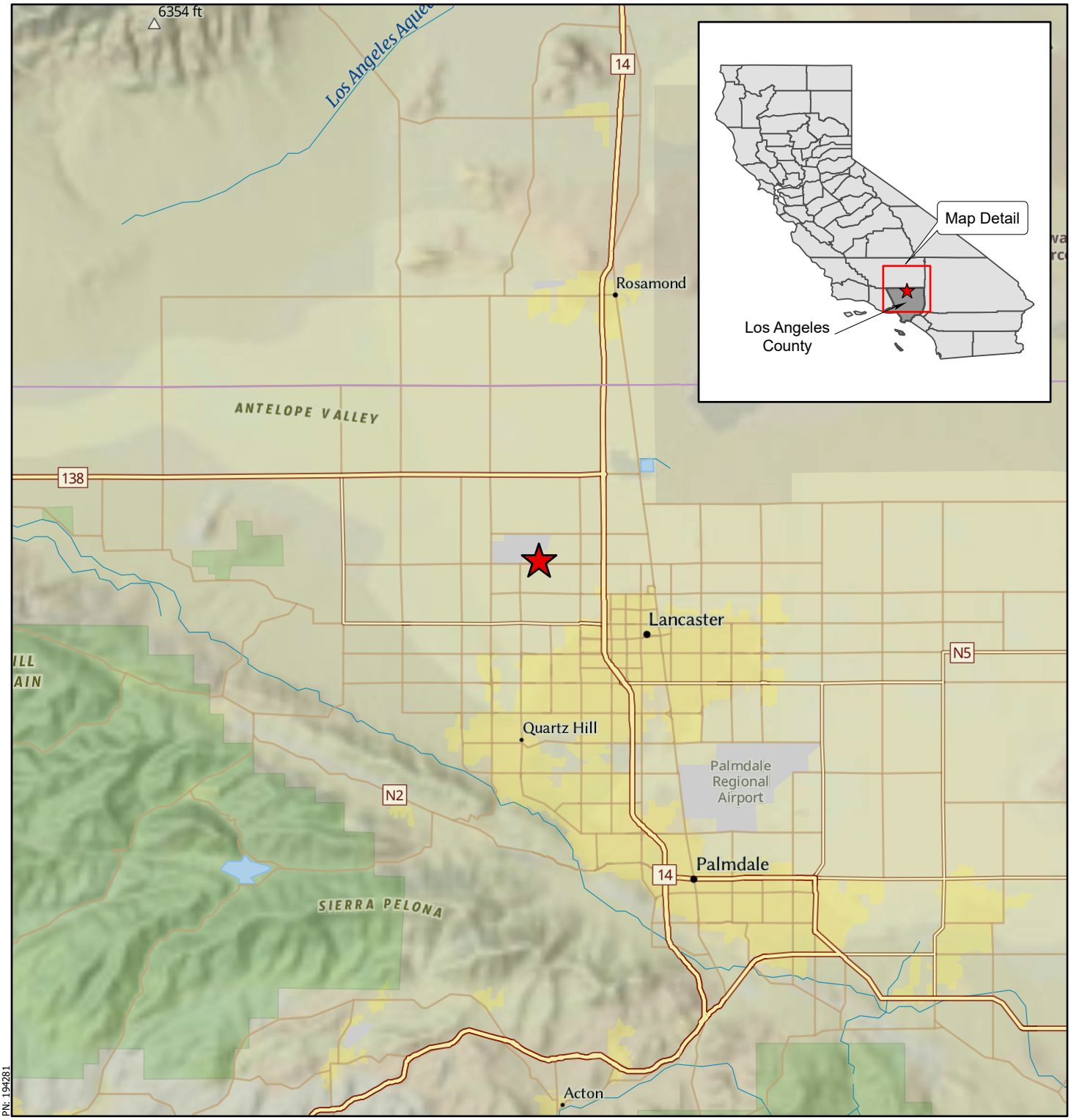
_____. 1975. *Los Angeles, Calif.,* 1:250,000 scale topographic quadrangle.

_____. 2012. *Lancaster West, Calif.*, 1:24,000 scale topographic quadrangle.

Wheeler, G.M. 1883. "73. Part of Southern California." 1:506,880 scale map. https://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~377~30084:73--Part-Of-Southern-California

Attachment 1

Figures



Legend

★ Project Location

Michael Baker INTERNATIONAL

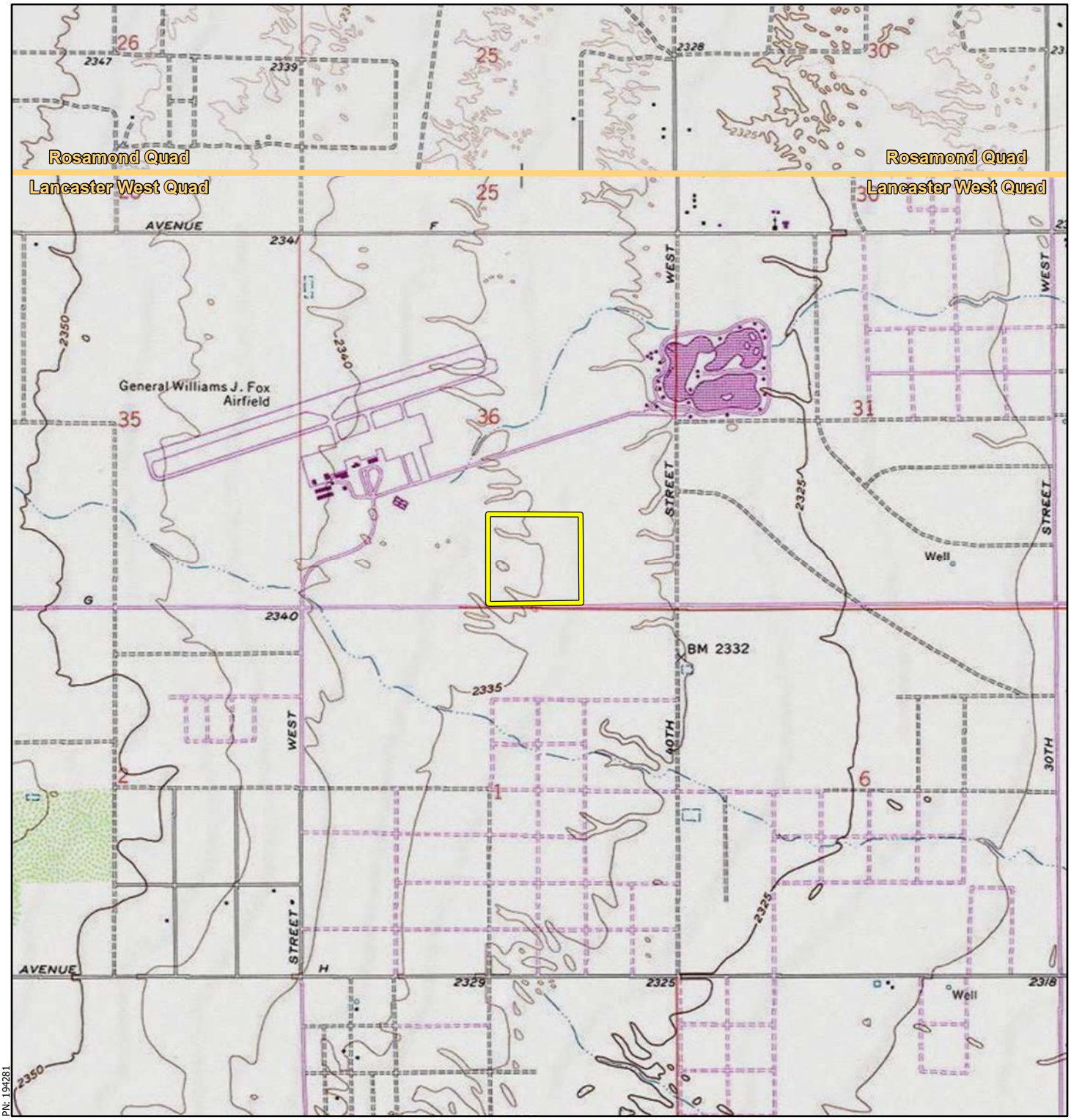
0 5 10 Miles

Source: Esri, ArcGIS Online, National Geographic World Map: *Lancaster, California*

