Confidential

CALEXICO AND MOUNT SIGNAL SOLAR FARMS
CALEXICO, IMPERIAL COUNTY

Phase 1 Cultural Resources Survey Report

Prepared for
8minutenergy Renewables LLC
10100 Santa Monica Boulevard, Suite 300
Los Angeles, California 90067

October 2011

ESA

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Statement of Confidentiality

This report contains confidential cultural resources location information; report distribution should be restricted to those with a need to know. Cultural resources are nonrenewable, and their scientific, cultural, and aesthetic values can be significantly impaired by disturbance. To deter vandalism, artifact hunting, and other activities that can damage cultural resources, the locations of cultural resources should be kept confidential. The legal authority to restrict cultural resources information is in California Government Code § 6254.10 and the National Historic Preservation Act of 1966, as amended, § 304.

Management Summary

8minutenergy Renewables LLC (8ME) has retained Environmental Science Associates (ESA) to complete a Phase 1 Cultural Resources Survey Report for the proposed Calexico and Mount Signal Solar Farm Project (Project) located near the City of Calexico, Imperial County, California. The proposed Project includes the construction of three solar facilities on approximately 4,200 acres of land and a 230-kilovolt (kV) transmission line that will connect the three facilities. The transmission line is located, in part, on Bureau of Land Management lands. The Imperial County Department of Planning and Development Services is the responsible lead agency for Project compliance with the California Environmental Quality Act (CEQA).

This Phase 1 Cultural Resources Survey Report details the methods and results of the study, which consisted of an archival records search and a field survey. The records search indicated that three cultural resources (the All-American Canal, CA-IMP-7130; a historic-era mesquite thicket, CA-IMP-3325; and a segment of the Westside Main Canal, CA-IMP-7834) have been previously recorded within a 1-mile radius of the Project area. None of the three previously recorded resources are located within the Project area itself. A total of three new cultural resources, a historic-period debris scatter (temporarily designated ESA-CAL-1), the landscape remnants of a historic-period farmstead (temporarily designated ESA-CAL-2), and a historic-period residence (temporarily designated ESA-CAL-3 were identified in the Project area as a result of the field survey. Resources ESA-CAL-1, ESA-CAL-2, and ESA-CAL-3 were evaluated as part of this study and are recommended not eligible for listing in the California Register of Historical Resources and are not considered significant resources under CEQA.

The Project area is located in agricultural fields that have been subject to disturbances likely up to at least 2 feet in depth. The proposed Project will be constructed within the agricultural fields themselves. Any Imperial Irrigation District (IID) irrigation canals and drains will remain in place, including maintenance of access roads located within IID easements.

Based on the results of the archival records search and field survey, as well as the previous disturbance associated with agricultural activities in the Project area, ESA has determined that the Project area has a low sensitivity for encountering cultural resources during construction. Recommendations for actions to be taken in the event of inadvertent discovery of cultural resources and/or human remains are provided in the *Summary and Recommendations* section at the close of this report.

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Introduction

8minutenergy Renewables LLC (8ME) has retained Environmental Science Associates (ESA) to complete a Phase 1 Cultural Resources Survey Report for the Calexico and Mount Signal Solar Farm Project (Project) located near the City of Calexico, Imperial County, California (Figure 1). The proposed Project includes the construction of three solar facilities on approximately 4,200 acres of land (Figure 2). The Project area is currently being used for agriculture. ESA has conducted this cultural resources study in compliance with the California Environmental Quality Act (CEQA). The study will be used in support of an Environmental Impact Report (EIR) being prepared for the Project. The Imperial County Department of Planning and Development Services is the lead agency responsible for Project compliance with CEQA.

The purpose of this cultural resources study is to:

- Identify potential or documented prehistoric and historic-period cultural resources within the Project area;
- Identify potential Project-related impacts to identified and potential cultural resources; and
- Recommend further procedures to avoid potential significant impacts to cultural resources.

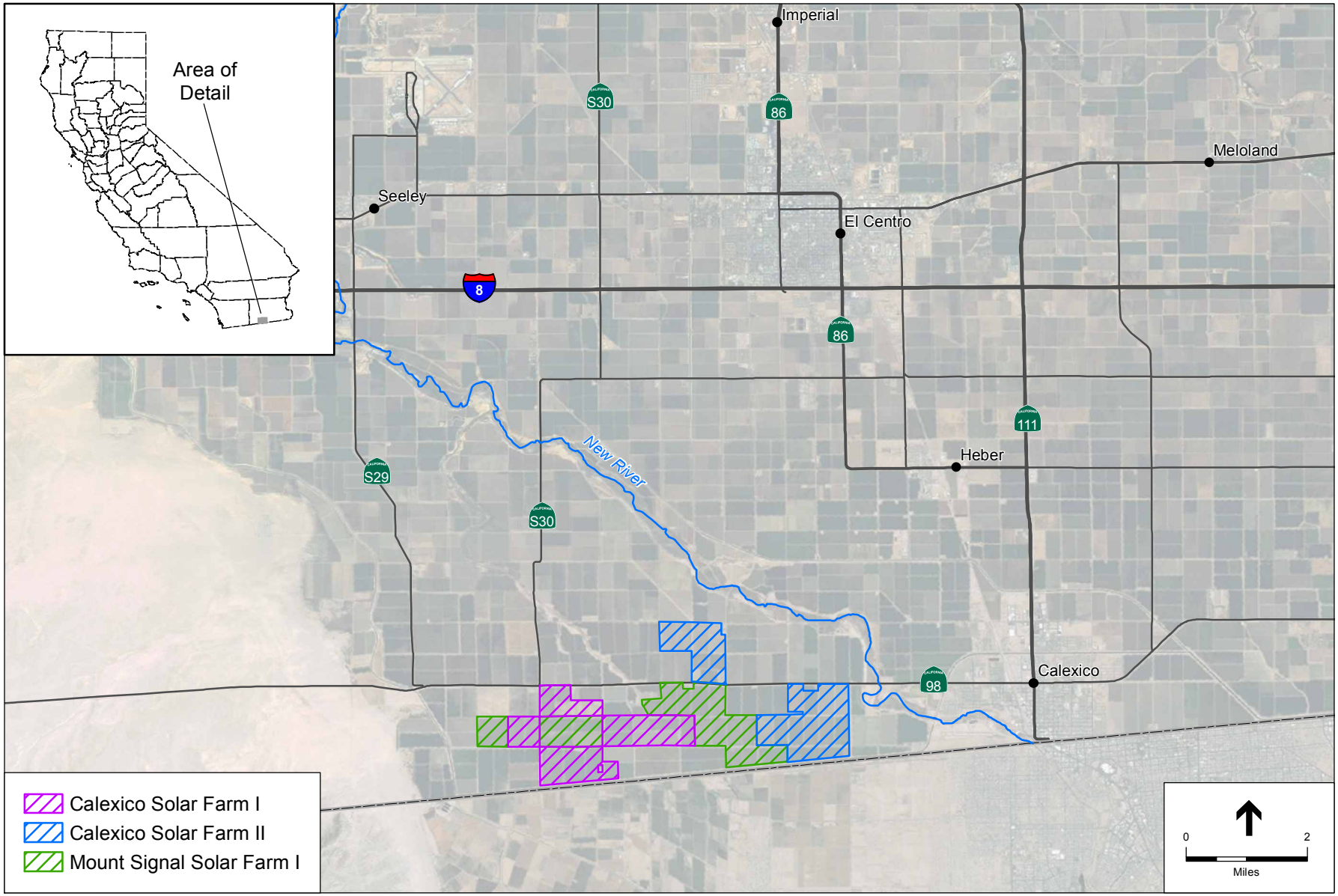
This study was completed by Madeleine Bray who has an M.A. in Archaeology, is a Registered Professional Archaeologist (R.P.A.), and has 4 years of archaeological experience throughout California, and Candace Ehringer, who has an M.A. in Archaeology, is a R.P.A., and has over 10 years of archaeological experience throughout California. Monica Strauss, M.A., R.P.A, served as Principal Investigator. Each of these staff members meet the Secretary of the Interior's Professional Qualifications Standards for archaeologists. Katherine Anderson, M.A., prepared the historic architectural evaluation and meets the Secretary of the Interior's Professional Qualifications Standards for architectural historian. This Phase 1 Cultural Resources Survey Report details the methods and results of the study, which consisted of an archival records search and a field survey.

Project Location and Description

8ME proposes to sponsor three solar facilities connected by an associated dual-circuit 230 kV transmission line on private land located approximately 2 to 8 miles west of Calexico in Imperial County, California (Figure 3). The proposed solar facilities are:

- an up-to-200-MW PV Calexico Solar Farm I (CSF-I, composed of Phases A and B; developed by 88FT 8ME, LLC);
- an up-to200-MW PV Calexico Solar Farm II (CSF-II, composed of Phases A and B; developed by 89MA 8ME, LLC);
- an up-to-200-megawatt (MW) photovoltaic (PV) Mount Signal Solar Farm I (MSSF-I; developed by 82LV 8ME, LLC).

