Phase I Cultural Resources Assessment
University Hills Specific Plan Project
City of San Bernardino, San Bernardino County, California

San Bernardino North, California, USGS 7.5-minute Topographic Quadrangle Map
Township 1, South Range 4 West, Sections 4, 5, 8 and 9
University Hills Specific Plan
404-Acre Study Area; 160-Acre Survey Area

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MANAGEMENT SUMMARY

This report documents a California Environmental Quality Act (CEQA)-level Phase I existing literature search and paleontologic resources assessment for about 404 acres located in the City of San Bernardino, San Bernardino County, California. In addition, this report addresses the results of an archaeological pedestrian survey conducted on about 160-acres of the total 404-acre study area. Michael Brandman Associates (MBA) has performed this investigation at the request of the Inland Communities Corporation. This study was completed to determine if archaeological or historical resources more than 45 years old were visible within the 160-acre survey area, and to determine the cultural resource sensitivity of those portions of the project area to be impacted by development for the purposes of generating recommendations consistent with CEQA. Development is proposed within the survey area boundaries, while the remainder of the project area is currently conceived as open space. Portions of APNs 0265-061-16, 0265-051-12, 0265-051-09 and 0265-041-12 constitute the survey area for this report. Additionally, APNs 0265-051-13, 0265-021-13, 0265-011-08, 0265-011-06 and 0265-011-07 were considered as the 404-acre study area. The latter set of APNs will not be developed according to the University Hills Conceptual Development Plan.

A cultural resource literature search was conducted by MBA Senior Archaeologist Michael H. Dice, at the Archaeological Information Center (AIC), which is located at the San Bernardino County Museum (SBCM) on November 30, 2007. A search radius of 1 mile was used, and the results indicated that no historical or archaeological resources were known within the 404-acre study area.

MBA contacted the Native American Heritage Commission (NAHC) on June 26, 2008 requesting a Sacred Lands File search for traditional cultural properties. The response from the NAHC was received on June 27, 2008. The NAHC response indicated that no sacred lands or traditional cultural properties are known for the project area. MBA subsequently sent information-request letters to each tribal entity named by the NAHC on June 30, 2008. All responses received at the MBA office have been incorporated into Appendix A. Letters received subsequent to the date of the final report will be forwarded to the client and the City of San Bernardino as they are received.

The Phase I pedestrian survey was performed on approximately 160-acres of the total 404-acre study area on June 27, 2008 with positive results. During the pedestrian survey, a potentially historic-age utility pole alignment was detected in the eastern portion of the survey area, and the remains of an off-site historic-age homestead were detected. No prehistoric-age archaeological resources were observed. The potential historic-age utility pole alignment was recorded onto a DPR 523 Isolate Form, and was subsequently submitted to the AIC for the assignment of a primary number. The completion and submittal of the DPR 523 form for this resource suffices for mitigating adverse impacts to the resource.
MBA contacted Eric Scott of the Division of Geological Sciences at the San Bernardino County Museum (SBCM) on June 26, 2008 requesting a paleontological records check. The response was received on July 8, 2008. The paleontological review indicated that there are no known fossil localities recorded within the study area, and that the study area is situated upon surface exposures of the following rock units: Holocene and late Pleistocene younger alluvial fan deposits, late Pleistocene older alluvial fan deposits, Miocene conglomerate and arkose and Cretaceous granitic rocks. The Pleistocene alluvial fan deposits and the Miocene conglomerate and arkose have high potential to yield significant nonrenewable paleontologic resources, and are assigned high paleontologic sensitivity. For this reason, there is high potential for adverse impacts to fossil resources during ground-disturbing activities.

Based upon the results of the records search, the 160-acre pedestrian survey and the location of the development areas within highly disturbed soils subject to flooding episodes, off-road vehicle activity and historic-era agricultural use. The probability for encountering intact subsurface deposits is considered low. Therefore, the cultural resource sensitivity of the 160-acre survey area was determined to be low, and archaeological monitoring is not recommended during development. However, MBA does recommend additional studies if the parameters of the development plan are modified, such that resources may be adversely impacted. Specifically, this applies to two historic-age homesteads. One of the homesteads is presently located within an area designated as open space, and the other is situated on APN 0265-051-07, between the eastern and western portions of the survey area. If either of these historic-age resources are to be impacted by alterations to the development plan, recommendations have been provided within this report. In addition, recommendations are included to assist in mitigating potential adverse impacts to paleontologic resources.
SECTION 1: INTRODUCTION

At the request of the Inland Communities Corporation, MBA conducted a Phase I cultural resources assessment. This assessment included a pedestrian survey of about 160-acres of the total 404-acre study area. The proposed use of the study area is for the implementation of the University Hills Specific Plan. This includes future mixed-density residential development and preservation as open space.

The purpose of this report is to identify the presence or absence of potentially significant cultural resources, and to determine the probability for encountering subsurface cultural or paleontologic resources within those portions of the project area impacted by development. This report includes recommendations for cultural resource mitigation programs, where necessary.

Federal, state, and local agencies have developed laws and regulations designed to protect significant cultural resources that may be affected by projects regulated, funded, or undertaken by an agency. These laws govern the preservation of historical and archaeological resources of national, state, regional, and local significance. This archaeological assessment was performed in compliance with CEQA, and is consistent with the Historical and Archaeological Resources Element of the City of San Bernardino General Plan (2005).

This report closely follows the California Office of Historic Preservation (OHP) procedures for cultural resource surveys and the OHP Archaeological Resource Management Report (ARMR) format for archaeological reports. This report is organized into sections and appendices, which are summarized as follows:

- Section 1 introduces the proposed project, the location, and the cultural resources team.
- Section 2 summarizes cultural setting.
- Section 3 presents the research design and investigative methods.
- Section 4 provides the results of the archaeological records search, 160-acre archaeological survey, and the paleontologic records search.
- Section 5 provides management recommendations.
- Section 6 contains the project certification.
- Section 7 presents a reference list.
- Appendix A provides required cultural resource compliance documents.
- Appendix B provides personnel qualifications.
- Appendix C presents the regulatory framework.
- Appendix D provides recent photographs of the project area.
1.1 - Project Location

Located in the northwestern portion of the City of San Bernardino in San Bernardino County, California, the study area is found to the north of the 210 Freeway and east of Interstate 215 (Exhibit 1). It can be found on the San Bernardino North, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle map, in Sections 4, 5, 8 and 9 of Township 1 South, Range 4 West (Exhibit 2). Specifically, the study area is found to the north of the California State University - San Bernardino campus, is located to the north of portions of Badger Canyon Road and is east of Devil’s Canyon Road (Exhibit 3). Portions of Assessor’s Parcel Numbers (APN) 0265-061-16, 0265-051-12, 0265-051-09 and 0265-041-12 constitute the survey area for this report. These parcels contain a linear Metropolitan Water District Easement trending from the northwest to the southeast, within the survey area. Additionally, APNs 0265-051-13, 0265-021-13, 0265-011-08, 0265-011-06 and 0265-011-07 were considered as the 404-acre study area. The latter set of APNs will not be developed according to the University Hills Conceptual Development Plan.

APNs 0265-021-13, 0265-011-08, 0265-011-06 and 0265-011-07 are located to the north of the San Bernardino National Forest (SBNF) boundary, and are included within a portion of privately owned land within the SBNF. Ownership was verified through an informal map review of SBNF lands by SBNF Archaeologist William D. Sapp. This information was transmitted through an informal telephone call between MBA and Dr. Sapp on June 26, 2008.

1.2 - Project Description

The proposed project is the implementation of The University Hills Specific Plan. This project has evolved out of the Paradise Hills Specific Plan and Environmental Impact Report (EIR) that were previously approved by the City, though never implemented or constructed. The University Hills Specific Plan includes residential development and supporting infrastructure, as well as a clubhouse, public parks, water tanks, and designated open space. Approximately 160-acres of the 404-acre Specific Plan project area are proposed to be developed; while about 244-acres will be designated open space. The University Hills Specific Plan Conceptual Development Plan is presented as Exhibit 4.

1.3 - Environmental Setting

1.3.1 - Topography, Geology, and Soils

Situated at the base of the San Bernardino Mountains, the 160-acre survey area exhibits a gentle slope, increasing in elevation from the south to the north. The elevation of the survey area ranges from approximately 1,600 feet to 1,840 feet above sea level (AMSL). The survey area soils exhibit an uneven surface expression, presumably resulting from flooding episodes throughout time. Several small, unnamed drainages were observed throughout the survey area.
Numerous dirt roads are located within the survey area, and represent a range of maintenance efforts and off-road vehicle (ORV) use. The dirt road found along much of the southern boundary of the survey area appeared to be periodically bladed and well maintained. In contrast, the dirt road nearer the northern portion of the survey area exhibited minimal use as evidenced by the presence of vegetation, and a definitive lack of any recent maintenance efforts. Many of the dirt roads found throughout the central portion of the survey area appeared to have been used for ORV activity within the recent past.

The rock type observed within the survey area included granitic and quartz materials, ranging in size from pebbles to boulders. Numerous water-worn granitic boulders were noted within the drainages.

The study area is geologically mapped as containing surface exposures of the following rock units: Holocene and late Pleistocene younger alluvial fan deposits, late Pleistocene older alluvial fan deposits, Miocene conglomerate and arkose and Cretaceous granitic rocks (Scott 2008).

1.3.2 - Vegetation and Wildlife
The vegetation located within the 160-acre survey area is generally consistent with a disturbed coastal sage scrub plant community. The dominant species include California sagebrush (Artemisia californica) and California buckwheat (Eriogonum fasciculatum). In addition, chaparral yucca (Hesperoyucca whipplei), common sunflower (Helianthus annuus), mustard (Brassica sp.) and wild tree tobacco were observed.

Various avian species were observed during the pedestrian survey.

1.3.3 - Land Use
The entirety of the survey area is presently undeveloped. Lands adjacent to both the 160-acre survey area and the larger 404-acre study area are also generally undeveloped. An abandoned single-family residential property was noted on APN 0265-051-07, between the western-most portion and the eastern portions of the survey area. The remains of this residential structure are located off-site, as indicated by the parameters of the conceptual development plan. Open land appeared to be situated to the north of the entire 404-acre study area and open, undeveloped land is located to the east of the 160-acre survey area. Located to the west of the survey area is a single residential property, surrounded by open, undeveloped land. Modern residential development is found just beyond a small portion of undeveloped land, to the south and southeast of the eastern-most portion of the survey area. A concrete lined drainage is found along the northern portion of the Badger Hills, at the southern boundary of the western-most portion of the survey area. The Badger Hills are currently undeveloped.
1.4 - Assessment Team

MBA Senior Archaeologist Michael H. Dice conducted the records search at the AIC on November 30, 2007. MBA Project Archaeologist Jennifer M. Sanka and MBA Consulting Archaeologists Alynne Loupe and Arabesque Said performed the pedestrian survey on approximately 160-acres on June 27, 2008. Ms. Sanka additionally generated the cultural resources assessment document. Professional qualifications for all team members are located in Appendix B.
SECTION 2: CULTURAL SETTING

The following is a brief overview of the prehistoric and historic context in which to understand the relevance of sites found in the general vicinity of the project area. This section is not intended to be a comprehensive review of the current resources available; rather this section serves as a generalized overview. Descriptions that are more detailed can be found in ethnographic studies, mission records, and major published sources including Kroeber (1925), Wallace (1955), Warren (1968), Heizer (1978), Moratto (1984), and Chartkoff and Chartkoff (1984).

2.1 - Prehistoric Background

Temporal prehistoric traditions vary greatly according to location; however, the most accepted regional chronology for the coastal and central interior Southern California is derived from Wallace’s four-part Horizon format (1955). This was later updated and revised by Warren (1968). Presently, regional archaeologists generally follow Wallace’s Southern California format but the loosely established times for each period subunit are often challenged. The documented stages are as follows:

- Desert Culture (12000 to 10000 B.C.);
- Western Hunting Culture or Lake Mohave (9000 to 5000 B.C.);
- Pinto Period (5000 to 2,500 B.C.); and
- Protohistoric (2,500 B.C. to A.D. 1769).

2.1.1 - Desert Culture Period (12000 to 10000 B.C.)

Comparatively, little is known of Paleo-Indian peoples in the California archaeological record, although highly documented archaeological village sites in the Southwest have revealed associated bones of now extinct large mammals, as well as Clovis and Folsom tool traditions (Fagan 2000). This period is noted for an increase in drier weather, and consequently most of the known California Late Paleo-Indian/early Archaic sites are located near extinct desert valley lakes, rock shelters and on the Channel Islands off the coast (Chartkoff and Chartkoff 1984; Forbes 1989). These consist of occupation sites, butchering stations and burials. This period ends with a marked extinction of large game native to North America and a distinct change in prehistoric tool kits used to prepare plant foods. Small projectile points, choppers, flat scrapers, drills, and digging sticks are also common (Forbes 1989).

