

**Appendix D:
Phase I Cultural Resource Assessment**

**Phase I Cultural Resource Assessment
Solano360 Specific Plan EIR Project
City of Vallejo, Solano County, California**

Cordelia, California, USGS 7.5-minute Topographic Quadrangle Map
Township 3 North, Range 3 West, Section 6

Prepared for:



County of Solano

Solano County Government Center
675 Texas Street, Suite 6500
Fairfield, CA 94533

Contact: Ron Grassi, CAO Principal Management Analyst

Prepared by:

Michael Brandman Associates

Bishop Ranch 3
2633 Camino Ramon, Suite 460
San Ramon, CA 94583

Author/Contact: Carrie D. Wills, Senior Project Archaeologist



Fieldwork Conducted By: Carrie D. Wills
Fieldwork Conducted On: May 13, 2011
Report Date: November 18, 2011

Keywords: Cordelia California, USGS topographic quadrangle map, Solano County Fairgrounds

TABLE OF CONTENTS

Management Summary	1
Section 1: Introduction	3
1.1 - Project Location	3
1.2 - Project Description	3
1.3 - Assessment Team	3
Section 2: Cultural Setting	7
2.1 - Prehistoric Background	7
Section 3: Results	14
3.1 - Record Searches	14
3.1.1 - Information Center Search	14
3.1.2 - Native American Heritage Commission Record Search.....	15
3.1.3 - Paleontological Resources.....	15
3.2 - Pedestrian Survey.....	15
Section 4: Summary and Recommendations	17
4.1 - Summary.....	17
4.2 - Recommendations	17
4.2.1 - Cultural Resource Recommendations.....	17
4.3 - Inadvertent Discovery Procedures.....	17
4.3.1 - Accidental Discovery of Human Remains	17
4.3.2 - Accidental Discovery of Cultural Resources	18
4.3.3 - Accidental Discovery of Paleontological Resources	19
Section 5: References	20
Appendix A: Project Area Photographs	
Appendix B: Cultural Resources Correspondence	
B-1: Native American Information Request Representative Letter	
B-2: Native American Heritage Commission Sacred Lands File Search Response	
B-3: Paleontological Report	
Appendix C: Personnel Qualifications	
Appendix D: Regulatory Framework	

LIST OF EXHIBITS

Exhibit 1: Regional Location Map..... 4
Exhibit 2: Local Vicinity Map Topographic Base 5
Exhibit 3: Local Vicinity Map Aerial Base 6

LIST OF TABLES

Table 1: Previous Studies 14

MANAGEMENT SUMMARY

At the request of County of Solano, Michael Brandman Associates (MBA) conducted a Phase I Cultural Resources Assessment at the proposed project area located within Solano County, California (Exhibit 1). The proposed project consists of up to 477, 314 square feet of retail, commercial, entertainment, and office space on 47.4 acres at time of full buildout. The fairgrounds portion of the site would include up to 150, 500 square feet of new building space at time of full buildout, including a new exposition hall and new concert arena/grandstand cover.

The purpose of this assessment is to identify the presence or absence of potentially significant cultural resources within the project area, and, if impacted by the proposed development, propose recommendations for mitigation. Completion of this investigation fulfills the requirements associated with the California Environmental Quality Act (CEQA). This report closely follows the California Office of Historic Preservation (OHP) procedures for cultural resource surveys and the OHP's Archaeological Resource Management Report (ARMR) format for archaeological reports.

On April 22, 2011, a record search was conducted by MBA at the Northwest Information Center (NWIC) in Rohnert Park for the project area and a 0.25-mile radius beyond the project boundaries. Results from the NWIC indicate that eight previous studies were conducted within the search radius. One prehistoric site (CA-SOL-317), a lithic scatter, was recorded just outside the western project boundary.

On May 11, 2011, MBA sent a letter to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project area. The response from the NAHC was received on June 10, 2011, and it noted that the search failed to indicate the presence of Native American cultural resources in the immediate project area. A list of seven Native American tribal members who may have additional knowledge of the project area was included with the results. These tribal members were sent letters on August 29, 2011 asking for any additional information they might have concerning the project area. As of this date, no response from any of the seven Native Americans has been received.

A paleontological survey directly adjacent to the project area resulted in the visual identification of fossil plant remains in exposed geological deposits from the Cretaceous Great Valley Sequence (Fisk et al. 2011). The visual inspection of exposed Pleistocene Alluvium sediments was negative for paleontological resources; however, they note that fossil vertebrates have been found elsewhere in these types of geological deposits, indicating a potential for their discovery within the project area. Alluvium from the Holocene period is too young and thin to preserve fossils. Given these observations, Fisk (2011) recommended that a Paleontological Evaluation Report and Paleontological Mitigation Plan be developed.

MBA Senior Project Archaeologist Carrie D. Wills surveyed the project area on May 13, 2011. The project area was flat and predominantly covered with asphalt, buildings, and a horserace track with a nine-hole golf course in the middle of the track. No prehistoric resources were observed although particular attention was paid to the area near CA-SOL-317. The stables and associated buildings were visually assessed and are considered historically significant; therefore, they would require evaluation and recordation on appropriate Department of Parks and Recreation (DPR) 523 forms prior to demolition. In addition, many of the fair buildings would require evaluation for historic significance and recordation on appropriate Department of Parks and Recreation (DPR) 523 forms prior to demolition.

SECTION 1: INTRODUCTION

1.1 - Project Location

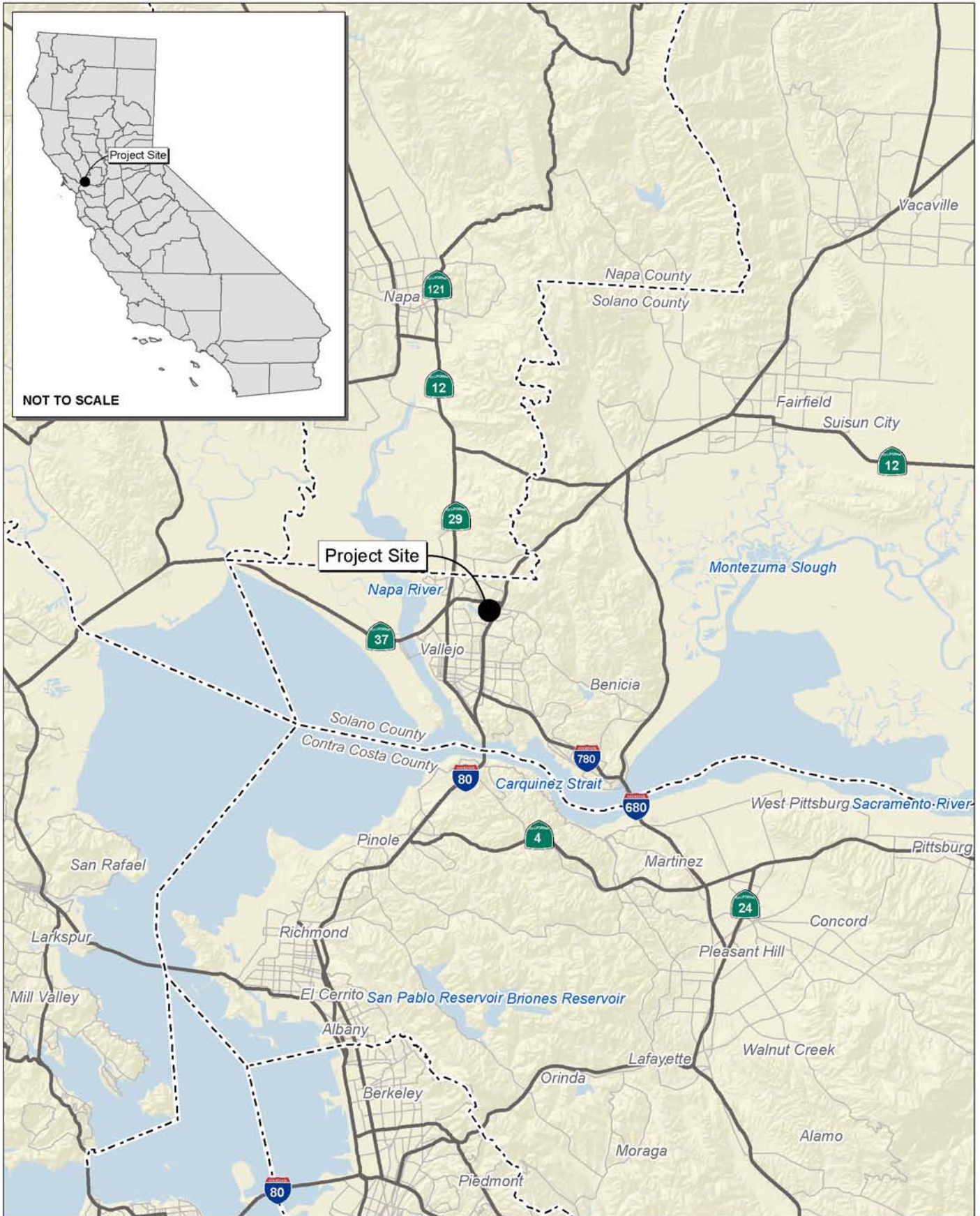
Located in the central region of northern California within Solano County, the project is located south of the Marriott Hotel and State Route 37 (SR-37); west of Interstate 80 (I-80); north of Newell Mobile Homes; and east of Fairgrounds Drive and Six Flags Discovery Kingdom, Lake Chabot and a Six Flags parking lot (Exhibit 1). The project area is depicted on the Cordelia, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle map, in Section 6 of Township 3 North, Range 3 West (Exhibit 2). Specifically, the project area is located immediately east of I-80 and south of SR-37 (Exhibit 3).

1.2 - Project Description

The entertainment and open space project area would authorize up to 477,314 square feet of retail, commercial, entertainment, and office space on 47.4 acres at time of full buildout. The fairgrounds portion of the site would include up to 150,500 square feet of new building space at time of full buildout, including a new exposition hall and new concert arena/grandstand cover. All existing fair facilities would be demolished with the exception of Gibson Hall, McCormack Hall, a trash shed, a maintenance shed, a livestock building, and a sheep barn. According to the Specific Plan, three parking structures would also be constructed at the site.

1.3 - Assessment Team

MBA Senior Project Archaeologist Carrie D. Wills conducted the pedestrian survey and authored this report. Professional qualifications for Ms. Wills can be found in Appendix B.



Source: Census 2000 Data, The CaSIL, MBA GIS 2011.



Michael Brandman Associates
 20850018 • 11/2011 | 1_regional.mxd

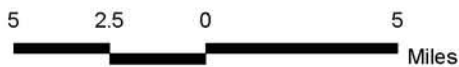
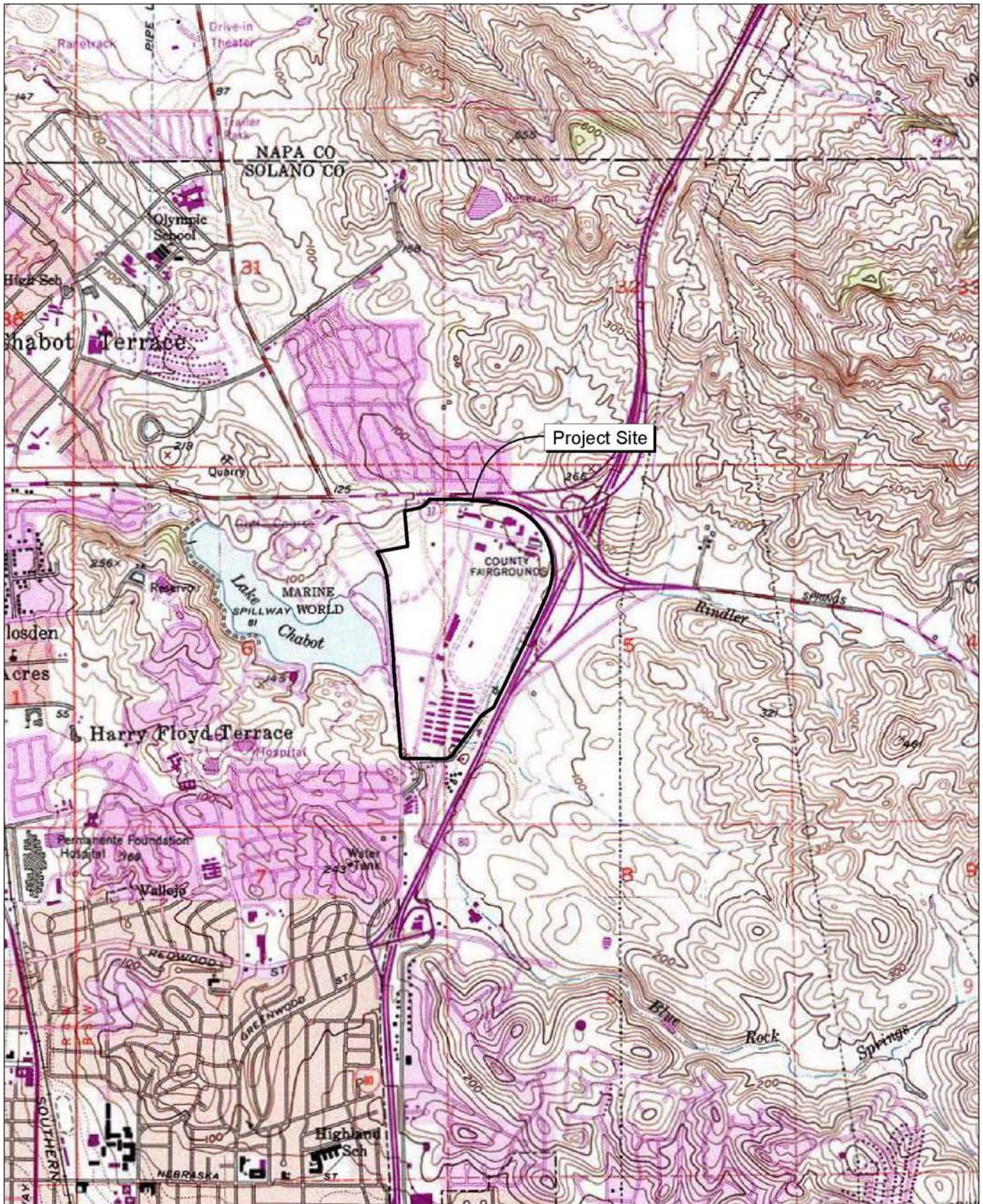


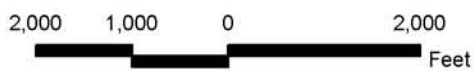
Exhibit 1 Regional Location Map



Source: TOPO! USGS Cordelia, CA (1978) and Benicia, CA (1980) 7.5' DRG.

