

CULTURAL RESOURCES ASSESSMENT

**TENTATIVE TRACT MAP NO. 18952
UNINCORPORATED AREA OF REDLANDS
SAN BERNARDINO COUNTY, CALIFORNIA**

LSA

July 2014

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LSA Project No. WAL1401

National Archaeological Database Information:

Type of Study: Intensive Survey

Sites Recorded: None

USGS Quadrangles: Redlands, California 7.5'

Acreage: 38.34 acres

Key Words: Phase I Survey, Negative Results

LSA

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MANAGEMENT SUMMARY

LSA Associates, Inc. (LSA) is under contract to Walden Structures to conduct a cultural resources assessment for Tentative Tract Map 18952 in an unincorporated area of Redlands, San Bernardino County, California. The 38.34-acre undeveloped property is proposed to be developed with 131 single-family residences. As part of the development process and in compliance with the California Environmental Quality Act (CEQA), City staff is requiring a Phase I Cultural Resources Assessment. As such, a cultural resources records search, literature review, and intensive survey were conducted for the project.

Water conveyance features (concrete standpipe irrigation system) were identified within the project boundaries during the survey, but they do not constitute a cultural landscape or warrant recordation or evaluation as cultural resources. No prehistoric cultural resources have been documented within 0.5 mile of the project area; it has been so severely disturbed by previous agricultural use that sensitivity is low for subsurface archaeological resources. Therefore, no monitoring or any further cultural resources studies are recommended. However, in the event previously undocumented archaeological resources are identified during earthmoving activities, further work in the area should be halted until the nature and significance of the find can be assessed.

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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INTRODUCTION

LSA Associates, Inc. (LSA) is under contract to Walden Structures to conduct a cultural resources assessment for the proposed 38.34-acre Walden Structures Residential Project located in the City of Redlands, San Bernardino County, California. This undeveloped property is proposed to be developed with 131 single-family residences. The cultural resources assessment was completed pursuant to the California Environmental Quality Act (CEQA), Public Resources Code (PRC) Chapter 2.6, Section 21083.2, and the California Code of Regulations, Title 14, Chapter 3, Article 5, Section 15064.5.

The project is located in the southwestern quarter of Section 19, Township 1 South, Range 2 West, San Bernardino Baseline and Meridian, as shown on the *Redlands, California 7.5-minute* topographic quadrangle (United States Geological Survey [USGS] 1967, photorevised 1988) (Figure 1). The project parcels have been severely disturbed by agricultural activities since the 1930s (Historic Aerials; Google Earth 2013).

NATURAL SETTING

The natural setting of the project vicinity is presented based on the underlying theoretical assumption that humans and human societies are in continual interaction with the physical environment. Being an integral and major part of the ecological system, humans respond to the limits imposed by the environment by technological and behavioral adaptation and by altering the environment to produce more favorable conditions. Locations of archaeological sites are based on the constraints of these interactions, whether due to proximity to a particular resource, topographical restrictions, or availability of shelter and protection. Sites will also contain an assemblage of artifacts and ecofacts consistent with the particular interaction.

Biology

At an average elevation of 1,650 feet above mean sea level (amsl), the project is within the Sonoran Life Zone of California (Schoenherr 1992), which ranges from below sea level to an elevation of approximately 3,500 feet amsl. The native vegetation of the project area has been largely removed by agricultural activities; vegetation present consisted of xeric grasses (Figures 2 and 3). Common animals to the area include coyotes, rabbits, rodents, ravens, raptors, reptiles, and insects; however, none was observed.

Geology

The study area is located on an alluvial outwash plain, which lies on a slightly southwest-facing sloping valley floor; the Crafton Hills are located less than two miles to the southeast (Bortugo and Spittler 1986). The San Bernardino Mountains are less than three miles north of the project. The natural topography of the study area is characterized as valley lowland intersected by rolling hills and surrounded by mountain ranges. Geologically, the project is within an area composed of sediments (granitic boulders, cobbles, gravel, and sands) washing down from the Crafton Hills and the mountains to the northeast (Norris and Webb 1990).