2.1.2 - Western Hunting Culture or Lake Mohave Period (~9000 to 5000 B.C.)

It is hypothesized that large mammals became less available as a food resource due to drier weather conditions, and therefore the West and Southwest show an increased reliance in using small game, such as squirrels and rabbits and wild plants to sustain the small tribal bands (Jennings 1989; Oswalt...
1988). This period is also marked by the absence of food grinding stone implements. The period ends when stone grinding implements become increasingly more prevalent in the archaeological record (Forbes 1989; Jennings 1989; Oswalt 1988).

2.1.3 - Pinto Period (5000 to 2500 B.C.)

This period highlights a combination of both Desert Culture and Western Hunting Cultures, where an increase in grinding tools appears in the archaeological record. Such tools suggest an increased level of reliance on wild plants and small animals (Forbes 1989; Jennings 1989; Oswalt 1988). The Pinto spear-point tool tradition is the hallmark of this period. This tradition is characterized by small coarsely chipped points, which tend to be triangular and sometimes are found with parallel sides. These points may have tipped the atlatl. A slight variation in tool type appears towards the end of this period, which is represented by Gypsum and Elko points. The Gypsum point is typified by its contracting stem, whereas Elko points are corner notched (Jennings 1989).

2.1.4 - Protohistoric (~2500 B.C. to 1769 A.D.)

In the southwestern Great Basin, this period is characterized as having cooler and wetter conditions than that previously experienced, an environment similar to that of today. Sites appear in previously unoccupied areas of California. The numbers of sites in some regions, especially near ephemeral lakes, seem to have risen dramatically. In the Owens Valley, permanent village sites were utilized, along with the addition of upland dry-environment sites. These changes reflect a phenomenon found throughout the western United States where an increase in population and changes in tool kits and living arrangements resulted in more specialized uses of materials and landscapes. Diagnostic artifacts associated with this period consist of Elko and Gypsum projectile points.

Saratoga Springs Period (1500 to 800 B.C.)

This period is environmentally similar to earlier periods. In the southwest Great Basin, this period is characterized by the introduction of the bow and arrow, exploitation of the pine nut and an increase in logistical complexity relative to landscape use. With these changes came a diversification of resource use and a more sedentary settlement pattern in the Owens Valley. The nature and number of sites attributed to this time period changed such that the “winter villages” became larger, numbers of such villages were reduced, and base camps in the upland areas became larger, more diversified and more numerous.

2.2 - Native American Background

The project area is located in an area ethnographically mapped as the western-most portion of the Serrano traditional use area. This area also borders the eastern-most extent of documented Gabriéliño tribal territory. Gabriéliño lands are mapped as extending north from Aliso Creek to just beyond Topanga Canyon along the Pacific Coast, and inland to the City of San Bernardino (Bean and Smith
1978). The Serrano traditional use area is then mapped to the northeast and east of Gabrieliño lands, encompassing much of the San Bernardino Mountains from the Cajon Pass in the west, past modern Twentynine Palms in the east (Bean and Smith 1978). It is likely that these tribal boundaries were fluid, allowing for contact, trade, and diffusion of ideas between neighboring groups.

2.2.1 - The Serrano

The Serrano traditional use area is mapped as encompassing the San Bernardino Mountains from the Cajon Pass in the west to beyond modern Twentynine Palms in the east, and from about Victorville in the north to near the San Gorgonio Pass in the south (Bean and Smith 1978). However, these borders are ill defined, due to a lack of reliable data and to the Serrano sociopolitical organization. The Serrano were organized into autonomous lineages occupying defined territories; however, these groups rarely identified a permanent habitation site. These groups were neither politically aligned, nor were they socially connected outside of each localized lineage (Strong 1972). For these reasons, the borders of the arbitrarily grouped Serrano peoples would vary greatly from lineage to lineage, depending upon their respective worldviews.

Studies on linguistic characteristics have indicated that the term Serrano had been academically applied to four different groups, including the Serrano, Kitanemuk, Vanyume, and the Tataviam (Alliklik) (Bean and Smith 1978; Johnston 1965). The Vanyume use area has been mapped to the north of Victorville, extending from the Cajon Pass in the west, to near modern Ludlow between the Cady and Bristol Mountains (Bean and Smith 1978). The Kitanemuk and Tataviam are found within the general vicinity of the Tehachapi Mountains.

The Serrano generally spoke a language that also belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family, a language family that includes the Shoshonean groups of the Great Basin. The total Serrano population at contact was roughly 2,000 persons. The range of this group was limited and restricted by reliable water sources.

The Spanish decimated all indigenous groups adjacent to the San Bernardino Mountains, but some Serrano survived for many years. This was due to the ruggedness of the terrain in the far eastern San Bernardino Mountains and to their dispersed population. Kroeber (1925) and Bean and Smith (1978) form the primary historical sources for this group.

Serrano populations studied in the early part of the last century were a remnant of their cultural form prior to contact with the Spanish Missionaries. Nonetheless, the Serrano are viewed as clan and moiety-oriented or local lineage-oriented group tied to traditional territories or use-areas. Typically, a “village” consisted of a collection of families centered about a ceremonial house, with individual families inhabiting willow-framed huts with tule thatching. Considered hunter-gatherers, the Serrano exhibited a sophisticated technology devoted to hunting small animals and gathering roots, tubers,
and seeds of various kinds. Today, Serrano descendants are found mostly on the San Manuel and Morongo reservations.

2.2.2 - The Gabrieliño

Kroeber (1925) and Bean and Smith (1978) form the primary historical references for this tribal group. The arrival of Spanish explorers and the establishment of missions and outposts during the eighteenth century ended the prehistoric period in California. At this time, traditional Gabrieliño society began to fragment as a result of foreign diseases and the mass removal of local Indian groups to the Mission San Gabriel and Mission San Juan Capistrano.

The Gabrieliño spoke a language that belongs to the Cupan group of the Takic subfamily of the Uto-Aztecan language family (a language family that includes the Shoshonean groups of the Great Basin). The total Gabrieliño population in about 1770 AD was roughly 5,000 persons, based on an estimate of 100 small villages, with approximately 50 to 200 people per village. Their range is generally thought to have been located along the Pacific coast from Malibu to San Pedro Bay, south to Aliso Creek, then east to Temescal Canyon, then north to the headwaters of the San Gabriel River. Also included were several islands, including Catalina. This large area encompasses the City of Los Angeles, much of Rancho Cucamonga, Corona, Glendale, and Long Beach. By 1800, most traditional Gabrieliños had either been killed, or subjugated by the Spanish.

The first modern social analyses of Gabrieliño culture took place in the early part of the twentieth century (Kroeber 1925). By this time, acculturation and disease had devastated this group, and the population studied was a remnant of their pre-contact form. Nonetheless, the early ethnographers viewed the Gabrieliño as a chief-oriented society of semi-sedentary hunter-gatherers. Influenced by coastal and interior environmental settings, their material culture was quite elaborate and consisted of well-made wood, bone, stone, and shell items. Included among these was a hunting stick made to bring down numerous types of game.

Located in an area of extreme environmental diversity, large villages may have been permanent, such as that found on or near Red Hill in Rancho Cucamonga, with satellite villages utilized seasonally. Their living structures were large, domed, and circular thatched rooms that may have housed multiple families. The society exhibited ranked individuals, possibly chiefs, who possessed a much higher level of economic power than unranked persons.

2.3 - Historic Background

A comprehensive historical review of the San Bernardino Valley is found in Swope (1997). Hampson et al. (1988) divided the history of the upper Santa Ana River region into three phases. The following review details information taken from these two sources.
2.3.1 - The Spanish Period (1772 to 1824)

The first Europeans to traverse the lands in the vicinity of the project area were Spanish soldier Pedro Fages and Father Francisco Garcés. This expedition to locate deserting soldiers eventually brought the group through the foothills of the San Jacinto Mountains, along Coyote Canyon on the southern edge of Riverside County. They then continued into the Anza Valley, the San Jacinto Valley, Riverside, and eventually into San Bernardino and the Cajon Pass. This and other expeditions sparked an influx of non-natives to Southern California, and the first of these groups were the Spanish. Associated with the Spanish migration is the establishment of missions and military presidios along the coast of California. By the early decades of the 19th century, the Missions began establishing ranchos for the purpose of expanding their agricultural holdings. In 1806, Mission San Gabriel representative Father Zalvidea came to the San Bernardino valley area in search of suitable mission administrative or ranching sites. In 1810, Father Dumetz consecrated a new Mission San Gabriel outpost and named the area "San Bernardino" after Saint Bernardino of Siena (City of San Bernardino, Website). According to Juan Caballeria (1902 in Lugo 1950), Father Francisco Dumetz consecrated the new Mission San Gabriel supply station, including a chapel, at the Guachama Rancheria. This was an existing protohistoric native village near the mouth of San Timoteo Canyon (see also Lerch and Haenszel 1981).

In 1819, the Rancho San Bernardino was formally established. This followed a decision by the heads of the mission system to expand their agricultural holdings into the interior, and later establish a chain of additional Missions in the desert interior (Harley 1989). Because it soon proved that no reliable water existed, the Fathers ordered the construction of a zanja, or ditch. The zanja originated at the mouth of Mill Creek and was 12 miles in length. This ditch was constructed in 1819 and 1820 by the indigenous Serranos living at the Guachama Rancheria.

2.3.2 - The Mexican Period (1824 to 1848)

Administration of the southern California ranchos shifted to Mexican hands about 1824, but effective control did not occur until the early 1830s. Once the ranchos were secularized, the Mexican administrators began granting vast tracts of the original Mission properties to members of prominent Mexican families. In 1842, title to the Rancho San Bernardino, was granted to Jose del Carmen Lugo, Jose Maria Lugo, Vincente Lugo, and their cousin Diego Sepulveda by Manuel Micheltorena, Governor of California.

During the transitional period (1830), construction began on new adobe buildings (SBR-2307/H) associated with the outpost on the Rancho, which by this time had begun cattle operations in the valley. The location of this new Spanish site, now known as the San Bernardino Asistencia, is found on a low finger ridge about 1000 feet south of the zanja, and 2500 feet north of San Timoteo Canyon. At the time, San Timoteo Canyon was a well-known route of travel between Sonora and San Gabriel, and had been utilized by Indian traders. The originally planned asistencia was abandoned for about a
decade when the new Mexican land grantees, Don Lugo and family, moved into the asistencia and made it their permanent home. Lugo expanded his cattle operations and made use of the old zanja such that property along most of the length of the zanja could be used for agriculture.

Because Indians often attacked the northern part of the Rancho San Bernardino to steal horses and cattle, Governor Micheltorena granted about a league of land, known as the Rancho Muscupiabe, to Miguel Blanco. This small rancho was centered in Township 1 North, Range 5 West and Township 1 North, Range 4 West, to the north of the San Bernardino Rancho, which was once Agua Caliente. Township 1 North, Range 4 West, Lot 38 of this Rancho encompasses the southern portions of the University Hills Specific Plan study area. Blanco then proceeded to construct a large house near the mouth of Cable Creek for his wife and six children, built corrals, and planted crops. The establishment of the Blanco outpost was meant to discourage Piutes from north of Cajon Pass, from raiding the San Bernardino area (Haenszel 1987). Eventually, the Indians stole all of his horses and cattle, and he was forced to abandon the outpost and move to the asistencia. In the 1850s, after the territory was ceded to the United States, land tribunals restored the property to Blanco.

2.3.3 - American Settlement Period (1848 to 1885)

Although California lands shifted to American holdings, exploitation of the area was slow to occur. In 1851, Mormon immigrants began arriving in the area and began purchasing the majority of the Rancho from the Lugo family. The Mormons stopped at the Glen Helen Park area, also known as Sycamore Grove, while elders sought out the Lugo family to negotiate a price for the rancho. Once purchased, Mormon Bishop Tenney replaced Lugo at the asistencia, which served as a school and tithing house. Mormon agricultural fields along the zanja were the only irrigated fields in the entire valley. After the Mormons returned to Salt Lake in 1857, their properties were sold off to the slow influx of ranchers and farmers.

The advent of the railroad in Southern California encouraged population growth and the establishment of numerous townsites and sidings, and arrival of the Atchison, Topeka and Santa Fe (ATSF) in the mid-1880s greatly increased communications, travel and shipping between the San Bernardino region and Los Angeles. By the mid to late 1880s, rail transportation was probably reliable enough to assume that crop shipments could take place on a regular basis, allowing shipments of produce from areas such as: Upland, Cucamonga, Rialto, South Cucamonga, Ontario, and Alta Loma to be shipped to Los Angeles, San Bernardino and other points further east.