Exhibit 2

Local Vicinity Map Topographic Base



Michael Brandman Associates

20850018 • 11/2011 | 2_local_topo.mxd

COUNTY OF SOLANO • SOLANO 360 SPECIFIC PLAN
PHASE I CULTURAL RESOURCES ASSESSMENT



Source: Solano County NAIP, 2009.



Michael Brandman Associates

20850018 • 11/2011 | 3_local_aerial.mxd



Exhibit 3 Local Vicinity Map Aerial Base

SECTION 2: CULTURAL SETTING

Following is a brief overview of the prehistory, ethnography, and historic background, providing a context in which to understand the background and relevance of sites found in the general project area. This section is not intended to be a comprehensive review of the current resources available; rather, it serves as a general overview.

Further details can be found in ethnographic studies, mission records, and major published sources, including Beardsley (1948), Bennyhoff (1950), Fredrickson (1973 and 1974), Kroeber (1925), Chartkoff and Chartkoff (1984), and Moratto (1984).

2.1 - Prehistoric Background

Cultural Setting

Prehistory

Early archaeological investigations in central California were conducted at sites located in the Sacramento-San Joaquin Delta region. The first published account documents investigations in the Lodi and Stockton area (Schenck and Dawson 1929). The initial archaeological reports typically contained descriptive narratives, with more systematic approaches sponsored by Sacramento Junior College in the 1930s. At the same time, University of California at Berkeley excavated several sites in the lower Sacramento Valley and Delta region, which resulted in recognizing archaeological site patterns based on variations of inter-site assemblages.

Research during the 1930s identified temporal periods in central California prehistory and provided an initial chronological sequence (Lillard and Purves 1936; Lillard, et al. 1939). In 1939, Lillard noted that each cultural period led directly to the next and that influences spread from the Delta region to other regions in central California (Lillard, et al. 1939). In the late 1940s and early 1950s, Beardsley documented similarities in artifacts among sites in the San Francisco Bay region and the Delta and refined his findings into a cultural model that ultimately became known as the Central California Taxonomic System (CCTS). This system proposed a uniform, linear sequence of cultural succession (Beardsley 1948; 1954). The CCTS system was challenged by Gerow, whose work looked at radiocarbon dating to show that Early and Middle Horizon sites were not subsequent developments but, at least partially, contemporaneous (Gerow 1954; 1974; Gerow and Force 1968).

To address some of the flaws in the CCTS system, Fredrickson (1973) introduced a revision that incorporated a system of spatial and cultural integrative units. Fredrickson separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (10000 to 6000 B.C.); Lower, Middle and Upper Archaic (6000 B.C. to A.D. 500), and Emergent (Upper and Lower, A.D. 500 to 1800). The suggested temporal ranges are similar to earlier horizons, which are broad cultural units that can be arranged in a temporal sequence (Moratto 1984).

In addition, Fredrickson defined several patterns—a general way of life shared within a specific geographical region. These patterns include:

- Windmill Pattern or Early Horizon (3000 to 1000 B.C.)
- Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)
- Augustine Pattern or Late Horizon (A.D. 500 to historic period)

Brief descriptions of these temporal ranges and their unique characteristics follow.

Windmill Pattern or Early Horizon (3000 to 1000 B.C.)

Characterized by the Windmill Pattern, the Early Horizon was centered in the Cosumnes district of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. The large variety of projectile point types and faunal remains suggests exploitation of numerous types of terrestrial and aquatic species (Bennyhoff 1950; Ragir 1972). Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicates an extensive trade network that may represent the arrival of Utian populations into central California. Also indicative of this period are rectangular *Haliotis* and *Olivella* shell beads, and charmstones that usually were perforated.

Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. Fredrickson (1973) suggests that the Berkeley Pattern marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher proportion of grinding implements at this time, implying an emphasis on plant resources rather than on hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. As noted by Lillard, the practice of spreading ground ochre over the burial was common at this time (Lillard, et al. 1939). Grave goods during this period are generally sparse and typically include only utilitarian items and a few ornamental objects. However, objects such as charmstones, quartz crystals, and bone whistles occasionally were present, which suggest the religious or ceremonial significance of the individual (Hughes 1994). During this period, larger populations are suggested by the number and depth of sites compared with the Windmill Pattern. According to Fredrickson (1973), the Berkeley Pattern reflects gradual expansion or

assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis.

Augustine Pattern or Late Horizon (A.D. 500 to Historic Period)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow and arrow technology; and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. There are more baked clay artifacts and extensive use of *Haliotis* ornaments of many elaborate shapes and forms. Burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation (Moratto 1984). Judging from the number and types of grave goods associated with the two types of burials, cremation seems to have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions. Johnson (1976) suggests that the Augustine Pattern represents expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.

Central California research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using osteological data to determine the health of prehistoric populations (Dickel et al. 1984). Although debate continues over a single model or sequence for central California, the general framework consisting of three temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

Native American Background

At the time of European contact, the project vicinity was occupied by the Patwin tribe of the Native Americans. The Patwin occupied the southwestern Sacramento Valley from the town of Princeton, north of Colusa, south to San Pablo and Suisun bays, and from the lower hills of the eastern North Coast Ranges to the Sacramento River. Patwin territory extended approximately 40 miles east to west and 90 miles north to south. Based primarily on linguistic variation, the Patwin are the most southern division of the Wintuan population, who are members of the Penutian linguistic stock. The area around Vallejo was likely occupied by speakers of the Suisun dialect. Distinction is made between the Hill and River Patwin. Hill Patwin had villages located in valleys along the hills of the Vaca Mountains and Coast Ranges with populations concentrated in the Indian, Bear, Capay, Cortina, Long, and Napa valleys. In general, the River Patwin occupied the west banks of the lower Sacramento River below the Feather River as well as the lower reaches of Cache and Putah creeks in the Sacramento Valley (Cook 1976; Johnson 1978). The Patwin political organization was centered on the tribelet, which consisted of a primary village with smaller satellite villages governed by a chief. Tribelets were autonomous and differed from each other with minor cultural variations. The economic and ceremonial activities of each village were administered by a chief whose position was typically passed on patrilineally, although some chiefs were chosen by village elders. The chief

administered subsistence ventures, such as hunting and gathering expeditions, and served as the primary resource distributor (Johnson 1978).

The Hill Patwin subsistence base varied seasonally and included gathering seeds and plant resources on the plains, netting migratory waterfowl in the tule marshes, and netting salmon and other fish in the rivers and streams. Acorns were a staple in the Patwin diet and were obtained from communally owned hill and valley oak groves (Johnson 1978). The Patwin typically stored the acorns in granaries as insurance against famine in poor harvest years. Ethnographic reports indicate the Patwin obtained large game such as deer, tule elk, and antelope, by using nets or shooting with bows and arrows.

The Hill Patwin trade system included various resources that were exchanged with Wappo, Nomlaki, and Southeastern Pomo, and the River Patwin. The River Patwin obtained obsidian from sources to the west and east. Initially, finished shell beads were obtained from coastal tribes, but later, the River Patwin traded for whole shells from the Pacific Coast and produced the beads themselves (Johnson 1978). Relationships with nearby tribes as well as other Patwin tribelets were not always friendly. Johnson notes that relations were strained especially with Napa Valley groups and that the provocations primarily consisted of poaching, with the subsequent retaliations consisting of organized battles on individuals or groups or surprise attacks on villages (Johnson 1978).

Patwin mortuary practices included burials in cemeteries located at one end of the village, possessions of the deceased being buried along with them, and at some locations, property was burned near the grave. Typically, only people who died away from the village were cremated (Johnson 1978). Johnson notes that according to a Hill Patwin informant “the River people [Patwin] set a corpse upright, then pushed the head down, broke the back, wrapped the body in a skin, and put it in the grave” (Johnson 1978). In addition, long burial ropes constructed of hemp were wrapped around the deceased and temporary containers made of tule reeds were utilized for transport (Johnson 1978).

Spanish Exploration and Settlement

Spanish exploration into Suisun Bay and into the Central Valley dates back to the late 1700s. Spanish mission records indicate that by 1800, Patwin inhabitants at Aguastos, the south-central area, and other villages were being taken to Mission Dolores (San Francisco de Asis), and that Mission Sonoma (San Francisco Solano), built in 1823, was baptizing Patwin tribal members until secularization of the missions in 1832-1836. Many Native Americans were not willing converts. There are numerous accounts of neophytes fleeing the missions, and a series of “Indian Wars” broke out when the Spanish tried to return them to the missions (Johnson 1978).

The Mexican Period

With the declaration of Mexican independence in 1821, Spanish control of Alta California ended, although little change actually occurred. Political change did not take place until mission secularization in 1834, when Native Americans were released from missionary control and the mission lands were granted to private individuals. Shoup and Milliken (1999) state that mission

secularization removed the social protection and support on which Native Americans had come to rely. It exposed them to further exploitation by outside interests, often forcing them into a marginal existence as laborers for large ranchos. Following mission secularization, the Mexican population grew as the native population continued to decline. Anglo-American settlers began to arrive in Alta California during this period and often married into Mexican families, becoming Mexican citizens, which made them eligible to receive land grants. In 1846, on the eve of the U.S.-Mexican War (1846 to 1848), the estimated population of Alta California was 8,000 non-natives and 10,000 natives. However, these estimates have been debated. Cook (1976) suggests the Native American population was 100,000 in 1850; the U.S. Census of 1880 reports the Native American population as 20,385.

During this period, General Mariano Guadalupe Vallejo assumed authority of Sonoma Mission and established a friendly relationship with the Native Americans who were living there. In particular, Vallejo worked closely with Chief Solano, a Patwin who served as Vallejo's spokesperson when problems with Native American tribes arose. In 1843, Governor Manuel Micheltorena gave General Vallejo the 84,000 acre Soscoe land grant of Rancho Suscolto, which included the present-day Vallejo.

Euro-American Expansion

During this period, and prior, Native American populations were declining rapidly because of an influx of Euro-American diseases. In 1832, a party of trappers from the Hudson's Bay Company, led by John Work, traveled down the Sacramento River, unintentionally spreading a malaria epidemic to Native Californians. Four years later, a smallpox epidemic decimated local populations, and it is estimated that up to 75 percent of the native population died (Cook 1955).

After the upheaval of the Bear Flag Revolt in 1846, and the result of the Treaty of Guadalupe Hidalgo in 1848, California became a United States territory. In 1848, James W. Marshall discovered gold at Coloma in modern-day El Dorado County, which started the gold rush into the region that forever altered the course of California's history. The arrival of thousands of gold seekers in the territory contributed to the exploration and settlement of the entire State. By late 1848, approximately four out of five men in California were gold miners.

The gold rush originated along the reaches of the American River and other tributaries to the Sacramento River, and Hangtown, present-day Placerville, became the closest town offering mining supplies and other necessities for the miners in El Dorado County. Gold subsequently was found in the tributaries to the San Joaquin River, which flowed north to join the Sacramento River in the great delta east of San Francisco Bay.

By 1864, California's gold rush had essentially ended. The rich surface and river placers were largely exhausted and the miners either returned to their homelands or stayed to start new lives in California. After the gold rush, people in towns such as Jackson, Placerville, and Sonora turned to other means of commerce, such as ranching, agriculture, and timber production. With the decline of gold mining,

agriculture and ranching came to the forefront in the State's economy. California's natural resources and moderate climate proved well suited for cultivation of a variety of fruits, nuts, vegetables, and grains.

The County of Solano

Solano County is one of the original 27 counties created at statehood. Originally named Benicia County, its name was changed to Solano County in honor of Sem-Yeto, also known as Chief Solano, a Patwin man who ruled over most of the indigenous tribes between the Sacramento River and Petaluma Creek. The county retains its original boundaries as they were delineated in 1850.