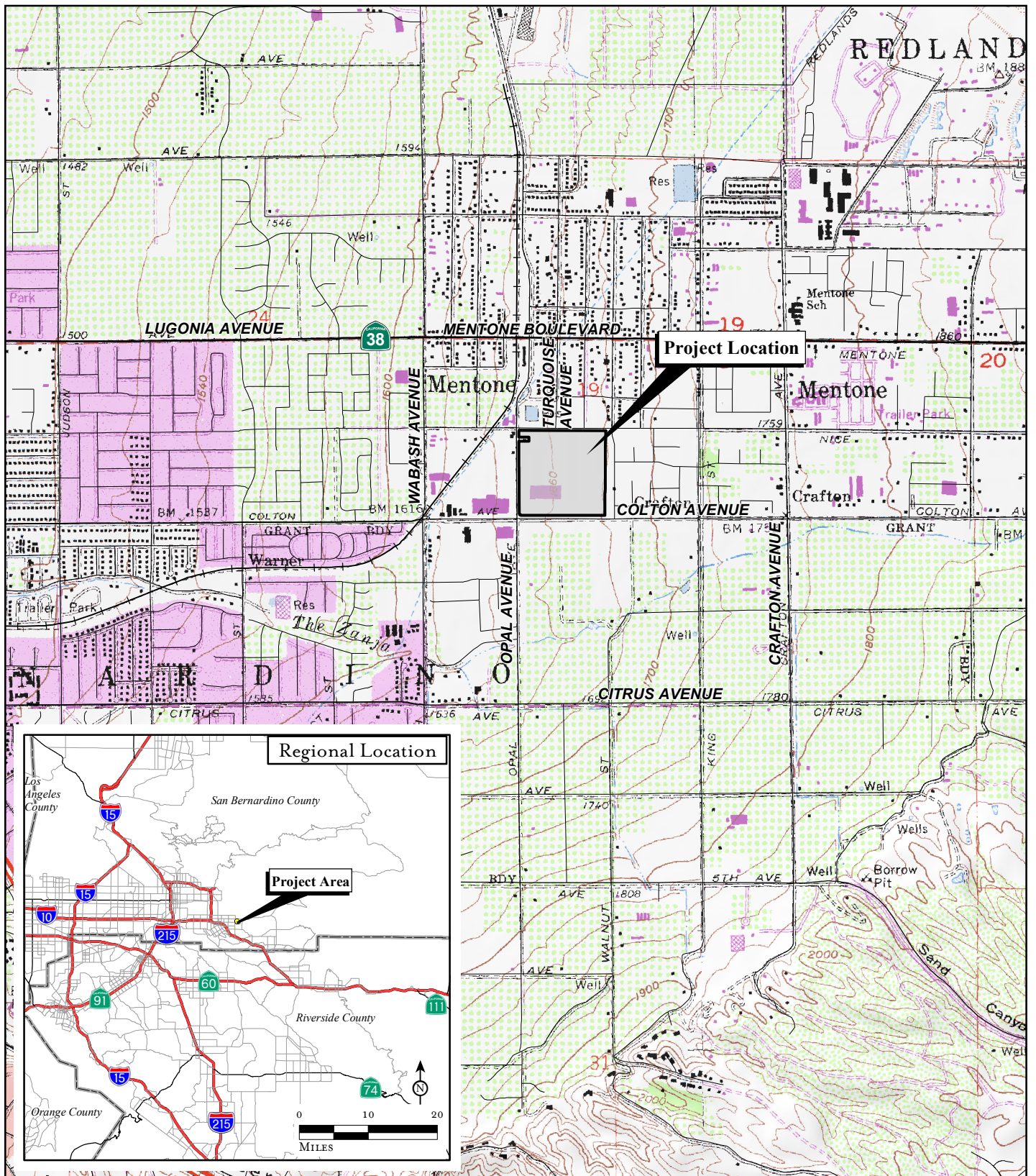
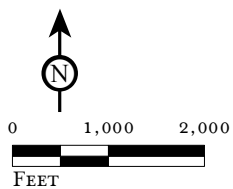


FIGURE 1

LSA



SOURCE: 7.5' USGS Quads: Redlands, CA (88); Yucaipa, CA (88).

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Tentative Tract Map No. 18952
Cultural Report

Regional and Project Location



Figure 2: Vegetation within the Project



Figure 3: Overview of Project, Facing North

Hydrology

The project region is characterized by an arid climate, with dry, hot summers and moderate winters. Rainfall averages 5 to 15 inches annually (Beck and Haase 1974). Precipitation comes in late winter and spring, with occasional warm monsoonal showers in late summer. Mill Creek drains into the Santa Ana River, both of which are less than three miles to the northeast of the project.