2.4 - Archival Aerial Photograph Review

MBA reviewed archival aerial photographs taken in 1930 (c-910_60) and in 1953 (#AXL-30K-68) (Exhibit 5). The photographs were evaluated for the types of agricultural practices performed upon them by the land or leaseholders that might have an effect on the condition of the land. They were
also reviewed to determine the existence of structures that might have been demolished and/or plowed after the photographs were taken in 1930 and 1953.

In 1930, the study area exhibited one structure complex in Badger Canyon. According to the 1898 Township 1 North, Range 4 West, San Bernardino Meridian Survey Map, these structures appear to correspond with an unrecorded homestead named the J.W. Marshall Place, which includes a house and a barn. This homestead is depicted on the map as being located within the southwest ¼ of the southwest ¼ of Section 4, on a bench above the bottom of Badger Canyon Creek. As observable in the 1930 aerial photograph, this structure complex exhibited citrus orchards, a house, a barn, roads and fields. This structure complex is located within the portion of the Specific Plan designated as open space. Additional buildings are not observable in this photograph. Fields are located at the mouth of Badger Canyon, and no flood control infrastructure is observable.

By 1953, the Marshall Structure complex is still present, and additional buildings are observable on the property. However, the adjacent fields do not appear to be utilized at this time. An additional structure complex is noted at the mouth of Badger Canyon. This structure complex is located on APN 0265-051-07, between the western portion and the eastern portion of the survey area. This structure is not located within the survey area, but the remnants of this structure complex are still observable in modern aerial photographs and were observable during the pedestrian survey. At this time, there are still no flood control basins in or near the study area.

MBA additionally reviewed aerial photographs from 1966, 1980, 1995 and 2002. From these photographs, it is known that the flood control basins had been constructed by 1966. In addition, the 1966 photograph indicates that the constituents of the Marshall Structure complex had changed since 1953. By 1966, it is observable that some of the buildings had been removed and/or replaced, and that the large barn remained. Then, the 1980 aerial depicts the Marshall Structure complex as lacking any evidence of agricultural pursuit, as the orchard was gone and the agricultural fields appear unutilized. At this time, only one large building complex and the barn remained. The structure at the mouth of Badger Canyon, situated on APN 0265-051-07, is observable in all of the aerial photographs as well. However, by 1980, it appears that agriculture was no longer being practiced in the general vicinity of that structure complex.
2.5 - General Land Office Records Search

An on-line search of the Bureau of Land Management (BLM) General Land Office (GLO) records indicates that Sections 4, 5, 8 and 9 of Township 1 South, Range 4 West were transferred to Jose del Carmen Lugo, Vicente Lugo and Diego Sepulveda on November 24, 1865 under the auspices of the March 3, 1851 Spanish-Mexican Grant. These sections were included in a much larger land grant, encompassing a total of approximately 35,000 acres. These lands were included within the Rancho San Bernardino. No additional title transfers are listed for any portion of Sections 4, 5, 8 and 9.
SECTION 3: RESEARCH DESIGN AND METHODS

The primary purpose of this cultural resources assessment is to determine whether cultural resources are located within a specific area, determine whether or not any existing cultural resources should be considered significant resources, and develop specific mitigation measures that will address potential impacts to existing or potential resources. Thus, this study consists of seven distinct efforts:

1. Request of NAHC Sacred Lands File record search and contact with appropriate tribal groups and individuals.
2. Request review of existing paleontological records and assessment of paleontological sensitivity.
3. Review of previous cultural resource sites and studies in the region.
4. Examination of archival topographic maps, aerial photographs and road maps.
5. Conduct a transect survey of those portions of the project area proposed to be impacted by development (survey area).
7. Development of recommendations associated with mitigation monitoring and/or impacts to existing cultural resources following CEQA Guidelines.
8. Completion of DPR forms for discovered sites and isolates.

3.1 - Record Search

3.1.1 - Information Center Search

The primary purpose of cultural resource record search is to determine what cultural resources more than 45 years old have been recorded in the vicinity of or within the project area, and whether such resources will be or could be impacted by development. A records search was conducted at the AIC, which is located at the SBCM in Redlands, to determine the existence of previously documented cultural resources in the City and County. This records search included reviews of archival maps and examinations of current inventories of the:

- National Register of Historic Places (NRHP);
- California Register of Historical Resources (CR);
- California Historical Landmarks (CHL);
- California Points of Historical Interest (CPHI); and
- California State Historic Resources Inventory (HRI).
3.1.2 - Native American Heritage Commission Record Search

A Sacred Lands File search request was sent to the NAHC to determine whether any sacred sites are recorded within the study area or in the general vicinity. Information request letters were sent to the tribal groups and individuals named by the NAHC as having potential knowledge of sacred properties. These information request letters were associated with CEQA-level scoping only, and were not affiliated with formal, government-to-government SB 18 consultations.

Tribal Consultation Overview and Responsibilities

The following overview is provided to assist the City in meeting its responsibilities for compliance with Tribal Consultation legislation, which is required when a project results in adopting a Specific Plan.

As of March 1, 2005, California Government Codes 65092; 65351; 65352; 65352.3; 65352.4; 65352.5 and 65560, formerly known as Senate Bill (SB) 18, requires city and county governments to consult with California Native American tribes before individual site-specific, project-level land use decisions are made. In particular, this process applies to General Plan Amendments and adoptions of Specific Plans. The intent of this legislation is to provide all tribes, whether federally recognized or not, an opportunity to consult with local governments for the purpose of preserving and protecting their sacred places. See Appendix C for more information.

3.1.3 - Paleontological Records Search

The primary purpose of a paleontological analysis is to determine the potential for impacts to significant paleontological resources in the study area. Thus, an information request was made to the Division of Geological Sciences at the SBCM in Redlands. The results of the SBCM paleontology literature and records review assist in determining the need or lack thereof for additional paleontological studies or mitigation measures.

3.2 - Pedestrian Survey

The purpose of the cultural resource pedestrian survey is to locate and document previously recorded or new cultural resource sites or isolates that are more than 45 years old, and to determine whether such resources will be or could be impacted by development. Those portions of the University Hills Specific Plan Project proposed to be directly impacted by development were examined using a modified block-transect technique, with 10 to 15 meter spacing. The spacing was increased due to the presence of dense vegetation, and the resultant negligible surface visibility.

3.3 - Sites and Isolates

Prehistoric-age and historic-age cultural resources can vary from area to area. Prehistoric-age and historic-age cultural resources are defined as three or more items, such as lithics, stone tools, glass,
cans, etc., that are not from a single source or material found within a 10 square meter area. Historic-age items must be more than 45 years old or have the potential to be more than 45 years old. This definition assumes that items found in an area with a diversity of materials represent more than a single activity at a location. Sites could also be loci if they presumably represent repeated discrete activity, such as a milling station, hearth, or isolated structure.

### 3.4 - Local Archaeological And Paleontological Regulations

According to the City of San Bernardino General Plan (2005), San Bernardino has an unusual array of historic and environmental resources, and the City wishes to control development to minimize the potential impacts of future development on significant natural, historic, cultural, habitat and hillside resources (Goal 2.6). To ensure this goal, the City prefers that development adjacent to natural areas and hillsides maintain the City’s significant open spaces and historic and cultural landmarks (Policy 2.6.1). In addition, the City wishes to work with project proponents to allow for the adaptive reuse of historic structures (Policy 2.6.4).

As part of the Historical and Archaeological resources preservation program, the City has generated a variety of policies to assist in meeting the following Goals:

- **Goal 11.1:** Develop a program to protect, preserve, and restore the sites, buildings and districts that have architectural, historical, archaeological, and/or cultural significance.
- **Goal 11.2:** Provide incentives that can be used to preserve our historic and cultural resources.
- **Goal 11.3:** Promote community appreciation for our history and cultural resources.
- **Goal 11.4:** Protect and enhance our historic and cultural resources.
- **Goal 11.5:** Protect and enhance our archaeological resources.

The City of San Bernardino General Plan is available through the City of San Bernardino website.

See Appendix C for further regulatory requirements.
SECTION 4: RESULTS

4.1 - Record Search

4.1.1 - Information Center Search

On November 30, 2007, MBA Senior Archaeologist Michael H. Dice conducted a records search at the AIC, which is located at the SBCM in Redlands. To identify any historic properties, Mr. Dice examined the current inventories of the NRHP, CR, CHL, and CPHI. In addition, Mr. Dice reviewed the HRI and archival maps for the County and the City to determine the existence of previously documented local historical resources. MBA additionally made efforts to obtain additional record search data on file with the SBNF, as the SBNF maintains separate records from the AIC. MBA telephoned Lytle Creek District Archaeologist Uyen Doan on June 26, 2008 for this reason. Ms. Doan returned the MBA phone call on July 2, 2008 in the form of a voicemail, and MBA subsequently left another voicemail for Ms. Doan on July 3, 2008. If any additional record search data can be obtained for the northern portion of the records search radius on lands in the SBNF, this information will be incorporated into the final report.

Review of the 1898 Township 1 North, Range 4 West, San Bernardino Meridian Survey Map shows that an unrecorded homestead identified as J.W.Marshall is located in the southwest ¼ of the southwest ¼ of Section 4 on a bench above the bottom of Badger Canyon Creek. This map notes that a house and a barn are found at this location. This mapped location corresponds with a structure complex and adjacent agricultural fields observable in archival aerial photographs as early as 1930 (as discussed in Section 2.4).

According to AIC files, the entirety of the project area was surveyed by Christopher Drover in 1990 (Drover 1990). This study was completed in support of the Paradise Hills Specific Plan and Environmental Impact Report, which was subsequently approved by the City but never implemented or constructed. This study identified one historic age structure complex with refuse dating to the 1940-1950s (Drover 1990). This resource was not recorded during the course of the 1990 study. These buildings may be associated with the remains of the homestead located within the southwest ¼ of the southwest ¼ of Section 4, known as by the name of J.W. Marshall Place or may correspond to the historic-age structural remnants on APN 0265-051-07. However, Drover does not indicate the location of this resource within his study area, nor does he provide any maps of the potential resource within the study area. In addition, portions of the study area, excluding both of the previously mentioned historic-age structure complexes, were examined by Statistical Research, Inc. for Federal Emergency Management Agency (FEMA) and the City (SRI 2001). This Class I records review study evaluated lands extending far beyond the boundaries of the present study area.
The AIC data additionally indicated that there are no previously recorded resources within the study area boundaries, and eleven resources within the search radius. Nine historic-age, no prehistoric-age and two historic-age pending archaeological resources were detected within the 1-mile search radius. These previously recorded resources, and their spatial relationship to the present study area are outlined in the following table.

**Table 1: Previously Recorded Cultural Resources**

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Type</th>
<th>Location ~1-mile radius</th>
<th>Location ~0.5-mile radius</th>
<th>Location ~0.25-mile radius</th>
<th>On Site?</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA-SBR-8093H/36-008093</td>
<td>Historic age – Two concrete foundations, a semi-cylindrical tank and metallic refuse associated with a rock quarrying operation.</td>
<td>—</td>
<td>•</td>
<td>—</td>
<td>No</td>
</tr>
<tr>
<td>CA-SBR-8302H/36-008302</td>
<td>Historic age – A rock and concrete foundation, found directly to the northeast of the historic age Fairview School (CA-SBR-6581H)</td>
<td>—</td>
<td>—</td>
<td>•</td>
<td>No</td>
</tr>
<tr>
<td>CA-SBR-9859H/36-009859</td>
<td>Historic age – A domestic refuse deposit, dating to approximately 1945 – the 1950s.</td>
<td>•</td>
<td>—</td>
<td>—</td>
<td>No</td>
</tr>
<tr>
<td>CA-SBR-9860H/36-009860</td>
<td>Historic age – A well buried approximately 34 feet below the modern ground surface.</td>
<td>•</td>
<td>—</td>
<td>—</td>
<td>No</td>
</tr>
<tr>
<td>36-012952</td>
<td>Historic age – A one-story, single-family residence constructed in the California bungalow style. This residence was built about 1933. (NR – 6Z).</td>
<td>•</td>
<td>—</td>
<td>—</td>
<td>No</td>
</tr>
<tr>
<td>36-012953</td>
<td>Historic age – A one-story, single-family rustic cabin. This residence was built about 1936. (NR – 6Z).</td>
<td>•</td>
<td>—</td>
<td>—</td>
<td>No</td>
</tr>
</tbody>
</table>
Table 1: Previously Recorded Cultural Resources (Cont.)