The three solar facilities will tie into a proposed 230-kilovolt (kV) transmission line that will be constructed as part of the MSSF-I project. The transmission line is located, in part, on Bureau of Land Management land.

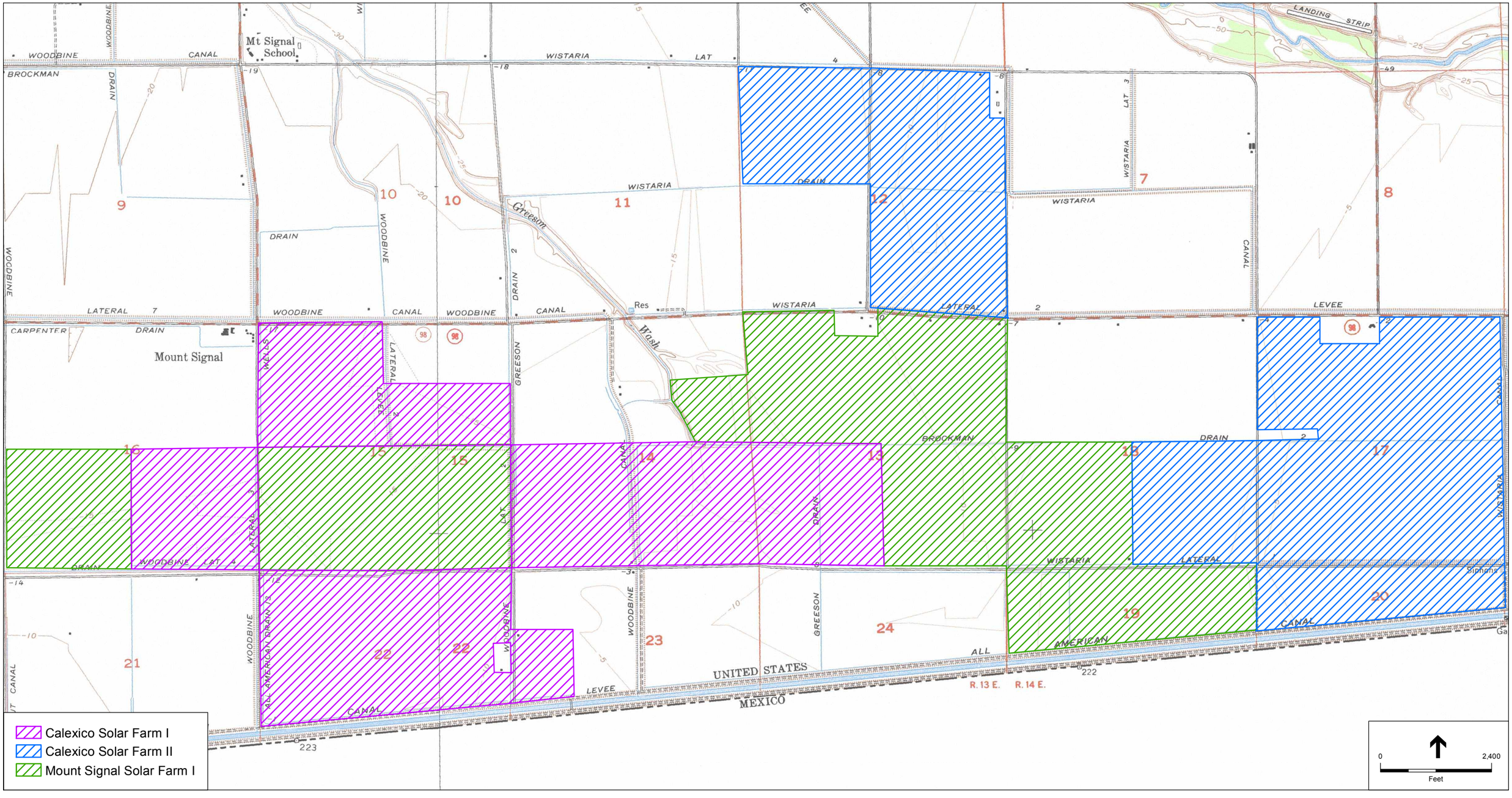


SOURCE: Bing Maps; ESRI; ESA, 2011.

Calexico . 211837

Figure 1

Regional Location Map



SOURCE: USGS

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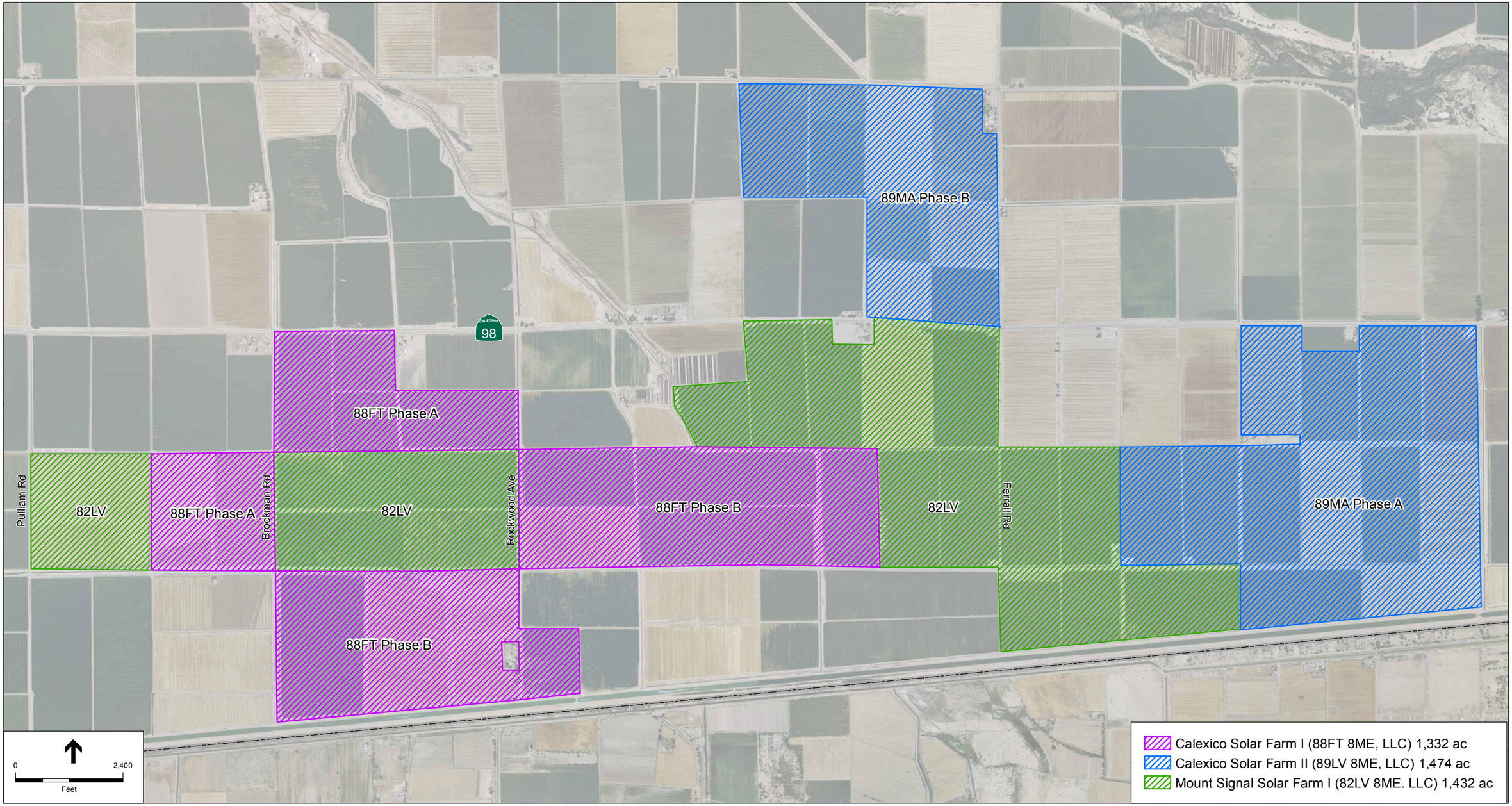
Figure 2

Project Location Map



SOURCE: USGS

Calexico. 211837

Figure 3

Project Facilties Map

Calexico Solar Farm I (Phases A & B)

The CSF-I solar facility includes four solar fields totaling approximately 1,330 acres that are situated on agricultural fields between State Route 98 to the north and the U.S.-Mexico border to the south, and between a private road to the west (½ mile east of Pulliam Rd) and a private road to the east, one-half mile west of Ferrell Road. This project will be constructed in two Phases (A and B) with a combined production total of up to 200 MW.

CSF-I Assessor's Parcel Numbers (1,330 acres):

- Phase A (720 acres): 052-210-001, 052-210-002, 052-210-015, 052-210-14
- Phase B (610 acres): 052-190-011, 052-210-037, 052-210-038, 052-210-039, 052-210-018

CSF-I is located on the U.S.G.S. Heber and Mount Signal, CA 7.5-minute topographic quadrangle and is legally described as portions of Sections 14, 15, 16, and 23 of Township 17 South, Range 13 East, SBB&M [San Bernardino Base & Meridian].