SPR-23-004 PROJECT
LANCASTER, CA

Regional Vicinity

Figure 1



PN: 194281

Legend

Project Area

Michael Baker INTERNATIONAL

0 0.25 0.5 Miles

Source: Esri, ArcGIS Online, Lancaster West USGS 7.5-Minute topographic quadrangle maps: *Lancaster, California*

SPR-23-004 PROJECT
LANCASTER, CA

Project Vicinity

Figure 2

PN: 194281

Legend

Project Area

Michael Baker INTERNATIONAL

0 300 600 Feet

Source: ESRI, ArcGIS Online, World Imagery 2023: *Lancaster, California*

SPR-23-004 PROJECT
LANCASTER, CA

Project Area

Figure 3

Attachment 2

Historical/Archaeological Resources Survey Report for the G40 Lancaster Project (Tang and Hogan 2020)

HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT

G 40 LANCASTER PROJECT

Assessor's Parcel Numbers 3105-001-011 through -014
City of Lancaster, Los Angeles County, California

For Submittal to:

Economic Development Department
City of Lancaster
44993 North Fern Avenue
Lancaster, CA 93534

Prepared for:

Antelope Valley Engineering, Inc.
129 West Pondera Street
Lancaster, CA 93534

Prepared by:

CRM TECH
1016 East Cooley Drive, Suite A/B
Colton, CA 92324

Bai "Tom" Tang, Principal Investigator
Michael Hogan, Principal Investigator

April 13, 2020
CRM TECH Contract No. 3591

Title: Historical/Archaeological Resources Survey Report: G 40 Lancaster Project, Assessor's Parcel Numbers 3105-001-011 through -014, City of Lancaster, Los Angeles County, California

Author(s): Bai "Tom" Tang, Principal Investigator
Ben Kerridge, Archaeologist/Report Writer
Daniel Ballester, Archaeologist/Field Director

Consulting Firm: CRM TECH
1016 East Cooley Drive, Suite A/B
Colton, CA 92324
(909) 824-6400

Date: April 13, 2020

For Submittal to: Economic Development Department
City of Lancaster
44993 North Fern Avenue
Lancaster, CA 93534
(661) 723-6128

Prepared for: Barry Munz
Antelope Valley Engineering, Inc.
129 West Ponderosa Street
Lancaster, CA 93534
(661) 948-0805

USGS Quadrangle: Lancaster West, Calif., 7.5' quadrangle; Section 36, T8N R13W, San Bernardino Baseline and Meridian

Project Size: Approximately 38 acres

Keywords: Antelope Valley, western Mojave Desert; Phase I cultural resources survey; no "historical resources" under CEQA

MANAGEMENT SUMMARY

Between February and April 2020, at the request of Antelope Valley Engineering, Inc., CRM TECH performed a cultural resources study on approximately 38 acres of undeveloped land in the City of Lancaster, Los Angeles County, California. The subject property of the study consists of Assessor's Parcel Numbers 3105-001-011 through -014, located on the northeast corner of Avenue G and 45th Street West, in the southeast quarter of Section 36, T8N R13W, San Bernardino Baseline and Meridian.

The study is a part of the environmental review process for the proposed G 40 Lancaster Project, which entails primarily the construction of an industrial park on the property. The City of Lancaster, as the lead agency for the project, required the study pursuant to the California Environmental Quality Act (CEQA). The purpose of the study is to provide the City with the necessary information and analysis to determine whether the project would cause a substantial adverse change to any "historical resources," as defined by CEQA, that may exist in or around the project area.

In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, contacted the State of California Native American Heritage Commission, and carried out an intensive-level field survey of the entire project area. Throughout the course of the study, no "historical resources" were encountered within or adjacent to the project area.

Based on the results of these research procedures, CRM TECH recommends to the City of Lancaster a finding of *No Impact* regarding "historical resources." No further cultural resources investigation is recommended for the project unless development plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during any earth-moving operations associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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INTRODUCTION

Between February and April 2020, at the request of Antelope Valley Engineering, Inc., CRM TECH performed a cultural resources study on approximately 38 acres of undeveloped land in the City of Lancaster, Los Angeles County, California (Fig. 1). The subject property of the study consists of Assessor's Parcel Numbers 3105-001-011 through -014, located on the northeast corner of Avenue G and 45th Street West, in the southeast quarter of Section 36, T8N R13W, San Bernardino Baseline and Meridian (Figs. 2, 3).

The study is a part of the environmental review process for the proposed G 40 Lancaster Project, which entails primarily the construction of an industrial park on the property. The City of Lancaster, as the lead agency for the project, required the study pursuant to the California Environmental Quality Act (CEQA; PRC §21000, et seq.). The purpose of the study is to provide the City with the necessary information and analysis to determine whether the project would cause a substantial adverse change to any "historical resources," as defined by CEQA, that may exist in or around the project area.

In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, contacted the State of California Native American Heritage Commission, and carried out an intensive-level field survey of the entire project area. The following report is a complete account of the methods, results, and final conclusion of the study. Personnel who participated in the study are named in the appropriate sections below, and their qualifications are provided in Appendix 1.