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Type</th>
<th>Location ~1-mile radius</th>
<th>Location ~0.5-mile radius</th>
<th>Location ~0.25-mile radius</th>
<th>On Site?</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSBR-19H</td>
<td>Historic age – The Devil Canyon Toll Road, which was built and developed between the 1860s and 1880s, and links to the Mojave Trail northwest of the Community of Cedarpines Park, CA. This resource includes Sawpit Creek Road/ the Sawpit Canyon II extension of the Devil Canyon Toll Road (36-013421).</td>
<td>●</td>
<td>●</td>
<td>—</td>
<td>No</td>
</tr>
<tr>
<td>CA-SBR-6354H/ 36-006354</td>
<td>Historic age - Three wood, metal and concrete bridges, five concrete and granite cobble structures, three diversion channels to percolation basins, a pentagonal shaped structure enclosing a pump house and well head, and a retaining wall.</td>
<td>●</td>
<td>—</td>
<td>—</td>
<td>No</td>
</tr>
<tr>
<td>CA-SBR-6581H/ 36-006581</td>
<td>Historic age – The Fairview School site, originally constructed in 1888. In 1985/ 1986 a stone foundation, associated refuse and olive trees were noted. However, no cultural constituents were observable by 1996. In 1996, only 26 olive trees surrounded the site.</td>
<td>—</td>
<td>—</td>
<td>●</td>
<td>No</td>
</tr>
<tr>
<td>P1071-22H (Pending Cultural Resource)</td>
<td>Historic age - One of the first diversions from Devil Canyon Creek. This resource was first recorded in use in 1905, and was last reported active in 1914.</td>
<td>●</td>
<td>—</td>
<td>—</td>
<td>No</td>
</tr>
</tbody>
</table>
Table 1: Previously Recorded Cultural Resources (Cont.)

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Type</th>
<th>Location ~1-mile radius</th>
<th>Location ~0.5-mile radius</th>
<th>Location ~0.25-mile radius</th>
<th>On Site?</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1071-3H (Pending Cultural Resource)</td>
<td>Historic age – The San Bernardino to Bear Valley Railroad Site.</td>
<td>●</td>
<td>—</td>
<td>—</td>
<td>No</td>
</tr>
</tbody>
</table>

4.1.2 - Native American Heritage Commission Record Search

On June 26, 2008, MBA sent a letter to the NAHC in an effort to determine whether any sacred sites are listed in their Sacred Lands File for this portion of the City of San Bernardino. Our efforts were associated with CEQA scoping only. The response from the NAHC was received on June 27, 2008. To ensure that all potential Native American resources are adequately addressed, letters to each of the nine listed tribal contacts were sent on June 30, 2008. All responses received at the MBA office are incorporated into Appendix A. Letters received subsequent to the date of the final report will be forwarded to the client and the City of San Bernardino as they are received.

4.1.3 - Paleontological Records Search

The paleontological records check was requested on June 26, 2008. The response was received on July 8, 2008 from Eric Scott, Curator of Paleontology at the SBCM. Mr. Scott undertook a literature review and records search of the paleontology of the study area (Appendix A). The paleontological review showed that the study area is situated upon surface exposures of the following rocks: Holocene and late Pleistocene younger alluvial fan deposits, late Pleistocene older alluvial fan deposits, Miocene conglomerate and arkose and Cretaceous granitic rocks. The Pleistocene alluvial fan deposits and the Miocene conglomerate and arkose have high potential to yield significant nonrenewable paleontologic resources, and are assigned high paleontologic sensitivity.

Excavations into Pleistocene sediments, including alluvial fan deposits, throughout the Inland Empire have repeatedly demonstrated a high potential to yield significant fossil resources. Fossils recovered in San Bernardino and Riverside Counties represent extinct taxa, including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, sabre-toothed cats, large and small horses, large and small camels and bison (Jefferson 1991; Reynolds and Reynolds 1991; Woodburne 1991; Springer and Scott 1994; Scott 1997; Springer et al. 1998, 1999, and 2007). For this reason, the Pleistocene-age deposits present within the study area are assigned high paleontologic sensitivity.

A search of the Regional Paleontologic Locality Inventory (RPLI) was conducted by Craig R. Manker of the Division of Geological Sciences at the SBCM, and it indicated that no paleontologic resource localities are recorded within the boundaries of the study area or within 1 mile in any direction.
2008). The closest recorded resource locality is located approximately three miles to the south of the study area (SBCM 1.102.1). This locality yielded several elements of extinct proboscidean (possibly mammoth) from surface sediments geologically mapped as Holocene and late Pleistocene valley alluvium.

Based upon this records review, the study area exhibits high potential to yield significant, nonrenewable paleontologic resources in Pleistocene-age sediments and in Miocene conglomerate and arkose. Therefore, MBA recommends a program to mitigate potential adverse impacts to paleontologic resources.

### 4.2 - Pedestrian Survey

MBA Project Archaeologist Jennifer M. Sanka and MBA Consulting Archaeologists Alynne Loupe and Arabesque Said surveyed approximately 160-acres of the University Hills Specific Plan Project area on June 27, 2008. The project area was generally examined using a modified block-transect technique, with 10 to 15 meter spacing. The spacing was increased in various portions of the survey area due to the presence of dense vegetation, and the resultant lack of surface visibility.

The 160-acre survey area is an irregular shape, and is comprised of three non-contiguous sections. The eastern portion of the project area contains two non-contiguous parcels: 0265-051-12 and 0265-061-16. This portion of the survey area is separated from the western portion by APN 0265-051-07, and contains the majority of APNs 0265-041-12 and 0265-051-09.

The entirety of the survey area is presently undeveloped, and the majority of the adjacent lands are similarly undeveloped. A presently occupied residence is located to the west of the survey area, and the remains of an historic-age residence are situated on APN 0265-051-07, between the eastern and western portions of the survey area. Several dirt roads were noted throughout the project area (Appendix D: Photographs 3, 6, and 8), and several of these roads appeared to have been recently used by off-road vehicles.

The survey area generally exhibited very poor surface visibility, ranging between 0 and 5 percent (Appendix D: Photographs 1, 2, 4, 5 and 7), due to extremely dense vegetation. Visibility increased to about 100 percent along the numerous dirt roads, and along the bottom of portions of Badger Canyon (Appendix D: Photographs 3, 6, and 8). The survey area was accessed from Badger Canyon Road, which is a dirt road branching from Devil’s Canyon Road. This maintained dirt road generally trends east west along the southern boundary of the survey area, which is also the southern boundary of the larger 404-acre study area (Appendix D: Photograph 6).

The rock type observed in the project area consisted of small gravels not more than 3 centimeters in diameter, found within a light brown silt-sand. Numerous granitic and quartz inclusions were noted
throughout, ranging in size from pebbles to boulders. Water-worn granitic boulders were noted in several drainages throughout the project area, and these lacked evidence of prehistoric-age milling activity. The surface expression of the survey area soils are characterized by undulations throughout, presumably resulting from numerous flooding episodes. The soils have also been impacted by off-road vehicle activity, and the historic-era agricultural use of the lands situated at the mouth of Badger Canyon, as observable in archival aerial photographs.

Modern refuse was generally absent from the survey area, with the exception of 1 cinder-block fragment, 1 beer bottle and 1 fragment of irrigation or sewer piping.

During the pedestrian survey, a potentially historic-age utility pole alignment was detected in the eastern portion of the survey area, and the remains of an off-site historic-age homestead were detected. No prehistoric-age archaeological resources were observed.

4.2.1 - UHSP Isolate 001
Located in the eastern portion of the survey area is a potential historic-age utility pole alignment (Appendix D: Photographs 1, 3 and 4). Exhibiting a T-configuration, the wooden crossbars carry two wires along the southern edge of the San Bernardino Mountains. This alignment appears to be in good condition, and continues beyond the boundaries of the survey area.

This resource has been recorded onto a DPR 523 Isolate form, and was submitted to the AIC for the assignment of a primary number.

Statement of Significance
Prehistoric-age and historic-age cultural resources are defined as three or more items, such as lithics, stone tools, glass, cans, etc., that are not from a single source or material found within a 10-square meter area. Historic-age items must be more than 45 years old or have the potential to be more than 45 years old. This definition assumes that items found in an area with a diversity of materials represent more than a single activity at a location. Sites could also be loci if they presumably represent repeated discrete activity, such as a milling station, hearth, or isolated structure.

Isolated artifacts that do not meet this minimal requirement cannot be considered unique under CEQA Guidelines. Therefore, UHSP Isolate 001 cannot be considered significant under CEQA. The preparation of a DPR 523 form for this find suffices for mitigating adverse impacts.

4.2.2 - Off-site Historic-age Homestead
Located on APN 0265-051-07, which is between the eastern and western portions of the survey area, are the remains of a historic-age homestead (Appendix D: Photograph 9). This historic-age resource is observable on archival aerial photographs as early as 1953, as discussed in Section 2.4. In 1953, structures are observable surrounded by several large, presumably ornamental trees. In addition, rows
of trees are located to the south of the structures, which may have been a citrus grove. The remains of this homestead are in poor condition, due to vandalism. Currently, the cement porch with an ornamental stonewall, portions of the exterior façade, the remains of an irrigation system and some refuse are intact. All of the observable constituents of this homestead have been adversely impacted by paintball activities, as evidenced by a plethora of paintball pellets and by residual paint from expended pellets. Numerous couches, wooden pallets and mattresses have been staged in front of the residence for these modern-era paintball activities.
SECTION 5: SUMMARY AND RECOMMENDATIONS

5.1 - Summary

In accordance with CEQA and the City of San Bernardino General Plan, MBA assessed the effects of development for the 160-acre survey area, and considered the entirety of the 404-acre study area. The results of the cultural resource record search indicate that there are no previously recorded resources within the 404-acre study area boundaries, and eleven resources within the search radius. Nine historic-age, no prehistoric-age and two historic-age pending archaeological resources were detected within the 1-mile search radius.

According to AIC files, the entirety of the study area was previously surveyed by Christopher Drover in 1990 (Drover 1990). This report identified one historic age structure complex with refuse dating to the 1940-1950s (Drover 1990). This resource was not recorded during the course of the 1990 study. These buildings may be associated with the remains of a homestead located within the southwest ¼ of the southwest ¼ of Section 4, known as by the name of the J.W. Marshall Place or may correspond to the historic-age structural remnants on APN 0265-051-07. However, Drover does not indicate the location of this resource within his study area, nor does he provide any maps of the potential resource within the study area. In addition, portions of the study area, excluding both of the previously mentioned historic-age structure complexes, were examined by Statistical Research, Inc. (SRI 2001). This Class I records review study evaluated lands extending far beyond the boundaries of the present study area.

Review of the 1898 Township 1 North, Range 4 West, San Bernardino Meridian Survey Map shows that an unrecorded homestead identified as the J.W.Marshall Place is located in the southwest ¼ of Section 4 on a bench above the bottom of Badger Canyon Creek. This maps notes that a house and a barn are found at this location.

MBA additionally reviewed aerial photographs taken in 1930, 1953, 1966, 1980, 1995 and 2002. In 1930, the study area exhibited one structure complex in Badger Canyon. These structures appear to correspond with the unrecorded homestead named the J.W.Marshall Place, which included citrus orchards, a house, a barn, roads and fields at that time. This structure complex is located within the portion of the Specific Plan designated as open space, and the remains were not surveyed or inventoried during the course of the 160-acre pedestrian survey. Additional buildings are not observable in the 1930 photograph, though some agricultural fields are located at the mouth of Badger Canyon.

By 1953, the Marshall Structure complex is still present, and additional buildings are observable on the property. However, the adjacent fields do not appear to be utilized at this time. An additional
structure complex is noted at the mouth of Badger Canyon. This structure complex is located on APN 0265-051-07, between the western-most portion and the eastern portions of the survey area. This structure is not located within the survey area, but the remnants of this structure complex are still observable in modern aerial photographs and were observable during the pedestrian survey.

The 1966 photograph indicates that the constituents of the Marshall Structure complex had changed since 1953. By 1966, it is observable that some of the buildings had been removed and/or replaced, and that the large barn remained. Then, the 1980 aerial depicts the Marshall Structure complex as lacking any evidence of agricultural pursuit, as the orchard was gone and the agricultural fields appear unutilized. At this time, only one large building complex and the barn remained. The structure at the mouth of Badger Canyon, situated on APN 0265-051-07, is observable in all of the aerial photographs as well. However, by 1980, it appears that agriculture was no longer being practiced in the general vicinity of the structure complex on APN 0265-051-07.