Calexico Solar Farm II (Phases A & B)

The CSF-II solar facility includes two solar fields totaling approximately 1,470 acres that are situated on agricultural fields generally located between Kubler Road to the north and the U.S.-Mexico border to the south, and between Hammers Road to the east and a private road to the west, one-half mile west of Corda Road. This project will also be constructed in two Phases (A and B) with a combined production total of up to 200 MW.

CSF-II Assessor's Parcel Numbers (1,470 acres):

- Phase A (940 acres): 059-110-006, 059-110-008, 059-130-003, 059-110-003, 059-110-007
- Phase B (530 acres): 052-180-043, 052-180-044, 052-180-022, 052-180-050, 052-180-051

CSF-II is located on the U.S.G.S. Heber, CA 7.5-minute topographic quadrangle and is legally described as a portion of Section 12of Township 17 South, Range 13 East, and portions of Sections 17, 18, and 20 of Township 17 South, Range 14 East, SBB&M.

Mount Signal Solar Farm I

The MSSF-I solar facility includes three solar fields totaling approximately 1,440 acres that are situated on agricultural fields between State Route 98 to the north and the U.S.-Mexico border to the south, and between Pulliam Road to the west and Weed Road to the east. This project will have a production of up to 200 MW.

MSSF-I Assessor's Parcel Numbers (1,440 acres):

- Parcel I (560 acres): 052-210-013; 052-210-036; 052-210-034; 052-210-035
- Parcel II (380 acres): 059-130-001; 059-130-002; 059-130-004; 059-130-005
- Parcel III (330 acres): 052-210-016
- Parcel IV (170 acres): 052-190-012

MSSF-I is located on the U.S.G.S. Heber and Mount Signal, CA 7.5-minute topographic quadrangle and is legally described as portions of Sections 18 and 19 of Township 17 South, Range 14 East, and portions of Sections 13, 14, 15, and 16 of Township 17 South, Range 13 East, SBB&M.

The residence associated with assessor's parcel number 059-130-002 (within Project Parcel II) may be demolished as part of this Project.

The solar facilities for each, CSF-I, CSF-II, and MSSF-I, will be constructed within the agricultural fields themselves. Any Imperial Irrigation District (IID) irrigation canals and drains will remain in place, including maintenance of access roads located within IID easements.

Regulatory Framework

Numerous laws and regulations require federal, state, and local agencies to consider the effects a project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Register of Historic Places (NRHP); CEQA; and the California Register of Historical Resources (CRHR), Public Resources Code (PRC) 5024, are the primary federal and State laws governing and affecting preservation of cultural resources of national, State, regional, and local significance.

Federal

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 historic resources and to indicate what properties should be considered for protection from destruction or impairment" (Code of Federal Regulations [CFR] 36 Section 60.2). The NRHP recognizes both historical-period and prehistoric archaeological 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 meet one or more of the following four established criteria (U.S. Department of the Interior, 1995):

A. Are associated with events that have made a significant contribution to the broad patterns of our history;

B. Are associated with the lives of persons significant in our past;

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for NRHP listing (U.S. Department of the Interior, 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (U.S. Department of the Interior, 1995). The NRHP recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

State

The State implements the NHPA through its statewide comprehensive cultural resources surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions. The OHP advises recordation of any resource 45 years or older, since "there is commonly a five year lag between resource identification and the date that planning decisions are made" (OHP, 1995).

California Register of Historical Resources

The CRHR is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The criteria for eligibility for the CRHR are based upon NRHP criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined eligible for, or listed in, the NRHP.

To be eligible for the CRHR, a prehistoric or historic-period property must be significant at the local, State, and/or federal level under one or more of the following four 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; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the CRHR must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a

historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the NRHP, but it may still be eligible for listing in the CRHR.

Additionally, the CRHR consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The CRHR automatically includes the following:

- California properties listed on the NRHP and those formally Determined Eligible for the NRHP;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the CRHR.

Other resources that may be nominated to the CRHR include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the NRHP, the CRHR, and/or a local jurisdiction register);
- Individual historical resources;
- Historical resources contributing to historic districts; and
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State and is *codified at PRC Section 21000 et seq.* CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or archaeological resources.

Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. The *CEQA Guidelines* (Section 15064.5) recognize that an historical resource includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the *CEQA Guidelines* apply. If a project may cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (*CEQA Guidelines* Sections 15064.5(b)(1), 15064.5(b)(4)).

If an archaeological site does not meet the criteria for a historical resource contained in the *CEQA Guidelines*, then the site may be treated in accordance with the provisions of Section 21083, which is a unique archaeological resource. As defined in Section 21083.2 of CEQA a "unique" archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site is to be treated in accordance with the provisions of Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required.

The *CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (*CEQA Guidelines* Section 15064.5(c)(4)).

Native American Heritage Commission

Section 5097.91 of the California PRC established the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

California Public Records Act

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native

American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency."

Health and Safety Code, Sections 7050 and 7052

Health and Safety Code, Section 7050.5, declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code, Section 622.5

The California Penal Code, Section 622.5, provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands, but specifically excludes the landowner.

Public Resources Code, Section 5097.5

PRC Section 5097.5, defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

Local

Imperial County General Plan

The Imperial County General Plan provides goals, objectives, and policies for the identification and protection of significant cultural resources. The Open Space Element of the General Plan includes goals, objectives, and policies for the protection of cultural resources and scientific sites that emphasize identification, documentation, and protection of cultural resources.

Cultural Context

Environmental Background

The Project is located in the Imperial Valley, a part of the Salton Trough in the Colorado Desert physiographic province of California. The topography of the Imperial Valley is relatively flat, with few significant land features. The valley floor slopes gently to the north (less than 0.5 percent) from an elevation of sea level at Calexico to approximately 225 feet below sea level at the Salton Sea. Annual rainfall in this arid region is less than 3 inches per year with four months of average summertime temperatures above 100ºF. Winters temperatures are mild, seldom reaching freezing.

The Salton Trough is bounded on the east and northeast by the San Andreas Fault and on the west by the San Jacinto fault zone. This trough is filled with more than 15,000 feet of Miocene and younger, marine and non-marine sediments capped by approximately 100 feet of Pleistocene and later lacustrine deposits that have been deposited by intermittent filling of the fresh-water Lake Cahuilla.

The Project area consists essentially of flat agricultural fields with minimal improvements. Underlying materials consist primarily of alluvial sediments of varying thicknesses.

Prehistory

This first period of human occupation in California is commonly referred to as the Paleoindian Period (12,000 to 8,000 years B.P*)*, and was characterized by small groups of nomadic hunter-gatherers. To date, few Paleoindian sites have been identified in the Colorado Desert (Schaefer and Laylander, 2007).

During the Archaic period (8,000 to 1,500 B.P), populations grew and prehistoric economies became more diversified, shifting away from large game hunting. New technologies, such as the milling stone, indicate an increasing dependence on plant resources. Other Archaic period artifacts include Gypsum, Elko, and Humboldt projectile points. Significant Archaic period sites in the Colorado Desert are the Indian Hill Rockshelter site in present-day Anza-Borrego Desert State Park; a small rock shelter in Tahquitz Canyon; and several sites in the northern Coachella Valley (Schaefer, 1994; Schaefer and Laylander, 2007). These northern Coachella sites produced deeply buried deposits, clay-lined hearths, shell beads, milling equipment, Coso obsidian bifaces, and faunal remains. Their earliest components have been radiocarbon dated to around 3,000 years B.P. (Love and Dahdul, 2002).

By the Late Prehistoric or Patayan period (1,500 B.P to the historic era), an extensive network of established trade routes wound their way through the desert. Several major trails crossed the Mojave and Colorado Deserts before and at the time of Spanish contact, and continued to be used not only by the native peoples but by Euro-American explorers as well. The Yuma-Needles Trail ran from south of Yuma up the western side of the Colorado River to the Needles area. The Mojave Trail ran from Needles west across the desert to the coast. The Cocomaricopa Trail ran from Arizona through the Salton Sink and then northwest to meet the Mojave Trail near San Bernardino (Greene, 1983). The complex network of prehistoric trails consisted of major travel routes and special activity areas, interconnected with smaller trails. Broken ceramic vessels, lithic debitage, and small rock features or shrines are often found along trails (Schaefer, 1994). It is also believed that these trade routes encouraged or were the motivating factors for the development of an “increasingly complex socioeconomic and sociopolitical organization” within Protohistoric peoples in the Southern California area (Sutton and Basgall, 2007).

Artifacts typical of the Late Prehistoric period include Desert Side-notched and Cottonwood projectile points, brownware and buffware ceramics, and steatite shaft straighteners. Ceramics appear to have been introduced in the Salton Basin by about 1,000 B.P. Imported goods from the California coast, such as shell beads, are also found and testify to the importance of trade during

this period. Late Prehistoric sites are often associated with trails, pictographs, petroglyphs, bedrock milling surfaces, and rock shelters. During this period, a shift took place along the Colorado River from hunting and gathering to floodplain horticulture. A large number of Late Prehistoric sites have been found on the shoreline of ancient Lake Cahuilla (Schaefer, 1994).