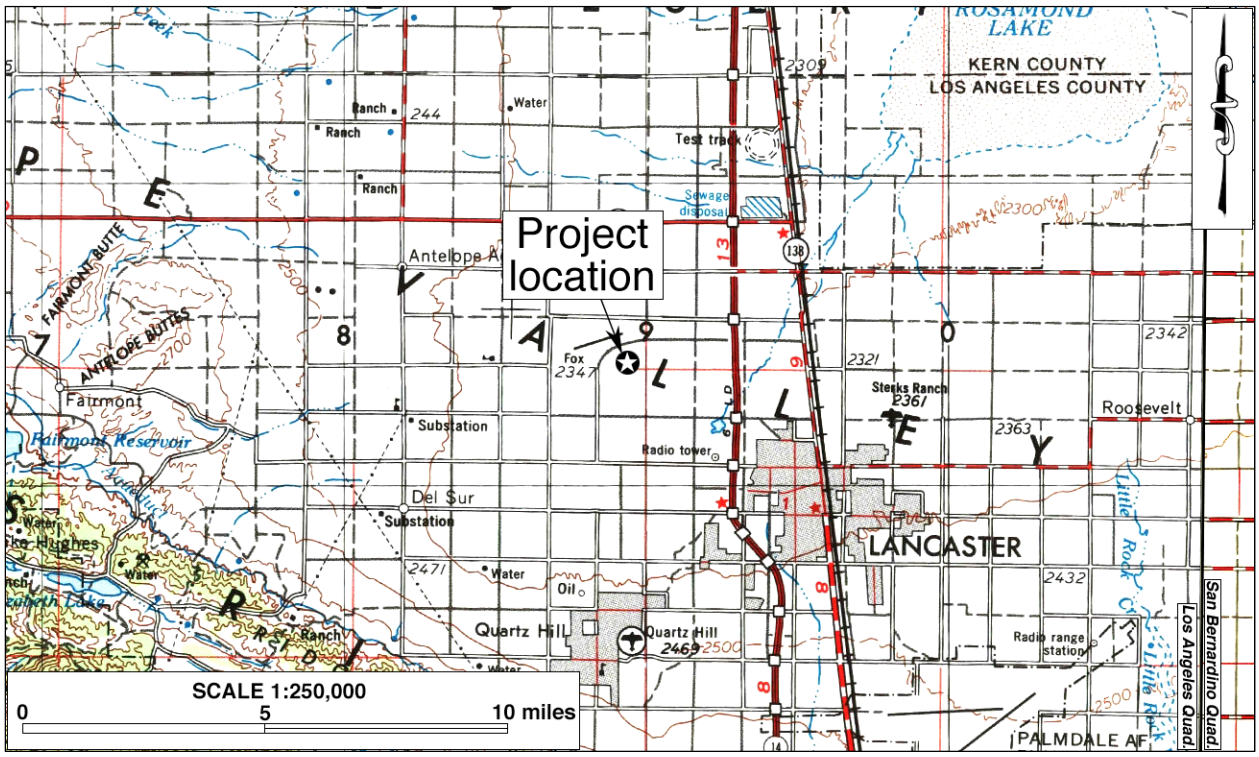

Figure 1. Project vicinity. (Based on USGS Los Angeles and San Bernardino, Calif., 1:250,000 quadrangles [USGS 1969; 1975])

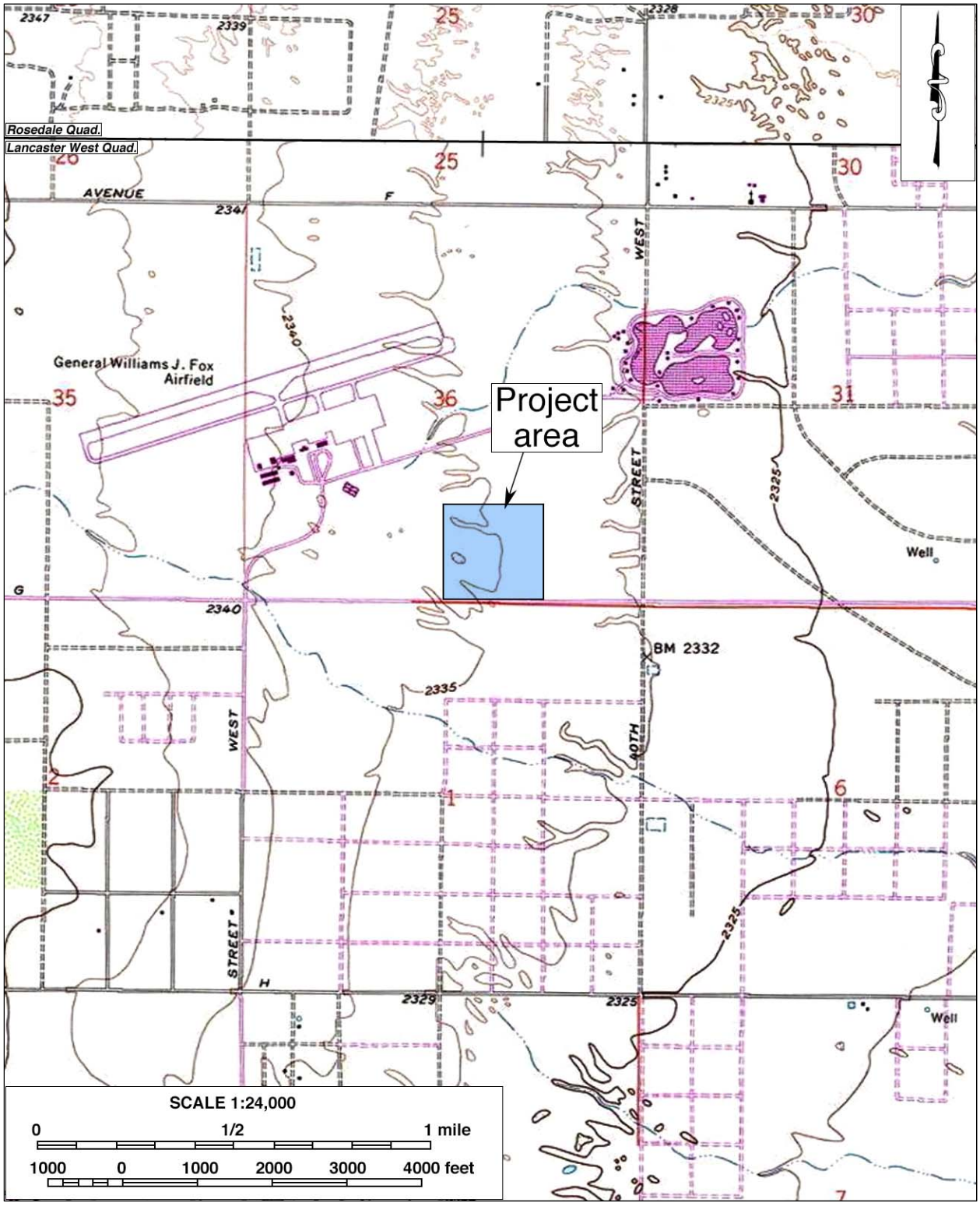

Figure 2. Project location. (Based on USGS Rosedale and Lancaster West, Calif., 1:24,000 quadrangles [USGS 1973; 1974])