CULTURAL SETTING

Prehistory

Of the many chronological sequences proposed for Southern California, the archaeological literature typically uses two primary regional syntheses. In 1955, Wallace advanced a chronology that defined four cultural horizons, each with characteristics reflecting local variations: Early Man, Milling Stone, Intermediate, and Late Prehistoric horizons. In 1986, Warren offered a chronology based on a more ecological approach which defined five periods in Southern California prehistory: Lake Mojave, Pinto, Gypsum, Saratoga Springs and Protohistoric. Warren viewed cultural continuity and change in terms of various significant environmental shifts, defining the cultural ecological approach for archaeological research of the California deserts and coasts. Many changes in settlement patterns and subsistence focus are viewed as cultural adaptations to a changing environment, beginning with the gradual environmental warming in the late Pleistocene, the desiccation of the desert lakes during the early Holocene, the short return to the pluvial conditions during the middle Holocene, and the general warming and drying trend that currently continues (Warren 1986).

Ethnohistory

The project area is on the southern margin of the traditional cultural territory of the Serrano (Bean and Smith 1978) and the Cahuilla. Like other Native American groups in Southern California, the Serrano were semi-nomadic hunter-gatherers who subsisted by exploitation of seasonably available plant and animal resources and were first encountered by the Spanish missionaries in the late 18th century. The first written accounts of the Serrano are attributed to mission fathers; later documentation was by Benedict (1924), Strong (1929), Bright (1975), and others. The first written accounts of the Cahuilla are attributed to mission fathers. Ethnography was by Hooper (1920), Strong (1929), Bean (1972), and many others.

Serrano. Ethnohistorically, the Serrano Indians lived in the area north of Cahuilla territory, occupying much of present-day San Bernardino County and northeastern Los Angeles County. The northern boundary of Riverside County is the approximate boundary between the Serrano and the Cahuilla. There is some overlap in the perceived culture areas. The term *Serrano* is Spanish for “mountaineer, highlander” and is derived from *sierra*, meaning “mountain range” (Bean and Smith 1978). This term was given to people who inhabited the areas of the San Bernardino Mountains that had no associated mission.

The Serrano, like the Cahuilla, were hunter-gatherers who relied on the women to do much of the collecting while the men captured various animals. Most Serrano lived in small villages near water, usually perennial seeps, streams, and small lakes. The availability of water largely determined the

nature, duration, and distribution of Serrano settlements (Benedict 1924 in Bean and Smith 1978). Family dwellings were circular, domed, willow-frame structures covered with tule thatching (Bean and Smith 1978).

With the Spanish intrusion came a drastic change in lifestyle for the natives of Southern California. Incorporation of the indigenous populations into the mission system led to the disruption of native cultures and changes in subsistence and land use practices. Mission San Gabriel, established in 1771, probably had a limited effect on the Serrano population until the *asistencia* was established near Redlands, perhaps as early as 1819 (Harley 1988). Cattle ranch/farm settlements such as Guachama (3.8 miles south of the project area) and Jumuba (four miles south-southwest of the project area) were established on or near Indian villages, primarily in the major drainages conducive to horticulture and animal husbandry. Within a short time, the missions controlled many ranchos where Indians lived and worked.

After 1820, most of the Serrano in the San Bernardino Valley were moved to Mission San Gabriel. Land near ancestral villages was cleared for farming, and water was diverted for irrigation and stock. The mission's expansion drastically affected native plants and animals, and human populations were decimated by European introduced diseases, conflicts, and forced labor. Further declines in local population occurred as the Native Americans retreated to isolated sanctuaries in the mountains (Bean and Smith 1978).

Cahuilla. The other Native American tribe inhabiting the Santa Ana River area was the Cahuilla. Cahuilla traditional territory encompassed diverse topography ranging from the Salton Sink to the San Bernardino Mountains and San Gorgonio Pass (Bean 1978; Kroeber 1925). The Cahuilla were generally divided into three groups: Desert Cahuilla, Mountain Cahuilla, and Pass Cahuilla (Kroeber 1925). Like other Southern California Native American tribes, the Cahuilla were semi-nomadic peoples leaving their villages and using temporary camps near available plant and animal resources.