Lake Cahuilla

The body of water known as Lake Cahuilla formed when waters from the Colorado River were diverted into the Salton Trough. The lake formed and receded in no fewer than three separate events between A.D. 1200 and the late 1600s (Schaefer and Laylander, 2007). It is unknown whether the lake was present during the earlier Holocene; however, there is little evidence of Early or Middle Holocene archaeological sites along the lake margins. Each infilling would have occurred over a number of years, estimated at about 20 years per infilling. Desiccation of the lake would have taken three times as long in each instance (Laylander, 2006). At its maximum, the lake would have covered an area of 5,500 square kilometers and had over 400 kilometers of shoreline (Laylander, 2006). During much of the Holocene, the Project area would have been submerged under Lake Cahuilla.

Plant and animal life would have abounded along the lake's shore and attracted both permanent and seasonal human occupation. When the lake was present, it was home to freshwater fish, shellfish, aquatic birds, and riparian flora and fauna. In addition, the lake was a source of potable water for the human and animal populations (Laylander, 2006).

Settlement along the lake's shoreline was most intensive along the northwest shores, with some large-scale multiseasonal occupations in addition to smaller seasonal camps. Fish traps and slab-lined house pits have been recorded along the northwest shoreline. Along the eastern shoreline, smaller sites such as seasonal campsites are more common; however, some more complex sites exist where washes emptied into the lake. Little evidence is available regarding evidence of settlement along the lake's southern shore. One notable feature of the southern shore is Obsidian Butte, which was a major source of obsidian for coastal southern California. Exploitation of the resource was limited by the presence of the lake; when the lake stood higher than an elevation of 40 meters below sea level, Obsidian Butte was submerged and inaccessible (Schaefer and Laylander, 2007).

Ethnography

The Imperial Valley was inhabited by a group of people known generally as the Kumeyaay. The Kumeyaay were also known as the Diegueño, a term used to describe a number of linguistically and culturally related Native groups that came under the governance of the Mission San Diego de Alcalá after the mission was established in 1769 (Luomala, 1978). The Kumeyaay have also been referred to in the past as Ipai-Tipai. Diegueño groups residing in the Imperial Valley were sometimes known as the Kamia or Desert Kumeyaay (Luomala, 1978).

The Kumeyaay occupied an area that encompassed roughly southern present-day San Diego County, southern Imperial County, and northern Baja California (Kroeber, 1925). Their territory

ranged from the coast through the Peninsular Ranges to the Colorado Desert. To the east of the Kumeyaay and along the southern Colorado River area were the Yuman peoples (traditional Quechan tribal area). Kumeyaay territory was bordered on the north by the Luiseño, Cupeño, and Cahuilla.

The Kumeyaay language belonged to the Yuman language family, Hokan stock - the same family that includes the lower Colorado River tribes and other Arizona groups (Luomala, 1978). Culturally, however, the Kumeyaay also shared many similar traits with their northern, Luiseño and Cahuilla neighbors. Within their cultural assemblage are numerous lithic tools such as projectile points, scrapers, baskets, pottery manufacture, twines for nets and other textile objects, houses of bulrush, the bow and arrow, and cremation burials. Subsistence strategy for the Kumeyaay involved small-game hunting and resource gathering, with a noted reliance upon marine resources near San Diego Bay and along the Pacific Coast. Inland Kumeyaay populations followed similar subsistence strategies to the Luisueño and the Cahuilla, with a primary reliance upon the exploitation of small game animals including insects, fish, birds, dove, rabbits, and squirrels, as well as abundantly available vegetal resources such as many varieties of seeds, principally the acorn, cacti, and herbaceous plants. Studies indicate that the Kumeyaay divided their seasonal subsistence between the mountain and the desert ecological zones. With the seasons, the Kumeyaay moved in small bands from one productive area to another to ensure a near constant food supply (Luomala, 1978).

In 1769, the Mission San Diego de Alcala was founded and Kumeyaay were missionized and eventually moved onto reservations (Luomala, 1978); however, inland Kumeyaay groups were likely outside of the direct influence of the mission. Today, Kumeyaay tribal members within the United States are divided into twelve federally recognized bands: Barona, Campo, Ewiiaapaayp, Inaja-Cosmit, Jamul, La Posta, Manzanita, Mesa Grande, San Pasqual, Santa Ysabel, Sycuan, and Viejas. An additional San Diego County band, the Kwaaymii Laguna Band of Indians, is not currently federally recognized. Several more Kumeyaay communities are present in Mexico.

History

The historic period for southeastern California began in 1540 with the explorations of Hernando de Alarcón, who traveled up the Colorado River from the Gulf of California, and Melchior Diaz, who came by land to the Imperial Valley area. The first non-native, historic-period utilization of the desert region was as a passageway between destinations. For almost a century, no permanent settlements of any kind were established in the region. In 1774, Father Francisco Garcés accompanied an expedition led by Juan Bautista de Anza from the San Gabriel Mission to the junction of the Gila and Colorado Rivers (Bean and Vane, 2002).

The Spanish missions that dotted the California coast never spread inland, and the desert remained relatively unexplored and unsettled by Europeans for much of the next century. The Romero-Estudillo Expedition of 1823-24 was an attempt by the Spanish to establish a secure route between the California Coast and Tucson; however, despite two attempts, the expedition never managed to make it as far as the Colorado River (Greene, 1983).

In 1821, Mexico won its independence from Spain. Mexico continued to promote settlement of California with the issuance of land grants. In 1833, Mexico secularized the missions, reclaiming the majority of mission lands and redistributing them as land grants. Mexico ceded California to the United States as part of the Treaty of Guadalupe Hildalgo, which ended the Mexican-American War (1846-1848). California officially became a state in 1850 (Starr, 2007).

Imperial Valley

Permanent American settlement of the Imperial Valley came in the first years of the 1900s. In 1901, the Imperial Canal was constructed to deliver water from the Colorado River to the valley, allowing for agricultural development. The Southern Pacific Railroad built a branch line from Niland to Calexico between 1902 and 1904, further facilitating growth of the region (Salton Sea Authority, 2003; Chudleigh, 2011). Imperial County was formed from eastern San Diego County in 1907 (County of Imperial, 2006).

In 1905, a temporary diversion of the Colorado River breached, causing the river to change course and flow into the Salton Sink. The flow created two new river channels (Alamo River and New River) and continued to fill the Salton Sink for two years, creating the extant Salton Sea. In 1907, the breach was finally closed (Salton Sea Authority, 2003; Chudleigh, 2011). The Alamo River and New River continue to flow into the Salton Sea today.

In 1911, the IID formed and began work toward a new irrigation system for the Imperial Valley. Federal creation of a dam to control the flow of the Colorado River was authorized in 1928 and the Hoover Dam (Boulder Dam) was completed in 1935. A new canal, known as the All American Canal, was constructed between 1934 and 1942 to deliver water from the Colorado River to the Imperial Valley and is still in use today (Salton Sea Authority, 2003; Chudleigh, 2011).

Agriculture and livestock remain the dominant industries in the Imperial Valley. The top ten commodities in 2010 included cattle, leaf lettuce, alfalfa, head lettuce, onions, broccoli, sugar beets, carrots, cantaloupes, and sudangrass (Imperial County, 2010).

Cultural Resources Methods and Results

This Phase 1 Cultural Resources study includes (1) archival research conducted by AECOM, and (2) a pedestrian survey conducted by ESA. The following section summarizes the methods and results of the study.

Archival Research

A records search for the Project was requested from the South Coastal Information Center by AECOM (AECOM 2011a; 2011b; 2100c). The records search included a review of all previously recorded cultural resources and cultural resources reports on file within a 1-mile radius of the Project. Included in the records search was a review of archaeological and historic site forms, historic maps, the CRHR, and the NRHP. The archival research was conducted prior to the field

survey to determine if any portions of the Project area had been subject to previous cultural resources study and to familiarize surveyors with the types of resources previously encountered in the vicinity.

Previous Investigations

The records search indicated that a total of 24 cultural resources studies have been previously conducted within a 1-mile radius of the Project. A total of eight cultural resources studies were previously conducted within 1 mile of CSF-I, of which four included portions of the Project area (AECOM 2011a). A total of five cultural resources studies were previously conducted within 1 mile of CSF-II, of which four included portions of the Project area (AECOM 2011b). A total of 11 cultural resources studies were previously conducted within 1 mile of MSSF-I, of which five included portions of the Project area (AECOM 2011c). Additional information concerning the previous investigations conducted within 1 mile of the Project can be found in AECOM's record search summaries attached as Appendix A.

Previously Recorded Resources

The records search revealed that a total of three cultural resources have been previously recorded within 1 mile of the Project (Table 1). The resources include: segments of the All-American Canal (CA-IMP-7130); a historic-era mesquite thicket (CA-IMP-3325); and a segment of the Westside Main Canal (CA-IMP-7834). None of the three resources are located within the Project area.