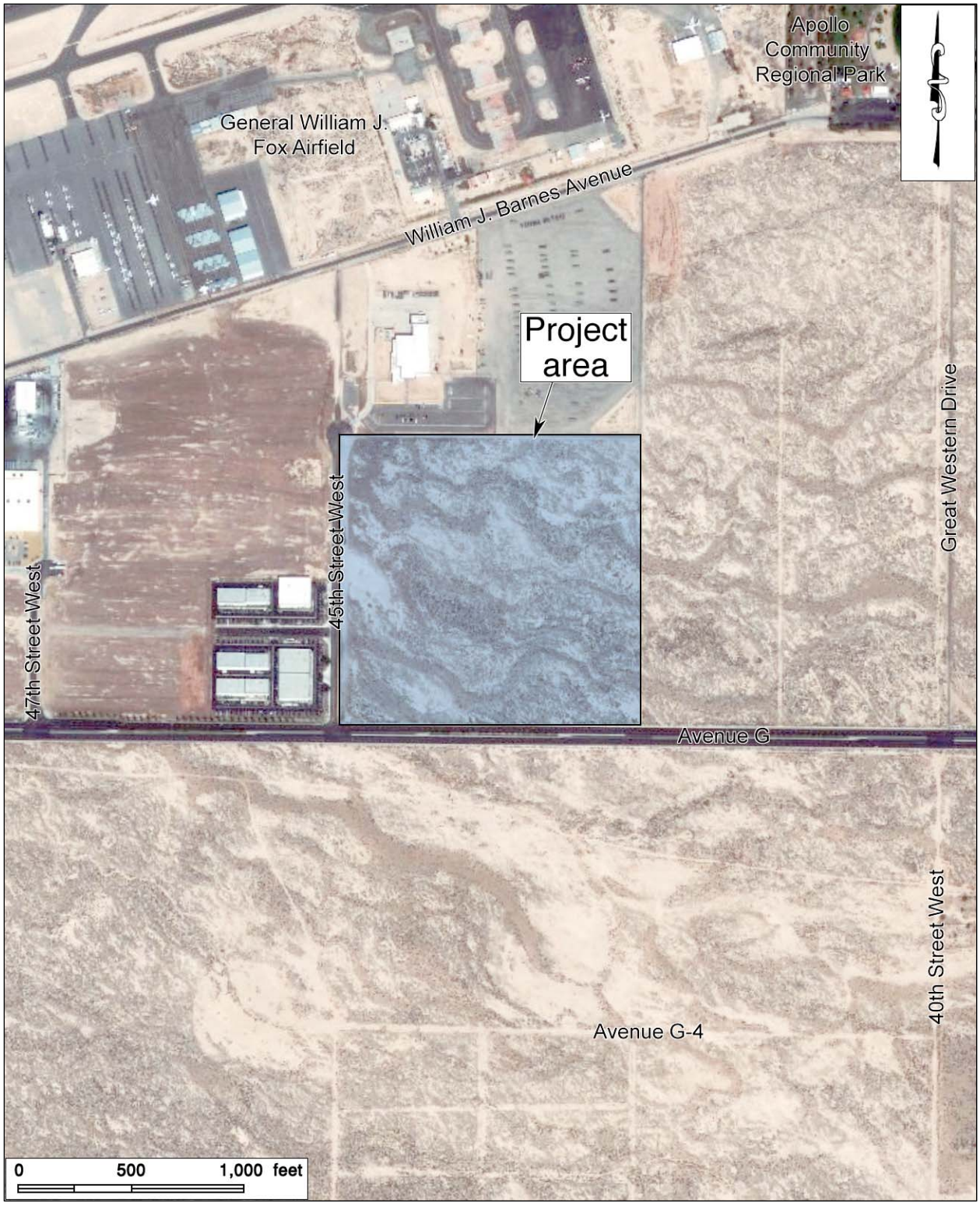

Figure 3. Aerial view of the project area.

SETTING

CURRENT NATURAL SETTING

The project area is located in the western portion of the City of Lancaster, one of a string of urban communities along Highway 14 in the Antelope Valley region of northern Los Angeles County. Situated on the southwestern rim of the Mojave Desert, the climate and environment of the Antelope Valley are typical of the southern California desert country, marked by extremes in temperature and aridity. The mean minimum temperature in winter is 28°F and the mean maximum temperature in summer reaches 96°F, with temperatures over 100°F not uncommon.

The project area encompasses a square-shaped tract of vacant desert land bounded by Avenue G on the south, 45th Street West on the west, a National Guard storage facility on the north, and undeveloped open land on the east (Fig. 3). The terrain features undulating low hummocks interspersed with barren low-lying silty clay pans, and the elevations range approximately from 2,335 feet to 2,340 feet above mean sea level. The surface soils are a mix of silty and clayey lakebed deposits partially overlain by coarse-grained sands and gravels. Vegetation observed on the property consists of a dense understory of low-lying vegetation and sporadic growth of larger non-native grasses and shrubs, such as tumbleweed, wild mustard, and filaree (Fig. 4).

CULTURAL SETTING

Archaeological Context

In order to understand Native American cultures prior to European contact, archaeologists have devised chronological frameworks on the basis of artifacts and site types dating back some 12,000 years. One of the more frequently used time frames for the Mojave Desert divides the region's prehistory into five periods marked by changes in archaeological remains, reflecting different ways in which Native peoples adapted to their surroundings. According to Warren (1984) and Warren and Crabtree (1986), these five periods are the Lake Mojave Period (12,000-7,000 years ago), the Pinto Period (7,000-4,000 years ago), the Gypsum Period (4,000-1,500 years ago), the Saratoga Springs Period (1,500-800 years ago), and the Protohistoric Period (800 years ago to European contact).

This time frame is based on general technological changes from large stone projectile points, with few milling stones for grinding food products, to smaller projectile points with an increase in milling stones. The scheme also notes increases in population, changes in food procurement and resource exploitation, and more cultural complexity over time. During the Protohistoric Period, there is evidence of contact with the Colorado River tribes and the introduction of pottery across the Mojave Desert.

Ethnohistorical Context

The present-day Lancaster area lies on the southern edge of the traditional homeland of the Kitanemuk, a small Native American group located principally on the southern and western flanks of the Tehachapi Mountains (Blackburn and Bean 1978). The general ecological adaptation and subsistence technology of the Kitanemuk differed little from that of their neighbors to the north or

Figure 4. Current natural setting of the project area. (View to the west; photograph taken on March 3, 2020)

west, such as the Southern Valley Yokuts. Linguistic evidence suggests the presence of some form of the patrilineal system found elsewhere in southern California, but the lineages were not totemic, nor was there evidence of moieties. Precise data on the demographic characteristics and political organization of the Kitanemuk can no longer be obtained.

The Kitanemuk may have had contacts with the Spanish colonizers as early as the 1770s, but little historical information is available today on this small group, which had no more than 500-1,000 members at the peak of its population. During the Spanish and Mexican Periods, the Kitanemuk were apparently represented at the San Fernando, San Gabriel, and San Buenaventura Missions. After the American annexation of Alta California, some Kitanemuk were found on the Tejon Reservation in the 1850s, and later on at the Tule River Reservation, where some of their descendants still reside.

Historical Context

In 1772, a small force of Spanish soldiers under the command of Pedro Fages became the first Europeans to set foot in the Antelope Valley. Over the next century, a number of famous explorers, including Francisco Garcés, Jedediah Smith, Kit Carson, and John C. Fremont, traversed the Antelope Valley, but their explorations brought little change to the region. For much of the 19th century, the Antelope Valley continued to receive only the occasional hunters, drawn by its legendary herds of antelopes, and travelers. Don Alexander and Phineas Banning's first stage line between Los Angeles and northern California, for example, ran through the southern edge of the valley.

The history of today's City of Lancaster began in 1876, when the Southern Pacific Railway Company chose the essentially uninhabited Antelope Valley for its line between the San Joaquin Valley and the Los Angeles Basin, and established a string of regularly spaced sidings and water stops across the desert. Around one of these sidings and water stops, Moses Landley Wicks, a real estate developer who was active in many parts of southern California at the time, purchased from the Southern Pacific 640 acres of land and laid out the townsite of Lancaster in 1884. During the land boom of the 1880s, the new town prospered, thanks to the abundance of artesian water in the vicinity. Beginning in 1895, however, several years of continuous drought all but destroyed Lancaster and other settlements in the Antelope Valley, and forced nearly all settlers to abandon their land and leave the region (Hamilton et al. 1913:35-37).

Along with the other settlements, Lancaster recovered slowly after the turn of the century. With the adoption of electric water pumps, irrigated agriculture became the primary means of livelihood in the region. Alfalfa, which was first introduced around 1890 (Hamilton et al. 1913:34), emerged as the principal crop in the early 20th century, so much so that "alfalfa is king" became the slogan for the agricultural interests in the valley. After World War II, however, the aerospace and defense industry overtook agriculture as the most important sector in the Antelope Valley economy. In 1977, Lancaster was incorporated as a city. Since then, the city has experienced rapid growth due to the phenomenal expansion of housing development, and increasingly taken on the characteristics of a "bedroom community" in support of the Greater Los Angeles area.