In 1840, José Francisco Armijo received the 13,315-acre Rancho Tolenas land grant by Governor Alvarado. Armijo's son, Antonia, acquired the land when his father died in 1850, and it was subsequently acquired by Captain R.H. Waterman in 1858. Shortly after acquiring the land, Waterman offered 16 acres to Solano County for a new, more centrally located county seat. Solano County voters accepted the offer, and the county seat was relocated from Benicia to the new town of Fairfield, where it remains today.

Early settlers into the County cultivated fruits and vegetables for local consumption, and grains were grown on a larger scale for export. Dry farm crops such as wheat and oats used for cattle fodder proved profitable in the area despite limited irrigation. Initially, all products were transported via the waterways but, with the completion of California Pacific Railroad, goods were transported by rail. Fruit and nut crops were particularly successful in the project vicinity, and by 1910, Solano-Yolo Land and Water Company proposed dam and irrigation systems to support these crops. However, by 1930, government standards resulted in sales and abandonment of orchards with subsequent fruit worker strikes and riots resulting in the 1934 to 1935 closure of the peach and cherry shipping industry. The fruit and nut industries slowly recuperated and were aided by the formation of the Solano Irrigation District in 1948. Solano County continued to grow over the years with the addition of Travis Air Force Base in 1943, new industrial parks, and a resurgence of fruit processing and packing warehouses.

The City of Vallejo

Mariano Vallejo proposed the creation of a new town in 1850, and in 1851 the location was officially decided upon where present-day Vallejo sits. The town was to serve as the State capitol, but in 1852 when the government was convened there, no new building had been constructed for them to meet and after eleven days decided to move the sessions to Sacramento. In 1853, the State capitol was officially moved to nearby Bernicia.

The primary industry that brought early settlers into the greater Vallejo area was farming. The rich Delta soil and temperate climate proved beneficial for cultivating vegetables and fruit, and the nearby waterways provided a ready source of transportation for shipping to the gold mining towns of the Sierra Nevada. In addition to growing fruits and vegetables, farmers soon discovered that dry farm

crops such as oats and wheat could be grown in the area with minimal irrigation. The first railroad into the area was the California Pacific built in 1874, which replaced water transport as the main source for transporting local products.

A prominent feature in the history of the City of Vallejo is Mare Island, established in 1854 by Commander David Farragut as the site of the first Pacific naval installation. The first ship constructed at the Mare Island facilities was launched in 1860, and the height of construction took place there during World War II, employing over 41,000 people. The shipyard was closed in 1996 on the recommendation of the Base Realignment and Closure Commission.

The Solano County Fair

Dating back to at least 1875, agriculture fairs were important events for horse races and livestock shows, co-organized by Solano and Napa counties (Rohrs 2011). A precursor to the Solano County Fair, the “Bells of Solano County Exposition,” was organized in May 1930 by David A. Weir, publisher of the Solano Republican newspaper, and held across from the Solano County Courthouse in Fairfield. The event was intended to celebrate the 75th anniversary of the newspaper, as well as highlight the agriculture, technology, and local business of Solano County. Weir’s vision was that the profits from the event would be used for an ongoing annual Solano County fair, but unfortunately the fair was not as successful as he hoped despite the attendance by more than 20,000 visitors (Goerke-Shrode 2005a,b).

Plans for purchasing land and securing financing for the development of the Solano County fair began in 1938, but with the effects of World War II being felt across the country, these efforts were delayed. After the end of the war, planning resumed and groundbreaking ceremonies for the fairground took place on September 21, 1950. The opening of the fair was so important, that a parade proceeded through downtown Vallejo, schools were let out early, and traffic backed up for miles trying to enter the fairgrounds (Rohrs 2011).

SECTION 3: RESULTS

3.1 - Record Searches

3.1.1 - Information Center Search

On April 22, 2011, a record search was conducted by MBA at the Northwest Information Center (NWIC) in Rohnert Park for the project area and a 0.25-mile radius beyond the project boundaries. To identify any historic properties or resources, the current inventories of the National Register of Historic Places (NR), the California Register of Historic Resources (CR), the California Historical Landmarks (CHL) list, the California Points of Historical Interest (CPHI) list, and the California State Historic Resources Inventory (HRI) were reviewed to determine the existence of previously documented local historical resources.

Results from the NWIC indicate that eight previous studies were conducted within the search radius (Table 1).

Table 1: Previous Studies

Record Number	Author/Date	Title of Report
S-000885	Fredrickson/1978	An Archaeological Reconnaissance of the Proposed Shea Homes Subdivision, Solano County CA
S-001834	Eisenman/1979	A Preliminary Cultural Resources Study of the Lakeville-Sobrante 230kV T/L Project Area
S-002663	Damon/1980	Lakeville-Sobrante 230kV Transmission Line Archaeological Sensitivity Map (Letter Report)
S-005068	Deitz/1973	Report of an Archaeological Reconnaissance of the Hunter Ranch, Vallejo, CA
S-007352	Chavez/1985	Cultural Resources Evaluation for the Marine World/Africa USA Property, Vallejo, CA
S-007354	Rondeau/1985	Archaeological Survey Report, Route 27 Improvements, 10-SOL-37 P.M. 10.0/11.210101-327000 (Caltrans)
S-020617	Psota/1998	Review of the Historic Resources of the Built Environment for Site SF-354, Parrot Cellular Store Mount at 153 Plaza Drive, Suite 103, Vallejo, Solano County, CA (letter report)
S-021254	Origer/1998	Archaeological Survey Report for the Solano Bikeway Project Planned by the City of Vallejo, 04-SOL-80

One prehistoric site (CA-SOL-317), a lithic scatter, was recorded just outside the western project boundary. According to the DPR form that was completed by David Chavez and Associates in March 1985, the site consisted of “a scatter of lithic debitage and shell in a dark brown/black soil matrix. The debitage consisted of both chert and obsidian flakes. The flakes were mainly thinning and small pressure flakes although some large obsidian chunks (2.5 cm²) were noted.” In addition, the DPR

form states that “a review of maps and materials for the area indicates that the site location consists entirely of fill material. The site is a secondary deposit and it is believed that the materials came from a site originally located on a hill south of the golf course.”

3.1.2 - Native American Heritage Commission Record Search

On May 11, 2011, MBA sent a letter to the Native American Heritage Commission (NAHC) in an effort to determine whether any sacred sites are listed on its Sacred Lands File for the project area. The response from the NAHC was received on June 10, 2011. The record search failed to indicate the presence of Native American cultural resources in the immediate project area. A list of seven Native American representatives who may have additional information about the project site was sent with the results. On August 29, 2011, letters were sent to each of the seven representatives requesting further information about the project area. As of this date, no responses have been received from any of the Native American representatives.

3.1.3 - Paleontological Resources

A recent paleontological study (Fisk et al. 2011) conducted directly adjacent to the project area found that although there have been no reported fossil remains in the local vicinity, geological deposits evidenced some fossil plant remains that suggest a potential for encountering additional paleontological resources during ground disturbance.

The project area falls geologically within the Coast Ranges Physiographic Province, consisting of faulted and folded northwest trending hills that are separated by narrow valleys (Fisk et al. 2011). Within the project area, three distinct geological layers have been identified (Graymer et al. 1999) that are of concern for yielding paleontological resources. From oldest to youngest, these are the Cretaceous Great Valley Sequence, the Pleistocene Alluvial Fan Deposits, and the Holocene Alluvial Fan Deposits.

The paleontological survey directly adjacent to the project area resulted in the visual identification of fossil plant remains in exposed geological deposits from the Cretaceous Great Valley Sequence (Fisk et al. 2011). The visual inspection of exposed Pleistocene Alluvium sediments was negative for paleontological resources; however, they note that fossil vertebrates have been found elsewhere in these types of geological deposits, indicating a potential for their discovery within the project area. Alluvium from the Holocene period is too young and thin to preserve fossils. Given these observations, Fisk (2011) recommended that a Paleontological Evaluation Report and Paleontological Mitigation Plan be developed.

3.2 - Pedestrian Survey

MBA’s Senior Project Archaeologist surveyed the project area on May 13, 2011. The project area was surveyed using 10- to 15-meter transects when possible, walked in a zigzag pattern to ensure proper coverage.

The project area consisted of flat terrain, predominantly covered with asphalt roads, fairgrounds' buildings, stables, a horserace track with a nine-hole golf course in the middle of the track and various landscape elements.

The pedestrian survey started in the southern portion of the fairgrounds where the horse stables are located. The horse stables are very similar in design and components, with the major difference being the number of stalls (Appendix A, Photographs 1 and 2). There is a tack shed located in a central area between each of the stables (Photograph 3). Within the southern portion of the fairgrounds, south of the stables was a large, open grassy area that was surveyed using 10-meter transects (Photographs 4 and 5). Visibility was fair to good in this area, depending on the grass cover; however, no cultural resources were discovered. In the northeastern portion of the project area is the a horserace track with a nine-hole golf course in the middle of the track (Photograph 6). In the approximate center at the western project boundary is possibly the original sign for the entrance into the racetrack that reads "Horseman's Cafe" (Photograph 7). On the opposite side of Fairgrounds Drive from the Horseman's Cafe sign is the approximate location where the prehistoric lithic scatter (SOL-317) was recorded (Photograph 8). To try to determine if remnants of SOL-317 or an unknown prehistoric site were within the project area, the grassy area adjacent to the east of Fairgrounds Drive was surveyed (Photograph 9 and 10). Although no evidence of any prehistoric resources were observed, visibility was very poor in this area because of thick grass and weedy vegetation. The remaining project area was covered with various fairgrounds buildings, parking areas, and asphalt roads. Representative photos of the buildings include the Exposition Hall (Photograph 11), the Livestock Building (Photograph 12), McCormick Hall (Photograph 13), and the Solano County Main Building (Photograph 14). Photographs 15 and 16 show a main walkway/road and the turnstyle entrance to the fairgrounds.

During the course of the pedestrian survey, no prehistoric resources were discovered. However, the stables and associated tack buildings, as well as some of the fairgrounds buildings, appear historically significant and would require recordation on appropriate DPR forms prior to demolition.

SECTION 4: SUMMARY AND RECOMMENDATIONS

4.1 - Summary

In accordance with CEQA regulations, MBA assessed the effects of development for the project area. Results from the NWIC indicate that eight previous studies have been conducted within a 0.25-mile radius of the project area. One prehistoric site has been previously recorded adjacent to the western project area boundary; however, the DPR form indicates the site was “entirely fill material from a nearby hill.” The results of the NAHC record search failed to indicate the presence of Native American cultural resources, and no responses have been received from Native American representatives indicating they had particular concerns about the project. No prehistoric resources were discovered during the course of the pedestrian survey. However, the stables and associated tack buildings, as well as some of the fairgrounds buildings, are considered historically significant.

4.2 - Recommendations

4.2.1 - Cultural Resource Recommendations

Since the vast majority of the project area has been previously disturbed on numerous occasions for development of the fairgrounds, the racetrack, as well as roads and parking areas, the possibility for finding significant prehistoric resources is considered slight. No prehistoric resources were discovered during the field survey. Therefore, monitoring for prehistoric resources is not recommended.

The stables and associated buildings were visually assessed during the pedestrian survey and were considered historically significant; therefore, they would require evaluation and recordation on appropriate Department of Parks and Recreation (DPR) 523 forms prior to demolition. In addition, many of the fair buildings would require evaluation for historic significance and recordation on appropriate Department of Parks and Recreation (DPR) 523 forms prior to demolition.

4.3 - Inadvertent Discovery Procedures

4.3.1 - Accidental Discovery of Human Remains

There is always the possibility that ground-disturbing activities may uncover previously unknown human remains. Should this occur, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed.

In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or
2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:
 - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
 - The descendent identified fails to make a recommendation; or
 - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

4.3.2 - 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 archaeologist shall make recommendations to the lead agency concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Cultural resources could consist of, but are not limited to, stone, bone, 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 Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the archaeologist 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.

No further grading or construction activity 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 curated at a qualified scientific institution approved by the lead agency, where they would be afforded long-term preservation to allow future scientific study.

4.3.3 - Accidental Discovery of Paleontological Resources

In the event a fossil is discovered during construction for the proposed project, excavations within 100 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The County shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Solano County to determine procedures to be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the County determines that avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The plan shall be submitted to Solano County for review and approval. Upon approval, the plan shall be incorporated into the project.