TABLE 1
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN 1 MILE OF THE PROJECT

Permanent Trinomial (CA-IMP-)	P-Number (P-13-)	Description	Date Recorded	Nearest Project Area
7130	007130	Segments of the All-American Canal	2005; 2001; 2000; 1997; 1996; 1994	Calexico I, Calexico II, Mount Signal I
3325	003325	Historic mesquite thicket	1880	Calexico II
7834	008334	Segment of the Westside Main Canal	2009; 2007; 2000; 1999	Mount Signal I

SOURCE: AECOM 2011a, 2011b, 2011c

Field Survey

ESA conducted field surveys of the Project area October 11 through October 17, 2011. The survey crew was led by ESA archaeologists Madeleine Bray, M.A., R.P.A. and Candace Ehringer, M.A., R.P.A.

Survey Methods

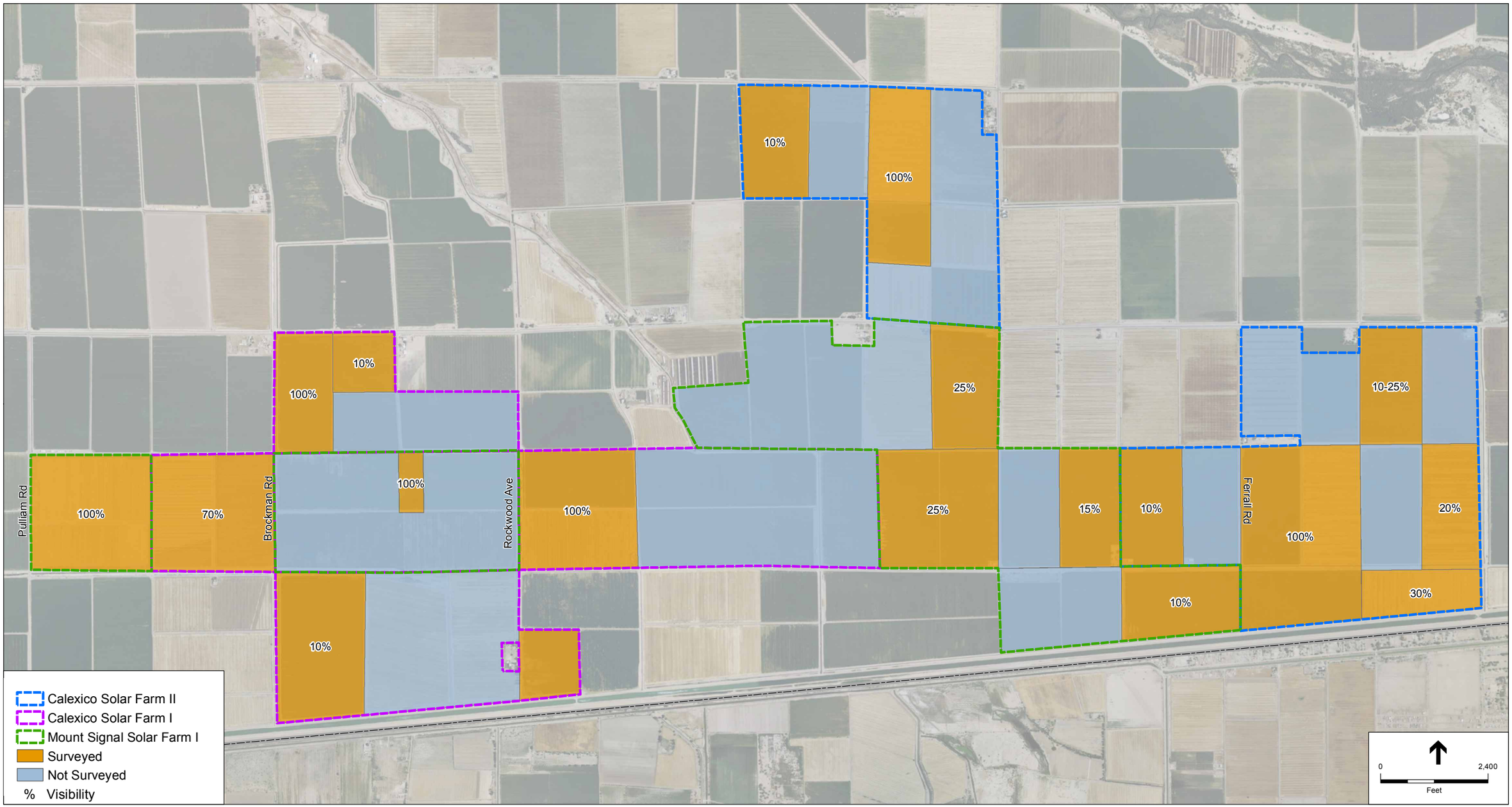
All accessible areas of the 4,200-acre Project area with adequate ground visibility were subject to intensive pedestrian survey and resulted in the survey of a total of 1,790 acres. Survey was conducted in transects of no greater than 30 meters (100 feet). Surveyed and unsurveyed areas are depicted in Figure 4.

All portions of the Project area that were accessible to surveyors and that exhibited a ground surface visibility of 10 percent or greater were surveyed (Plates 1 and 2). The entire Project area consists of land in use for agriculture. Typically, areas that were surveyed included fields that were barren and recently disked; hay fields where the hay had been recently cut and/or baled; and alfalfa fields where the alfalfa small in size and was spaced widely enough to allow for greater than 10 percent visibility.

At the request of several farmers, areas containing newly planted crops and areas where sheep were present were not surveyed. Other areas that were not surveyed included fields with less than 10 percent visibility (typically hay fields and alfalfa fields); fields that were flooded; fields that were being actively farmed (e.g. workers were physically present in the field and performing tasks such as cutting or baling hay); and fields where pesticides were being applied.

Visibility varied greatly across the Project area. Fields that were barren offered 100 percent visibility. Visibility in fields where hay had been recently cut ranged from 10-70 percent. Fields with alfalfa offered 10-30 percent visibility. In all areas, the soils had clearly been heavily disturbed by agriculture.

Any cultural resources encountered during the survey were documented and recorded on the appropriate Department of Parks and Recreation (DPR) 523 forms. Each newly recorded resource was given a temporary field designation, then documented, photographed, and recorded. Isolated historic artifacts and modern (post-1965) features were not recorded and such objects and features are not considered cultural resources for the purpose of this analysis. Because the proposed project would be constructed within agricultural fields, and because Imperial Irrigation District (IID) irrigation canals and drains will remain in place and will not be impacted by the proposed project, historic-era water conveyance features were not recorded.



SOURCE: USGS

Calexico. 211837

Figure 4

Survey Coverage Map

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Plate 1: Overview- Barren Field

Plate 2: Overview – Field with baled hay

Survey Results

Three cultural resources, a historic-period debris scatter (temporarily designated ESA-CAL-1), the landscape remnants of a historic-period farmstead (temporarily designated ESA-CAL-2), and a historic-period residence (temporarily designated ESA-CAL-3) were recorded in the Project area as a result of the field survey. DPR 523 forms for each of the three recorded resources are attached in Appendix B. The resources are described below.

Historic-Period Debris Scatter (temporary designation ESA-CAL-1)

This resource is a sparse historic artifact scatter, measuring 200 feet north-south by 23 feet east-west, located within an elevated roadbed between a concrete-lined irrigation canal and an agricultural field. No features were recorded. Artifacts included: One small complete glass jar; 75+ fragments of colorless glass; opaque white glass with an embossed floral design; a colorless glass milk bottle rim; amethyst-colored solarized glass; aqua, green, and brown glass; a colorless glass bottle neck fragment, with a double ring finish; white-glazed whiteware ceramic unglazed orange ceramic fragments; a glass base with the makers mark "333" within a diamond; and a large colorless glass base with the maker's mark "Bishop's California".

The maker's mark "Bishop's California" may refer to Bishop & Co., a food manufacturer based in Los Angeles that operated from 1887 to 1930, when it was acquired by Nabisco (*Los Angeles Downtown News*, 12/22/2008). Bishop sold products such as "Bishop's California Preserves". The maker's mark "333" within a diamond is likely an Illinois Glass Co. mark, dating between 1900-1929 (Lockhart et al., 2005, Lockhart and Whitten, 2006). Therefore, the site appears to date to the early 20th century.

The site's condition was poor, as the road in which it is located appears to be frequently used by vehicles and agricultural machinery. Moreover, as the road is elevated several feet above the surrounding fields, it is likely that the artifacts are in a disturbed context and were possibly imported to this location when the road was constructed.

Historic-Period Farmstead (temporary designation ESA-CAL-2)

This resource appears to be the landscape remnants of an early- to mid-20th century residential or agriculture-related site. The resource measures 375 by 200 feet and is bounded on all sides by agricultural canals and ditches. On the south side, a cement-lined canal runs parallel to and just north of Anza Road. The canal is approximately 5 feet wide and trapezoidal in section. On the east, the site is bounded by Woodbine Canal, which is approximately 10 feet wide and was filled with water at the time of recording. On the north and west, the site is bounded by dirt ditches. Several landscaping features are apparent. Three chinaberry trees are located in the southern portion of the site. A fallen palm tree is located in the middle of the dense brush that characterizes the northern portion of the site.