Cahuilla villages usually were in canyons or near adequate sources of water and food plants. The immediate village territory was owned in common by a lineage group or band. The other lands were divided into tracts owned by clans, families, or individuals. Trails used for hunting, trading, and social interaction connected the villages. Each village was near numerous sacred sites that included rock art panels (Bean and Shipek 1978).

Social organization of the Cahuilla was patrilineal clans and kinships groups known as moieties. Lineages within a clan cooperated in defense, subsistence activities, and religious ceremonies. Most lineages owned their own village site and resource plots; although the majority of their territory was open to all Cahuilla people (Bean 1978).

History

The historic period in San Bernardino County is divided into three periods, beginning with the first Spanish land expedition through the region in 1769. Certain themes are common throughout the historic period; these include the development of transportation, settlement, and agriculture (Robinson 1979).

Spanish Period. The Spanish period, 1769–1821, is characterized by the exploration of Southern California and the establishment of the San Diego Presidio, Missions San Diego, San Luis Rey, and San Gabriel, and the subsequent decline of Native American populations. European livestock, agricultural goods, architecture, and construction techniques were introduced, and Spanish influence continued after 1821, due to the mission system.

San Bernardino County proved to be too far inland to include any missions or *asistencias* within its limits until around 1819, when the church used Native American neophytes from the San Gabriel Mission and the Serrano inhabitants of the nearby Guachama village to establish the *Asistencia de San Bernardino* in Redlands (Harley 1988).

Mexican Period. The Mexican period, 1821–1848, began with Mexican independence from Spain and continued until the end of the Mexican American War (Cleland 1962). Due to the lack of funding, the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, soon lost their vast land holdings, and released their neophytes. The former mission land holdings were redistributed to politically prominent individuals as land grants by various California governors. One of these was grants was the Rancho San Bernardino, a holding of 37,700 acres encompassing the entire San Bernardino Valley granted to the Lugo family in 1842. At that time, cattle ranching was a more substantial business than agricultural activities, and trade in hides and tallow increased during the early portion of this period. Until the Gold Rush of 1849, livestock and horticulture dominated the economics of California (Ingersoll 1904; Beattie 1925; Beattie and Beattie 1951). Following the end of hostilities between Pio Pico, the last Mexican governor of California, and the United States in January of 1847, the United States officially obtained California from Mexico through the Treaty of Guadalupe Hidalgo in 1848 (Cleland 1962).

American Period. The American period, 1848–Present, followed the Treaty of Guadalupe Hidalgo. In 1850, California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush of 1849. The cattle industry reached its greatest prosperity during the first years of the American period. Mexican period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849–1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys. When the beef market collapsed, many California ranchers lost their ranchos through foreclosure. A series of disastrous floods in 1861–1862, followed by two years of extreme drought, which continued to some extent until 1876, altered ranching forever in the Southern California area (Beattie and Beattie 1951).

Few Mexican ranchos remained intact during the American period due to legal costs, lack of written documents proving title claims, and the incentive to sell cattle ranchlands of declining value off to arriving Euroamericans. As a result, many of the rancho holdings became available for settlement by immigrants. One of the most prominent of these was Captain Jefferson Hunt of the Mormon Battalion, who led a group of settlers into San Bernardino in 1851. The Mormon Colony purchased Rancho San Bernardino from the Lugos shortly thereafter (County of San Bernardino 2000), but Brigham Young recalled the Mormons to Salt Lake City six years later (Haenszel 1992). San Bernardino County was created from parts of Los Angeles and San Diego Counties in 1853. In 1854, the City of San Bernardino was incorporated as the County seat.

As travel along the Santa Fe Trail brought more settlers, a pattern of settlement developed along the Santa Ana and San Jacinto waterways. Following the completion of Southern Pacific's line from Los Angeles through the San Geronimo Pass in the mid-1870s, the major railroads (Santa Fe, Union Pacific, and Southern Pacific) added branch lines to make San Bernardino the hub of their Southern California operations. Competition between the railroads resulted in reduced fares, which brought thousands to California in the 1880s (City of San Bernardino 2002). This created a boom period of agricultural and land development. The railroads were the first major land transportation conduits, effectively connecting the area to the rest of United States and facilitating the development of San Bernardino and surrounding regions.