SECTION 5: REFERENCES

- Beardsley, R.K. 1954. Temporal and Areal Relationships in Central California Archaeology. Berkeley: University of California Archaeological Survey Reports 25.
- Beardsley, R.K. 1948. "Cultural Sequences in Central California Archaeology." *American Antiquity* 14:1-28.
- Bennyhoff, J. 1950. Californian Fish Spears and Harpoons. *University of California Anthropological Records* 9(4):295-338.
- Chartkoff J.L. and K.K. Chartkoff. 1984. *The Archaeology of California*. Menlo Park. Stanford University Press.
- Cook, S.F. 1976. *The Population of the California Indians 1769-1970*. University of California Press. Berkeley, California.
- Dickel, D.N., P. D. Schulz, and H.M. McHenry. 1984. "Central California: Prehistoric Subsistence Changes and Health." In *Paleopathology at the Origins of Agriculture*, edited by Mark Nathan Cohen and George J. Armelagos, pp. 439-462. Academic Press, Inc., Orlando, FL.
- Fisk, L. H., L. R. Pratt, and D. H. Haasl. 2011. "Paleontological Identification Report for the Redwood Parkway-Fairgrounds Drive Improvements Project in Solano County, California."
- Frederickson, D.A. 1973. *Early Cultures of the North Coast Ranges, California*. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Davis.
- Gerow, B.A. 1974. "Comments on Fredrickson's Cultural Diversity." *The Journal of California Anthropology* 1(2):239-246.
- Gerow, B.A. 1954. *The Problem of Cultural Sequences in Central California Archaeology*. Paper presented at the Annual Meeting of the American Association for the Advancement of Sciences.
- Gerow, B.A., and R. Force. 1968. *An Analysis of the University Village Complex with a Reappraisal of Central California Archaeology*. Stanford University Press, Stanford, CA.
- Goerke-Shrode 2005a. Goerke-Shrode, S. "Exposition was to showcase county." *Solano, The Way it Was*. Historical Articles of Solano County. July 3.
- Goerke-Shrode 2005b. Goerke-Shrode, S. "First Solano fair didn't fare well financially." *Solano, The Way it Was*. Historical Articles of Solano County. August 28.
- Graymer, R. W., E. E. Brabb, and D. L. Jones. 1999. "Geology of the Cordelia and the northern part of the Benicia 7.5 minute quadrangles, California: a digital map database: U.S. Geological Survey, Open-File Report OF-99-162, scale 1:24,000."

- Hughes, R.E. (editor). 1994. *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson. Assembled and edited by Richard E. Hughes. Contributions of the University of California No. 52, Archaeological Research Facility, Berkeley, CA.*
- Johnson, J.J. 1976. *Archaeological Investigations at the Blodgett Site (CA-SAC-267), Sloughhouse Locality, California. Report to the U.S. National Parks Service, Western Regional Office, Tucson, AZ.*
- Johnson, P. J. 1978. "Patwin. *Handbook of North American Indians California Volume 8.*" Robert F. Heizer, Editor, pp. 350-360. Smithsonian Institution, Washington, D.C.
- Lillard, J.B., R.F. Heizer, and F. Fenenga. 1939. *An Introduction to the Archaeology of Central California. Sacramento Junior College, Department of Anthropology, Bulletin 2. Sacramento.*
- Lillard, J.B. and W.K. Purves. 1936. "The Archaeology of the Deer Creek-Cosumnes Area, Sacramento Co., California." *Sacramento. Sacramento Junior College, Department of Anthropology Bulletin 1.*
- Moratto, M.J. 1984. *California Archaeology. San Diego. Academic Press.*
- Ragir, S.R. 1972. *The Early Horizon in Central California Prehistory. Contributions of the University of California Archaeological Research Facility 15. Berkeley, CA.*
- Rohrs, S. 2011. "Solano County Fair delves into its past." *Vallejo Times Herald, August 3.*
- Schenck, W.E., and E.J. Dawson. 1929. "Archaeology of the Northern San Joaquin Valley." *American Archaeology and Ethnology 25:286-413.*
- Shoup, L.H., and R.T. Milliken. 1999. *Inigo of Rancho Posolmi: the Life and Times of a Mission Indian. Novato. Ballena Press.*

Appendix A: Project Area Photographs



Photograph 1: Overview of stables; facing north



Photograph 2: Detail of stables; facing northeast.

Source: Michael Brandman Associates, 2011.



Michael Brandman Associates

20850018 • 11/2011 | A_proj_area_photos_1and2.cdr

Appendix A Project Area Photographs 1 and 2

COUNTY OF SOLANO • SOLANO 360 SPECIFIC PLAN
PHASE I CULTURAL RESOURCES ASSESSMENT



Photograph 3: Tack shed located between two stables; facing east.



Photograph 4: Open, grassy field at southern end of fairgrounds; facing west.

Source: Michael Brandman Associates, 2011.



Michael Brandman Associates

20850018 • 11/2011 | A_proj_area_photos_3and4.cdr

Appendix A Project Area Photographs 3 and 4

COUNTY OF SOLANO • SOLANO 360 SPECIFIC PLAN
PHASE I CULTURAL RESOURCES ASSESSMENT



Photograph 5: Open, grassy field at southern end of fairgrounds; facing north.



Photograph 6: Horserace track with 9 hole golf course in the middle and grandstand in the left background; facing northwest.

Source: Michael Brandman Associates, 2011.



Michael Brandman Associates

20850018 • 11/2011 | A_proj_area_photos_5and6.cdr

Appendix A Project Area Photographs 5 and 6

COUNTY OF SOLANO • SOLANO 360 SPECIFIC PLAN
PHASE I CULTURAL RESOURCES ASSESSMENT



Photograph 7: Horseman's Cafe sign marking entrance to racetrack; facing east.



Photograph 8: Approximate location where the prehistoric lithic scatter was recorded – across from Fairgrounds Drive. Facing west.

Source: Michael Brandman Associates, 2011.



Michael Brandman Associates

20850018 • 11/2011 | A_proj_area_photos_7and8.cdr

Appendix A Project Area Photographs 7 and 8

COUNTY OF SOLANO • SOLANO 360 SPECIFIC PLAN
PHASE I CULTURAL RESOURCES ASSESSMENT



Photograph 9: Area adjacent and east of Fairgrounds Drive that was surveyed for prehistoric resources; facing south



Photograph 10: Area adjacent and east of Fairgrounds Drive that was surveyed for prehistoric resources; facing north.

Source: Michael Brandman Associates, 2011.



Michael Brandman Associates

20850018 • 11/2011 | A_proj_area_photos_9and10.cdr

Appendix A Project Area Photographs 9 and 10

COUNTY OF SOLANO • SOLANO 360 SPECIFIC PLAN
PHASE I CULTURAL RESOURCES ASSESSMENT



Photograph 11: Exposition Hall; facing northeast.



Photograph 12: Livestock Building; facing east.

Source: Michael Brandman Associates, 2011.



Michael Brandman Associates

20850018 • 11/2011 | A_proj_area_photos_11and12.cdr

Appendix A Project Area Photographs 11 and 12

COUNTY OF SOLANO • SOLANO 360 SPECIFIC PLAN
PHASE I CULTURAL RESOURCES ASSESSMENT



Photograph 13: McCormick Hall; facing north.



Photograph 14: Solano County building; facing north.

Source: Michael Brandman Associates, 2011.



Michael Brandman Associates

20850018 • 11/2011 | A_proj_area_photos_13and14.cdr

Appendix A Project Area Photographs 13 and 14

COUNTY OF SOLANO • SOLANO 360 SPECIFIC PLAN
PHASE I CULTURAL RESOURCES ASSESSMENT



Photograph 15: Overview of one of the main road/walkways with fairgrounds; facing south.



Photograph 16: Entrance turn-styles to fairgrounds main buildings; facing west.

Source: Michael Brandman Associates, 2011.



Michael Brandman Associates

20850018 • 11/2011 | A_proj_area_photos_15and16.cdr

Appendix A Project Area Photographs 15 and 16

COUNTY OF SOLANO • SOLANO 360 SPECIFIC PLAN
PHASE I CULTURAL RESOURCES ASSESSMENT

Appendix B: Cultural Resources Correspondence

**B-1: Native American Information Request
Representative Letter**



August 29, 2011

Charlie Wright, Chairperson
Cortina Band of Indians
P.O. Box 1630
Williams, CA 95987

Subject: **Proposed Solano 360 Project, PN 2085.0018, Solano County**

Dear Charlie Wright:

At the request of County of Solano, Michael Brandman Associates is conducting a Cultural Resources Initial Assessment for a proposed project within the Solano County Fairgrounds, located east of Lake Chabot, south of Highway 37, and northwest of I-80 in the City of Vallejo, CA. The proposed project includes the redevelopment of the current Fairgrounds property, and is depicted on the attached aerial map and is designated "Project Location" in black.

A field survey of the proposed project area was conducted by MBA Senior Project Archaeologist Carrie D. Wills, on May 13, 2011. The results of the survey were negative for any visible cultural resources.

Consultation

The California Environmental Quality Act (CEQA) requires the City to consider the effect this project may have on historic properties. The definition of "historic properties" includes, in some cases, properties of traditional religious and cultural significance to Native American tribes. To determine whether any historic properties may be affected by the project, MBA has reviewed archival maps and historic documents and consulted with the Native American Heritage Commission (NAHC). The NAHC response letter indicated that there may be additional information to be gained from individual tribal members and/or tribal organizations. MBA is sending this letter to give you the opportunity to provide any additional knowledge you may have about the project area. Because public involvement is a key ingredient in successful CEQA consultation, we are soliciting your input as part of this process.

Please feel free to contact me at 925.830.2733 or via email at cwills@brandman.com if you have any questions or would like to discuss the project in more detail.

Sincerely,

Carrie D. Wills, MA, RPA
Senior Project Archaeologist
Michael Brandman Associates
Bishop Ranch 3
2633 Camino Ramon, Suite 460
San Ramon, CA 94583

Enclosures: Aerial Map of Project Area

Fresno
559.497.0310

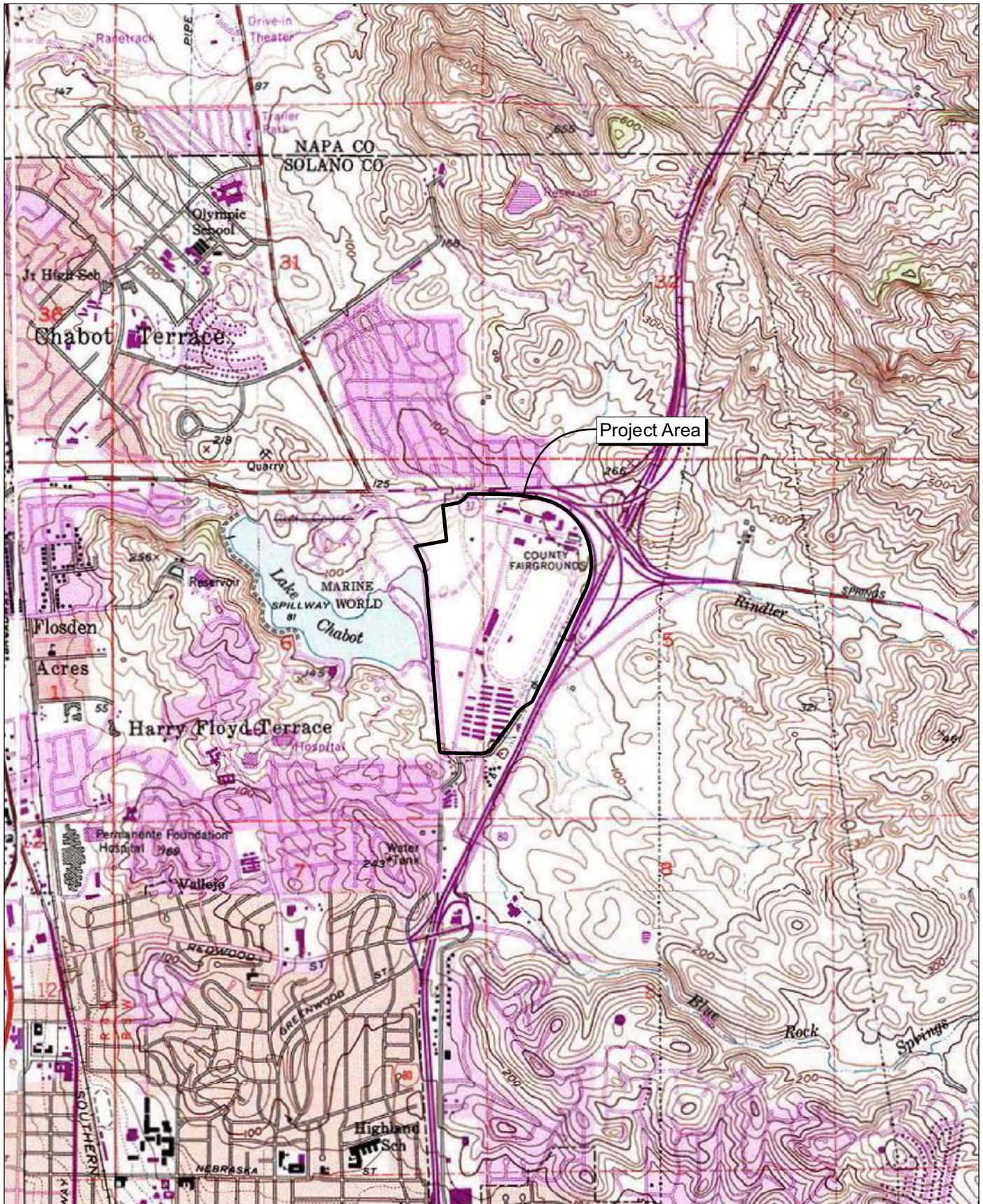
Irvine
714.508.4100

Palm Springs
760.322.8847

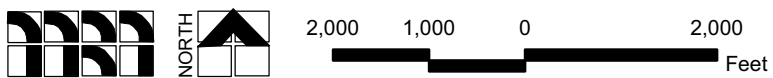
Sacramento
916.447.1100

San Bernardino
909.884.2255

San Ramon
925.830.2733



Source: TOPO! USGS Cordelia, CA (1980) 7.5' DRG.
 Township 3N, Range 3W, Section 5