During the pedestrian survey, a potentially historic-age utility pole alignment was detected in the eastern portion of the survey area, and the remains of an off-site historic-age homestead were detected on APN 0265-051-07. No prehistoric-age archaeological resources were observed. A DPR 523 Isolate form was created for the potentially historic-age utility pole alignment, and was submitted to the AIC for the assignment of a primary number. The completion and submittal of this DPR 523 form to the AIC suffices for mitigating impacts to this resource.

Based upon the results of the pedestrian survey within the 160-acre survey area to be directly impacted by development, the lack of previously recorded archaeological resources within the 404-acre study area despite past pedestrian survey efforts, the highly disturbed nature of the survey area soils due to flooding events, off-road vehicle activity and historic-era agricultural use, MBA finds it unlikely that the survey area will exhibit intact, subsurface deposits. Therefore, MBA does not recommend a monitoring program to mitigate adverse impacts to cultural resources during development related activities in the 160-acre survey area. However, MBA does recommend additional studies if the parameters of the development program are modified. Specifically, this applies to any alteration or destruction of the historic-age homestead located on APN 0265-051-07 and/or the remnants of the J.W Marshall Place located within the in the southwest ¼ of the southwest ¼ of Section 4. If either of these resources will be impacted by development associated with the implementation of the University Hills Specific Plan or any other future development, then these resources must be fully recorded on DPR 523 Forms to be submitted to the AIC and evaluated for significance. If these resources are found to be significant under the provisions of CEQA, additional mitigative efforts may be required. Recordation and significance evaluations must be completed prior to any disturbance or demolition of any of the constituents of the resources.
The potential for impacts to significant paleontological resources are considered high in Pleistocene-age sediments and Miocene conglomerate and arkose. Consequently, MBA recommends a program to mitigate potential adverse impacts to paleontologic resources.

5.2 - Recommendations

Based on the results of the record search, the 160-acre pedestrian survey, and the disturbed nature of the survey area soils MBA does not recommend cultural resource monitoring during development. However, MBA does recommend additional studies if the development plans will impact any of the constituents of the historic-age homestead located on APN 0265-051-07 and/or the remnants of the J.W Marshall Place located within the in the southwest ¼ of the southwest ¼ of Section 4.

The potential for impacts to significant paleontological resources are considered high in Pleistocene-age sediments and Miocene conglomerate and arkose. Consequently, MBA recommends a program to mitigate potential adverse impacts to paleontologic resources.

5.2.1 - Cultural Resources Recommendations

The probability for impacts to significant cultural resources is considered low within the 160-acre survey area. This designation is based upon the lack of significant resources within the study area despite past archaeological surveys and the disturbed nature of the survey area soils. Therefore, MBA does not recommend a mitigation-monitoring program within the 160-acre survey area during development related activities. However, MBA does recommend additional studies if the development plans will impact any of the constituents of the historic-age homestead located on APN 0265-051-07 and/or the remnants of the J.W Marshall Place located within the in the southwest ¼ of the southwest ¼ of Section 4.

<table>
<thead>
<tr>
<th>Mitigation No.</th>
<th>Mitigation Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR-1</td>
<td>If the parameters of the University Hills Specific Plan are modified in a manner such that any of the constituents of either the historic-age homestead located on APN 0265-051-07 and/or the remnants of the J.W Marshall Place are altered or destroyed, then additional efforts will be required. These efforts should include, but are not limited to, the full recordation of the entirety of the resource onto DPR 523 Forms to be submitted to the AIC. In addition, any resource proposed to be altered or destroyed by development must be evaluated for significance, including a determination of eligibility for listing in the CR and/or any local register. If the resources are found to be significant under the provisions of CEQA, additional mitigative efforts may be required. Full recordation and significance evaluations must be completed prior to any disturbance or demolition of any of the constituents of the resources.</td>
</tr>
</tbody>
</table>
5.2.2 - Accidental Discovery of Human Remains

There is always the small possibility that ground-disturbing activities during construction may uncover previously unknown buried human remains. Should this occur, Federal laws and standards apply including Native American Graves Protection and Repatriation Act (NAGPRA) and its regulations found in the Code of Federal Regulations at 43 CFR 10.

In the event of an accidental discovery or recognition of any human remains, California State Health and Safety Code § 7050.5 dictates that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to CEQA regulations and Public Resources Code (PRC) § 5097.98.

5.2.3 - Accidental Discovery of Cultural Resources

It is always possible that ground-disturbing activities during construction may uncover previously unknown, buried cultural resources. In the event that buried cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archeologist and shall make recommendations to the Lead Agency on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Potentially significant cultural resources consist of, but are not limited to, stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.

If the resources are determined to be unique historic resources as defined under §15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any archaeological artifacts recovered as a result of mitigation shall be donated to a qualified scientific institution approved by the Lead Agency where they would be afforded long-term preservation to allow future scientific study.

In addition, reasonable efforts to avoid, minimize, or mitigate adverse effects to the property will be taken and the State Historic Preservation Officer (SHPO) and Native American tribes with concerns
about the property, as well as the Advisory Council on Historic Preservation (ACHP) will be notified within 48 hours in compliance with 36 CFR 800.13(b)(3).

5.2.4 - Paleontological Recommendations
The potential for impacts to significant paleontological resources is considered high in Pleistocene-age sediments and Miocene conglomerate and arkose. Therefore, MBA recommends a program to mitigate potential adverse impacts to paleontologic resources.

Table 3: Recommended Paleontological Resource Mitigation Measures

<table>
<thead>
<tr>
<th>Mitigation No.</th>
<th>Mitigation Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR-1</td>
<td>A field survey conducted by a qualified paleontologist of those portions of the study area mapped as containing rock units with a high potential for yielding significant, nonrenewable paleontologic resources. Specifically, this includes a field survey of surface exposures mapped as Pleistocene-age and Miocene conglomerate and arkose. This field survey shall assist in determining the need or lack thereof for paleontologic monitoring during development, and determine the intensity of monitoring efforts should they be required. If the field survey determines the need for a mitigation-monitoring program, refer to PR-2 to PR-5.</td>
</tr>
<tr>
<td>PR-2</td>
<td>Monitoring of excavation in areas identified as likely to contain paleontologic resources following the completion of a field survey. Paleontologic monitors should be equipped to salvage fossils, as they are unearthed, to avoid construction delays, and to remove samples of sediments likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced or eliminated if the potentially fossiliferous units described herein are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.</td>
</tr>
<tr>
<td>PR-3</td>
<td>Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils are essential in order to fully mitigate adverse impacts to the resources.</td>
</tr>
<tr>
<td>PR-4</td>
<td>Identification and curation of specimens into an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance. The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not complete until such curation into an established museum repository has been fully completed and documented.</td>
</tr>
<tr>
<td>PR-5</td>
<td>Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate lead agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts to paleontologic resources.</td>
</tr>
</tbody>
</table>
SECTION 6: CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this archaeological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: July 8, 2008  Signed: Jennifer M. Sanka, M.A., RPA
Michael Brandman Associates
Irvine, CA
SECTION 7: REFERENCES


Appendix A:
Cultural Resources Correspondence
A-1: Native American Heritage Commission
Sacred Lands File Search
June 26, 2008

Native American Heritage Commission
915 Capitol Mall, Suite 364
Sacramento, CA 95814-4801

Via email: gtomei_nahc@pacbell.net

Subject: Request for a Sacred Lands Records Search for the University Hills Specific Plan Project located on about 404 acres in the City of San Bernardino, County of San Bernardino, California. (USGS San Bernardino North, CA. quad)

To Whom It May Concern:

Michael Brandman Associates (MBA) would like to determine whether any listed sacred sites are located within or near a project area found in the City of San Bernardino.

The project area is located in San Bernardino County, and is found on the USGS San Bernardino North, CA. 7.5' topographic quadrangle, T.1S, R.4W, Sections 4, 5, 8 and 9.

Please notify us of any sacred Native American sites that may be affected by the undertaking. A full description of this project can be found in our archaeological survey report, which is forthcoming. This request is not affiliated with the SB 18 process; rather, it is an information request to be included within a cultural resources assessment compliance document.

Sincerely,

Jennifer M. Sanka M.A., RPA
Project Archaeologist
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA. 92602
PHONE: 714.508.4100 x.1065
FAX: 714.508.4110
June 27, 2008

Jennifer Sanka  
Michael Brancman Associates  
220 Commerce, Suite 200  
Irvine, CA 92602

Sent by Fax: 714-508-4110  
Number of pages: 2

Re: Proposed approximate 404 acres project in the City of San Bernardino, County of San Bernardino

Dear Ms. Sanka:

The Native American Heritage Commission was able to perform a record search of its Sacred Lands File (SLF) for the affected project area. The SLF failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the Sacred Lands File does not guarantee the absence of cultural resources in any area of potential effect (APE).\textsuperscript{1}

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the nearest tribes that may have knowledge of cultural resources in the project area. A List of Native American contacts are attached to assist you. The Commission makes no recommendation of a single individual or group over another. It is advisable to contact the person listed; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area (APE).

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton  
Program Analyst

Attachment: Native American Contact List
Native American Contacts
San Bernardino County
June 27, 2008

Cahuilla Band of Indians
Anthony Madrigal, Jr., Chairperson
P.O. Box 391760 Cahuilla
Anza , CA 92539
tribalcouncil@cahuilla.net
(951) 763-2631
(951) 763-2632 Fax

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, vice chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

San Manuel Band of Mission Indians
James Ramos, Chairperson
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

Gabrielino/Tongva Council / Gabrielino Tongva Nation
Sam Dunlap, Tribal Secretary
761 Terminal Street; Bldg 1, 2nd floor Gabrielino Tongva
Los Angeles , CA 90021
office @tongvatribene.net
(213) 489-5001 - Office
(909) 262-9351 - cell
(213) 489-5002 Fax

Gabrielino Band of Mission Indians of CA
Ms. Susan Frank
PO Box 3021 Gabrielino
Beaumont , CA 92223
(951) 897-2536
(951) 769-845-3606 - FAX

Morongo Band of Mission Indians
Michael Contreras, Cultural Heritage Prog. Manager
13000 Field Road Cahuilla
Caborzon , CA 92230 Serrano
(951) 755-5025
(951) 201-1866 - cell
(951) 922-0105 Fax

San Manuel Band of Mission Indians
Ann Brierty, Environmental Department
101 Pure Water Lane Serrano
Highland , CA 92346
abrierty@sanmanuel-nsn.gov
(909) 863-5899 EXT-4321
(909) 862-5152 Fax

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 Resources Code and Section 5097.96 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed University Hills Specific Plan Project, located on about 404 acres in the City of San Bernardino; San Bernardino County, California for which a Second Lands File search and Native American Contacts list were requested.
Native American Contacts
San Bernardino County
June 27, 2008

Serrano Nation of Indians
Goldie Walker
6588 Valaria Drive
Highland CA 92346
Serrano
(909) 862-9883

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 5097.54 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the propose University Hills Specific Plan Project, located on about 404-acres in the City of San Bernardino; San Bernardino County, California for which a Sacred Lands File search and Native American Contacts list were requested.
July 1, 2008

SAMPLE

Subject: Native American Consultation Letter associated with one Cultural Resource Survey: The University Hills Specific Plan Project located on about 404 acres in the City of San Bernardino, County of San Bernardino, California. (USGS San Bernardino North, CA. quad)

Dear xxxx:

Michael Brandman Associates completed an archaeological resource survey on approximately 190 acres of a 404 acre project area in the City of San Bernardino. The proposed project is the implementation of the University Hills Specific Plan, which is a mixed density residential community with supporting infrastructure. Development is NOT proposed to occur on about 214 of the total 404 acres. The archaeological survey returned negative findings for prehistoric age cultural resources within the 190 acre survey area. This consultation letter is not associated with the SB18 process, but is an information request that shall be included in our cultural resource assessment document.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) and CEQA consider the effects a project may have on historic properties. The definition of “historic properties” can include properties of traditional religious and cultural significance to Native American groups.

To determine whether the proposed project may impact any historic properties, including traditional cultural properties, MBA has reviewed background information and consulted with entities such as the NAHC. The Native American Heritage Commission does not indicate that any sacred sites are located in or near this project area, but have listed you as a tribal contact.

We have attached a map showing the location of the project area with reference to the San Bernardino North, CA. topographic map. Generally, the project area is found to the north of the 210 Freeway and east of Interstate 215. Specifically, the project area is located to the north of the Cal State San Bernardino Campus, and north of Badger Canyon Road, which is a dirt road.