Irrigation systems would play a critical role in the settlement of the San Bernardino region in the American Period by facilitating the spread of agriculture. Irrigation ditches, canals, and other systems were constructed beginning in 1819 with the Mill Creek *zanja* (ditch), the earliest European water conveyance system in the entire County and region. The *zanja* was built by Serrano Indians from the nearby Guachama village under the direction of Pedro Alvarez. It ran from the mouth of Mill Creek to the *asistencia* on today's Barton Road in Old San Bernardino (Harley 1988). The *zanja* was the practical boundary between the settlement of Lugonia and the City of Redlands (Anonymous 1890).

Redlands. After the Mormons left the San Bernardino Valley in the late 1850s, a number of ranches were established along what would become Barton Road by prominent individuals such as Ben Barton and Anson Van Leuven. By the end of the decade, the area around the mouth of the Santa Ana Canyon was acquired by the Crafts family and would later become known as Crafton. A community that subsequently sprang up between Crafton and the Old San Bernardino Mission district became known as Lugonia (after the Lugo family, original owners of Rancho San Bernardino). By the early 1880s, two Lugonia entrepreneurs, E.G. Judson and F.E. Brown, formed the Redlands Water Company and began buying up land and constructing reservoirs and canals to supply water to their acquisitions. Judson and Brown platted the town of Redlands (named for the color of the soil) in 1887 (Gudde 1969). The town was incorporated on November 26, 1888, the fourth city to incorporate in the County of San Bernardino. By 1890, downtown Redlands had "40 substantial brick buildings, none less than 2 stories high, all occupied by the various branches of trade and manufacturing" (Anonymous 1890). Redlands prospered during the regional citrus boom, but from its founding it also developed as a residential community of "gentlemen ranchers" with winter homes for prosperous industrialists from the East Coast and the Midwest.

METHODS

Records Search

In June 2014, LSA archaeologist Gini Austerman conducted a records search at the San Bernardino Archaeological Information Center (SBAIC) of the California Historical Resources Information System (CHRIS) located at the San Bernardino County Museum, Redlands. CHRIS cultural resources maps at the SBAIC were checked for possible prehistoric and historic resources previously recorded within one mile of the project area. To supplement the CHRIS data, a review was conducted of the National Register of Historic Places (National Register) Index, California Register of Historical Resources (California Register), Office of Historic Preservation Directory of Properties, and historic USGS topographic maps.

Additional Research

Aerial photographs and historic topographic maps were examined to determine presence of historic water conveyance features and building or structures within the project parcel.

Field Survey

On June 30, 2014, Ms. Austerman conducted an intensive pedestrian survey of the 38.34-acre project area where possible. Portions of the property were surveyed in systematic parallel transects spaced by approximately 15 meters (approximately 50 feet). Special attention was paid to areas of exposed soil for surface artifacts and features and to stratigraphy and rodent burrows for evidence of buried midden. The purpose of this survey was to identify and document—prior to the beginning of ground-disturbing activities—any cultural resources that might be exposed and to locate areas within the project area that might be sensitive for cultural resources.

RESULTS

Research

Data from the SBAIC indicated eight cultural resources studies have been conducted within a 0.5-mile radius of the project, none of which was located within the project. The closest study was conducted on the south side of Colton Avenue in the location of the present-day Redlands High School (Report 1063005). The previous studies are listed in Table A (below).

Table A: Previous Studies

Report	Author	Title
1061783	1988 Hornbeck, David, and Howard Botts	The Seven Oaks Dam Project: water Systems. Submitted to Army Corps of Engineers. Unpublished report on file at the San Bernardino County Museum, Redlands, Ca.
1062438	1991 Laska, Robin, and Mark Swanson	An Archaeological Survey of Tentative Tract No. 13887, Mentone, San Bernardino County, California. Unpublished report on file at the San Bernardino County Museum, Redlands, Ca.
1062853	1991 Foster, John M., James J. Schmidt, Carmen A. Weber, Gwendolyn R. Romani, and Roberts S. Greenwood	Cultural Resources Investigation: Inland Feeder Project, MWD of Southern California. Unpublished report on file at the San Bernardino County Museum, Redlands, Ca.
1063005	Toren, A.G., and Roberta Greenwood	Cultural Resources Study and Evaluation for the Proposed Redlands High School No. 2 Location. Unpublished report on file at the San Bernardino County Museum, Redlands, Ca.
1066006	2007 Orfila, Rebecca S., Marissa Guenther, and Matthew DeCarlo	A Phase I Cultural Resources Assessment of a Portion of the Beeline 12 kV Circuit Line near Victorville, San Bernardino County, California. Unpublished report on file at the San Bernardino County Museum, Redlands, Ca.
106631	2009 McKenna, Jeanette A.	Redlands High School Records Search.