RESEARCH METHODS

RECORDS SEARCH

On February 26, 2020, CRM TECH archaeologist Ben Kerridge completed the records search at the South Central Coastal Information Center (SCCIC), California State University, Fullerton, which is the State of California's official cultural resource records repository for the County of Los Angeles. During the records search, Kerridge examined maps and records on file at the SCCIC for previously identified cultural resources and existing cultural resources reports within a one-mile radius of the project area. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, or Los Angeles County Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

HISTORICAL RESEARCH

Historical background research for this study was conducted by CRM TECH principal investigator/ historian Bai "Tom" Tang on the basis of published literature in local and regional history, U.S. General Land Office (GLO) land survey plat maps dated 1856, U.S. Geological Survey (USGS) topographic maps dated 1917-1975, and aerial photographs taken in 1948-2016. The historic maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley. The aerial photographs are available at the Nationwide Environmental Title Research (NETR) Online website and through the Google Earth software.

NATIVE AMERICAN PARTICIPATION

In order to identify any known Native American cultural resources in or near the project area, on February 10, 2020, CRM TECH CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. NAHC is the State of California's trustee agency for the protection of "tribal cultural resources," as defined by California Public Resources Code §21074, and is tasked with identifying and cataloging properties of Native American cultural value, including places of special religious, spiritual, or social significance and known graves and cemeteries throughout the state. The response from NAHC is summarized below and attached to this report in Appendix 2.

FIELD SURVEY

On March 13, 2018, CRM TECH field director Daniel Ballester and project archaeologist Charly Sheldon carried out the intensive-level field survey of the project area. The survey was completed on foot by walking a series of parallel north-south transects spaced 15 meters (approximately 50 feet) apart. In this way, the ground surface in the entire project area was systematically and carefully examined for any evidence of human activities dating to the prehistoric or historic period (i.e., 50 years or older). Ground visibility was poor (10 percent) in most of the project area because of the dense low-lying vegetation growth but was excellent (90-100 percent) on the barren silty clay pans between the low hummocks (Fig. 4).

RESULTS AND FINDINGS

RECORDS SEARCH

The records search at the SCCIC indicates that small portions of the project area may have been covered by two previous surveys completed in 2010 (Fig. 5), but the project area as a whole had not been surveyed for cultural resources prior to this study. Within the one-mile scope of the records search, SCCIC records show 10 other previous studies on various tracts of land and linear features (Fig. 5). In all, roughly 20 percent of the land within the scope of the records search has been surveyed previously, but no cultural resources have been recorded within the project boundaries or with the one-mile radius.

HISTORICAL RESEARCH

Historical sources consulted for this study suggest that the project area is low in sensitivity for cultural resources from the historic period. Throughout the historic period and to the present time, no evidence of any settlement or development activities was observed within the project boundaries (Figs. 6-9; NETR Online 1948-2016; Google Earth 1994-2015). In the early and mid-20th century, the only man-made features known to be present in the project vicinity were a few winding dirt roads, including one traversing a few hundred feet south of the project location (Figs. 7-9; NETR Online 1948-1959).

By 1959, with the construction of the General William J. Fox Airfield to the north, 45th Street West and the segment of Avenue G to the west of the project location, both unpaved dirt roads at the time,

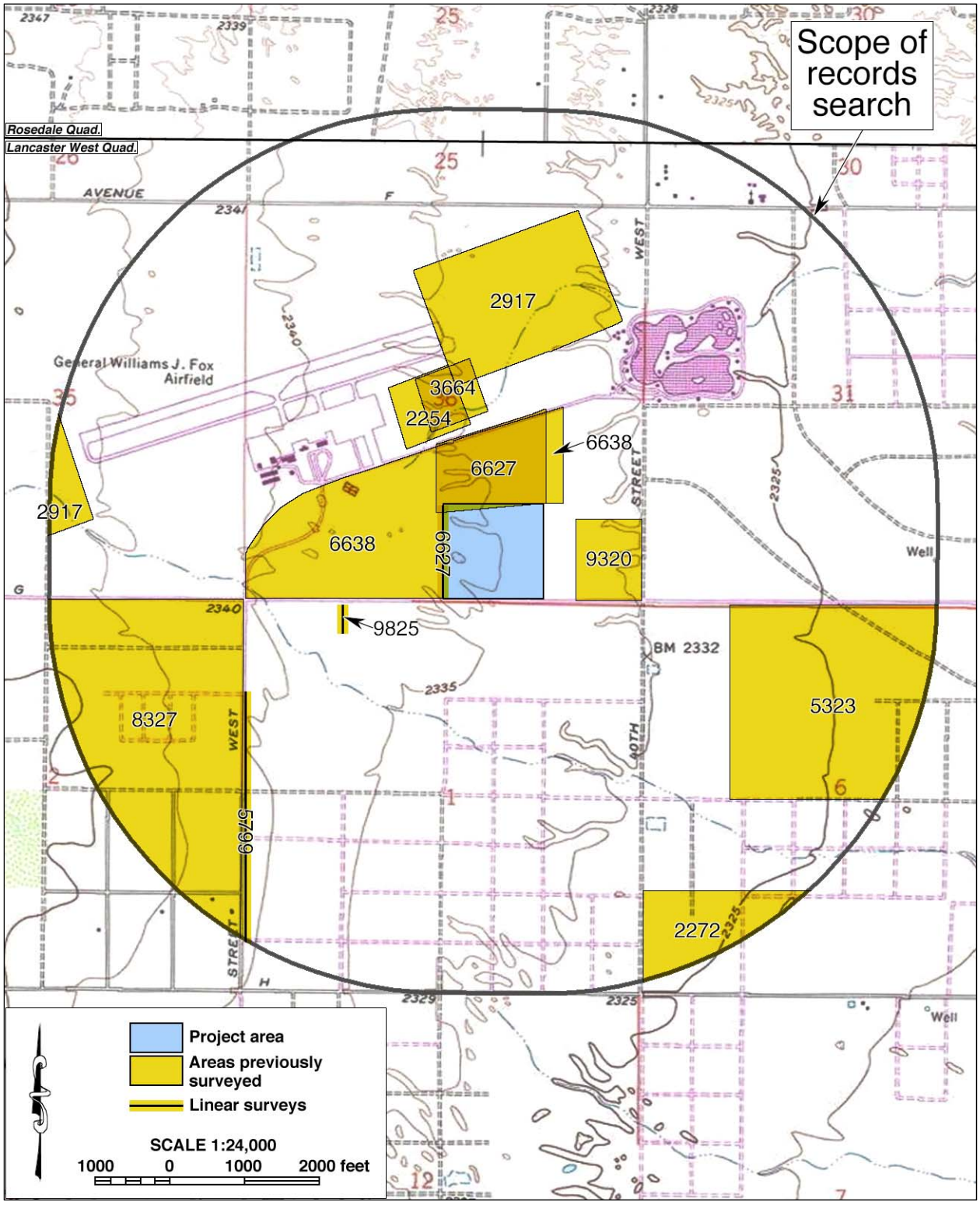

Figure 5. Previous cultural resources studies within the scope of the records search, listed by SCCIC file number. Locations of historical/archaeological resources are not shown as a protective measure.