We wish to ask if you have any information or concerns about this project area, and/or if the proposed project may have an impact on cultural resources that are important to you.
A-2: Paleontological Records Search
June 26, 2008

Eric Scott
San Bernardino County Museum,
Division of Geological Sciences
2024 Orange Tree Lane
Redlands, CA  92374

Via Email: escott@sbcm.co.san-bernardino.ca.us

Subject: Request for a RUSH Paleontological Resources Records Search for the University Hills Specific Plan Project located on about 404 acres in the City of San Bernardino, County of San Bernardino, California. (USGS San Bernardino North, CA. 7.5' Topographic Quadrangle)

Mr. Scott:

I am in need of a RUSH paleontological records search on a project area located in Sections 4, 5, 8 and 9 of T.1S R.4W, as found on the USGS San Bernardino North, CA. 7.5' topographic quadrangle.

Once the results have been determined, please email the results to me at jsanka@brandman.com or fax the results to our office 714.508.4110, and mail MBA a hard copy. If you have any more questions or need to speak with me, please feel free to call me at 714.508.4100 ext 1065. Thank you for your time and effort.

Sincerely,

Jennifer M. Sanka M.A., RPA
Project Archaeologist
Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA. 92602

S:/JenSanka/2533.0006.0 University Hills SP/Appendices/253300060_Paleo request letter.doc
8 July 2008

Michael Brandman Associates
attn: Jennifer M. Sanka, M.A., RPA
220 Commerce, Suite 200
Irvine, CA 92602

re: PALEONTOLOGY LITERATURE AND RECORD REVIEW, UNIVERSITY HILLS SPECIFIC PLAN PROJECT, CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CALIFORNIA

Dear Ms. Sanka,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-named 404-acre property in the City of San Bernardino, San Bernardino County, California. Specifically, the study area is located in portions of sections 4, 5, 8 (projected), and 9, Township 1 North, Range 6 West, San Bernardino Base and Meridian, as shown on the San Bernardino North, California 7.5' USGS topographic quadrangle (1967 edition, photorevised 1980).

Previous geologic mapping (Miller and others, 2001) indicates that the proposed University Hills Specific Plan Project is situated upon surface exposures of the following rock units: Holocene and late Pleistocene younger alluvial fan deposits (= unit Oyf); late Pleistocene older alluvial fan deposits (= Qof2, Qof); Miocene conglomerate and arkose (= Tc); and Cretaceous granitic rocks (= Kng). Of these rock units, Pleistocene alluvial fan deposits and the Miocene conglomerate and arkose have high potential to yield significant nonrenewable paleontologic resources, and so are assigned high paleontologic sensitivity.

Pleistocene older alluvium (including Pleistocene alluvial fan deposits) throughout San Bernardino and Riverside Counties and the Inland Empire has been repeatedly demonstrated to have high paleontologic sensitivity (Jefferson, 1991; Reynolds and Reynolds, 1991; Woodburne, 1991; Springer and Scott, 1994; Scott, 1997; Springer and others, 1998, 1999, 2007; Anderson and others, 2002). Fossils recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, saber-toothed cats, large and small horses, large and small camels, and extinct bison (Jefferson, 1991; Reynolds and Reynolds, 1991; Woodburne, 1991; Springer and Scott, 1994; Scott, 1997; Springer and others, 1998, 1999, 2007).
For this review, Craig R. Marker of the Division of Geological Sciences, SBCM conducted a search of the Regional Paleontologic Locality Inventory (RPLI). The results of this records search indicated that no previously recorded paleontologic resource localities are known from within the boundaries of the proposed study area, nor from within at least one mile in any direction. The nearest paleontologic resource locality recorded in the RPLI is located 3 miles south of the study area in sediments mapped at the surface as Holocene and late Pleistocene valley alluvium. This locality (SBCM1.102.1) is reported to have yielded several elements of extinct proboscidean, possibly mammoth (‘Mammuthus’ sp.).

Recommendations

The results of the literature review and the search of the RPLI at the SBCM demonstrate that the proposed property is situated upon surface sediments with high potential to contain significant paleontologic resources. A qualified vertebrate paleontologist must develop a program to mitigate impacts to nonrenewable paleontologic resources, including full curatorial of recovered resources (see Scott and others, 2004). This mitigation program must be consistent with the provisions of the California Environmental Quality Act (Scott and Springer, 2003), as well as with regulations currently implemented by the County of San Bernardino and the proposed guidelines of the Society of Vertebrate Paleontology.

The County of San Bernardino (Development Code §8 2.20.040) defines a qualified vertebrate paleontologist as meeting the following criteria:

**Education:** An advanced degree (Master's or higher) in geology, paleontology, biology or related disciplines (exclusive of archaeology).

**Professional Experience:** At least five years professional experience with paleontologic (not including cultural) resources, including the collection, identification and curation of the resources.

The County of San Bernardino (Development Code §8 2.20.030) requires that paleontologic mitigation programs include, but not be limited to:

(a) **Field survey before grading.** In areas of potential but unknown sensitivity, field surveys before grading shall be required to establish the need for paleontologic monitoring.

(b) **Monitoring during grading.** A project that requires grading plans and is located in an area of known fossil occurrence, or that has been demonstrated to have fossils present in a field survey, shall have all grading monitored by trained paleontologists crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Paleontologic monitors shall be equipped to salvage fossils as they are unearthed, to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially fossiliferous
units described for the property in question are not present, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.

(c) Recovered specimens. Qualified paleontologic personnel shall prepare recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils is essential in order to fully mitigate adverse impacts to the resources.

(d) Identification and curation of specimens. Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance. The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of a diverse impact to significant paleontologic resources is not considered complete until curation into an established museum repository has been fully completed and documented.

(e) Report of findings. Qualified paleontologic personnel shall prepare a report of findings with an appended itemized list of specimens. A preliminary report shall be submitted and approved before granting of building permits, and a final report shall be submitted and approved before granting of occupancy permits. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into the collections of the San Bernardino County Museum, will signify completion of the program to mitigate impacts to paleontologic resources.

References


Please do not hesitate to contact us with any further questions you may have.

Sincerely,

Eric Scott, Curator of Paleontology
Division of Geological Sciences
San Bernardino County Museum
Appendix B: Personnel Qualifications
Experience Summary

Ms. Sanka is a Certified Archaeologist with eight years of archaeological field experience in both the New and Classical Worlds. Her Cultural Resource Management career began in North Carolina, directly after completing her M.A. at Duke University in 2003. Since then, Ms. Sanka has gained three years of experience in the prehistoric and historic archaeology of North Carolina, Maryland, and Southern California. She has participated in various projects, gaining familiarity with pre-field assessments, archival research, pedestrian field surveys, site evaluation and testing and data recovery and analysis. She is currently refining her ability to prepare documents that comply with the California Environmental Quality Act and National Environmental Policy Act. Ms. Sanka is a member of the American Schools of Oriental Research (ASOR), Archaeological Institute of America (AIA), and a Registered Professional Archaeologist (RPA).

Recent Project Experience

**Environmental Documents (CEQA and NEPA)**

Chaffey Joint School District East Avenue Project, Rancho Cucamonga. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the Chaffey Joint School District East Avenue Project, Rancho Cucamonga, CA.

Shandin Hills Project, San Bernardino. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the MICAL, LLC Shandin Hills Project, San Bernardino, CA.

Wildomar Trails Project, Wildomar. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the South Coast Communities, LLC Wildomar Trails Project, Wildomar, CA.

Sempra North Montebello Boulevard Project, Montebello. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the Sempra North Montebello Boulevard Project, Montebello, CA.

Mesa Verdes Estates Project, Calimesa. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the Mesa Verde Estates Secondary Access Road Project, Calimesa, CA.

Terracon Cherry Valley Boulevard Project, Cherry Valley. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the Terracon Cherry Valley Boulevard Project, Cherry Valley, CA.

Ohio Avenue Project, San Bernardino. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the John Laing Homes Ohio Avenue Project, San Bernardino, CA.

Merill Avenue Project, Chino. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the Watson Land Company Merrill Avenue Project, Chino, CA.

Kasbergen Ramona Expressway and Alessandro Avenue Project, San Jacinto. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the Kasbergen Ramona Expressway and Alessandro Avenue Project, San Jacinto, CA.

Van Buren Street Project, Coachella. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the Coachella Land Company Van Buren Street Project, Coachella, CA.
San Sevaine Way and Wacker Drive Project, Glen Avon. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the United Strategies San Sevaine Way and Wacker Drive Project, Glen Avon, CA.

Industrial Park Project, Redlands. Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the IDS Real Estate Group Iowa Industrial Park Project, Redlands, CA.

Ranch Road Project, Colton Staff Archaeologist and Author of Phase I Cultural Resources Assessment for the Medlin Tropica Ranch Road Project, Colton, CA.

Tustin Skyline Drive Storm Drain Project, Tustin Hills Staff Archaeologist and Author of a Phase I Cultural Component for an EIR, Tustin Skyline Drive Storm Drain Project, Tustin Hills, CA.

El Mirage Meeks Project, Adelanto. Author of Phase I Cultural Resources Assessment for Alpine Real Property Equity Group El Mirage Meeks Project, Adelanto, CA.

Dean Project, Adelanto Author of Phase I Cultural Resources Assessment for Alpine Real Property Equity Group Dean Project, Adelanto, CA.

Jeffredo Property Project, Coachella. Contributing Author of Phase I Cultural Resources Assessment for Brighton Properties, LLC Jeffredo Property Project, Coachella, CA.

Historical, Archaeological and Paleontological Resources

Phase I Surveys, Various Locations in Southern California. Field Technician for various Phase I surveys in Southern California: City of Bakersfield, Off Road Vehicle Project; Camp Pendleton, Oceanside, CA; Aerial Gunnery Range, Chocolate Mountains; China Lake Naval Air Weapons Station, Ridgecrest; and various other projects for the City of Hemet, the City of Moreno Valley and the City of Fontana.

Twenty-nine Palms Military Training Facility. Field Technician for Phase II Testing in Twenty-nine Palms and Barstow, Southern California.

Fort Bragg and Randolph County. Field Technician for Phase II Testing in Fayetteville and Greensboro, North Carolina.

Santiago Hills Full Data Recovery. Field Technician for Phase III, Full Data Recovery Projects in the City of Orange, Southern California:

Downtown Los Angeles Public School #9 Project. Excavation and Relocation of an historic cemetery, Los Angeles, CA.

Full Data Recovery Project Maryland Pokomoke City, Maryland. Field Technician for Phase III Project. This historic project evidenced many complex domestic features: a well, privies, middens and a sizable brick homestead with clayed floors.
Michael H. Dice, M.A., RPA  
Project Scientist/Senior Archaeologist

<table>
<thead>
<tr>
<th>Education</th>
<th>Experience Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.A., Anthropology, Arizona State University, Tempe, Arizona</td>
<td>Mr. Dice is a Certified Archaeologist with more than eighteen years of experience performing records searches, archaeological surveys, archaeological site testing (Phase II) and data collection (Phase III) projects on private and public lands in the Southwestern United States and Southern California. During his career, he has authored or co-authored more than 150 CEQA and/or NEPA level documents including several manuscripts for the National Park Service. Mr. Dice is a member of the California Historical Society, a Registered Professional Archaeologist (RPA), and is a member of the National Trust for Historic Preservation.</td>
</tr>
<tr>
<td>B.A., Anthropology, Washington State University, Pullman, Washington</td>
<td></td>
</tr>
<tr>
<td>Anthropology Track, University of Washington, Seattle, Washington</td>
<td></td>
</tr>
<tr>
<td>Professional Affiliations</td>
<td>Recent and Selected Project Experience</td>
</tr>
<tr>
<td>Member, California Historical Society</td>
<td>Transportation</td>
</tr>
<tr>
<td>Member, National Trust for Historic Preservation</td>
<td>Santa Ana Art Wall Project (Santa Ana, CA), OCTA Tracks/Santa Ana Depot at Santiago Street. Serviced as senior project archaeologist to perform an ASR/HRER/HPSR package for the City of Santa Ana for its Caltrans District 12 submission. Construction of the Art Wall was funded by, in part, by the Federal Highway Administration (FHWA). The project was not considered an undertaking exempt from federal cultural resource compliance as governed by Caltrans-FHWA Programmatic Agreement (PA) associated with Section 106 of the National Historic Preservation Act (36 CFR §800). The APE was established in consultation with Cheryl Sinopoli of District 12. Once the APE had been approved by Rail HQ, several unrecorded historic properties were evaluated. Work progressed with Caltrans staff guidance in a reasonable and responsive fashion. Our historic architectural specialist and co-author, Christeen Taniguchi, is now an employee of Galvin and Associates. The project allowed interaction between MBA, Caltrans and SHPO, with successful results.</td>
</tr>
<tr>
<td>Registered Professional Archaeologist (RPA)</td>
<td>Nation Park Service</td>
</tr>
<tr>
<td>Registered Archaeologist, Orange County</td>
<td>Project Archaeologist/Database Manager for the emergency Chapin-5 Fire Rehabilitation Project, Mesa Verde National Park, Colorado (1996-1999). Began as field crew chief (GS-7) and finished with the Park as a GS-9 Database manager. Created an ACCESS 6.0 database for the recordation or re-recordation of more than 500 archaeological sites within the rehabilitation area.</td>
</tr>
<tr>
<td></td>
<td>Telecommunication</td>
</tr>
<tr>
<td></td>
<td>NEPA Compliance/Telecommunication Facilities. Serving as project scientist for a variety of telecommunication providers throughout California in complying with the National Environmental Policy Act (NEPA) for the implementation of cellular communication facilities. This project includes the preparation of NEPA compliance documents in accordance with the Federal Communication Commissions regulations pertaining to telecommunication facilities, biological surveys, including focused, sensitive species surveys and wetland delineations and permitting, cultural resource records searches and Phase I surveys, including architectural/historical evaluations and construction monitoring, and arborist surveys.</td>
</tr>
</tbody>
</table>
**Water**