Table A: Previous Studies

Report	Author	Title
1066634	2009 Michael Brandman Associates	Cultural Resources Records Search and Site Visit Results for Berizon Wireless Candidate 'Hellen' 1895 Colton Avenue, Redlands, San Bernardino County, California. Letter report on file at the San Bernardino County Museum, Redlands, Ca.
1065666	2004 Goodwin, Rory, and Patricia Tuck	Cultural Resources Assessment for the Simus Property APN 0298-052-0093, San Bernardino County, California. Unpublished report on file at the San Bernardino County Museum, Redlands, Ca.

Although no cultural resources were documented within the project area, 16 are recorded within 0.5 mile. These include four historic period water conveyance resources (the Zanja CA-SBR-8092; an irrigation system CA-SBR-8099; a Redlands/Bear Valley Canal segment CA-SBR-8546; and two historic retaining walls, CA-SBR-8846; plus a Pending Site, a segment of the Indian Ditch P-1063-48); and eleven paved historic roads (36-24013 through 36-24020, 36-24081, 36-24082, and 36-13549). The nearest resource is the Mill Creek Zanja, which is adjacent to the northwestern corner of the project and has been listed in the National Register and is a California Historic Landmark (#43) and Engineering Landmark (#21).

A Pending Site is an archaeological or historic-period site that is mapped based on limited information but has not yet been formally documented on DPR forms. Table B lists the cultural resources documented within the 0.5-mile radius and a brief description of the sites follows.

Table B: Archaeological Resources

Archaeological Resource Number	Site Type
36-008092 (CA-SBR-8099H)	The Zanja
36-008099 (CA-SBR-8846H)	Orchard irrigation system
36-008546 (CA-SBR-8546H)	Redland/Bear Valley Canal
36-008846 (CA-SBR-8046H)	Two historic retaining walls
P-1063-48	Pending Site: Indian Ditch
36-24013	Wabash Avenue
36-24014	Crysolite Avenue
36-24015	Jasper Avenue
36-24016	Opal Way
36-24017	Opal Avenue
36-24018	Turquoise Avenue
36-24019	Tourmaline Avenue
36-24020	Beryle Avenue
36-24081	Olivine Avenue
36-24082	Malachite Avenue
36-13549	Agate Avenue

CA-SBR-8092H, The Zanja. This site was originally recorded in 1974 by Dr. G. Smith of the San Bernardino County Museum. Dr. Smith describes the Zanja as being considered San Bernardino County's "first irrigation ditch." Originally it brought water from Mill Creek to the Guachama Indian Rancheria and Mission Ranch located on Mission Road. The Zanja was constructed by Serrano and probably Cahuilla Indian labor under the supervision of Pedro Alvarez; the cobblestone irrigation ditch was engineered by the Franciscan fathers of the Mission San Gabriel. Work was completed in 1820. With the completion of the irrigation system, the San Bernardino Valley could be opened up to important agricultural pursuits. The Zanja is listed in the National Register and is State Historic Landmark #43 as well as Engineering Landmark #21. This site is located on the south side of Colton, within 0.25 mile southeast of the project.

CA-SBR-8099. This irrigation system was recorded by George Toren in 1994. The site is located on the south side of Colton Avenue between Opal Avenue and King Street. The site consisted of a historic irrigation system built circa 1920; it had been periodically upgraded and maintained until it was demolished during construction of Redlands High School. This site is located across Colton Avenue, south of the project.

CA-SBR-8546. A segment of this site, known as the Redlands/Bear Valley Canal, was recorded by Madeline Bray in 2009. In 1996, Greenwood and Associates originally documented this canal. The canal was constructed by the East Redlands Water Company circa 1877 and was still in use in 2009. Sections of the canal are capped in concrete; numerous water conveyance features are associated with the canal. This site is located less than 100 feet northwest of the project; it crosses through the intersection of Opal and Nice Avenues.

CA-SBR-8846H. This site was recorded by George Toren in 1997 as two historic retaining walls; one was built circa 1890 for a residence, the other was built in 1945. This site is located less than 0.25 mile south of the project.