The site consists of a sparse scatter of historic artifacts and modern debris, including : a crushed metal box; cushion springs; a small ceramic horse head figurine; clear glass; a metal pipe; fragments of ceramic sewer pipe; pieces of metal agricultural implements and machinery; 50+ brown, cobalt, colorless, aqua, and green glass fragments; amethyst-colored solarized glass

fragments; a leather shoe; copper and iron scrap metal; windowpane glass fragments; saw-cut bone; a fragment of a handmade blue and red-glazed orange fabric coarseware vessel; a tiny (1-in.) colorless glass bottle with the number "4" embossed on the base; a colorless glass oval-shaped bottle base with embossed mark "LOC CA"; and a colorless glass base with the mark "…ESIGN PAID/FEB 23" and the makers mark for the Hazel Atlas company. Numerous modern cultural constituents were also observed: a fallen wood structural frame; a cushion; two life vests; a plastic ammunition shell; PVC; and a pull-tab.

Three features were recorded:

> **Feature 1:** Two cement wells/cisterns. One well has a cement cap and measures approximately 6 feet in diameter, with an approximately 3-ft diameter opening. The other well is cylindrical and measures approximately 3 feet in diameter. The wells are located under the easternmost chinaberry tree.
>
> **Feature 2:** Wood bridge across a cement-lined canal, connecting Anza Road and the home site. The bridge measures 16 feet east-west by 7 feet north-south and is comprised of 10-inch wide wooden planks laid across large wooden beams.
>
> **Feature 3:** Push-pile with soil, concrete fragments, floor tile, and wood fragments, some burnt. The feature is located in the middle of the dense brush.

A structure is depicted on the 1957 Heber USGS topographic map at the location of the site. Few of the artifacts were temporally diagnostic; however, the Hazel Atlas maker's mark can be dated to between 1920-1964 (Toulouse 1971). Therefore, it appears that this site can be tentatively dated to the early to mid-20th century.

Historic-Period Residence (temporary designation ESA-CAL-3)

This resource consists of an historic-period residence located at 504 Anza Road, in the City of Calexico (APN 059-130-002). The residence is minimal traditional rural in style; typically dating to the pre-WWII period (generally 1930s). The residence first appears on the 1945 Heber War Department 30-minute topographic map. The residence is a single-story, wood-frame structure with a rectangular footprint and side gable composite roof. The building has a shed-style addition on the eastern facade, and a metal porch covers the primary entrance and extends the width of the southern facade. The exterior walls are covered with horizontal siding and the windows appear to have been replaced since the original construction. Mature trees and landscaping hindered surveyor views of the residence from the public right-of-way.

Evaluation of Identified Resources

As part of this study, the significance of resources ESA-CAL-1, ESA-CAL-2, and ESA-CAL-3 were evaluated by applying the CRHR eligibility criteria provided in PRC Section 5024.1[c]. To be eligible for the CRHR, a prehistoric or historic-period resource must be determined to be significant at the local, State, and/or federal level under at least one of the four eligibility criteria and must retain enough of its historic character or appearance to be recognizable as a historical

resource and to convey the reasons for which it is determined significant. Additionally, archaeological resources ESA-CAL-1 and ESA-CAL-2 were subject to evaluation to determine whether they qualify as unique archaeological resources as set forth in PRC Section 21083.

Historic-Period Debris Scatter (temporary designation ESA-CAL-1)

Resource ESA-CAL-1 is recommended not eligible for listing in the CRHR and does not otherwise meet CEQA's definitions for a historical resource or unique archaeological resource. This resource consists of a surface scatter of historic trash, primarily containing non-diagnostic glass and ceramics elements. No features are associated with this feature and subsurface deposits are unlikely. The site's condition was poor, as the road in which it is located appears to be frequently used by vehicles and agricultural machinery. Moreover, as the road is elevated several feet above the surrounding fields, it is likely that the artifacts are in a disturbed context. The underrepresentation of diagnostic materials limits the resource's potential to yield information important in history (CRHR Criterion 4). While the resource can be broadly dated to the early 20th century and is likely associated with human activity related to irrigation construction and/or agricultural activities, the resource cannot be tied to specific historically-significant events or persons (CRHR Criteria 1 and 2). Likewise, the resource does not contain features or artifacts that represent a distinctive type, style, or manufacture technology (CRHR Criterion 3). Furthermore, ESA-CAL-1 does not qualify as a unique archaeological resource as it does not contain information of scientific importance, is not the oldest or best example of its type, and is not directly associated with scientifically recognized prehistoric or historic events or persons. For these reasons, resource ESA-CAL-1 is recommended not eligible for listing in the CRHR and is not a unique archaeological resource or otherwise significant under CEQA. No further work is recommended for this resource.

Historic-Period Farmstead (temporary designation ESA-CAL-2)

Resource ESA-CAL-2 is recommended not eligible for listing in the CRHR and does not otherwise meet CEQA's definitions for a historical resource. This resource consists of landscape remnants of a residential or agriculture-related site, including a row of three trees, two wells, a wooden bridge, and various historic and modern artifacts that was constructed some time prior to 1957. While the resource can be broadly dated to the first half of the 20th century and is likely associated with human activity related to irrigation construction and/or agricultural activities, the resource cannot be tied to specific historically-significant events or persons (CRHR Criteria 1 and 2). Aside from three elements, the bridge, wells, and row of trees, no other buildings or structures are present. These elements do not represent a distinctive type, style, or manufacture technology, either individually or in combination as a landscape (CRHR Criterion 3). The site's archaeological component consists of a surface scatter of historic and modern trash, primarily containing non-diagnostic glass, wood, cement, and ceramics elements. The underrepresentation of diagnostic materials limits the resource's potential to yield information important in history. The resource lacks archaeological materials or architectural features that would have the potential to yield information important in history (CRHR Criterion 4). For these reasons, resource ESA-CAL-2 is recommended not eligible for listing in the CRHR and is not a unique archaeological

resource or otherwise significant under CEQA. No further work is recommended for this resource.

Historic-Period Residence (temporary designation ESA-CAL-3)

Resource ESA-CAL-3 is recommended not eligible for listing in the CRHR and does not otherwise meet CEQA's definitions for a historical resource. This resource consists of a single-story residence constructed sometime prior to 1945. Based on its minimal traditional rural style, this residence was most likely constructed during the 1930s. The City of Calexico was founded in 1900 and began as a tent city of the Imperial Land Company. The city incorporated in 1908 and has remained predominantly industrial, with rural uses in the outlying community. Archival research did not indicate any association between the residence and known historical events or persons (CRHR Criteria 1 and 2). The residence appears to reflect typical pre- and post-WWII rural residential uses in the region. The building does not appear to embody the distinctive characteristics of a type, period, or method of construction and possesses no distinguishing design or artistic values (CRHR Criterion 3). The residence does not appear to have the potential to yield information important in history (CRHR Criterion 4). For these reasons, resource ESA-CAL-3 is recommended not eligible for listing in the CRHR is not recommended significant under CEQA. No further work is recommended for this resource.

Summary and Recommendations

Based on the results of the archival records search and field survey, as well as the Project area's historic use for agricultural purposes, it has been determined that the Project area has a low sensitivity for cultural resources. Nonetheless, because the Project is located within the prehistoric use area surrounding ancient Lake Cahuilla there remains the possibility that buried archaeological resources could be encountered during Project construction. In addition, of the 4,200-acre Project area, only 1,790 acres were accessible to cultural resources surveyors. In the un-surveyed areas, the possibility of encountering surface evidence of cultural resources, although low, cannot be completely discounted.

The following recommendations are provided for incorporation as mitigation measures in the EIR and would reduce potential impacts to the accidental discovery of archaeological resources or human remains to less-than significant.

Inadvertent Discoveries: In the event of the discovery of historical or archaeological materials, the contractor shall immediately cease all work activities in the area (within approximately 100 feet) of the discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation, the contractor shall immediately contact the Imperial

County Department of Planning and Development Services. The contractor shall not resume work until authorization is received from the County.

In the event of an unanticipated discovery of archaeological materials during construction, 8ME shall retain the services of a qualified professional archaeologist, meeting the Secretary of the Interior's Standards for a Qualified Archaeologist, to evaluate the significance of the materials prior to resuming any construction-related activities in the vicinity of the find. If the qualified archaeologist determines that the discovery constitutes a significant resource under CEQA and it cannot be avoided, 8ME shall implement an archaeological data recovery program.

Discovery of Human Remains: If potential human remains are encountered, the contractor shall halt work in the vicinity (within 100 feet) of the find and shall contact the Imperial County coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the coroner determines the remains are Native American in origin, the coroner shall contact the Native American Heritage Commission (NAHC). As provided in Public Resources Code Section 5097.98, the NAHC shall identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent shall be afforded the opportunity to provide recommendations concerning the future disposition of the remains and any associated grave goods as provided in PRC 5097.98.