**Victor Valley Recycled Water Project.** Project manager to perform a program-level Section 106/CEQA analysis for the Victor Valley Recycled Water Project through Bauer Environmental. Our project consisted of the analysis of a series of alternative recycled water facility locations and main-line pipeline routes in the County of San Bernardino, the City of Victorville, the City of Hesperia, and the City of Apple Valley. The VVRW project will eventually exhibit four recycled water treatment plants, several pumping stations, numerous main-line recycled water pipelines and numerous secondary pipelines. Four project footprints were evaluated for potential impacts to cultural resources. The results showed that the majority of the project area held "low" sensitivity for cultural resources, there was a minor amount of "medium" sensitivity, while those areas near the Mojave River held "high" sensitivity. We recommended that cultural resource testing take place along the Mojave River if those alternatives are chosen. Specific mitigation-monitoring recommendations will be recommended once the project reaches the "project-level" of analysis.

**Mining**

**Final Phase I Cultural Resources Survey Report for the Coachella Aggregates Expansion Project, Riverside County.** Cultural survey report for planned mining development in the County of Riverside. 2003.

**Utilities**

**Cultural Resource Records Search Results and Sensitivity Evaluation for the Palm Springs and Desert Hot Springs Master Drainage Plan Project.** Cultural evaluation report for planned utility construction in the Coachella Valley.

**Recreation & Community Complexes**

**Cultural Survey Report, Bakersfield State Vehicular Recreation Area (SVRA), Kern County.** Cultural survey report for planned State Park north of Bakersfield, in Kern County. 2006.

**Planned Development**

Over 200 reports available dated from 1999 to 2006.

**Schools**

**Cultural Resource Survey Report and Paleontological Records Review for the Chaffey School District #9 High School Project located west of San Sevane and north of Walnut Avenue, Fontana, San Bernardino County.** Cultural survey report for planned school development in the City of Fontana.

**Retail**

**Phase 1 Cultural Resource Survey: The Yucca Valley Home Depot Retail Center (APN#0601-201-31, -32 and -37), Town of Yucca Valley.** Cultural survey for a planned development in the Town of Yucca Valley

**Airport**

**Cultural Resource Records Search and Site Visit Results for the Proposed Ontario Airport TIS Transmitter Site, located near Parking Lot D and F of the Ontario International Airport, Ontario, San Bernardino County.** Cultural survey for a planned transmitter within the Ontario International Airport. Section 106 Study for Airport.
Experience
Recent and Selected Project Experience

Field Archaeologist

- Consulting archaeologist, Michael Brandman Associates, 2004-2008
- Field archaeologist, California State University, Bakersfield
- Field Archaeologist, CRM Tech, Riverside
- Field Archaeologist and Scientific Illustrator, Bishop Museum, Honolulu

Painting/Drawing – Fresco, Oil and Watercolor

- Scientific Illustration, Anthropology/Archaeology, Hawaiian Entomology, Hawaiian Botany. Traditional Illustration and Adobe Photoshop and Quark for publishing.
- Research, Design and Execution of large exterior and interior murals, fresco and tile.
- Portraits – Oil, Water color, conte, charcoal, graphite- live sittings and photos.

Jewelry

- Designed created fine jewelry, (one-of-kind) and limited edition for 18 years. Studio Jeweler
- Repair, gem setting, re-design out-of-date jewelry.

- Hollow Ware – Sterling and Copper, Chase, Repouse, Intaglio, set with stones.

Sculpture

- Wood, (carved with power and hand tools) Ceramic, Metals – welded, soldered, cast in bronze and silver.
- Sculpture-commissioned portraits, fountains and garden sculpture.
- Electroforming – Silver, Gold and Copper on Wood, Metal and Glass.

Mosaic

- Wood, Glass, Ceramic, Metal, Abalone and shell(etched and inlaid with Turquoise and shell.

Education

<table>
<thead>
<tr>
<th>University of Hawaii, Drawing, Painting, Scientific Illustration, Anthropology, Archaeology, Art History</th>
</tr>
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<tbody>
<tr>
<td>B.F.A. Metal Design, University of Washington, 1983</td>
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<tr>
<td>B.F.A. Printmaking, University of Washington, 1983</td>
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<tr>
<td>ArcView, GIS, ESRI, GIS CERTIFICATE UCR Extension, 2002</td>
</tr>
<tr>
<td>Independent Study, Raku, Peter Chung, Kaneohe, HI, 1999</td>
</tr>
<tr>
<td>Cornish Allied Arts, Seattle, Washington, Printmaking 1980-81</td>
</tr>
<tr>
<td>Professional - Goldsmith Apprenticeship to Don Tompkins, 1979-82</td>
</tr>
<tr>
<td>A.A. Graphic Arts, Highline College, Seattle 1979-80</td>
</tr>
</tbody>
</table>
**Glass**

- Designed, created and repaired stained glass and painted glass (church windows).
- Slump/Drape glass for bas-relief windows, lamps and sculpture.
- Created original sculptures and models in wood, clay and wax for molds for cast, slump glass.
- Repaired bent glass lamps (Tiffany), sculptured lamp repair and creation.
- Glass frit, glass enamel and fusing, Glass and copper tiles.

**Ceramics**

- Produced original pottery and sculpture, fountains and architectural ceramics and tooled for reproduction.

**Weaving**

- Sculptural and rugs. Woven fragments turned into gold and silver for jewelry.

**Rubber/Plastics**

- All mold-making products
- Silicone breast prosthetics – color mixing, sculpture and manufacture

**Information Systems & Graphics**

- ESRI GIS Certificate (ArcView 8.1 and extensions), UnderSea with GIS, Practical Applications of GIS for Archaeologists, Adobe Photoshop, Illustrator, Pagemaker, Quark, DeskTop Publishing.
- Word, Excel, Access, Powerpoint, scanners, digital cameras and programs.
- Owned and operated small book press and was directly involved with all aspects of production.
- Graphic Illustration and Book Design, traditional and computer generated.
- Designed and created art and artifact and merchandise catalogues combined with data base.

**Research**

- For Chemeuevi, Cahuilla, Cabazon and Chumash Tribes – Museum Projects and Publications.
- Nuuanu Valley, Hawaiian sites and history for Halí’a Aloha O Nuuanu Fresco at Kawanakaoa Intermediate School.  10’x 25’ Exterior Fresco, 1995
- Continued study of Halawa valley - text, photos and drawings in progress.
- Developing handbook for contemporary Fresco for use in public buildings
- Developing handbook for ancient jewelry techniques and sculptural electro-forming.
- Designed brochures and catalogues for galleries, yearbooks: photo sessions, graphic layout, camera and darkroom and printing of photos and flatwork.
- Developed handbook for artist law and business contracts.
Research and Project Development
- Draw, photograph and catalog artifacts, create maps and database.
- Developed holistic multi cultural curriculum for art history and archaeology.
- Adept in research, ancient and historic, modern materials adaptation and utilization.
- Exceptionally creative in design, utilization and problem solving.
- Demonstrated success in implementing large complex projects.

Management and Public Relations
- Managed art galleries, frame shops and print shops, employing/directing 90 people, produced books, catalogs and manuals.
- Traditional Photos for catalogs and manuals.
- Produced and presented art history outreach programs for galleries and schools, celebrating ethnic diversity.
- Sponsored and produced multi-media and multi-cultural events in galleries.
- Designed special exhibitions for corporate clients.
- Arranged media coverage for exhibitions, coordinated gallery events, newsletters.

Teaching
- Eighteen years teaching experience in Fine Arts – 14 media, extensive technique diversity
- Public and Private Schools in Seattle and Honolulu and California
- Artist in Residency Programs in Seattle and Honolulu
- Special Education programs at University of Washington
- Classes and commissions for Parks Department in Washington
- Special Classes – “Kids At Risk” and Refugee Children from Middle East and Africa
- Private Studio instruction to apprentice artisans, Seattle, Honolulu, and San Francisco

Community Projects
- Free Art Classes for kids in Campus Housing, University of California, Riverside
- Research, Design, Teach, Execute Hali’a Aloha O Nuuanu Fresco at Kawananakoa School
- Mayor’s Award for Inter-City Murals Project (Kids at Risk)
- Designed/Directed painted of Medgar Evers Memorial Mural, Seattle
- Certificate of Merit from Central Area YMCA, Murals, Seattle
- Fremont Fair - Mural Project for City Kids, Seattle

Awards
- Hawaii Governor’s Award – Art Educator for 1995 – Hali’a Aloha O Nuuanu Fresco – Kawananakoa
- Awarded Mural projects 1996, 1997 in Hawaii
- Fremont Mural Project for City Families - 1988
- Mayor’s Award for Inner-City Murals Project, Seattle, 1987
- Awarded Design/Direction for Medgar Evers Memorial Mural, Central District, Seattle, 1986
- Certificate of Merit from Central Area YMCA – Movable Murals Project, Seattle 1985
- First Place Mask Competition – Facere Gallery 1985
- Avant Garde Gallery – Seattle 1984 for Edge Art Gallery
- First Place for Broadsides – Bumpershoot – Seattle 1983
- Second Place – Mask Competition – Facere Gallery 1983

**Employment History**

Archaeologist
- Cultural Resource Management - California
Archaeologist
- University of California, Bakersfield
Archaeologist/Illustrator
- Bishop Museum, Honolulu, Hawaii
Teacher
- Riverside Unified School District
Artist/Curator
- Twenty-nine Palms Band of Chemehuevi
Administration/Special Projects
- University of California, Riverside
Art Faculty
- Honolulu Academy of Art at Linekona
Artist in Residence
- Hawaii State Education Department
Art Director/Systems Manager
- La Crosse Manufacturing, Newark, CA
Metalsmith
- Freelance Seattle, Honolulu, San Francisco
Conservator/Photo/Catalog
- Fluerly & Co, Seattle
Designer/Conservator/Catalog
- Poulsbo Frame/Gallery, Poulsbo, WA
Field Archeologist/Photo/ArcView
- Bishop Museum, Honolulu HI
Scientific Illustrator/ArcView
- Bishop Museum, Honolulu HI
Studio Art Instructor
- Honolulu Academy of Art At Linekona
Studio Art Teacher/Photo/Graphics
- St. Louis High, Honolulu
Designer/Illustrator/Owner
- Edge Art Press, Small Book Press, Seattle, WA
Director/Metalsmith
- Edge Art Gallery, Seattle, WA
Assistant Archivist
- Yale Library Archives, Yale University
Arabesque Said  
9852 Whitewater Road  
Moreno Valley, California  
92557  
(951) 310-7031  
Mystic0217@aol.com

OBJECTIVE  
A position as an archaeologist allowing me to apply my skills in archaeology, survey and documentation.

EDUCATION  
Fall 2006  
Arabic XL 1B. University of California, Los Angeles  
June 2006  
B.A., University of California, Riverside  
Major: Anthropology. Concentration: Archaeology

EXPERIENCE  
2005-Present  
Information Officer. Eastern Information Center. Riverside, California  
• Manage and process records, reports and maps related to archaeological and historical sites in Riverside, Inyo and Mono counties  
• Conduct record searches for archaeologists, development firms, and government agencies

Summer 2006  
Laboratory Assistant. Archaeological Research Unit. University of California, Riverside  
• Assisted in the laboratory analysis of stone artifacts collected from the Mojave Desert.

2003-2004  
Volunteer. Natural History Museum, Los Angeles, California.  
• Developed and designed activities to help families and children learn about the various exhibits in the Natural History Museum with a creative and interactive approach.  
• Participated in Family Fun Days at different locations each month.