P-1063-48. This site is a pending archaeological site known as Indian Ditch that has been mapped outside the project, along the southern boundary. This ditch was in use from the 1840s to the 1920s. Inclusion as a pending archaeological site is based on limited information; no site record has yet been filed for this resource. According to the information on the SBAIC maps, Indian Ditch ran near the alignment of Colton Avenue, south of the project.

Sites 36-24013 through 36-13549. These are roads within the scope of authority of the California Department of Transportation (Caltrans) and were surveyed and recorded for purposes of inventory. None is listed in the National Register, the California Register, or any local registers. These roads are within 0.25 mile of the project.

Additional Research

Aerial photographs indicate the study area has been used for agricultural purposes from at least 1929 until approximately 1977, at which time the orchard was cleared (Historic Aerials 1938, 1959, 1968, 1980, 2005; Google Earth 2014). In addition, the aerials indicate the presence of a residence and associated outbuildings by 1959. By 1980, a second residence, located at 1195 Opal Avenue, was noted on the aerial photographs; this residence remains on the parcel but is not within the project. A Southern Pacific rail line was indicated adjacent to Colton Avenue on the maps dated between 1929 and 1979. The 1980 USGS topographic map indicated the warehouse within the project; the railroad was no longer present.

Field Survey

Approximately half of the project was fenced and not accessible as the result of the area having been previously developed as a warehouse during the 1980s. Within the open area, visibility was fair, at approximately 50 percent; several push-piles of rocks and boulders were noted. Modern trash and debris were noted along the eastern boundary.

Two concrete standpipes of an early irrigation system were identified along the southern boundary, between the chain-link fence and the sidewalk adjacent to Colton Avenue (Figures 4 and 5); however, these features are unremarkable examples of a common resource type and do not warrant recordation as cultural resources. The irrigation features consisted of two concrete standpipes and vents that are aligned east-west along the edges of Colton Avenue. The features were installed prior to 1938 (Historic Aerials). The Southern Pacific Railroad line that ran along Colton was removed circa 1979 and no remnants were identified during the survey.



Figure 4: Irrigation Features within the Project Area, Facing Northeast



Figure 5: Overview of Irrigation Features, Facing West

DISCUSSION

Sensitivity for Subsurface Prehistoric Resources

No prehistoric site was previously documented within 0.5 mile of the project area. The project has been used for agriculture for nearly one hundred years and has sustained repeated severe disturbance since the early 1900s (Historic Aerials). Therefore, the potential for subsurface prehistoric resources is low.

Historic Period Resources/Cultural Landscapes

For a landscape to be considered culturally significant, character-defining features that convey its significance in history must not only be present, but they must possess historic integrity. Among the seven aspects of integrity are setting, feeling, and association; these have all been disrupted by the removal of the citrus orchard. Although elements of water conveyance infrastructure were identified, the project lacks any *intact* character-defining features associated with historic period citriculture. In other words, the project does not retain historical integrity.

The irrigation features were associated with a previous agricultural use of the property, but these features are no longer in use or have been partially removed. The citrus orchard was removed prior to 1980. Although all of these irrigation features are related to the historic agricultural activities of the station, they are of indeterminate age and are typical examples of a ubiquitous resource type, i.e., fragmentary water conveyance infrastructure. They are not “historical resources” under CEQA and do not warrant recordation or evaluation. Therefore, the project parcels do not constitute a cultural landscape, and the potential indicated for subsurface historic resources is low.

RECOMMENDATIONS

A cultural resources records search, literature review, and intensive survey were conducted for the project. Water conveyance features (standpipes) relating to an irrigation system were identified within the project boundaries during the survey. As discussed above, they are not “historical resources” under CEQA and do not warrant recordation or evaluation. The project parcels do not constitute a cultural landscape, and the potential indicated for subsurface historic resources is low.

No other previously undocumented cultural resources were identified by the current field survey. Although prehistoric cultural resources have been documented nearby, the project area has been so severely disturbed by prolonged and varied agricultural use that sensitivity is low for subsurface archaeological resources. Therefore, no monitoring or any further cultural resources studies are recommended. However, in the event previously undocumented archaeological resources are identified during earthmoving activities, further work in the area should be halted until the nature and significance of the find can be assessed by an archaeologist.

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify an MLD. With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

REFERENCES

Anonymous

- 1890 An Illustrated History of Southern California. Chicago; Lewis Publishing Co: 475–479.