Michael Brandman Associates

20850018 • 03/2011 | record_search.mxd

Record Search Map

SOLANO 360

B-2: Native American Heritage Commission Sacred Lands File Search Response

STATE OF CALIFORNIAEdmund G. Brown Jr., Governor**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 384
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net



June 10, 2011

Carrie D. Wills
Michael Brandman Associates
2633 Camino Ramon
San Ramon, CA 94583

Sent by Fax: 925-830-2715
Number of Pages: 2

Re: Proposed Solano 360 Project PN 2085.0018, Solano County

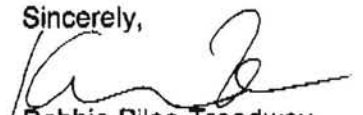
Dear Ms. Wills:

A record search of the sacred land file has 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 indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,


Debbie Pilas-Treadway
Environmental Specialist III

**Native American Contacts
Solano County
June 7, 2011**

Kesner Flores
PO Box 1047
Wheatland , CA 95692
calnagpra@hotmail.com
925-586-8919

Wintun / Patwin

Yocha Dehe Wintun Nation
Cynthia Clarke, Native Cultural Renewal Committee
P.O. Box 18
Brooks , CA 95606
Wintun (Patwin)
(530) 796-3400 - office
(530) 796-2143 Fax

Cortina Band of Indians
Charlie Wright, Chairperson
PO Box 1630
Williams , CA 95987
(530) 473-3274 - Voice
(530) 473-3190 - Voice
(530) 473-3301 - Fax

Wintun / Patwin

Yocha Dehe Wintun Nation
Reno Franklin, Cultural Resources Director
P.O. Box 18
Brooks , CA 95606
Wintun (Patwin)
rfranklin@yochadehe-nsn.gov
(530) 979-6346
(530) 796-3400 - office
(530) 796-2143 Fax

Wintun Environmental Protection Agency

Dave Jones
P.O. Box 1839
Williams , CA 95987
corwepa@hotmail.com
(530) 473-3318
(530) 473-3319
(530) 473-3320 - Fax

Wintun (Patwin)

Yocha Dehe Wintun Nation
Marshall McKay, Chairperson
P.O. Box 18
Brooks , CA 95606
(530) 796-3400
(530) 796-2143 Fax

Wintun (Patwin)

Yocha Dehe Wintun Nation
Leland Kinter, Native Cultural Renewal Committee
P.O. Box 18
Brooks , CA 95606
lkinter@yochadehe-nsn.gov
(530) 979-6346
(530) 796-3400 - office
(530) 796-2143 Fax

Wintun (Patwin)

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 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Solano 360 project PN 2085.0018, Solano County

B-3: Paleontological Report

**PALEONTOLOGICAL IDENTIFICATION REPORT
FOR THE
REDWOOD PARKWAY-FAIRGROUNDS DRIVE
IMPROVEMENTS PROJECT
IN SOLANO COUNTY, CALIFORNIA**

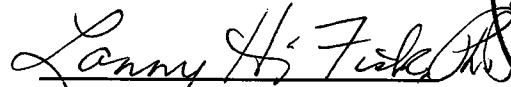
Prepared for:

CirclePoint
135 Main Street, Suite 1600
San Francisco, CA 94105

and

Solano Transportation Authority
One Harbor Center, Suite 130
Suisun City, CA 94585

Prepared by:

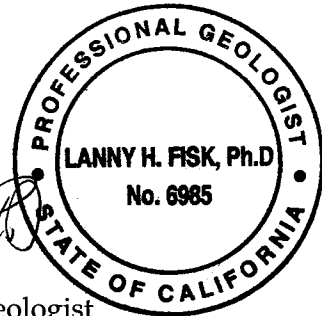


Dr. Lanny H. Fisk, PhD, PG
Principal Paleontologist and Professional Geologist

Mr. Levi R. Pratt

Dr. David M. Haasl, PhD

PaleoResource Consultants
F & F GeoResource Associates, Inc.
550 High Street, Suite 108
Auburn, CA 95603
888-887-9745
Lanny@PaleoResource.com



04 April 2011

TABLE OF CONTENTS

SECTION 1	Introduction and Project Description	1
	1.1 Introduction.....	1
	1.2 Project Description.....	1
SECTION 2	Laws, Ordinances, Regulations, and Standards	2
	2.1 Federal LORS	2
	2.2 State LORS	3
	2.3 County LORS.....	4
	2.4 Professional Standards	4
SECTION 3	Affected Environment	5
	3.1 Geographic Location.....	5
	3.2 Regional Geologic Setting	5
SECTION 4	Paleontological Identification Methods and Key Personnel	6
	4.1 Resource Inventory Methods	6
	4.2 Key Personnel	6
SECTION 5	Results of Paleontological Identification.....	8
	5.1 Stratigraphic Inventory	8
	5.2 Project Geology	8
	5.3 Paleontological Resource Inventory	9
	5.4 Summary and Recommendations	9
SECTION 6	Acronyms.....	11
SECTION 7	References.....	12

SECTION 1

INTRODUCTION AND PROJECT DESCRIPTION

1.1 Introduction

The purpose of this report is to provide the results of an initial investigation into the potential for and presence of scientifically significant paleontological resources (fossils – the remains of prehistoric plants and animals) along the proposed Redwood Parkway-Fairgrounds Drive Improvement Project (hereinafter Project) right-of-way (ROW). The goal of this investigation was to identify any paleontological resources that might be impacted by proposed Project excavations.

1.2 Project Description

The Solano Transportation Authority (STA), Solano County, and the City of Vallejo, in cooperation with the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), propose to undertake construction excavation activities to improve the I-80/Redwood Parkway and State Route (SR) 37/Fairgrounds Drive interchanges. Potential improvements include construction of a tight diamond at I-80/Redwood Parkway Interchange utilizing the existing structure over I-80; widening of Fairgrounds Drive from two to four lanes from Redwood Road to Coach Lane, and from four to six lanes from Coach Lane to Route 37; modifications to the Route 37/Fairgrounds Drive Interchange; installation of signals at the intersection of Redwood Parkway/I-80 eastbound ramps, Redwood Road/I-80 westbound ramps, Redwood Road/Fairgrounds Drive, Fairgrounds Drive/Solano County Fairgrounds Development Entrance (south), and Fairgrounds Drive/Valle Vista Avenue; modification of signals at Fairgrounds Drive/Route 37 westbound ramps, Fairgrounds Drive/Route 37 eastbound ramps, Fairgrounds Drive/Solano County Fairgrounds Development Entrance (north), Sereno Drive/Fairgrounds Drive, and Redwood Road/Admiral Callaghan Way; relocation of the Fairgrounds Drive/Redwood Road intersection and cul-de-sac at Moorland Street, west of Fairgrounds Drive; and construction of retaining walls and sound walls.

SECTION 2

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Paleontological resources are classified as non-renewable scientific resources and are protected by several federal and state statutes (California State Historic Preservation Office 1983; Marshall 1976; West 1991; Fisk and Spencer 1994; Gastaldo 1999), most notably by the 1906 Federal Antiquities Act and other subsequent federal legislation and policies and by the State of California's environmental regulations (CEQA, Section 15064.5). Professional standards for assessment and mitigation of adverse impacts on paleontological resources have been established by the SVP (1995, 1996). Design, construction, and operation of the proposed Project needs to be conducted in accordance with laws, ordinances, regulations and standards (LORS) applicable to paleontological resources. Therefore, the LORS applicable to paleontological resources are briefly summarized below, together with SVP professional standards.

2.1 Federal LORS

Federal legislative protection for paleontological resources stems from the Antiquities Act of 1906 (Public Law [P.L.] 59-209; 16 United States Code [U.S.C.] 431 *et seq.*; 34 Statute 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal land. The Antiquities Act of 1906 forbids disturbance of any object of antiquity on federal land without a permit issued by the responsible managing agency. This act also establishes criminal sanctions for unauthorized appropriation or destruction of antiquities. The Federal Highways Act of 1958 specifically extended the Antiquities Act to apply to paleontological resources and authorized the use of funds appropriated under the Federal-Aid Highways Act of 1956 to be used for paleontological salvage in compliance with the Antiquities Act and any applicable state laws (Fisk and Spencer 1994). The language in the Highways Act makes it clear that Congress intended that, to be in compliance with the Antiquities Act, highway construction projects must protect paleontological resources. Federal protection would apply to this project if it is federally funded through the Federal Highway Administration. Paleontological resources on federal lands are also explicitly protected under the Paleontological Resources Preservation Act (Title VI, Subtitle D of the Omnibus Public Land Management Act of 2009). This act, signed into law on 30 March 2009, criminalizes the unauthorized removal of fossils from federal land.

In addition to the Antiquities Act and the Paleontological Resources Preservation Act, other Federal statutes protecting fossils include the following. The Historic Sites Act of 1935 (P.L. 74-292; 49 Statute 666, 16 U.S.C. 461 *et seq.*) declares it national policy to preserve objects of historical significance for public use and gives the Secretary of the Interior broad powers to execute this policy, including criminal sanctions. The National Environmental Policy Act of 1969 (P.L. 91-190, 31 Statute 852, 42 U.S.C. 4321-4327) requires that important natural aspects of our national heritage be considered in assessing the environmental consequences of any proposed project. The Federal Land Policy Management Act of 1976 (P.L. 94-579; 90 Statute 2743, U.S.C. 1701-1782) requires that public lands be managed in a manner that will protect the quality of their scientific values. Paleontological resources are also afforded federal protection under Code of Federal Regulations Title 40, Section 1508.27 as a subset of scientific resources.

2.2 State LORS

Guidelines for the Implementation of CEQA, as amended 7 September 2004 (Title 14, Chapter 3, California Code of Regulations: 15000 *et seq.*) define procedures, types of activities, persons, and public agencies required to comply with CEQA, and include as one of the questions to be answered in the Environmental Checklist Form (Section 15063 and Appendix G, Section V, Part c) the following: “*Will the proposed project directly or indirectly destroy a unique paleontological resource or site?*”

Although neither CEQA nor the Guidelines define what is “*a unique paleontological resource or site*”, CEQA Section 21083.2 defines “*unique archaeological resources*” as “*...any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:*

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

With only slight modification, this definition is equally applicable to recognizing “*a unique paleontological resource or site*”. Additional guidance is provided in CEQA Guidelines Section 15064.5 (a)(3)(D), which indicates “*generally, a resource shall be considered historically significant if it.... has yielded, or may be likely to yield, information important in prehistory or history.*”

CEQA Guidelines Section XVIIa of the Environmental Checklist asks a second question equally applicable to paleontological resources: “*Does the project have the potential to . . . eliminate important examples of the major periods of California history or pre-history?*” Fossils are important examples of the major periods of California prehistory. To be in compliance with CEQA, environmental impact assessments, statements, and reports must answer both these questions in the Environmental Checklist. If the answer to either question is yes or possibly, a mitigation and monitoring plan must be designed and implemented to protect significant paleontological resources.

The CEQA lead agency having jurisdiction over a project is responsible to ensure that paleontological resources are protected in compliance with CEQA and other applicable statutes. STA and Caltrans are the CEQA lead agencies with the responsibility to ensure that fossils are protected during construction on this project. CEQA Section 21081.6 requires that the lead agency demonstrate project compliance with mitigation measures developed during the environmental impact review process.

Other state requirements for paleontological resource management are in California Public Resources Code Chapter 1.7, Section 5097.5 (Statutes. 1965, Chapter 1136, Page 2792), entitled Archaeological, Paleontological, and Historical Sites. This statute defines any unauthorized

disturbance or removal of a fossil site or fossil remains on public land as a misdemeanor and specifies that state agencies may undertake surveys, excavations, or other operations as necessary on publicly owned lands to preserve or record paleontological resources. This statute applies to this project because impacts will occur on California state-owned lands.

2.3 County LORS

California Planning and Zoning Law requires each county and city jurisdiction to adopt a comprehensive, long-term general plan for its development. The general plan is a policy document designed to give long range guidance to those making decisions affecting the future character of the planning area. It represents the official statement of the community's physical development as well as its environmental goals. The general plan also acts to clarify and articulate the relationship and intentions of local government to the rights and expectations of the general public, property owners, and prospective investors. Through its general plan, the local jurisdiction informs these groups of its goals, policies, and development standards; thereby communicating what must be done to meet the objectives of the general plan. State planning law requires each jurisdiction to identify environmental resources and to prepare and implement policies which relate to the utilization and management of these resources.

The Solano County General Plan does not contain goals, policies, or implementation guidelines that address paleontological resources. However, the background report prepared for the Solano County General Plan 2008 update (EDAW 2006) assigns a paleontological sensitivity in accordance with SVP standard guidelines to geologic units found within the county, and the EIR written for the General Plan 2008 update provides mitigation measures to protect paleontological resources.

2.4 Professional Standards

The SVP, a national scientific organization of professional vertebrate paleontologists, has established standard guidelines (SVP 1995, 1996) that outline acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional paleontologists in the nation adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically spelled out in its standard guidelines. The SVP's standard guidelines were approved by a consensus of professional paleontologists and are the standard against which all paleontological monitoring and mitigation programs are judged. Many federal and state regulatory agencies have either formally or informally adopted the SVP's "standard guidelines" for the mitigation of construction-related adverse impacts on paleontological resources, including both federal (FERC, USFS, BLM, NPS, etc.) and state agencies (CEC, CPUC, Caltrans, etc.).