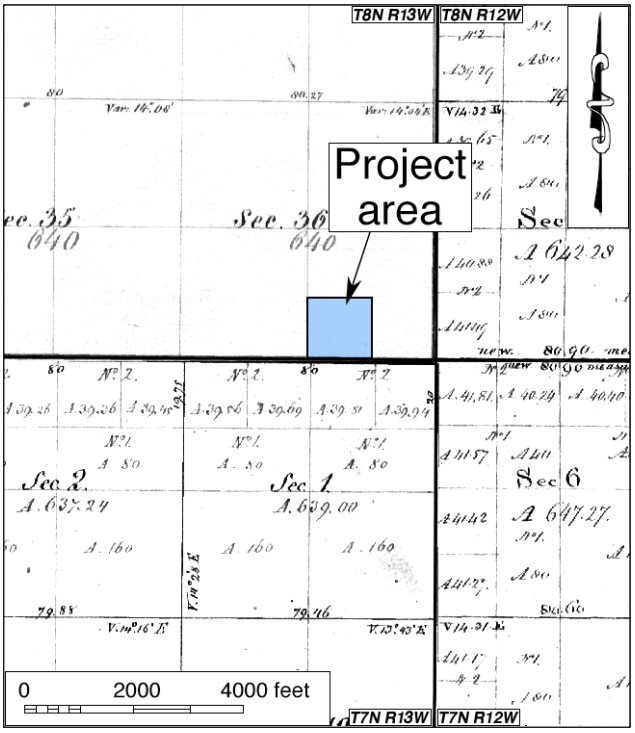

Figure 6. The project area and vicinity in 1853-1856. (Source: GLO 1856a-d)

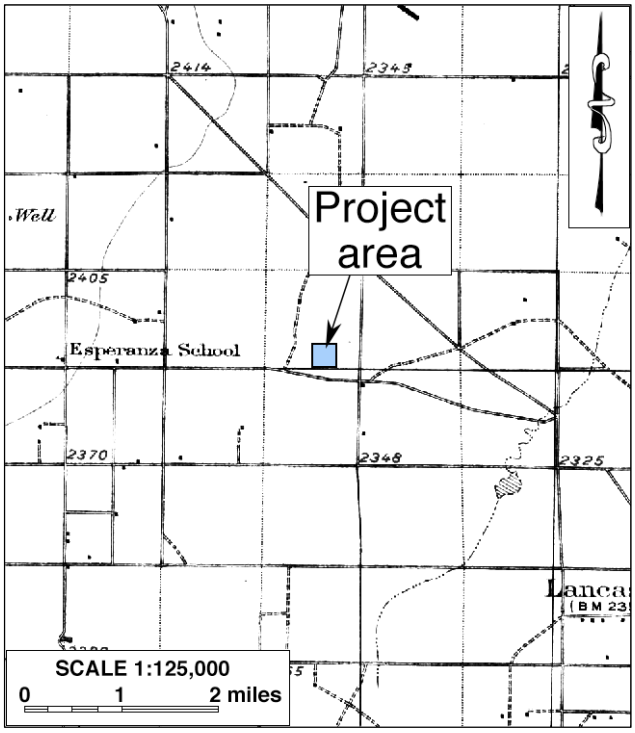

Figure 7. The project area and vicinity in 1915. (Source: USGS 1917)

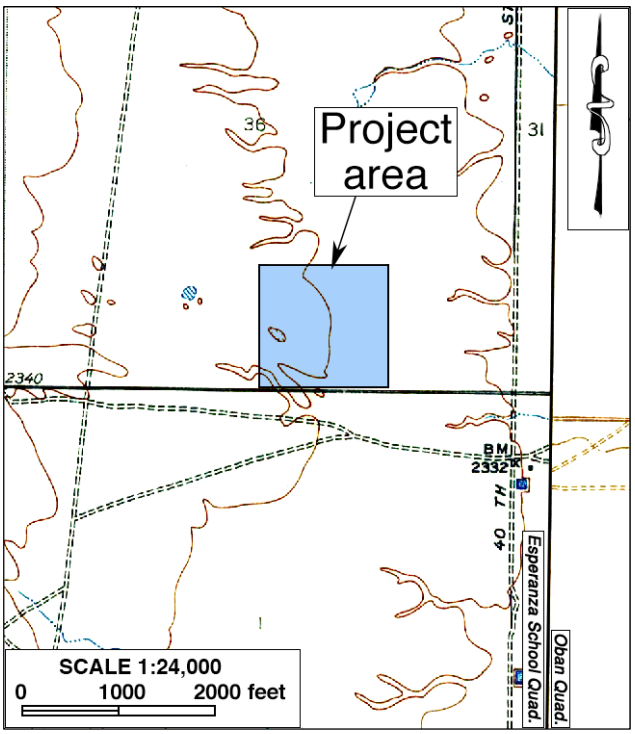

Figure 8. The project area and vicinity in 1930-1931. (Source: USGS 1933; 1934)

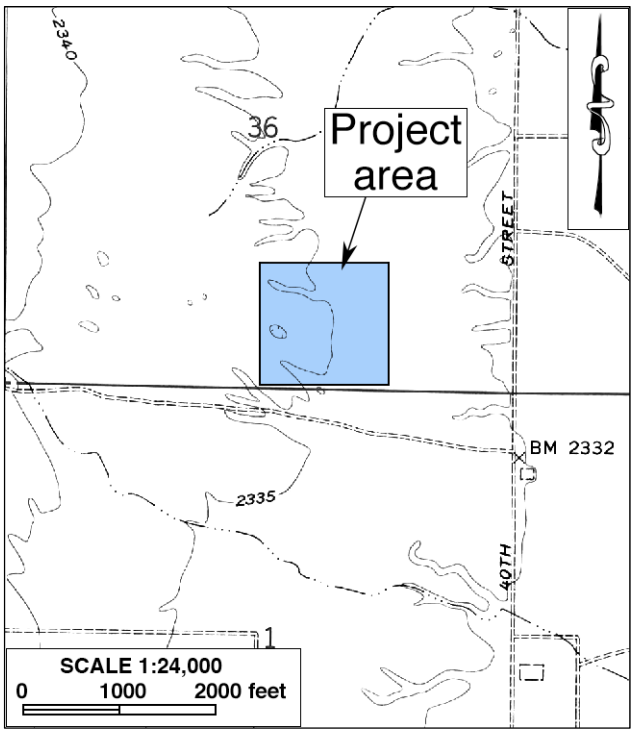

Figure 9. The project area and vicinity in 1956-1958. (Source: USGS 1958)

had become the nearest man-made features (NETR Online 1956; 1959). Avenue G was eventually turned into a paved local thoroughfare by the 1970s, but all other development around the project area, such as the improvement of 45th Street West and the construction of buildings on the surrounding properties, date only to the post-1994 era (NETR Online 1994-2016; Google Earth 1994-2015).

NATIVE AMERICAN PARTICIPATION

In response to CRM TECH's inquiry, the Native American Heritage Commission reported in a letter dated February 26, 2020, that Sacred Lands File identified no Native American cultural resources in the project vicinity. Noting that the absence of specific information would not necessarily indicate the absence of cultural resources, however, NAHC recommended that local Native American groups be consulted for further information and provided a referral list of potential contacts. NAHC's reply is attached to this report in Appendix 2 for reference by the City of Lancaster in future government-to-government consultations with the pertinent tribal groups.

FIELD SURVEY

The field survey produced completely negative results for potential "historical resources." Throughout the course of the survey, no buildings, structures, objects, sites, features, or artifact deposits of prehistoric or historical origin were encountered within the project area. The presence of underground utility lines was noted along the southern project boundary, on the northern edge of the Avenue G right-of-way, and some scattered refuse was observed on the property. All these items appeared to be modern in origin, however, and none of them was of any historical/archaeological interest.

DISCUSSION

The purpose of this study is to identify any cultural resources within the project area, and to assist the City of Lancaster in determining whether such resources meet the official definition of "historical resources" or "tribal cultural resources," as provided in the California Public Resources Code, in particular CEQA. According to PRC §5020.1(j), "'historical resource' includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California."