RELEVANT EXPERIENCE  
Spring 2007  
Audited Anthropology 191: Seminar in Cultural Resources Management. University of California, Riverside  

Fall 2004  
Field Course in Archaeology: Survey and Documentation. University of California, Riverside  
• Professor: Phil Wilke  
• Conducted field surveys of historic and aboriginal archaeological sites in Southern California.  
• Mapped sites  
• Documented sites on primary and archaeological site records

Spring 2004  
Geology Field Studies, Mojave National Preserve and San Andreas Fault from San Bernardino to central coast. Riverside Community College, California.
Fall 2003  Geology Field Studies of the Colorado Plateau

HONORS AND AWARDS
Spring 2005  Dean’s Honors List, University of California, Riverside
Fall 2002-2004  President’s Honors List, Riverside Community College, California

ADDITIONAL SKILLS
- Experience with Windows XP, Mac OS, Microsoft Office, Internet Explorer, Firefox, and familiarity with Adobe Photoshop
- Thorough knowledge of a 7.5’ USGS topographic map, compass, and range finder
- Knowledge of global satellite positioning system
- Fluent in Spanish; reading and writing ability in Arabic

REFERENCES
Dr. Matt Hall
Coordinator
Eastern Information Center
University of California, Riverside
Department of Anthropology, 92521

Kay White
Administrative Assistant
Eastern Information Center
University of California, Riverside
Department of Anthropology, 92521
Appendix C:
Regulatory Framework
REGULATORY FRAMEWORK

Government agencies, including federal, state, and local agencies, have developed laws and regulations designed to protect significant cultural resources that may be affected by projects regulated, funded, or undertaken by the agency. Federal and state laws that govern the preservation of historic and archaeological resources of national, state, regional, and local significance include the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), and the California Environmental Quality Act (CEQA). In addition, laws specific to work conducted on federal lands includes the Archaeological Resources Protection Act (ARPA), the American Antiquities Act, and the Native American Graves Protection and Repatriation Act (NAGPRA).

The following Federal or CEQA criteria were used to evaluate the significance of potential impacts on cultural resources for the proposed project. An impact would be considered significant if it would affect a resource eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CR), or if it is identified as a unique archaeological resource.

Federal-Level Evaluations

Federal agencies are required to consider the effects of their actions on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings under NEPA § 106. Federal agencies are responsible for initiating NEPA § 106 review and completing the steps in the process that are outlined in the regulations. They must determine if NHPA § 106 applies to a given project and, if so, initiate review in consultation with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO). Federal agencies are also responsible for involving the public and other interested parties. Furthermore, NHPA §106 requires that any federal or federally assisted undertaking, or any undertaking requiring federal licensing or permitting, consider the effect of the action on historic properties listed in or eligible for the NRHP. Under the Code of Federal Regulations (CFR), 36 CFR Part 800.8, federal agencies are specifically encouraged to coordinate compliance with NEPA § 106 and the NEPA process. The implementing regulations “Protection of Historic Properties” are found in 36 CFR Part 800. Resource eligibility for listing on the NRHP is detailed in 36 CFR Part 63 and the criteria for resource evaluation are found in 36 CFR Part 60.4 [a-d].

The NHPA established the NRHP as the official federal list for cultural resources that are considered important for their historical significance at the local, state, or national level. To be determined eligible for listing in the NRHP, properties must meet specific criteria for historic significance and possess certain levels of integrity of form, location, and setting. The criteria for listing on the NRHP are significance in American history, architecture, archaeology, engineering, and culture as present in
districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. In addition, a resource must meet one or all of these eligibility criteria:

a.) Is associated with events that have made a significant contribution to the broad patterns of our history.

b.) Is associated with the lives of persons significant in our past.

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

d.) That have yielded, or may be likely to yield, information important in prehistory or history.

Criterion D is usually reserved for archaeological resources. Eligible properties must meet at least one of the criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character.

Criteria Considerations
Ordinarily cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, buildings that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the NRHP. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

a.) A religious property deriving primary significance from architectural or artistic distinction or historical importance.

b.) A building or structure removed from its original location but which is primarily significant for architectural value, or which is the surviving structure most importantly associated with a historic person or event.

c.) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building associated with his or her productive life.

d.) A cemetery that derives its primary importance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events.
e.) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived.

f.) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance.

g.) A property achieving significance within the past 50 years if it is of exceptional importance.

Thresholds of Significance

In consultation with the SHPO/THPO and other entities that attach religious and cultural significance to identified historic properties, the Agency shall apply the criteria of adverse effect to historic properties within the Area of Potential Effect (APE). The Agency official shall consider the views of consulting parties and the public when considering adverse effects.

Federal Criteria of Adverse Effects

Under federal regulations, 36 CFR Part 800.5, an adverse effect is found when an undertaking alters, directly or indirectly, any of the characteristics of a historic property that qualifies the property for inclusion in the NRHP in a manner that diminishes the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Consideration will be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property’s eligibility for listing in the NRHP. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.

According to 36 CFR Part 800.5, adverse effects on historic properties include, but are not limited to, those listed below:

- Physical destruction of or damage to all or part of the property.
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the U.S. Secretary of the Interior’s Standards for the Treatment of Historic Properties per 36 CFR Part 68 and applicable guidelines.
- Removal of the property from its historic location.
- Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance.
• Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features.

• Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization.

• Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long term preservation of the property’s historic significance.

If Adverse Effects Are Found

If adverse effects are found, the agency official shall continue consultation as stipulated at 36 CFR Part 800.6. The agency official shall consult with the SHPO/THPO and other consulting parties to develop alternatives to the undertaking that could avoid, minimize, or mitigate adverse effects to historic resources. According to 36 CFR Part 800.14(d), if adverse effects cannot be avoided then standard treatments established by the ACHP maybe used as a basis for Memorandum of Agreement (MOA).

According to 36 CFR Part 800.11(e), the filing of an approved MOA, and appropriate documentation, concludes the § 106 process. The MOA must be signed by all consulting parties and approved by the ACHP prior to construction activities. If no adverse affects are found and the SHPO/THPO or the ACHP do not object within 30 days of receipt, the agencies’ responsibilities under § 106 will be satisfied upon completion of report and documentation as stipulated in 36 CFR Part 800.11. The information must be made available for public review upon request, excluding information covered by confidentiality provisions.

State-Level Evaluation Processes

An archaeological site may be considered an historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California per PRC § 5020.1(j) or if it meets the criteria for listing on the CR per California Code of Regulations (CCR) at Title 14 CCR § 4850.

The most recent amendments to the CEQA guidelines direct lead agencies to first evaluate an archeological site to determine if it meets the criteria for listing in the CR. If an archeological site is an historical resource, in that it is listed or eligible for listing in the CR, potential adverse impacts to it must be considered as stated in PRC §§ 21084.1 and 21083.2(l). If an archeological site is considered not to be an historical resource, but meets the definition of a “unique archeological resource” as defined in PRC § 21083.2, then it would be treated in accordance with the provisions of that section.
With reference to PRC § 21083.2, each site found within a project area will be evaluated to determine if it is a unique archaeological resource. A unique archaeological resource is described as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

9. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

10. Has a special and particular quality such as being the oldest of its type or the best available example of its type.

11. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

As used in this report, “non-unique archaeological resource” means an archaeological artifact, object, or site that does not meet the criteria for eligibility for listing on the CR, as noted in subdivision (g) of PRC § 21083.2. A non-unique archaeological resource requires no further consideration, other than simple recording of its components and features. Isolated artifacts are typically considered non-unique archaeological resources. Historic structures that have had their superstructures demolished or removed can be considered historic archaeological sites and are evaluated following the processes used for prehistoric sites. Finally, OHP recognizes an age threshold of 45 years. Cultural resources built less than 45 years ago may qualify for consideration, but only under the most extraordinary circumstances.

Title 14, CCR, Chapter 3 § 15064.5 is associated with determining the significance of impacts to archeological and historical resources. Here, the term historical resource includes the following:

1. A resource listed in, or determined eligible by the State Historical Resources Commission, for listing in the CR (PRC § 5024.1; Title 14 CCR, § 4850 et seq.).

2. A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in an historical resource survey meeting the PRC § 5024.1(g) requirements, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

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 may be considered a historical resource, provided the lead agency’s determination
is supported by substantial evidence in light of the whole record. 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 (PRC § 5024.1; Title 14 CCR § 4852) including the following:

A. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.

B. Is associated with the lives of persons important in our past.

C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

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

Typically, archaeological sites exhibiting significant features qualify for the CR under Criterion D because such features have information important to the prehistory of California. A lead agency may determine that a resource may be a historical resource as defined in PRC §§ 5020.1(j) or 5024.1 even if it is:

- Not listed in or determined to be eligible for listing in the CR.
- Not included in a local register of historical resources pursuant to PRC § 5020.1(k).
- Identified in an historical resources survey per PRC § 5024.1(g).

**Threshold of Significance**

If a project will have a significant impact on a cultural resource, several steps must be taken to determine if the cultural resource is a “unique archaeological resource” under CEQA. If analysis and/or testing determine that the resource is a unique archaeological resource and therefore subject to mitigation prior to development, a threshold of significance should be developed. The threshold of significance is a point where the qualities of significance are defined and the resource is determined to be unique under CEQA. A significant impact is regarded as the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource will be reduced to a point that it no longer meets the significance criteria. Should analysis indicate that project development will destroy the unique elements of a resource; the resource must be mitigated for under CEQA regulations. The preferred form of mitigation is to preserve the resource in-place, in an undisturbed state. However, as that is not always possible or feasible, appropriate mitigation measures may include, but are not limited to:

1. Planning construction to avoid the resource.
2. Deeding conservation easements.
3. Capping the site prior to construction.

If a resource is determined to be a “non-unique archaeological resource,” no further consideration of the resource by the lead agency is necessary.

**Tribal Consultation**

The following serves as an overview of the procedures and timeframes for the Tribal Consultation process, for the complete Tribal Consultation Guidelines, please refer to the State of California Office of Planning and Research web site.

Prior to the amendment or adoption of general or specific plans, local governments must notify the appropriate tribes of the opportunity to conduct consultation for the purpose of preserving or mitigating impacts to cultural places located on land within the local government’s jurisdiction that is affected by the plan adoption or amendment. The tribal contacts for this list maintained by the NAHC and is distinct from the Most Likely Descendent (MLD) list. It is suggested that local governments send written notice by certified mail with return receipt requested. The tribes have 90 days from the date they receive notification to request consultation. In addition, prior to adoption or amendment of a general or specific plan, local government must refer the proposed action to tribes on the NAHC list that have traditional lands located within the city or county’s jurisdiction. Notice must be sent regardless of prior consultation. The referral must allow a 45-day comment period.

In brief, notices from government to the tribes should include:

- A clear statement of purpose.
- A description of the proposed general or specific plan, the reason for the proposal, and the specific geographic areas affected.
- Detailed maps to accompany the description.
- Deadline date for the tribes to respond.
- Government representative(s) contact information.
- Contact information for project proponent/applicant, if applicable.

The basic schedule for this process is:

- 30 days: time NAHC has to provide tribal contact information to the local government; this is recommended not mandatory.
• 90 days: time tribe has to respond indication whether or not they want to consult. Note: tribes can agree to a shorter timeframe. In addition, consultation does not begin until/unless requested by the tribe within 90 days of receiving notice of the opportunity to consult. The consultation period, if requested, is open-ended. The tribes and local governments can discuss issues for as long as necessary, or productive, and need not result in agreement.

• 45 days: time local government has to refer proposed action, such as adoption or amendment to a general plan or specific plan, to agencies, including the tribes. Referral required even if there has been prior consultation. This opens the 45-day comment period.

• 10 days: time local government has to provide tribes of notice of public hearing.
Appendix D: Survey Area Photographs
Photograph 1. Overview of the eastern portion of the survey area, taken from near the southeastern-most survey area corner. View to the west.

Photograph 2. Overview of the eastern portion of the survey area, taken from near the middle of the survey area. View to the east.
Photograph 3. Overview of the eastern portion of the survey area, taken from near the middle of the survey area. View to the southeast.

Photograph 4. Overview of the eastern portion of the survey area, taken from near the middle of the survey area. View to the east.
Photograph 5. Overview of the western portion of the survey area, taken from the near the southwestern-most survey area corner. View to the northeast.

Photograph 6. Overview of the southern boundary of the survey area. View to the east.
Photograph 7. Overview of the western portion of the survey area, taken from the northwest corner of the survey area. View to the east.

Photograph 8. Overview of an unmaintained dirt road and the northern survey area boundary. View to the east.
Photograph 9. View of the remains of the off-site historic-age structure on APN 0265-051-07.