Bean, Lowell John

- 1972 *Mukat's People: The Cahuilla Indians of Southern California*. Berkeley and Los Angeles: University of California Press.
1978 Cahuilla. In *California*, edited by R. F. Heizer, pp. 575–587. Handbook of North American Indians, vol. 8, W.C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Bean, Lowell John, and Charles R. Smith

- 1978 Serrano. In *California*, edited by R.F. Heizer, pp.570–574. Handbook of North American Indians, vol. 8, W.C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Bean, Lowell John, and Florence C. Shippek

- 1978 Luiseño. In *California*, edited by R.F. Heizer, pp.550–563. Handbook of North American Indians, vol. 8, W.C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Beattie, George W.

- 1925 Development of Travel Between Southern Arizona and Los Angeles as it Related to the San Bernardino Valley. *Historical Society of Southern California, Annual Publications* 13(2):228–257.

Beattie, George W., and Helen P. Beattie

- 1951 *Heritage of the Valley: San Bernardino's First Century*. Biobooks: Oakland.

Beck, Warren A., and Ynez D. Haase

- 1974 *Historical Atlas of California*. Norman, Oklahoma: University of Oklahoma Press.

Benedict, Ruth F.

- 1924 A Brief Sketch of Serrano Culture. *American Anthropologist* 26 (3).

Bortugno, E.J., and T.E. Spittler

- 1986 Geologic Map of the San Bernardino Quadrangle, CDMG Map No. 3A, Scale 1:250,000.

Bright, William

- 1975 Two Notes on Takic Classification: Paper read at the Third Annual Uto-Aztecan Conference, Flagstaff, June 19–20, 1975. (Copy, Manuscript No. 76-66 in National Anthropological Archives, Smithsonian Institution, Washington.)

Cleland, Robert Glass

- 1962 Introduction. In *Historic Spots in California*, by M.B. Hoover, H.E. Rensch, and E.G. Rensch, pp. xi–xiv. Fourth printing revised by R. Teiser. Stanford University Press.

Google Earth

- 2013 Aerial view of project area, Redlands, California.

Gudde, Erwin G.

- 1969 *California Place Names, the Origin and Etymology of Current Geographical Names*. University of California Press. Berkeley, California. p. 416.

Haenszel, Arda M.

- 1992 Mormons in San Bernardino. In *San Bernardino County Museum Association Quarterly*, Vol. 39 No. 3.

Harley, R. Bruce

- 1988 Rev. Juan Caballeria: Historian or Storyteller? Rethinking the 1810 Dumetz Expedition. *San Bernardino County Museum Quarterly* 35(2), 42p.+

Historic Aerials (HistoricAerials.com)

- 1938, 1959, 1968, 1980, 2005 Aerial photograph of project area.

Hooper, Lucile

- 1920 *The Cahuilla Indians*. University of California Publication in American Archaeology and Ethnology. Vol. 16 No. 6. Reprinted by Malki Museum Press. Banning, California.

Ingersoll, L.A.

- 1904 *Ingersoll's Century Annals of San Bernardino County 1769–1904*. Los Angeles: By the Author, 1904.

Kroeber, Alfred L.

- 1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin No. 78. Washington D.C.: Smithsonian Institution. Reprinted in 1976, New York: Dover Publications.

Norris, R.M., and R.W. Webb

- 1990 *Geology of California*. Second Edition. New York: John Wiley and Sons, Inc.

Robinson, W.W.

- 1979 *Land in California*. University of California Press, Berkeley and Los Angeles.

San Bernardino, City of,

- 2002 History of San Bernardino. From City web site (<http://www.ci.san-bernardino.ca.us/>).

San Bernardino, County of

- 2000 San Bernardino (history) From County website (<http://www.co.san-bernardino.ca.us/history.htm>).

Schoenherr, Allan A.

- 1992 *A Natural History of California*. University of California Press, Berkeley and Los Angeles.

Strong, William D.

- 1929 Aboriginal Society in Southern California. *University of California Publications in American Archaeology and Ethnology* 26(1): 1-358. Berkeley.

United States Geologic Survey

1967 *Redlands, California*. 7.5-minute topographic quadrangle map, photorevised 1988.

Wallace, William J.

1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11(3):214–230.

Warren, Claude N.

1986 The Desert Region. In *California Archaeology*, by M. Moratto with contributions by D.A. Fredrickson, C. Raven, and C. N. Warren, pp. 339–430. Academic Press, Orlando, Florida.