Briefly, SVP guidelines require that each project have literature and museum archival reviews, a field survey, and, if there is a high potential for disturbing significant fossils during project construction, a mitigation plan that includes monitoring by a qualified paleontologist to salvage fossils encountered, identification of salvaged fossils, determination of their significance, and placement of curated fossil specimens into a permanent public museum collection (such as the designated California state repository for fossils, the University of California Museum of Paleontology at Berkeley).

SECTION 3

AFFECTED ENVIRONMENT

3.1 Geographic Location

The proposed Project is located in southwestern Solano County, California, along Fairgrounds Drive from the Redwood Parkway/I-80 Interchange to 0.3 miles north of State Route 37 at Gateway Drive. The proposed Project ROW is bound on the north by latitude 38°08'40"N and longitude 122°14'06"W and on the south by latitude 38°07'22"N and longitude 122°13'52"W. The proposed Project is northeast of the City of Vallejo, and adjacent to the Solano County Fairgrounds and Six Flags Discovery Kingdom. The ground surface in the proposed Project vicinity is undulatory with topographical changes reflective of old and new erosional surfaces. Elevation in the general area varies from approximately 85 to 150 feet (~26–46 meters). The proposed Project is within the Coast Ranges Physiographic Province. The Coast Ranges Physiographic Province is positioned south of the Klamath Mountains Physiographic Province, north of the Transverse Ranges Physiographic Province, west of the Great Valley Physiographic Province, and east of the Pacific Ocean. The Coast Ranges Physiographic Province generally consists of folded and faulted, northwest trending hills separated by narrow valleys. The proposed Project is located within the U. S. Geological Survey (USGS) Cordelia 7.5-minute (1:24,000-scale) Quadrangle.

3.2 Regional Geologic Setting

The geology in the vicinity of the proposed Project has been mapped or described by numerous workers, including Weaver (1949), Sims *et al.* (1973), Helley and Graymer (1997), and Graymer *et al.* (1999, 2002). Surficial geologic mapping of the Project vicinity has been provided at a scale of 1:750,000 by Jennings *et al.* (1977); at a scale of 1:500,000 by Jenkins (1938); at a scale of 1:100,000 by Helley and Graymer (1997) and Graymer *et al.* (2002), at a scale of 1:62,500 by Sims *et al.* (1973), and at a scale of 1:24,000 by Graymer *et al.* (1999). The information in these geologic maps and published and unpublished reports form the basis of the following discussion. Individual maps and publications are incorporated into this report and referenced where appropriate. The aspects of geology pertinent to this report are the types, distribution, and age of sediments immediately underlying the proposed Project area and their probability of producing fossils during Project construction. The site-specific geology in the vicinity of the proposed Project is discussed separately in Section 5.

SECTION 4

PALEONTOLOGICAL IDENTIFICATION METHODS AND KEY PERSONNEL

4.1 Resource Inventory Methods

To develop a baseline paleontological resource inventory of the Project area and to assess the potential paleontological productivity of each stratigraphic unit present, the published as well as available unpublished geological and paleontological literature was reviewed; and stratigraphic and paleontologic inventories were compiled, synthesized, and evaluated (see below). These methods are consistent with SVP (1995) guidelines for assessing the importance of paleontological resources in areas of potential environmental effect. No subsurface exploration was conducted for this report.

Geologic maps and reports covering the bedrock and surficial geology of the Project vicinity were reviewed to determine the exposed and subsurface rock units, to assess the potential paleontological productivity of each rock unit, and to delineate their respective areal distribution in the Project area. In addition, available aerial photographs of the area were examined to aid in determining the areal distribution of distinctive sediment and soil types.

The number and locations of previously recorded fossil sites from rock units exposed in and near the Project and the types of fossil remains each rock unit has produced were evaluated based on published and unpublished geological and paleontological literature. A windshield survey, which included visual inspection of exposures of potentially fossiliferous strata in the Project area, was conducted to document the presence of sediments and rock types suitable for containing fossil remains and the presence of any previously unrecorded fossil sites. The field survey for this identification report was conducted on 22 November 2010 by Dr. David M. Haasl, PhD, Senior Paleontologist and Mr. Levi R. Pratt, Field Paleontologist, both with PaleoResource Consultants (PRC). During the windshield survey, stratigraphy was observed in natural exposures, road cuts, bench cuts on athletic fields, and drainage diversions.

4.2 Key Personnel

Dr. Lanny H. Fisk, PhD, PG, PRC Principal Paleontologist has over 25 years experience as a professional paleontologist and 20 years as a paleontological consultant doing paleontological resource impact assessments and surveys, preparing CEQA and NEPA environmental documents and mitigation measures, designing and managing environmental compliance monitoring programs, and coordinating and consulting with state and federal resource agencies to resolve environmental concerns regarding paleontological resources. He has been a consulting paleontologist on numerous large earth-moving construction projects in California, including pipelines, power plants, highways, fiber-optic cables, landfills, and housing developments. These projects have involved extensive coordination and consultation with project sponsors, other consulting firms, and permitting agencies; adherence to strict delivery schedules; and completion within specified budget limits. Dr. Fisk has also taught paleontology courses at the university/college level and authored or co-authored a number of scientific research contributions on paleontological resources. His experience includes preparing paleontological

resource impact assessments and paleontological resource monitoring and mitigation programs. Dr. Fisk has a PhD degree with emphasis in paleobiology, plus all the coursework and research for a PhD in Geology. He is a California licensed geologist and an Oregon licensed Registered Geologist (RG). He holds a Bureau of Land Management Scientific Paleontological Collecting Permit, which demonstrates the qualification to do Federal Antiquities Act studies. The recommendations included in this report are those of Dr. Fisk and PaleoResource Consultants.

Other PRC personnel that worked on this Paleontological Identification report (PIR) include Dr. David M. Haasl, PhD, and Levi R. Pratt. Dr. Haasl has five years experience as a museum scientist at UCMP and is the author of several scientific papers on paleontology, specifically on Cenozoic marine mollusks. He has a PhD in paleobiology from the University of California at Davis and a MS in paleontology from Western Washington University. He has contributed to the preparation of several paleontological resource impact assessments, field surveys, and paleontological mitigation and monitoring plans. Levi Pratt has prepared and assisted in the preparation of final paleontological monitoring and mitigation reports, in conducting field surveys and in the preparation of paleontological assessment reports.

SECTION 5

RESULTS OF PALEONTOLOGICAL IDENTIFICATION

5.1 Stratigraphic Inventory

Regional geologic mapping in the vicinity of the proposed Project has been provided by Jennings *et al.* (1977; 1:750,000 scale); Jenkins (1938; 1:500,000 scale), Helley and Graymer (1997; 1:100,000 scale), Graymer *et al.* (2002; 1:100,000 scale), and Sims *et al.* (1973; 1:62,500 scale). Larger scale mapping of the proposed Project area has been provided by Graymer *et al.* (1999; 1:24,000 scale). These geologic maps were reviewed to determine the stratigraphic sequence of rocks that might be impacted by Project-related excavations. During the windshield survey for this proposed Project, the available geologic maps were “ground truthed” and determined to be reasonably accurate, given the limited exposures and vegetation cover.

5.2 Project Geology

Solano County’s diverse geologic history spans 144 million years, from the early Jurassic Period to the Holocene. The eastern portion of the county is made up of the north-south trending Sacramento and San Joaquin Valleys, as well as a small portion of the Northern California Coast Ranges. The Northern California Coast Range in Solano County is known as the Vaca Mountains, which consist of Cretaceous and Tertiary strata that have been uplifted and tilted eastward. The Cretaceous and Tertiary rocks of the Vaca Mountains consist of interbedded marine sandstone and shale that belong to the Great Valley Sequence. A large predominantly Quaternary plain lies to the east of the Vaca Mountains. In the southwestern portion of the county, Pliocene and late Miocene volcanic deposits are present. In the most detailed geologic mapping available, Graymer *et al.* (1999) recognized three stratigraphic units within the Project area. These units, from oldest to youngest, are the Cretaceous Great Valley Sequence (Undivided), Pleistocene Alluvial Fan Deposits, and Holocene Alluvial Fan Deposits. These units are discussed below.

Cretaceous Great Valley Sequence (Undivided): The Early to Late Cretaceous Great Valley Sequence is composed of interbedded carbonaceous sandstones, mudstones and shale. Locally, this stratigraphic unit also contains laminated quartz sandstone and fossil-hash gritstone. The Great Valley Sequence was formed from sediments deposited on a submarine fan along the continental margin (Graymer *et al.* 2002). Within the footprint of the proposed Project, the Great Valley Sequence consists of interbedded shale and sandstone. The shale interbeds are light grey in color, thinly laminated, and fissile. Sandstone interbeds are brown to tan in color, thinly laminated to massive, and well indurated. The massive, well indurated sandstones form the backbone of the ridges to the north and south of Lake Chabot and to the southeast along I-80. Within the Project area, a thin veneer of Pleistocene and Holocene alluvium unconformably overlie the Cretaceous Great Valley Sequence.

Pleistocene Alluvial Deposits: Pleistocene alluvial deposits consist of crudely bedded, moderately to poorly sorted, brown gravelly and clayey sand that fines upward to sandy clay. These deposits are located along ancient stream channels and can be distinguished from younger alluvial and fluvial deposits by their higher topographic position, greater degree of dissection,

lesser permeability than younger deposits (Helley and Graymer 1997). Outcrops observed along the proposed Project ROW form topographic highs and consist of poorly consolidated, reddish brown clayey sand. Pleistocene alluvial deposits are conformably overlain by Holocene deposits along valley floors.

Holocene Alluvial Deposits: Holocene alluvial deposits are composed of unconsolidated, brown silty clay deposited where streams emanate from upland regions onto the valley floor. Holocene Alluvium locally consists of light brown to tan sand, silt, and gravel deposited in fan, valley fill, terrace, or basin environments (Graymer *et al.* 2002). This unit is exposed within the proposed Project area as a thin veneer over older sediments. The depth of this unit varies widely, but is very thin in many places. Excavations within the Holocene Alluvium have the potential to impact more sensitive units at depth.

5.3 Paleontological Resource Inventory

An inventory of known paleontological resources discovered in the vicinity of the proposed Project is presented below. The literature review conducted for this inventory documented no previously recorded fossil sites within the actual proposed Project ROW. However, during the windshield survey, fossil plant material was observed within the Cretaceous Great Valley Sequence exposed along the proposed Project ROW at the intersection of Coach Lane and Fairgrounds Drive, and since depositional conditions observed in exposures appear to be favorable for the preservation of fossils, it is likely that additional paleontological resources will be found in sediments of the Cretaceous Great Valley Sequence. Sedimentary units mapped as Pleistocene Alluvium throughout Solano County have previously produced abundant fossils representing many extinct taxa. Vertebrate fossils found in Pleistocene Alluvium are representative of the Rancholabrean North American Land Mammal Age and include but are not limited to bison, mammoth, ground sloths, saber-toothed cats, dire wolves, cave bears, rodents, birds, reptiles and amphibians (Bell *et al.* 2004; Savage 1951; Stirton 1939, 1951). Additionally, Pleistocene aged vertebrate sites in the Hercules-Rodeo districts have yielded scientifically important microvertebrate material. This diverse microvertebrate fauna has been extensively studied most recently by Wolff (1971, 1973, and 1975) and consists of numerous small mammals, including rabbits, rodents, insectivores, and a variety of birds and lower vertebrates (frogs, lizards, and snakes). Many of these fossil specimens represent the best-preserved examples of their taxa found to date. Although during the field survey, no indications of fossils were seen at the surface in the exposed Pleistocene Alluvium, since fossil vertebrates have been previously reported elsewhere from this unit in similar sediments, it is likely that additional significant paleontological resources will be found in sediments of the Pleistocene Alluvium. The Holocene Alluvium is both too thin and too young for the preservation of fossils.

5.4 Summary and Recommendations

Although no fossil localities are reported from within the proposed Project ROW, fossil plant material was observed during the windshield survey in exposures of the Cretaceous Great Valley Sequence and significant fossils have been encountered in the Pleistocene Alluvium elsewhere in the area. These occurrences suggest that there is a high potential for additional scientifically important and significant fossil remains to be uncovered by the anticipated excavations during Project construction. The presence of known or reasonably anticipated resources that may be impacted by the proposed Project indicates that a Paleontological Evaluation Report (PER) will

be needed. Thus, a PER is recommended for this proposed Project and should be accompanied by a preliminary Paleontological Mitigation Plan (PMP).