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APPENDIX A

AECOM Records Search Summaries

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June 3, 2011

Tom Buttgenbach
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Dear Mr. Buttgenbach:

Subject: Literature Review for the Mount Signal Solar Farm Project (82LV)

This letter report documents the literature review and sensitivity assessment conducted for the proposed Mount Signal Solar Farm project site, located and along the U.S. - Mexico border west of Calexico in southern Imperial County, California. The proposed project is approximately 1,429 acres in total area and is located in active agricultural lands.

An archival records search was conducted at the South Coastal Information Center located at San Diego State University. The search included a 1-mile radius surrounding the proposed project site. The archival search consisted of an archaeological and historical records and literature review. The data reviewed included archaeological and historic site forms, historic maps, the California Register of Historical Resources, and the National Register of Historic Places (NRHP) for the project area. The research provides a background on the types of sites that may be expected in the vicinity of the project area. The research was also used to determine whether previous surveys had been conducted in the area and what cultural resources have been previously recorded within the project limits.

Previous Investigations

The records search indicated that 11 previous cultural investigations have been conducted within a 1-mile radius of the proposed project area (Table 1). These consist of five survey investigation, one environmental impact report, three historic properties survey reports, one regional overview, and one master plan. Of these, five previous investigations are located within the proposed project area (Green and Middleton 1994, IID 1993, Pigniolo et al. 1990, Schafer and O'Neill 200, Wallace Roberts and Todd 1999). Two of these are large overview investigations (IID 1993, Wallace Roberts and Todd).

Table 1. Previous Investigations within a 1-Mile Radius of the Project Area

Author	Title	Date	Within 1-mile radius	Within Proposed Project Area
Bussey et al.	Results of an Archaeological Survey for the Border Remote Video Surveillance Project, El Centro Sector, Imperial County, California.	2002	X	--
California Department of Transportation	Supplemental Historic Property Survey Report.	1999	X	--
Gallegos	Class II Cultural Resource Inventory East Mesa and West Mesa Regions, Imperial Valley, California, Volume 1.	1979	X	--
Green and Middleton	Cultural Resource Overview, All-American Canal Lining Project Final Report.	1994	--	X

Author	Title	Date	Within 1-mile radius	Within Proposed Project Area
Haney	First Addendum Archaeological Survey Report for a Proposed Pavement Rehabilitation and Shoulder/Bridge Widening Project Along State Route 98 in Imperial County.	1999	X	--
Hupp	Historic Architectural Survey Report Pavement Rehabilitation and Shoulder, Bridge, Culvert Widening Project, Imperial County, California.	1999	X	--
Imperial Irrigation District (IID)	Draft Environmental Impact Report for East Loweline and Trifolium Interceptors and Completion Projects.	1993	--	X
Pigniolo et al.	Cultural Resources Study of the Mount Signal and Dixie Ranch Imperial County Prison Alternatives, Imperial County, California.	1990	--	X
Schaefer and O'Neill	The All-American Canal: An Historic Properties Inventory and Evaluation.	2001	--	X
Van Werlhof and McNitt	Archaeological Examination of the Republic Geothermal Field, East Mesa, Imperial County.	1980	X	--
Wallace Roberts & Todd	County of Imperial Bicycle Master Plan.	1999	--	X

Previously Recorded Resources

The records search indicated that two cultural resources have been recorded within a 1-mile radius of the proposed project area (Table 2). Thse consist of segments of the All-American Canal that parallels the U.S.-Mexico border and a segment of the Westside Main Canal, connecting into the All-American Canal. No cultural resources have been previously identified within the project site.

Table 2. Previously Identified Cultural Resources within a 1-Mile Radius of the Project Area.

Primary Number (P-13-)	Permanent Trinomial (CA-IMP-)	Site Description	Date Recorded	Within 1-mile of the Proposed Project Area	Within the Proposed Project Area
007130	7130	Segments of the All-American Canal	2005; 2001; 2000; 1997; 1996; 1994	X	--
008334	7834	Segment of the Westside Main Canal	2009; 2007; 2000; 1999	X	--

Cultural Resource Sensitivity Assessment

The sensitivity of the project sire for cultural resources was assessed based on the results of the record searches and AECOM's past experience in the area. A low sensitivity level indicates that there are few or no previously recorded resources within the project site and the surrounding area. Resources at this level would not be expected to be complex in nature, with little to no site structure and little artifact diversity. The potential for the identification of newly identified resources at such project sites would be low. A moderate sensitivity level indicates that previously recorded resources were identified with the project site and/or the surrounding area. These are generally more complex

resources, with greater site structure, diversity of feature types, and artifact types. The potential for the identification of newly identified resources at such project sites would be moderate. Areas identified as high sensitivity indicate that the record search identified previously recorded sites within the project site and/or the surrounding area. These resources may range from moderately complex to highly complex, with more defined living areas or specialized work space areas, and a large breadth of features and artifact assemblage. The potential for the identification of newly identified resources at such project sites would be high. For the proposed Mount Signal Solar Farm project area, based on the records search review, the potential for cultural resources within the proposed project area is low.

One area in which prehistoric cultural materials appear to be concentrated in this region is the shoreline of ancient Lake Cahuilla, which would have encompassed the present-day Salton Sea. The lake covered much of the Imperial Valley and created an extensive lacustrine environment. Lake Cahuilla experienced several fill-recession episodes before it finally dried up about 300 years ago. In 1905, the Colorado River overflowed into the Salton Basin creating the present-day Salton Sea. While the project site is located within an area of recessional activity related to ancient Lake Cahuilla, based on the records search information and intensive agricultural use of the area, the potential for cultural resources within the proposed Mount Signal Solar Farm site is low.

Recommendations

As the majority of the project area has not been previously surveyed, a pedestrian survey investigation of the proposed project area would need to be conducted to identify any undocumented cultural resources within the area. In the event resources are identified during the survey, avoidance would be the preferred mitigation measure. If cultural resources cannot be avoided, these resources would need to be evaluated for significance in compliance with the California Environmental Quality Act (CEQA). A testing and evaluation program would need to be developed and conducted to assess their eligibility to the California Register of Historical Resources (CRHR . If a cultural resource cannot be avoided and is found to be significant under CEQA, a mitigation program would be required. For archaeological resources, this typically involves a research design and data recovery excavations.

Should you have any questions concerning this letter or need additional information, please feel free to contact me by telephone at (619) 233-1454 or by e-mail.

Sincerely,

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July 8, 2011

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Dear Mr. Buttgenbach:

Subject: Literature Review for the Calexico Solar Farm I Project (88FT)

This letter report documents the literature review conducted for the proposed Calexico Solar Farm I project site, located west of Calexico in southern Imperial County, California and along the U.S.-Mexico border. The proposed project is approximately 1,333 acres in total area and is located in active agricultural lands. The proposed project will be conducted in two Phases, Phase A and Phase B.

An archival records search was conducted at the South Coastal Information Center located at San Diego State University. The search included a 1-mile radius surrounding the proposed project site. The archival search consisted of an archaeological and historical records and literature review. The data reviewed included archaeological and historic site forms, historic maps, the California Register of Historical Resources, and the National Register of Historic Places (NRHP) for the project area. The research provides a background on the types of sites that may be expected in the vicinity of the project area. The research was also used to determine whether previous surveys had been conducted in the area and what cultural resources have been previously recorded within the project limits.

Previous Investigations

The records search indicated that eight previous cultural investigations have been conducted within a 1-mile radius of the proposed project area (Table 1). These consist of two survey investigation, one environmental impact report, four historic properties survey reports, and one master plan. Of these, four previous investigations are located within the proposed project area (Green and Middleton 1994, IID 1993, Schafer and O'Neill 200, Wallace Roberts and Todd 1999). Two of these are large overview investigations (IID 1993, Wallace Roberts and Todd) and two are linear surveys (Green and Middleton 1994, Schaefer and O'Neill).

Table 1. Previous Investigations within a 1-Mile Radius of the Project Area

Author	Title	Date	Within 1-mile radius	Within Proposed Project Area
Caltrans	Supplemental Historic Properties Survey Report	1999	X (Phase A)	--
Green and Middleton	Cultural Resource Overview, All-American Canal Lining Project Final Report.	1994	--	Phase A
Haney	First Addendum Archaeological Survey Report for a Proposed Pavement Rehabilitation and Shoulder/Bridge Widening Project Along State Route 98 in Imperial County.	1999	X (Phase A)	--

Author	Title	Date	Within 1-mile radius	Within Proposed Project Area
Hupp	Historic Architectural Survey Report Pavement Rehabilitation and Shoulder, Bridge, Culvert Widening Project, Imperial County, California.	1999	X (Phase A; Phase B)	--
Imperial Irrigation District (IID)	Draft Environmental Impact Report for East Loweline and Trifolium Interceptors and Completion Projects.	1993	--	Phase A; Phase B
Pigniolo et al.	Cultural Resources Study of the Mount Signal and Dixie Ranch Imperial County Prison Alternatives, Imperial County, California.	1990	X (Phase B)	--
Schaefer and O'Neill	The All-American Canal: An Historic Properties Inventoryand Evaluation.	2001	--	Phase A
Wallace Roberts & Todd	County of Imperial Bicycle Master Plan.	1999	--	Phase A; Phase B

Previously Recorded Resources

The records search indicated that one cultural resource has been recorded within a 1-mile radius of the proposed project area (Table 2), consisting of segments of the All-American Canal that parallels the U.S.-Mexico border. No cultural resources have been previously identified within either Phase A or Phase B project site.