More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that "generally a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

In summary of the research results presented above, no potential "historical resources" were previously recorded within or adjacent to the project area, and none was found during the present survey. In addition, the Native American Heritage Commission did not identify any properties of traditional cultural value in the project vicinity, and no notable cultural features were known to be present on the property throughout the historic period. Based on these findings, and in light of the criteria listed above, the present study concludes that no "historical resources," as defined above, exist within or adjacent to the project area.

CONCLUSION AND RECOMMENDATIONS

CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired." As stated above, this study has identified no "historical resources" as defined by CEQA, within or adjacent to the project area. Accordingly, CRM TECH presents the following recommendations to the City of Lancaster:

- The proposed project will not cause a substantial adverse change to any known "historical resources."
- No further cultural resources investigation is recommended for the project unless development plans undergo such changes as to include areas not covered by this study.
- If buried cultural materials are discovered during earth-moving operations associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

REFERENCES

Blackburn, Thomas C., and Lowell John Bean
1978 Kitanemuk. In Robert F. Heizer (ed.): *Handbook of North American Indians*, Vol. 8: *California*; pp. 564-569. Smithsonian Institution, Washington, D.C.

GLO (General Land Office, U.S. Department of the Interior)
1856a Plat Map: Township No. 7 North Range No. 12 West, SBBM; surveyed in 1855-1856.
1856b Plat Map: Township No. 7 North Range No. 13 West, SBBM; surveyed in 1856.
1856c Plat Map: Township No. 8 North Range No. 12 West, SBBM; surveyed in 1853-1855.
1856d Plat Map: Township No. 8 North Range No. 13 West, SBBM; surveyed in 1853-1855.

Google Earth
1994-2015 Aerial photographs of the project vicinity; taken in 1994, 2003, 2005, 2006, 2008, 2009, 2011, 2012, and 2015. Available through the Google Earth software.
Hamilton, Eva, Ellen Beery, Olcott Bulkley, Clara McDougal, Florence Rector, Minta Thomason, Rutha Williams, and Blanche Wright
1913 *The Hart of Antelope Valley*. Antelope Valley Union High School student project, Lancaster. Reprinted in Glen A. Settle (ed.): *Here Roamed the Antelope*; pp. 19-41. The Kern-Antelope Historical Society, Rosamond, California, 1963.
NETR Online
1948-2016 Aerial photographs of the project vicinity; taken in 1948, 1953, 1956, 1959, 1965, 1971, 1974, 1994, 2005, 2009, 2010, 2012, 2014, and 2016. http://www.historicaerials.com.
USGS (United States Geological Survey, U.S. Department of the Interior)
1917 Map: Elizabeth Lake, Calif. (30', 1:125,000); surveyed in 1915.
1933 Map: Oban, Calif. (6', 1:24,000); surveyed in 1930.
1934 Map: Esperanza School, Calif. (6', 1:24,000); surveyed in 1931.
1958 Map: Lancaster West, Calif. (7.5', 1:24,000); aerial photographs taken in 1956, field checked 1958.
1969 Map: San Bernardino, Calif. (120'x60', 1:250,000); 1958 edition revised.
1973 Map: Rosedale, Calif. (7.5', 1:24,000); 1954 edition photorevised in 1968 and 1973.
1974 Map: Lancaster West, Calif. (7.5', 1:24,000); 1958 edition photorevised in 1974.
1975 Map: Los Angeles, Calif. (120'x60', 1:250,000); aerial photographs taken in 1972.
Warren, Claude N.
1984 The Desert Region. In Michael J. Moratto (ed.): *California Archaeology*; pp. 339-430. Academic Press, Orlando, Florida.
Warren, Claude N., and Robert H. Crabtree
1986 Prehistory of the Southwestern Area. In Warren L. d'Azevedo (ed.): *Handbook of North American Indians*, Vol. 11: *Great Basin*; pp. 183-193. Smithsonian Institution, Washington, D.C.

APPENDIX 1:
PERSONNEL QUALIFICATIONS

PRINCIPAL INVESTIGATOR/HISTORIAN
Bai "Tom" Tang, M.A.

Education

1988-1993	Graduate Program in Public History/Historic Preservation, UC Riverside.
1987	M.A., American History, Yale University, New Haven, Connecticut.
1982	B.A., History, Northwestern University, Xi'an, China.
2000	"Introduction to Section 106 Review," presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno.
1994	"Assessing the Significance of Historic Archaeological Sites," presented by the Historic Preservation Program, University of Nevada, Reno.

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside/Colton, California.
1993-2002	Project Historian/Architectural Historian, CRM TECH, Riverside, California.
1993-1997	Project Historian, Greenwood and Associates, Pacific Palisades, California.
1991-1993	Project Historian, Archaeological Research Unit, UC Riverside.
1990	Intern Researcher, California State Office of Historic Preservation, Sacramento.
1990-1992	Teaching Assistant, History of Modern World, UC Riverside.
1988-1993	Research Assistant, American Social History, UC Riverside.
1985-1988	Research Assistant, Modern Chinese History, Yale University.
1985-1986	Teaching Assistant, Modern Chinese History, Yale University.
1982-1985	Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China.

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (with Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

PRINCIPAL INVESTIGATOR/ARCHAEOLOGIST
Michael Hogan, Ph.D., RPA*

Education

1991	Ph.D., Anthropology, University of California, Riverside.
1981	B.S., Anthropology, University of California, Riverside; with honors.
1980-1981	Education Abroad Program, Lima, Peru.
2002	Section 106—National Historic Preservation Act: Federal Law at the Local Level. UCLA Extension Course #888.
2002	"Recognizing Historic Artifacts," workshop presented by Richard Norwood, Historical Archaeologist.
2002	"Wending Your Way through the Regulatory Maze," symposium presented by the Association of Environmental Professionals.
1992	"Southern California Ceramics Workshop," presented by Jerry Schaefer.
1992	"Historic Artifact Workshop," presented by Anne Duffield-Stoll.

Professional Experience

2002-	Principal Investigator, CRM TECH, Riverside/Colton, California.
1999-2002	Project Archaeologist/Field Director, CRM TECH, Riverside.
1996-1998	Project Director and Ethnographer, Statistical Research, Inc., Redlands.
1992-1998	Assistant Research Anthropologist, University of California, Riverside
1992-1995	Project Director, Archaeological Research Unit, U. C. Riverside.
1993-1994	Adjunct Professor, Riverside Community College, Mt. San Jacinto College, U.C. Riverside, Chapman University, and San Bernardino Valley College.
1991-1992	Crew Chief, Archaeological Research Unit, U. C. Riverside.
1984-1998	Archaeological Technician, Field Director, and Project Director for various southern California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural Diversity.

Cultural Resources Management Reports

Author and co-author of, contributor to, and principal investigator for numerous cultural resources management study reports since 1986.

Memberships

* Register of Professional Archaeologists; Society for American Archaeology; Society for California Archaeology; Pacific Coast Archaeological Society; Coachella Valley Archaeological Society.

PROJECT ARCHAEOLOGIST/FIELD DIRECTOR
Daniel Ballester, M.S.

Education

2013	M.S., Geographic Information System (GIS), University of Redlands, California.
1998	B.A., Anthropology, California State University, San Bernardino.
1994	University of Puerto Rico, Rio Piedras, Puerto Rico.
2007	Certificate in Geographic Information Systems (GIS), California State University, San Bernardino.
2002	"Historic Archaeology Workshop," presented by Richard Norwood, Base Archaeologist, Edwards Air Force Base; presented at CRM TECH, Riverside, California.