SECTION 6

ACRONYMS

BLM	Bureau of Land Management
Caltrans	California Department of Transportation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CPUC	California Public Utilities Commission
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
LORS	Laws, Ordinances, Regulations, and Standards
NEPA	National Environmental Protection Act
NPS	National Park Service
PER	Paleontological Evaluation Report
PG	Professional Geologist
P.L.	Public Law
PMP	Paleontological Mitigation Plan
PRC	PaleoResource Consultants
RG	Registered Geologist
ROW	Right of Way
SR	State Route
STA	Solano Transportation Authority
SVP	Society of Vertebrate Paleontology
U.S.C.	United States Code
USFS	United States Forest Service
USGS	United States Geological Survey

SECTION 7

REFERENCES

Bell, C. J., Lundelius, Jr., E. L., Barnosky, A. D., Graham, R. W., Lindsay, E. H., Ruez, Jr., D. R., Semken, Jr., H. S., Webb, S. D., and Zakrzewski, R. J., 2004, The Blancan, Irvingtonian, and RanchoLabrean mammal Ages: p. 232-314 in Woodburne, M. O. (editor), Late Cretaceous and Cenozoic mammals of North America, Columbia University Press, New York, NY, 703 p.

California State Historic Preservation Office, 1983, Summary of state/federal laws protecting cultural resources: California State Historic Preservation Office, Sacramento, CA, 4 p.

Fisk, L. H., and Spencer, L. A., 1994, Highway construction projects have legal mandates requiring protection of paleontologic resources (fossils): p. 213-225 in Burns, S. F. (editor), Proceedings of the 45th Highway Geology Symposium, Portland, OR, 258 p.

Gastaldo, R. A., 1999, International laws: collecting, transporting and ownership of fossils – USA: p. 330-338, in Jones, T. P. and Rowe, N. P. (editors), Fossil plants and spores, The Geological Society, London, England, 396 p.

Graymer, R. W., Jones, D. L., and Brabb, E. E., 2002, Geologic map and map database of northeastern San Francisco Bay region, California -- most of Solano County and parts of Napa, Marin, Contra Costa, San Joaquin, Sacramento, Yolo, and Sonoma Counties: U.S. Geological Survey, Miscellaneous Field Studies Map MF-2403, scale 1:100,000.

Graymer, R. W., Brabb, E. E., and Jones, D. L., 1999, Geology of the Cordelia and the northern part of the Benicia 7.5 minute quadrangles, California: a digital map database: U.S. Geological Survey, Open-File Report OF-99-162, scale 1:24,000.

Graymer, R. W., and Helley, E. J. 1997, Quaternary Geology map of Contra Costa County and Surrounding Parts of Sonoma, Solano, Sacramento, and San Joaquin Counties, California: A Digital Database, U.S. Geological Survey, Open-File Report 97-98, scale 1:75,000.

Helley, E. J. and Graymer, R. W., 1997, Quaternary geology of Contra Costa County, and surrounding parts of Alameda, Marin, Sonoma, Solano, Sacramento, and San Joaquin Counties, California: a digital database: U.S. Geological Survey, Open-File Report OF-97-98, scale 1:100,000.

Jenkins, O. P., 1938, Geologic map of California: California Division of Mines and Geology, scale 1:500,000.

Jennings, C. W., 1977, Geologic map of California: California Division of Mines and Geology, scale 1:750,000.

Marshall, L. G., 1976, Paleontological salvage and federal legislation: *Journal of Paleontology*, vol. 50, p. 346-348.

Savage, D. E., 1951, Late Cenozoic Vertebrates of the San Francisco Bay Region: *University of California Publications Bulletin of the Department of Geological Sciences*, vol. 28, no. 10, p. 215-314.

Sims, J. D., Fox, K. F., Jr., Bartow, J. A., and Helley, E. J. 1973, Preliminary Geologic Map of Solano County and parts of Napa, Contra Costa, Marin, and Yolo Counties, California. U. S. Geological Survey, Miscellaneous Field Studies Map MF-484, scale 1:62,500.

Society of Vertebrate Paleontology, 1995, Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources – standard guidelines: *Society of Vertebrate Paleontology News Bulletin*, vol. 163, p. 22-27.

Society of Vertebrate Paleontology, 1996, Conditions of receivership for paleontologic salvage collections: *Society of Vertebrate Paleontology News Bulletin*, vol. 166, p. 31-32.

Solano County General Plan Update, 2006, Cultural and Paleontological Resources, Section 7-23- 7-26: Prepared by EDAW, Sacramento, CA, 41 p.

Stirton, R. A., 1939, Late Cenozoic Vertebrates of the San Francisco Bay Region: *University of California Publications in Geological Sciences*, vol. 24, p. 339-410.

Stirton, R. A., 1951, Prehistoric Land Animals of the San Francisco Bay Region: p. 177-186 in *Geology Guidebook of the San Francisco Bay Counties: History, Landscape, Geology, Fossils, Minerals, Industry, and Routes to Travel*, Jenkins, O.P. (editor), Bulletin 154 State of California Division of Mines, San Francisco, CA, 246 p.

Weaver, C. E., 1949, *Geology of the Coast Ranges - North San Francisco Bay Region*: Geological Society of America Memoir 35, 242 p.

Wolff, R. G., 1971, Paleoeology of a Late Pleistocene (Rancholabrean) Vertebrate Fauna from Rodeo, California: Ph.D. unpublished dissertation, University of California, Berkeley, 136 p.

Wolff, R. G., 1973, Hydrodynamic Sorting and Ecology of Late Pleistocene Mammalian Assemblage from California (USA): *Paleogeography, Paleoclimatology, Paleoeology*, vol. 13, p. 91-102.

Wolff, R. G., 1975, Sampling and Sample Size in Ecological Analyses of Fossil Mammals: *Paleobiology*, vol. 1, no. 2, p. 195-202.

West, R. M., 1991, State regulation of geological, paleontological, and archaeological collecting: *Curator*, vol. 34, p. 199-209.

Appendix C: Personnel Qualifications



Carrie D. Wills, RPA, M.A.
Senior Project Archaeologist

Overview

- 17 Years Experience
- Master's degree, Anthropology – California State University, Hayward
- Bachelor's degree, Anthropology – California State University, Hayward
- Registered Professional Archaeologist #11138

Carrie Wills, RPA, possesses 17 years of experience in the area of prehistoric and historic archaeology. Her expertise includes conducting pre-field assessments, archival research, pedestrian field surveys, site evaluation and testing, and data recovery and analysis. She has extensive experience preparing documents that comply with the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) and evaluating and assessing historic structures located on mining, ranching, and military facilities for inclusion on the National Register of Historic Places and California Register of Historical Resources.

Related Experience

Historical, Archaeological, and Paleontological Resources

KB Home Monte Vista, Historic American Buildings Survey, City of San Jose. Served as project manager for the KB Home Monte Vista Project. Conducted Historic American Buildings Survey Level III documentation for a large multi-structure canning facility, Del Monte Plant #3, in San Jose. Tasks included producing over 200 large-format, black and white photographs of exterior and interior views of the existing structures. The MBA historic report augments the photographic documentation by placing the structures within the appropriate historic context and addressing both the architectural and historical aspects of the site's significance. Specifically, the historical report focused on the Plant's contribution to the growth of the canning industry in San José. The plant was also assessed for historic significance and was found to meet the criteria for listing on the National Register of Historic Places as a District along with two other local Del Monte canneries. MBA coordinated with state, federal, and city agencies, including but not limited to City of San Jose Department of Planning and the National Park Service HABS/Historic American Engineering Record coordinator.

Costco's Warehouse Project, City of San Francisco. Served as project manager for Costco's Warehouse Project. Surveyed, excavated, and monitored the proposed site, located in downtown San Francisco, for a new Costco store. Supervised lab procedures and analysis of over 1,400 artifacts.

Montezuma Wetlands Project, County of Solano. Served as project manager for Solano County's Montezuma Wetlands Project. Provided technical direction of a 4,700-acre archaeological survey in Solano County, resulting in recording and subsurface testing of 12 sites. Co-authored the technical report that included extensive impacts and mitigation measures.

Lake Solano Regional Park Visitor's Center Project, County of Solano. As project archaeologist, conducted a cultural resource investigation that included record search reviews and a pedestrian field survey. The record searches included records at the Northwest Information Center, Rohnert Park, and at the Native American Heritage Commission in Sacramento.

Off-road Vehicle Park, City of Bakersfield. As senior project archaeologist, conducted an intensive field survey of 2,500 acres outside the City of Bakersfield. The project area included rolling hills, large flat valleys, and steep ravines. The survey resulted in discovery of over 150 prehistoric resources including bedrock mortars,

grinding slicks, and rock art. The resources were recorded and evaluated for eligibility for listing on the National Register of Historic Places and the California Register of Historical Resources. Following the evaluation, a comprehensive report detailing the findings was produced.

Bel Lago Project, City of Moreno Valley. As senior project archaeologist, conducted a site-specific field assessment of the Kerr Ranch and recorded all extant buildings and structures on Department of Parks and Recreation forms; both Primary and Building, Structure and Object forms. Detailed descriptions and measurements were taken as part of the assessment process, and each building and structure was evaluated individually for listing to the California Register of Historical Places or local registers or landmarks.

Westlake Shopping Center, City of Daly City. As senior project archaeologist for this major refurbishing effort for a shopping center located in Daly City, assessed the shopping center for historic significance under CEQA Section 15064 by reviewing historic maps, photos, and record and archival search results obtained from the Northwest Information Center and the Daly City Planning Department. Scope included conducting a visual appraisal of the existing buildings, structures, and signage.

San Demas Project, City of Sacramento. As senior project archaeologist, conducted a record search and field investigation for a built environment covering one city block in downtown Sacramento. As this was a built environment, there was no native ground surface to be surveyed; the investigation consisted of comprehensive research to determine the possibility of historic structures.

Cabrillo Corners Commercial Project, City of Half Moon Bay. As cultural resources specialist, conducted a record search at the Northwest Information Center and a pedestrian field survey of the proposed project area that borders Pilarcitos Creek in Half Moon Bay to determine the presence or absence of cultural resources prior to project development.

Gustine Municipal Airport Project, County of Merced. As senior project archaeologist, conducted a record search and pedestrian field survey of a 45-acre parcel located in Merced County to determine the presence or absence of cultural resources prior to improvements to the Airport.

Scheiber/White Projects, County of El Dorado. As senior project archaeologist, conducted record searches and field investigations for a 226-acre parcel and a 286-acre parcel of undeveloped land with gentle to steep rolling hills and open valleys.

Protzel Project, County of El Dorado. As senior project archaeologist, conducted a record search and field investigation for a 35-acre parcel of land. The field survey resulted in discovery of a site that contained both prehistoric and historic components located adjacent to one another.

Miller Ranch Property, City of Lincoln. As senior project archaeologist for this 130-acre residential development, reviewed record search results from the North Central Information Center, Sacramento and conducted a pedestrian field survey. The record search results indicated no cultural resources had been previously recorded within a 0.25-mile radius of the project area nor were any discovered during the field survey. A negative survey report was prepared detailing the record search and survey results to meet CEQA requirements.

Fahren's Creek Development Project, County of Merced. As senior project archaeologist, conducted a record search and field investigation on a parcel of undeveloped land, a portion of which was immediately adjacent to Fahren's Creek.

McBride R.V. and Self Storage Project, City of Chino. As senior project archaeologist, conducted a record search and pedestrian field survey of a 21.15-acre parcel of land to determine the presence or absence of cultural resources prior to project development. Prepared a negative survey report detailing the record search and survey results to meet CEQA requirements.

Brehm Communities, City of Chino. As senior project archaeologist for this 35-acre residential development, conducted a record search at the San Bernardino Archaeological Information Center and a modified field survey. Performed a visual assessment from various vantage points rather than a typical pedestrian survey and prepared a negative survey report detailing the record search and survey results to meet CEQA requirements.

Albers Barnes & Kohler LLP's Palm Ranch Dairy Project, County of Kern. As senior project archaeologist, was responsible for CEQA compliance issues related to cultural resources on a 120-acre parcel. Conducted a Phase I survey to determine the presence or absence of cultural resources within the project area, resulting in the discovery of artifactual material on the ground surface. Conducted a Phase II testing program to determine the presence or absence of subsurface cultural resources, resulting in inconclusive findings. Provided mitigation measures to protect any previously undiscovered resources during project excavation activities.

Albers Barnes & Kohler LLP's Bonanza Farm Dairy Project, County of Kern. As cultural resources specialist, conducted a record search and pedestrian field survey of two 200-acre parcels to determine the presence or absence of cultural resources prior to project development. Prepared a negative survey report detailing the record search and survey results to meet CEQA requirements.

Cypress Lakes Project, County of Contra Costa. As project manager, performed archival and records review, subsurface testing, and technical direction of an 850-acre archaeological survey that included two well-known and significant prehistoric burial mounds.

Mills Associates' Tassajara Valley Project, County of Solano. As project manager, provided technical direction of a 2,500-acre archaeological survey that resulted in recording and subsurface testing of 14 historic and one prehistoric archaeological site. Analyzed artifacts and prepared technical reports.

Future Urban Areas, Mundie and Associates, County of Contra Costa. As field director, conducted a 4,500-acre archaeological survey that resulted in recording of 11 historic archaeological sites, including the previously unrecorded historic town sites of West Hartley, Empire, and Star Mine associated with the Mount Diablo coalfield developments of 1850-1885. Recorded features including foundations, privies, cisterns, basements, and dumps. Hundreds of surface artifacts were examined. Also directed artifact analysis and prepared technical reports.

Energy, Utilities & Pipelines

Santa Cruz Water District's Pipeline Project, County of Santa Cruz. Served as resource team leader for this project that proposed modifications to the current operation and maintenance of an existing pipeline through implementation of the Santa Cruz North Coast Pipeline Rehabilitation Project. Reviewed compliance issues related to cultural resources found along four major waterways in Santa Cruz County and prepared a CEQA Initial Study to determine environmental impact associated with project implementation. Also provided necessary details to aid in the decision-making process for the project's next phase.

Federal Energy Regulatory Commission (FERC) Relicensing Project, County of Kern. As resource team leader, reviewed cultural resources to meet the requirements of Section 106 of the National Historic Preservation Act in preparation of a new FERC license application. Directed the Section 106 review and

prepared the preliminary draft of the license application, evaluated project impacts, and authored the Historic Properties Management Plan and a Programmatic Agreement.

Federal Energy Regulatory Commission (FERC) Relicensing Project, Kilarc-Cow Creek. As resource team leader, provided NHPA Section 106 compliance review in preparation of a new FERC license application. Following the survey effort, prepared the preliminary draft of the license application, evaluated the project impacts, prepared a comprehensive report, and finalized the Historic Properties Management Plan and a Programmatic Agreement.

Calypso Project Environmental Impact Statement, Fort Lauderdale, Florida. Served as resource team leader for Tractebel North America, Inc.'s Calypso Project Environmental Impact Statement (EIS) for a new natural gas pipeline extending from the Exclusive Economic Zone in the Atlantic Ocean to Port Everglades. Conducted the NHPA Section 106 review of both offshore and onshore cultural resources and prepared the preliminary drafts of the third-party EIS for the jurisdictional portion of the pipeline.

Rock Creek Hydroelectric Project, Oregon. Served as project archaeologist for Oregon Trail Electric Consumer Cooperative's Rock Creek Hydroelectric Project. Conducted a reconnaissance survey and evaluation of archaeological and historic resources to meet the requirements of NHPA Section 106.

Patriot Natural Gas Pipeline Project, Tennessee, Virginia, and North Carolina. Served as resource team leader for a project consisting of the Mainline Expansion and Patriot Extension three states. The Mainline Expansion involved improvement along East Tennessee Natural Gas Company's existing pipeline in Tennessee and Virginia, including approximately 187 miles of new pipeline, replacement of old pipeline, additional compression at existing facilities, and five new compressor stations. The Patriot Extension involves approximately 100 miles of new pipeline in Virginia and North Carolina, including three new meter stations. Provided third-party review of cultural resources reports and prepared third-party EIS.

Northwest Transmission Line Project, Oregon and Washington. Served as project archaeologist for Wallula Generation, LLC's Northwest Transmission Line Project. Conducted a 28-mile reconnaissance survey in Oregon and Washington along the Columbia River, evaluated and recorded archaeological sites, and completed appropriate forms for submittal to Washington

El Paso Energy's and Broadwing Communications' Fiber Optic Line, Texas and California. Served as resource team leader for a proposed fiber-optic transmission line reaching from El Paso, Texas, to Los Angeles, California. Prepared a Proponent's Environmental Assessment demonstrating CEQA compliance that was submitted with an application to the California Public Utilities Commission.

Fiber Optic Project, Cities of San Jose, San Francisco, and Los Angeles. Served as project manager for a Level Three Communications Fiber Optic Project. Conducted cultural resources studies and supervised construction monitoring to address CPUC mitigation measures during the "city build" portions of the project in San Jose, San Francisco, and the Los Angeles Basin. Prepared workbooks for each construction spread in each city to address potential cultural resources impacts and necessary mitigation required to preclude significant impacts.

Fiber Network Project, Northern and Southern California. Served as project manager for 360 Networks' Fiber Network Project. Responsible for all aspects of project management for this linear project spanning the length of California, including coordination, budget, consultation, and compliance issues.

Santa Fe Pacific Pipeline, State of California. As field supervisor for Santa Fe Pacific Pipeline's Concord-to-Colton Project, performed records search and intensive archaeological survey of a corridor stretching from

Fresno, through Bakersfield and Mojave, to San Bernardino. Recorded and evaluated for eligibility for listing on National Register of Historic Places more than 150 historic properties.

CPUC Alturas Transmission Line Project, California and Nevada. As archaeological monitor, documented compliance with mandated mitigation measures during the construction of this high-voltage power line reaching from Alturas, California, to Reno, Nevada.

Environmental Impact Reports for General Plan Updates

General Plan Update, County of Monterey. As senior project archaeologist, assisted in updating the General Plan with new policies including archaeological, historical, and paleontological resources. Tasks included a review of existing policies and suggestions for alternatives and updates relevant to current trends. Worked closely with Monterey County staff, agency personnel, and sub-consultants to ensure a high quality, timely Plan Update.

Trails Specific Plan Project, City of Livermore. As senior project archaeologist, conducted archival and record searches, including review of the 2000 North Livermore Specific Plan Draft Environmental Impact Report and the 2003 City of Livermore General Plan Update Master Environmental Assessment that specifically focuses on cultural resources within the proposed project area. Conducted a 235-acre pedestrian survey to determine the significance of previously recorded cultural resources and the presence or absence of previously unknown cultural resources, resulting in the recording of five historic resources using California Department of Parks and Recreation forms with context analysis and detailed maps. Prepared a comprehensive report including a detailed setting section with impacts and mitigation measures to ensure protection of significant cultural resources.

Educational Facility Environmental Analysis

Delta View and Kit Carson Schools Project, Kings County Office of Education. As senior project archaeologist, conducted archaeological and historical resource assessment at two proposed telecommunication tower sites located at two school sites. Conducted a record search at the Southern San Joaquin Valley Information Center and pedestrian surveys at both schools to determine the presence or absence of cultural resources. Determined negative survey results, and prepared a report detailing the record search and survey results that was presented to the Kings County Office of Education.

Mine Reclamation Plans and Environmental Analysis

Abandoned Mine Inventory Project, Washington Bureau of Land Management. As project manager, managed a five-person survey crew who conducted an intensive archaeological survey of 1,700 acres of difficult terrain and conditions in the City of Spokane. Recorded mining features and archaeological properties on appropriate State of Washington forms and prepared Determination of Eligibility forms for submittal to Washington's State Historic Preservation Officer.

High Desert Power Plant Project, County of San Bernardino. As project manager, conducted an approximately 2,000-acre field inventory of block and linear project areas located near the City of Victorville. Recorded and evaluated more than 30 historic and prehistoric sites.

Military Projects

Cultural Resources Overview Project, Concord Naval Weapons Station. As project manager, tasks included review of archival records and record search results for previously recorded sites within the Station. In addition, more than 500 World War II buildings and structures were evaluated for National Register of Historical Places eligibility and documented on appropriate Department of Parks and Recreation forms. An archaeological site

prediction model was developed to determine the likelihood of the presence of cultural resources within specific areas of the Station. An extensive context document was prepared to facilitate a comprehensive understanding of the Naval Weapons Station in terms of its historic presence within Contra Costa County and the City of Concord. Following assessment of the Station and its historic components, a Cultural Resource Overview Report for the 13,000-acre facility was developed.

NAVFAC Centerville Beach and Point Sur Projects, Humboldt and Monterey Counties. As project archaeologist, responsibilities included reviewing archival and site records prior to pedestrian field surveys at each of the locations. Following the surveys, documentation on Department of Parks and Recreation forms was prepared for each of the World War II buildings/structures located within the Station boundaries. Subsequent efforts included development and submittal of a historic context report and structural assessments of the buildings to determine National Register of Historic Places eligibility status. Prepared a preliminary Historic and Archeological Resource Protection Plan evaluating known archaeological site locations and preparing maps depicting areas of archaeological sensitivity.

Civil Engineering Laboratory Archaeological and Historic Resources Assessment Project, Port Hueneme. As project manager, scope included reviewing archival records and historic Port Hueneme documents at the base, reviewing previously recorded sites records from the South Central Coastal Information Center, CSU, Fullerton, and researching at Ventura Historical Society. Architectural documentation was prepared for nine World War II buildings on appropriate Department of Parks and Recreation forms and a single prehistoric site located within the base was assessed. A historic context report was developed and each of the buildings/structures was individually evaluated for National Register of Historic Places eligibility. Following assessment and documentation, an EIR/EIS technical report including a detailed historic setting, an overview of each of the types of buildings within the project area, an impacts assessment section, and appropriate mitigation for the impacts was prepared.

Navy Construction Battalion Center Historic and Archaeological Resources Protection Plan Project, Port Hueneme. As project manager, tasks included archival research of Battalion Center documents a record search review at the South Central Coastal Information Center, CSU, Fullerton, and a pedestrian field survey. Subsequent to the archival research, architectural documentation of 130 World War II buildings/structures was completed on appropriate Department of Parks and Recreation (DPR) forms. The forms typically included DPR Primary forms for each building or structure although in some instances, e.g., for large non-descript warehouse structures, a representative building was documented and identical buildings were listed on the form as having identical attributes. In addition to the Primary forms, a Building, Structure, Object (BSO) form providing additional descriptive and evaluative information was completed when appropriate. Following the archival research for previously recorded cultural resource sites and the field survey, an archaeological site prediction model was developed for the Battalion Center. Following documentation, a historic context for the Battalion Center was prepared. In addition, each building was assessed for National Register of Historic Places (NRHP) eligibility and a Historic and Archaeological Resources Protection (HARP) Plan was prepared.

H Street Extension Project, Lockheed Missiles and Space Company Property. The project consisted of an extension of H Street within the western portion of the Lockheed Missiles and Space Company facilities. Archaeological efforts were part of mitigation for construction within a National Register listed prehistoric shell mound. As project archaeologist, the work included pre-construction site testing using various means including shovel and backhoe investigations, surface collection for the entire project area, and a Phase III data recovery program in coordination with the Most Likely Descendant (MLD). Disposition of human remains found within the site was decided upon an agreement with the MLD. A construction-monitoring program was conducted during initial grading activities at the site to ensure protection of previously unknown cultural resources and/or additional human remains.

Naval Fuel Depot Point Molate Historic Resources Assessment Project, City of Rohnert Park. As project manager, conducted an archival records review at various repositories as well as a record search at the Northwest Information Center in Rohnert Park for previously recorded cultural resource sites. Conducted a field survey and general site reconnaissance of the project area. Subsequent to the archival research and survey, documentation of ten World War II buildings/structures was completed on appropriate Department of Parks and Recreation forms. The buildings and structures were evaluated for eligibility for listing on the National Register of Historic Places. In addition, one prehistoric archaeological site was assessed within the project area. A preliminary Historic and Archeological Resource Protection Plan was prepared evaluating known archaeological site locations with maps depicting areas of archaeological sensitivity. A historic context was prepared for the project area and a technical report detailing all of the research, field survey, building and structure evaluations, and the assessment of the prehistoric site was provided to the client.

Maya Caves Project, Punta Gorda, Belize, Central America. As excavation team member, worked two field seasons examining prehistoric cave deposits. Conducted surveys and excavations, analyzed and cataloged artifacts, and prepared technical report sections.

Professional Affiliations

- Society for Historical Archaeology
- Society for California Archaeology
- Register of Professional Archaeologists

Appendix D: 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 to the National Register of Historic Places (NR), 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 NHPA Section 106 (Section 106). Federal agencies are responsible for initiating Section 106 review and completing the steps in the process that are outlined in the regulations. They must determine if Section 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, Section 106 requires that any federal or federally assisted undertaking, or any undertaking requiring federal licensing, funding, or permitting, consider the effect of the action on historic properties listed in or eligible for the NR. Under the Code of Federal Regulations (CFR), 36 CFR Part 800.8, federal agencies are specifically encouraged to coordinate compliance with Section 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 NR 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 NR 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 NR, 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 NR 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 NR. 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 Code of Federal Regulations (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 NR 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 NR. 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.

Pursuant 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 pursuant to 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. Pursuant to 36 CFR Part 800.14(d), if adverse effects cannot be avoided then standard treatments established by the ACHP may be used as a basis for Memorandum of Agreement (MOA).

Pursuant to 36 CFR Part 800.11(e) the filing of an approved MOA, and appropriate documentation as specified concludes the Section 106 process. The MOA must be signed by all consulting parties and approved by the ACHP prior to construction activities. If no adverse effects are found and the SHPO/THPO or the ACHP do not object within 30 days of receipt, the agencies responsibilities under Section 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 a historical resource if it is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California pursuant to Public Resources Code PRC Section 5020.1(j) or if it meets the criteria for listing on the CR pursuant to California Code of Regulations (CCR) at Title 14 CCR Section 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 a historical resource, in that it is listed or eligible for listing in the CR, potential adverse impacts to it must be considered pursuant to PRC Sections 21084.1 and 21083.2(1). If an archeological site is considered not to be a historical resource, but meets the definition of a "unique archeological resource" as defined in PRC Section 21083.2, then it would be treated in accordance with the provisions of that section.

With reference to PRC Section 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:

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

A “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 Section 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 Section 15064.5 is associated with determining the significance of impacts to archaeological 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 Section 5024.1; Title 14 CCR, Section 4850, et seq.).
2. A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the PRC Section 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 Section 5024.1; Title 14 CCR Section 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 Sections 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 Section 5020.1(k)
- Identified in a historical resources survey pursuant to PRC Section 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 impacts to 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.

SB 18 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. Tribal contacts for this list are maintained by the NAHC, and it 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, or amendment, 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 indicating 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 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.