Table 2. Previously Identified Cultural Resources within a 1-Mile Radius of the Project Area.

Primary Number (P-13-)	Permanent Trinomial (CA-IMP-)	Site Description	Date Recorded	Within 1-mile of the Proposed Project Area	Within the Proposed Project Area
007130	7130	Segments of the All-American Canal	2005; 2001; 2000; 1997; 1996; 1994	X (Phase B)	--

Cultural Sensitivity

Cultural sensitivity levels for project areas are rated low, moderate or high based on the results of the record searches and AECOM's past experience in the area. A low sensitivity level indicates that there are few or no previously recorded resources within the project site and the surrounding area. Resources at this level would not be expected to be complex in nature, with little to no site structure and little artifact diversity. The potential for the identification of newly identified resources at such project sites would be low. A moderate sensitivity level indicates that previously recorded resources were identified with the project site and/or the surrounding area. These are generally more complex resources, with greater site structure, diversity of feature types, and artifact types. The potential for the identification of newly identified resources at such project sites would be moderate. Areas identified as high sensitivity indicate that the record search identified previously recorded sites within the project site and/or the surrounding area. These resources may range from moderately complex to highly complex, with more defined living areas or specialized work space areas, and a large breadth of features and artifact assemblage. The potential for the identification of newly identified resources at such project sites would be high. For the proposed Calexico Solar Farm I project area, based on the records search review, the potential for cultural resources within the proposed project area is low.

One area in which prehistoric cultural materials appear to be concentrated in this region is the shoreline of ancient Lake Cahuilla, which would have encompassed the present-day Salton Sea. The lake covered much of the Imperial Valley and created an extensive lacustrine environment. Lake Cahuilla experienced several fill-recession episodes before it finally dried up about 300 years ago. In 1905, the Colorado River overflowed into the Salton Basin creating the present-day Salton Sea. While the project site is located within an area of recessional activity related to ancient Lake Cahuilla, based on the records search information and intensive agricultural use of the area, the potential for cultural resources within the proposed Calexico Solar Farm I site is low.

As the majority of the project area has not been previously surveyed, a pedestrian survey investigation of the proposed project area would need to be conducted to identify any undocumented cultural resources within the area. In the event resources are identified during the survey, avoidance would be the preferred mitigation measure. If cultural resources cannot be avoided, these resources would need to be evaluated for significance under the California Environmental Quality Act (CEQA) for eligibility to the California Register of Historical Resources (CRHR). A testing and evaluation program would need to be developed and conducted. If a cultural resource cannot be avoided and is found to be significant under CEQA, a mitigation program would be required. For archaeological resources, this typically involves a research design and data recovery excavations.

Should you have any questions concerning this letter or need additional information, please feel free to contact me by telephone at (619) 233-1454 or by e-mail.

Sincerely,

Cheryl Bowden-Renna
Archaeologist/Associate
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April 14, 2011

Tom Buttgenbach
8minutenergy renewables LLC
10100 Santa Monica Blvd., Suite 300
Los Angeles, CA 90067

Dear Mr. Buttgenbach:

Subject: Literature Review for the Calexico Solar Farm II Project (89MA)

This letter report documents the literature review conducted for the proposed Calexico Solar Farm II project site, located west of Calexico in southern Imperial County, California and along the U.S.-Mexico border. The proposed project is approximately 1,477 acres in total area and is located in active agricultural lands. The proposed project will be conducted in two Phases, Phase A, south of State Route (SR) 98, and Phase B, northh of SR 98.

An archival records search was conducted at the South Coastal Information Center located at San Diego State University. The search included a 1-mile radius surrounding the proposed project site. The archival search consisted of an archaeological and historical records and literature review. The data reviewed included archaeological and historic site forms, historic maps, the California Register of Historical Resources, and the National Register of Historic Places (NRHP) for the project area. The research provides a background on the types of sites that may be expected in the vicinity of the project area. The research was also used to determine whether previous surveys had been conducted in the area and what cultural resources have been previously recorded within the project limits.

Previous Investigations

The records search indicated that five previous cultural investigations have been conducted within a 1-mile radius of the proposed project area (Table 1). These consist of one survey investigation, three historic properties survey reports, and one master plan. Of these, four previous investigations are located within the proposed project area (Green and Middleton 1994, IID 1993, Schafer and O'Neill 200, Wallace Roberts and Todd 1999). Two of these are large overview investigations (IID 1993, Wallace Roberts and Todd) and two are linear surveys (Green and Middleton 1994, Schaefer and O'Neill).

Table 1. Previous Investigations within a 1-Mile Radius of the Project Area

Author	Title	Date	Within 1-mile radius	Within Proposed Project Area
Green and Middleton	Cultural Resource Overview, All-American Canal Lining Project Final Report.	1994	--	Phase A
Haney	First Addendum Archaeological Survey Report for a Proposed Pavement Rehabilitation and Shoulder/Bridge Widening Project Along State Route 98 in Imperial County.	1999	X (Phase A; Phase B)	--
Imperial Irrigation District (IID)	Draft Environmental Impact Report for East Loweline and Trifolium Interceptors and Completion Projects.	1993	--	Phase A; Phase B

Author	Title	Date	Within 1-mile radius	Within Proposed Project Area
Schaefer and O'Neill	The All-American Canal: An Historic Properties Inventory and Evaluation.	2001	--	Phase A
Wallace Roberts & Todd	County of Imperial Bicycle Master Plan.	1999	--	Phase A; Phase B

Previously Recorded Resources

The records search indicated that two cultural resources have been recorded within a 1-mile radius of the proposed project area (Table 2), consisting of segments of the All-American Canal that parallels the U.S.-Mexico border and a historic mesquite thicket. No cultural resources have been identified within either Phase A or B project sites.

Table 2. Previously Identified Cultural Resources within a 1-Mile Radius of the Project Area.

Primary Number (P-13-)	Permanent Trinomial (CA-IMP-)	Site Description	Date Recorded	Within 1-mile of the Proposed Project Area	Within the Proposed Project Area
003325	3325	Historic mesquite thicket	1880	X (Phase B))	--
007130	7130	Segments of the All-American Canal	2005; 2001; 2000; 1997; 1996; 1994	X (Phase A)	--

Cultural Sensitivity

Cultural sensitivity levels for project areas are rated low, moderate or high based on the results of the record searches and AECOM's past experience in the area. A low sensitivity level indicates that there are few or no previously recorded resources within the project site and the surrounding area. Resources at this level would not be expected to be complex in nature, with little to no site structure and little artifact diversity. The potential for the identification of newly identified resources at such project sites would be low. A moderate sensitivity level indicates that previously recorded resources were identified with the project site and/or the surrounding area. These are generally more complex resources, with greater site structure, diversity of feature types, and artifact types. The potential for the identification of newly identified resources at such project sites would be moderate. Areas identified as high sensitivity indicate that the record search identified previously recorded sites within the project site and/or the surrounding area. These resources may range from moderately complex to highly complex, with more defined living areas or specialized work space areas, and a large breadth of features and artifact assemblage. The potential for the identification of newly identified resources at such project sites would be high. For the proposed Calexico Solar Farm II project area, based on the records search review, the potential for cultural resources within the proposed project area is low.

One area in which prehistoric cultural materials appear to be concentrated in this region is the shoreline of ancient Lake Cahuilla, which would have encompassed the present-day Salton Sea. The lake covered much of the Imperial Valley and created an extensive lacustrine environment. Lake Cahuilla experienced several fill-recession episodes before it finally dried up about 300 years ago. In 1905, the Colorado River overflowed into the Salton Basin creating the present-day Salton Sea. While the project site is located within an area of recessional activity related to ancient Lake Cahuilla,

based on the records search information and intensive agricultural use of the area, the potential for cultural resources within the proposed Calexico Solar Farm II site is low.

As the majority of the project area has not been previously surveyed, a pedestrian survey investigation of the proposed project area would need to be conducted to identify any undocumented cultural resources within the area. In the event resources are identified during the survey, avoidance would be the preferred mitigation measure. If cultural resources cannot be avoided, these resources would need to be evaluated for significance under the California Environmental Quality Act (CEQA) for eligibility to the California Register of Historical Resources (CRHR). A testing and evaluation program would need to be developed and conducted. If a cultural resource cannot be avoided and is found to be significant under CEQA, a mitigation program would be required. For archaeological resources, this typically involves a research design and data recovery excavations.

Should you have any questions concerning this letter or need additional information, please feel free to contact me by telephone at (619) 233-1454 or by e-mail.

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