Professional Experience

2002-	Field Director/GIS Specialist, CRM TECH, Riverside/Colton, California.
1999-2002	Project Archaeologist, CRM TECH, Riverside, California.
1998-1999	Field Crew, K.E.A. Environmental, San Diego, California.
1998	Field Crew, A.S.M. Affiliates, Encinitas, California.
1998	Field Crew, Archaeological Research Unit, University of California, Riverside.

PROJECT ARCHAEOLOGIST/REPORT WRITER
Ben Kerridge, M.A.

Education

2014	Archaeological Field School, Institute for Field Research, Kephallenia, Greece.
2010	M.A., Anthropology, California State University, Fullerton.
2009	Project Management Training, Project Management Institute/CH2M HILL.
2004	B.A., Anthropology, California State University, Fullerton.

Professional Experience

2015-	Project Archaeologist/Report Writer, CRM TECH, Colton, California.
2015	Teaching Assistant, Institute for Field Research, Kephallenia, Greece.
2009-2014	Publications Delivery Manager, CH2M HILL, Santa Ana, California.
2010-	Naturalist, Newport Bay Conservancy, Newport Beach, California.
2006-2009	Technical Publishing Specialist, CH2M HILL, Santa Ana, California.

Memberships

Society for California Archaeology; Pacific Coast Archaeological Society.

PROJECT ARCHAEOLOGIST
Charly O'Keefe Shelton, B.A.

Education

2017	B.A., Anthropology, California State University, Los Angeles.
2016	Archaeological Field School, Department of Anthropology, California State University, Los Angeles.
2012	Geology and Anthropology Studies, Pasadena City College, Pasadena.

Professional Experience

2019-	Project Archaeologist/CRM TECH, Colton, California.
2014	Paleontological Consultant, Los Angeles County Sherriff 's Department, Montrose Search and Rescue Team.
2012-	Filmmaker, Cinematic Choice/Fulcrum, La Crescenta, California
2009-	Reporter/Editor/Tech Officer, *Crescenta Valley Weekly*, La Crescenta, California.
2005-2008	Field Excavation, Department of Paleontology, Natural History Museum, Los Angeles.
2005	Lecturer, various venues in the Los Angeles area.
2003-2009	Reporter, *Crescenta Valley Sun*,(*Los Angeles Times* insert), La Cañada.

Memberships

The Archaeological Conservancy; American Association for the Advancement of Science; Past Councilmember, Crescenta Valley Town Council.

APPENDIX 2

CORRESPONDENCE WITH NATIVE AMERICAN HERITAGE COMMISSION

SACRED LANDS FILE & NATIVE AMERICAN CONTACTS LIST REQUEST

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916)373-3710
(916)373-5471 (Fax)
nahc@pacbell.net

Project: Proposed Fox Field Area Project; Assessor's Parcel Numbers 3105-001-011, -012, -013, and -014 (CRM TECH No. 3591)

County: Los Angeles

USGS Quadrangle Name: Lancaster West and Rosedale, Calif.

Township 8 North **Range** 13 West SB **BM; Section(s)**: 36

Company/Firm/Agency: CRM TECH

Contact Person: Nina Gallardo

Street Address: 1016 E. Cooley Drive, Suite A/B

City: Colton, CA **Zip:** 92324

Phone: (909) 824-6400 **Fax:** (909) 824-6405

Email: ngallardo@crmtech.us

Project Description: The primary component of the project is to develop an industrial park on approximately 38 acres of vacant land located at the northeast corner of W. Avenue G and N. 45th Street W. (APNs 3105-001-011 to -014), in the City of Lancaster, Los Angeles County, California.

February 10, 2020

NATIVE AMERICAN HERITAGE COMMISSION

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

February 26, 2020

Nina Gallardo
CRM Tech

Via Email to: ngallardo@crmtech.us

Re: Fox Field Area Project, Los Angeles County

Dear Ms. Gallardo:

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

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

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

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

Sincerely,

Steven Quinn
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Los Angeles County
2/26/2020

Fernandeno Tataviam Band of Mission Indians
Jairo Avila, Tribal Historic and Cultural Preservation Officer
1019 Second Street, Suite 1 — Tataviam
San Fernando, CA, 91340
Phone: (818) 837 - 0794
Fax: (818) 837-0796
jairo.avila@tataviam-nsn.us

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Rroad — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Rroad — Cahuilla
Banning, CA, 92220 — Serrano
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899 — Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838 — Kitanemuk
Newhall, CA, 91322 — Vanyume
Phone: (503) 539 - 0933 — Tataviam
Fax: (503) 574-3308
ddyocum@comcast.net

San Manuel Band of Mission Indians
Jessica Mauck, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
jmauck@sanmanuel-nsn.gov

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343 — Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Fox Field Area Project, Los Angeles County.

Attachment 3

Paleontological Record Search Results

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

February 26, 2023

Michael Baker International
Attn: Max van Rensselaer

re: Paleontological resources for the Fox Field Project

Dear Max:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Fox Field project area as outlined on the portion of the Lancaster west USGS topographic quadrangle map that you sent to me via e-mail on February 17, 2023. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County (NHMLA).

Locality Number	Location	Formation	Taxa	Depth
LACM VP 7853	Waste Management of North America Lancaster Landfill	Unknown formation (Pleistocene; sandy loess under a dune deposit strand, sandy siltstone, siltstone to clayey siltstone)	Rabbit (*Sylvagus*), camel family (Camelidae), antelope squirrel (*Ammospermophilus*), kangaroo rat (*Dipodymus*), pocket mouse (*Perognathus*), pack rat (*Neotoma*), deer mouse (*Peromyscus*), vole family (Microtinae), iguana (*Dipsosaurus*), pocket gopher (*Thomomys*), spiny lizard (*Sceloporus*), side blotched lizard (*Uta*), colubrid snakes (*Trimorphodon, Masticophis, Phyllorhynchus*), night lizard (*Xantusia*), western alligator lizard (*Elgaria*), toothy skinks (*Plestiodon*), whiptail lizard (*Aspidocelis*), spiny lizards (Phrynosomatidae), smelt (Osmeridae)	3-11 feet bgs
LACM VP 7884	E of the SE corner of the intersection of East 3rd Street & East Avenue H-13	Unknown formation (Pleistocene; fluvial brown clayey silt)	Camel (*Camelops hesternus*)	4 feet bgs
LACM VP 5942-5950	Along Avenue S from Palmdale to	Unknown formation (Holocene)	Kingsnake (*Lampropeltis*), Lizard (Lacertilia), leopard lizard (*Gambelia*);	0-9 ft bgs

	Lake Los Angeles		snake (Ophidia), gopher snake (*Pituophis*); rabbit (*Lagomorpha*), rodent (Rodentia), Pocket gopher (*Thomomys*), pocket mouse (*Chaetodippus*), kangaroo rat (*Dipodomys*); birds (Aves)	
LACM VP CIT451	Near intersection of E Barrel Springs Rd & 47th St E (Palmdale Quad)	Harold Formation	Mastodon (Mammutidae), horse family (Equidae)	Unknown
LACM IP 445	Lake Rogers; Edwards Air Force Base	Unknown formation (upper Pleistocene lacustrine deposits)	Invertebrates (unspecified)	Unknown
LACM VP 7891	near the California Aqueduct between the Tehachapi Mountains & the Rosamond Hills north of Willow Springs	Unknown formation (Pleistocene)	Camel (*Hemiauchenia*)	21 feet bgs

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

This records search covers only the records of the NHMLA. It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,

Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice