APPENDIX C6

SUMMARY OF CULTURAL RESOURCES SURVEY COVERAGE

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

October 12, 2022

Waen Messner, AICP, Project Manager
Lewis Management Corporation
1156 N. Mountain Avenue
Upland, CA 91786

Re: Summary of Cultural Resources Survey Coverage
The Gateway at Grand Terrace Specific Plan
City of Grand Terrace, San Bernardino County, California
CRM TECH Contract No. 3910B

Dear Ms. Messner:

I am writing to present you a summary of past and present cultural resources survey coverage of the planning area for the Gateway at Grand Terrace Specific Plan in the City of Grand Terrace, San Bernardino County, California. As depicted in Figures 1 and 2, the planning area encompasses a total of approximately 130 areas of semi-rural land, mostly undeveloped at this time, located generally east of Interstate Highway 215, south of De Berry Street, west of Michigan Street, and north of Main Street, on the southwestern outskirts of the city. The entire planning area lies within the west half of Section 5 and the east half of Section 6, Township 2 South, Range 4 West, San Bernardino Baseline and Meridian.

The present study is part of the environmental review process for the specific plan, which proposes a mixed commercial and residential development within the planning area boundaries. The City of Grand Terrace, as the lead agency for the specific plan, required the study pursuant to the California Environmental Quality Act (CEQA; PRC §21000, et seq.). The purpose of the study is to identify and inventory all potential "historical resources," as defined by CEQA and associated regulations, that are known to exist in the planning area for future statutory compliance purposes.

As you know, since 2017 most of the planning area has been covered by a series of cultural resources studies conducted by our firm and BCR Consulting LLC in association with what is now the Gateway at Grand Terrace Specific Plan (Figures 1, 2), including two Phase I intensive-level surveys in 2017 (Tang et al. 2017a; 2017b), a reconnaissance-level survey in 2017 (Tang 2017), a records search in 2019 (Brunzell 2019), and an update to one of the Phase I studies earlier this year (Tang 2022). Documentation of the methods, results, and conclusions of these studies has been submitted to the City of Grand Terrace.

Specifically, the southern portion of the planning area, designated for residential development, parks/open space, drainage improvement, and other utilities, was surveyed entirely at an intensive level in 2017 and/or 2022 (Tang et al. 2017b; Tang 2022; Figures 1, 2). During those studies, five cultural resources from the historic period, including four sites and an isolate (i.e., a locality with fewer than three artifacts) were identified within or partially within that portion of the planning area, as listed below:

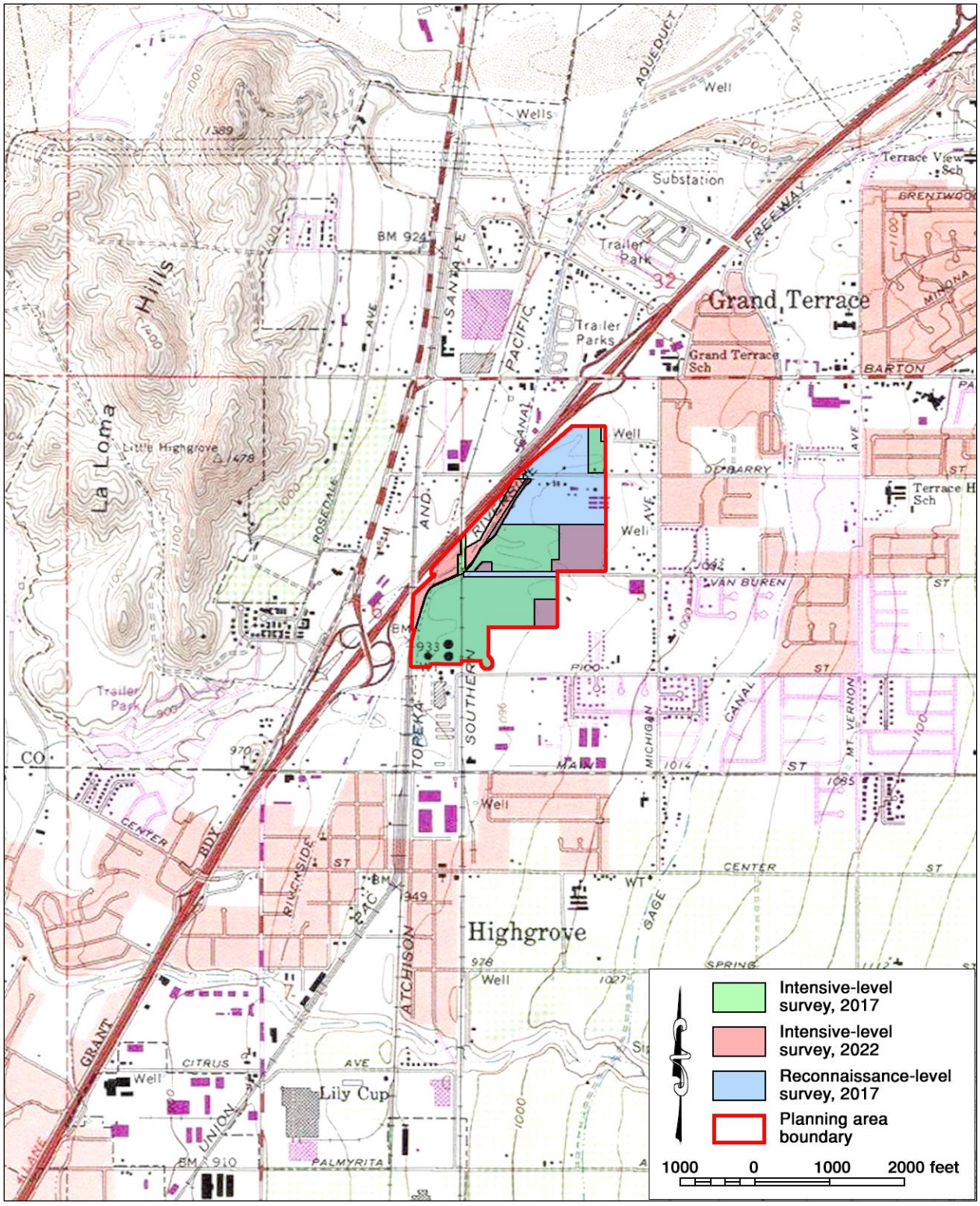


Figure 1. The planning area and past survey coverages. (Based on USGS San Bernardino South, Calif., 7.5' quadrangle, 1980 edition)

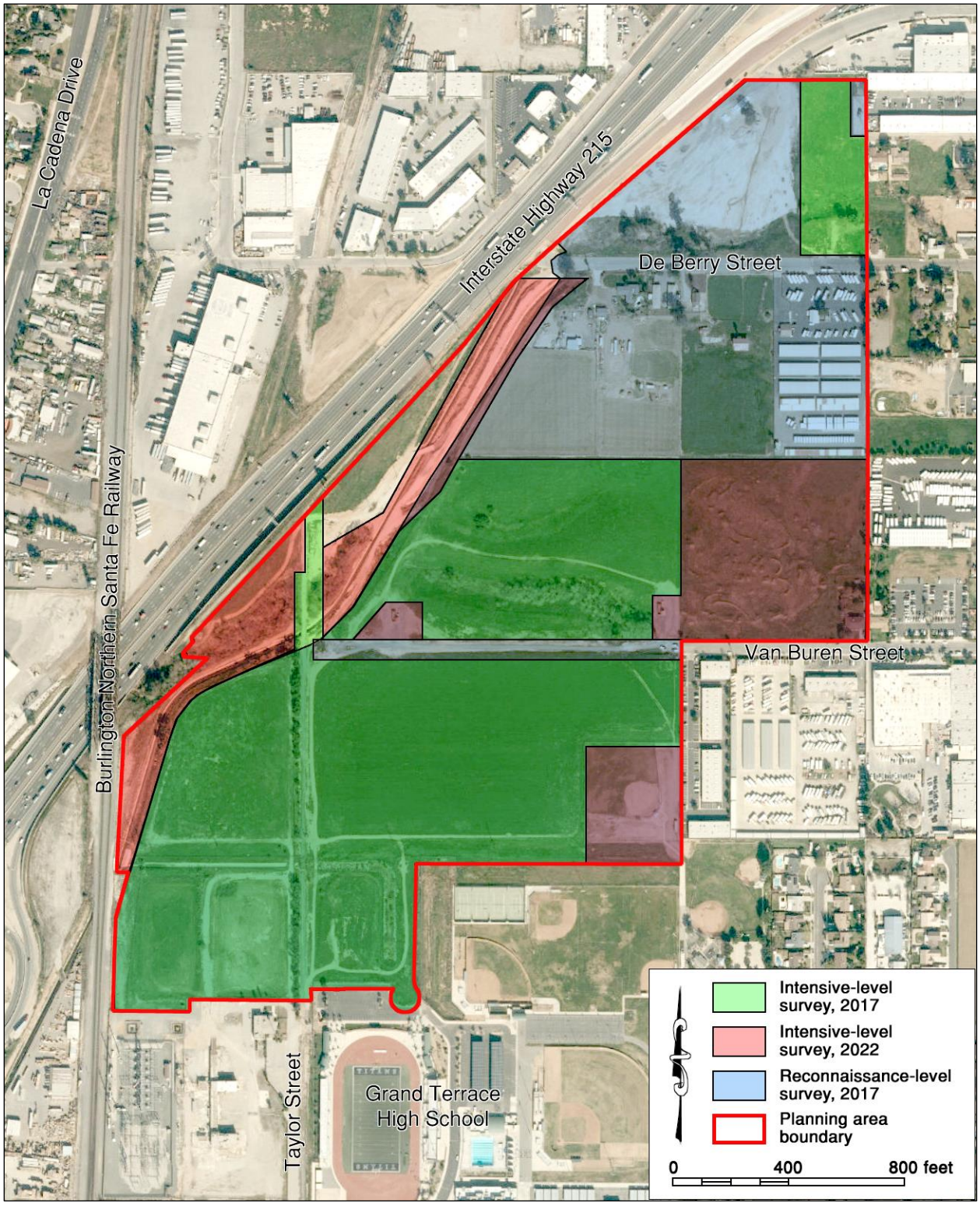


Figure 2. Recent satellite image of the planning area.

- Site 33-004495/36-007169 Riverside Upper Canal/Riverside-Warm Creek Canal, circa 1870-1886;
- Site 36-006101 Former alignment of Southern Pacific Railroad, circa 1888;
- Isolate 3910-1* Railroad spike near Site 36-006101;
- Site 3910-2* Partially concrete-lined drainage channel, pre-1930s;
- Site 3910-3* Single-family residence at 21996 Van Buren Street, circa 1971.

** Temporary designation, pending assignment of official identification numbers in the California Historical Resources Inventory*

No cultural resources of prehistoric (i.e., Native American) origin were identified during either of the two Phase I studies. At the completion of those studies, all five of the cultural resources listed above were determined not to meet the statutory definition of "historical resources" (Tang et al. 2017b:16; Tang 2022:9). Therefore, they require no further consideration under CEQA provisions on cultural resources. Based on these findings, the report that our firm submitted on September 8, 2022, along with attached supporting materials, recommended that the southern portion of the planning area be cleared for cultural resources compliance unless buried archaeological materials are discovered during future earth-moving operations (Tang 2022:10).

None of the five cultural resources recorded within or partially within the southern portion of the planning area extend into the northern portion, which is designated for commercial development. Due to current property ownerships and the resulting limitation of field access, only 3.05 acres in this portion of the planning area have been surveyed at an intensive level. That survey took place in 2017 on Assessor's Parcel Numbers (APN) 1167-161-03 and -04 near the northeastern corner of the planning area (Tang et al. 2017a; Figures 1, 2). During the survey, a single-family residence of circa 1945 vintage, located at 21992 De Berry Street, was recorded into the California Historical Resources Inventory but was also determined not to qualify as a "historical resource" (*ibid*.:15).

In addition to the survey on APN 1167-161-03 and -04, most of the northern portion of the planning area was included in the 2017 reconnaissance-level survey (Tang 2017; Figures 1, 2). As a result, four additional buildings or groups of buildings were noted in this portion of the planning area, all of them located along De Berry Street:

- Single-family residence at 21875 De Berry Street (APN 1167-151-10);
- Two duplexes at 21877-21899 De Berry Street (APN 1167-151-12 and -13);
- Single-family residence with outbuilding at 21911 De Berry Street (APN 1167-171-11);
- Former farm complex at 21971 De Berry Street (now a part of A Storage Place; APN 1167-171-12).

A comparison of the total coverage of these previous studies and the current project boundaries indicates that only a 2.83-acre parcel on the western edge of the planning area, namely APN 1167-151-09, had not been surveyed for cultural resources at either intensive or reconnaissance level prior to the current study (Figures 1, 2). On September 28, 2022, CRM TECH field director Daniel Ballester, M.S., conducted a reconnaissance-level field survey on that parcel of vacant land by walking a series of parallel northeast-southwest transects spaced 20 meters (approximately 60 feet) apart. The rest of the northern portion of the planning area was treated with a more cursory field reconnaissance through visual inspection from the adjacent public right-of-way for the purpose of updating the results of the 2017 reconnaissance. This part of the fieldwork was carried out by CRM TECH archaeologist Hunter O'Donnell, B.A., on July 19, 2022.

Figure 3. Former location of the residence at 21992 De Berry Street, view to the north. (Photograph taken on July 19, 2022)

Field observations in the northern portion of the planning area reveal that the previously recorded and evaluated residence at 21995 De Berry Street has since been demolished (Figure 3). The four buildings or groups of buildings noted during the 2017 reconnaissance remain extant today, although the residence at 21911 De Berry Street has evidently been abandoned (Figure 4). In addition, a small corrugated-metal building of unknown nature was noted on APN 1167-161-05 (no street address available), in the northeastern corner of the planning area.

Figure 3. Remaining historic-period buildings along De Berry Street. *Clockwise from upper left*: 21875 De Berry Street; 21877-21899 De Berry Street; 21911 De Berry Street; 21971 De Berry Street. (Photographs taken on July 19, 2022)

Real property information maintained by the County of San Bernardino and historical aerial photographs indicate that the buildings at 21877-21899 and 21971 De Berry Street were constructed in or around 1963 and 1942, respectively (County of San Bernardino n.d.; NETR Online 1938-1966). County records also provide construction dates of 1933 and 1923 for the residences at 21875 and 21911 De Berry Street, but historical aerial photographs suggest that those dates may be associated with other buildings on the properties that may or may not survive today (*ibid.*). Instead, the two residences evidently date to the 1948-1959 era and the 1950s-1960s (NETR Online 1948-1968). No information is available from County records on the corrugated metal building on APN 1167-161-05, which is owned by the City of Riverside, but the aerial photographs demonstrate that it may have been present since at least 1938 (NETR Online 1938).

Sources consulted during this study have identified no other cultural resources in the northern portion of the planning area. The historical/archaeological resources records searches conducted by our firm in 2017 and by BCR Consulting LLC in 2019 show the presence of 84 additional cultural resources of prehistoric or historical origin within a one-mile radius, but none of them were found within or adjacent to the northern portion of the planning area. Due to continued delays at both the South Central Coastal Information Center and the Eastern Information Center caused by facility closure during the COVID-19 pandemic, new records searches were not obtained for this study. Since neither of the information centers has updated its records collection since the beginning of the pandemic in March 2020, the 2017 and 2019 data are considered to be adequate at this time.

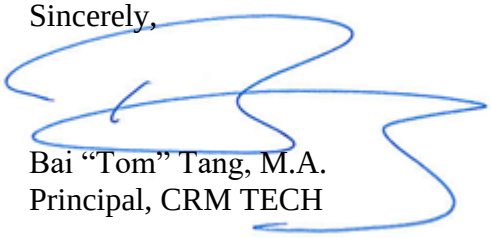
During the 2022 Phase I study on the southern portion of the planning area, the State of California Native American Heritage Commission stated in a letter dated July 29, 2022, that the Sacred Lands File maintained by the commission indicated the presence of unspecified Native American cultural resource(s) in the general vicinity and recommended that the Yuhaaviatam of San Manuel Nation (formerly known as the San Manuel Band of Mission Indians) be contacted for further information. As the results of the Sacred Lands File review are based on a very broad search radius, there is no indication that the Native American cultural resource(s) that triggered the positive finding is in fact located in the immediate vicinity of the planning area. When contacted by our firm at that time, the Yuhaaviatam of San Manuel Nation replied by e-mail on August 2, 2022, that "the proposed project is not located near any known cultural resources" (Tang 2022:6).

In summary, the five historic-period buildings or groups of buildings on APN 1167-151-10, 1167-151-12, 1167-151-13, 1167-161-05, 1167-171-11, and 1167-171-12 are the only potential "historical resources" known to be present in the portion of the planning area designated for commercial development. However, other than APN 1167-161-03 and -04, the bulk of this portion of the planning area has not been surveyed adequately, especially for archaeological resources. A standard Phase I survey should be required on all unsurveyed parcels once the project team gains sufficient access and prior to the approval of any specific projects on these properties.

Meanwhile, the qualifications of the five buildings or groups of buildings listed above as "historical resources" under CEQA provisions remain to be determined, which also needs to be addressed in future project-specific studies if development plans would result in the demolition, alteration, or relocation of the buildings. Furthermore, we recommend that a general condition be implemented for all future projects in the planning area: upon the discovery of any buried archaeological materials during earth-moving operations, all ground disturbances within a 50-foot radius should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

Thank you for this opportunity to be of service. Should you have any questions or need additional information, please feel free to contact our office.

Sincerely,



Bai "Tom" Tang, M.A.
Principal, CRM TECH

References Cited

Brunzell, David
2019 Cultural Resources Records Search for the Gateway Specific Plan Project, Grand Terrace, San Bernardino County, California. Copy provided by Lewis Management Corporation. (See Attachment C)

County Assessor, San Bernardino
n.d. Property Information Management System Internet Site. http://www.sbcounty.gov/assessor/pims/.

NETR (Nationwide Environmental Title Research) Online
1938-1968 Aerial photographs of the project vicinity; taken in 1938, 1948, 1959, and 1966-1968. http://www.historicaerials.com.

Tang, Bai "Tom"
2017 Historical, Archaeological, and Paleontological Resources Reconnaissance: Grand Crossing Specific Plan/Taylor Street-Commerce Way Alignment Project, City of Grand Terrace, San Bernardino County, California. On file, South Central Coastal Information Center, California State University, Fullerton. (See Attachment B)
2022 Update and Addendum to Cultural Resources Survey Report: The Gateway at Grand Terrace Specific Plan, City of Grand Terrace, San Bernardino County, California. Prepared by CRM TECH for Lewis Management Corporation.

Tang, Bai "Tom," Terri Jacquemain, Ben Kerridge, Nina Gallardo, and Salvadore Boites
2017a Historical/Archaeological Resources Survey Report: Assessor's Parcel Numbers 1167-161-03 and -04, City of Grand Terrace, San Bernardino County, California. On file, South Central Coastal Information Center, California State University, Fullerton. (See Attachment A)

Tang, Bai "Tom," Terri Jacquemain, Nina Gallardo, and Salvadore Boites
2017b Historical/Archaeological Resources Survey Report: Grand Terrace Crossing Project, City of Grand Terrace, San Bernardino County, California. On file, South Central Coastal

ATTACHMENT A

2017 INTENSIVE-LEVEL SURVEY ON APN 1167-161-03 and -04

HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT

ASSESSOR'S PARCEL NUMBERS 1167-161-03 AND -04

City of Grand Terrace
San Bernardino County, California

For Submittal to:

City of Grand Terrace
Planning Division, Planning and Development Services
22795 Barton Road
Grand Terrace, CA 92313

Prepared for:

Lewis Management Corporation
1156 North Mountain Avenue
Upland, CA 91786

Prepared by:

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

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

April 25, 2017
CRM TECH Contract No. 3168

Title: Historical/Archaeological Resources Survey Report: Assessor's Parcel Numbers 1167-161-03 and -04, City of Grand Terrace, San Bernardino County, California

Author(s): Bai "Tom" Tang, Principal Investigator/Historian
Terri Jacquemain, Architectural Historian/Report Writer
Nina Gallardo, Archaeologist/Native American Liaison
Salvadore Boites, Project Archaeologist

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

Date: April 25, 2017

Prepared for: Bill Hoover
Lewis Management Corporation
1156 N. Mountain Avenue
Upland, CA 91786
(909) 579-5134

For Submittal to: City of Grand Terrace
Planning Division, Planning and Development Services
22795 Barton Road
Grand Terrace, CA 92313
(909) 824-6621, ext. 247

USGS Quadrangle: San Bernardino South, Calif., 7.5' quadrangle; Section 5, T2S R4W, San Bernardino Baseline and Meridian

Project Size: Approximately three acres

Keywords: Eastern San Bernardino Valley; Phase I cultural resources survey; circa 1945 residential building at 21992 De Berry Street; no "historical resources" or "tribal resources" under CEQA

MANAGEMENT SUMMARY

Between January and April 2017, at the request of the Lewis Management Corporation, CRM TECH performed a cultural resources study on three acres of mostly open land in the southwestern portion of the City of Grand Terrace, San Bernardino County, California. The subject property of the study consists of Assessor's Parcel Numbers 1167-161-03 and -04, located on the north side of De Berry Street and approximately 700 feet west of Michigan Avenue, in the northwest quarter of Section 5, T2S R4W, San Bernardino Baseline and Meridian.

The present study is prepared in anticipation of future environmental review of a development project to be proposed on the property by the Lewis Management Corporation. The purpose of the study is to provide the City of Grand Terrace, as the lead agency for the project under the California Environmental Quality Act (CEQA), with the necessary information and analysis to determine whether the project would cause substantial adverse changes to any "historical resources" or "tribal cultural resources," as defined by CEQA, that may exist in or around the project area.

In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, contacted Native American representatives, and carried out a systematic field survey. As a result of these procedures, a circa 1945 residential building was identified and recorded at 21992 De Berry Street, in the southeastern portion of the project area, but was determined not to meet CEQA's definition of a "historical resource."

No other potential "historical resources" or "tribal cultural resources" were encountered throughout the course of the study. While the field survey efforts were somewhat hampered by the poor ground visibility due to heavy vegetation growth, in light of past land use and ground disturbances the project area does not appear to be particularly sensitive for as-yet undetected archaeological remains of either prehistoric or historical origin.

Based on these findings, CRM TECH recommends to the City of Grand Terrace a determination of *No Impact* regarding cultural resources. No further cultural resources investigation is recommended on the two parcels covered by this study. However, if buried cultural materials are discovered during future earth-moving operations within the project area, all work in the immediate vicinity should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

Between January and April 2017, at the request of the Lewis Management Corporation, CRM TECH performed a cultural resources study on three acres of mostly open land in the southwestern portion of the City of Grand Terrace, San Bernardino County, California (Fig. 1). The subject property of the study consists of Assessor's Parcel Numbers 1167-161-03 and -04, located on the north side of De Berry Street and approximately 700 feet west of Michigan Avenue, in the northwest quarter of Section 5, T2S R4W, San Bernardino Baseline and Meridian (Figs. 2, 3).

The present study is prepared in anticipation of future environmental review of a development project to be proposed on the property by the Lewis Management Corporation. The purpose of the study is to provide the City of Grand Terrace, as the lead agency for the project under the California Environmental Quality Act (CEQA; PRC §21000, et seq.), with the necessary information and analysis to determine whether the project would cause substantial adverse changes to any "historical resources" or "tribal cultural resources," as defined by CEQA, that may exist in or around the project area.

In order to identify such resources, CRM TECH conducted a historical/archaeological resources records search, pursued historical background research, contacted Native American representatives, and carried out a systematic field survey. This report is a complete account of the methods, results, and final conclusion of the study. Personnel who participated in the study are named in the appropriate sections below, and their qualifications are provided in Appendix 1.

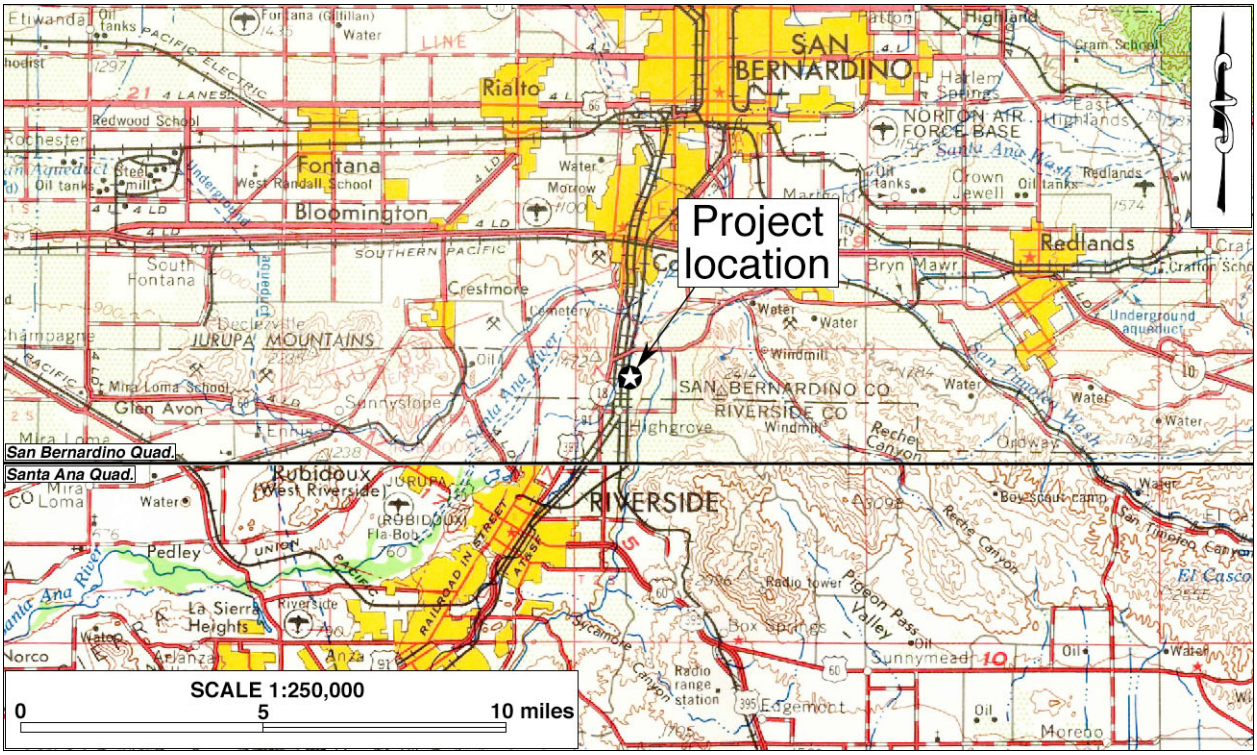


Figure 1. Project vicinity. (Based on USGS San Bernardino and Santa Ana, Calif., 1:250,000 quadrangles [USGS 1969; 1979])

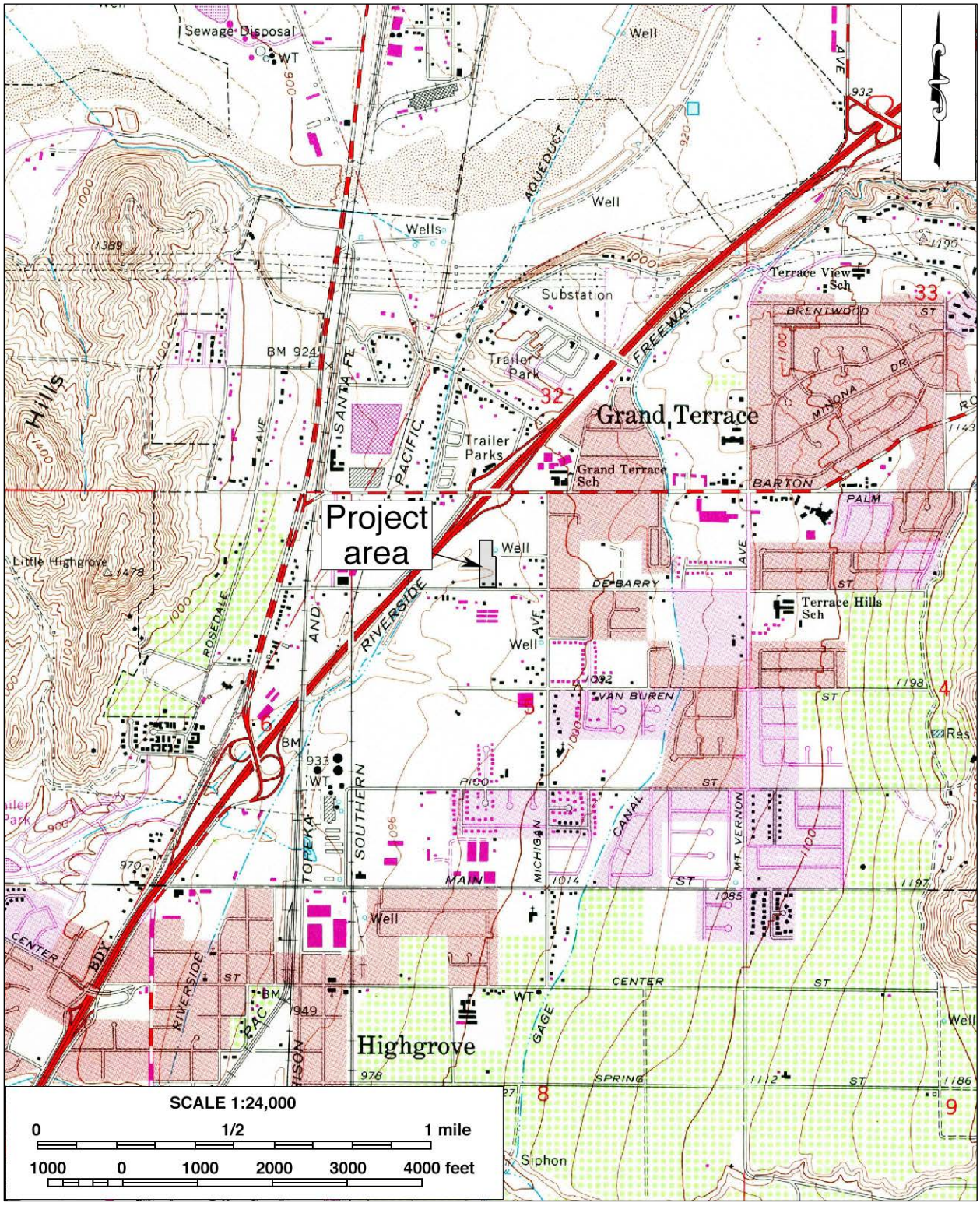


Figure 2. Project area. (Based on USGS San Bernardino South, Calif., 1:24,000 quadrangle [USGS 1980])

Figure 3. Aerial image of the project area.

SETTING

CURRENT NATURAL SETTING

The City of Grand Terrace is situated on a natural earthen terrace overlooking the Santa Ana River and the southeastern rim of the San Bernardino Valley, an alluvium-filled inland valley associated with the Santa Ana River and its tributaries. The natural environment of the surrounding region is characterized by its temperate Mediterranean climate, with the average maximum temperature in July reaching 95º (Fahrenheit) and the average minimum temperature in January hovering around 46º. Rainfall is typically less than 20 inches annually, most of which occurs between November and March.

The project area is bounded on the south by De Berry Street, on the west by a construction materials yard, on the north by a warehouse complex facing Commerce Way, and on the east by a few residences and a strip mall along Rena Lane (Fig. 3). The terrain in the project area is mostly level, with elevations ranging roughly between 968 and 980 feet above mean sea level (Fig. 4). The variation in elevation is accounted for mostly by a slight rise near the southern end of the property along De Berry Street, where residential development occurred in the past.

Currently, a modest single-family residence occupies the southeastern portion of the project area, at 21992 De Berry Street. The remainder of the project area has evidently been disked and grubbed in the past, but a recent growth of shrubs and grasses covers much of the ground surface, a typical occurrence after abundant winter precipitation (Fig. 4). The property lies in a semi-rural area on the southwestern edge of the City of Grand Terrace, and the existing land uses nearby feature

Figure 4. Overview of the current natural setting of the project area, view to the northwest. (Photograph taken on January 18, 2017)

residential, commercial/retail, and light industrial development as well as large expanses of undeveloped open land.

CULTURAL SETTING

Archaeological Context

The earliest evidence of human occupation in the Inland Empire region was discovered below the surface of an alluvial fan in the northern portion of the Lakeview Mountains, overlooking the San Jacinto Valley, with radiocarbon dates clustering around 9,500 B.P. (Horne and McDougall 2008). Another site found near the shoreline of Lake Elsinore, close to the confluence of Temescal Wash and the San Jacinto River, yielded radiocarbon dates between 8,000 and 9,000 B.P. (Grenda 1997). Additional sites with isolated Archaic dart points, bifaces, and other associated lithic artifacts from the same age range have been found in the nearby Cajon Pass area of the San Bernardino Mountains, typically atop knolls with good viewsheds (Basgall and True 1985; Goodman and McDonald 2001; Goodman 2002; Milburn et al. 2008).

The cultural history of southern California has been summarized into numerous chronologies, including those developed by Chartkoff and Chartkoff (1984), Warren (1984), and others. Specifically, the prehistory of the Inland Empire has been addressed by O'Connell et al. (1974), McDonald et al. (1987), Keller and McCarthy (1989), Grenda (1993), Goldberg (2001), and Horne and McDougall (2008). Although the beginning and ending dates of the recognized cultural horizons vary among different parts of the region, the general framework of the prehistory of the Inland Empire can be broken into three primary periods:

- Paleoindian Period (ca. 18,000-9,000 B.P.): Native peoples of this period created fluted spearhead bases designed to be hafted to wooden shafts. The distinctive method of thinning bifaces and spearhead preforms by removing long, linear flakes leaves diagnostic Paleoindian markers at tool-making sites. Other artifacts associated with the Paleoindian toolkit include choppers, cutting tools, retouched flakes, and perforators. Sites from this period are very sparse across the landscape and most are deeply buried.
- Archaic Period (ca. 9,000-1,500 B.P.): Archaic sites are characterized by abundant lithic scatters of considerable size with many biface thinning flakes, bifacial preforms broken during manufacture, and well-made groundstone bowls and basin metates. As a consequence of making dart points, many biface thinning waste flakes were generated at individual production stations, which is a diagnostic feature of Archaic sites.
- Late Prehistoric Period (ca. 1,500 B.P.-contact): Sites from this period typically contain small lithic scatters from the manufacture of small arrow points, expedient groundstone tools such as tabular metates and unshaped manos, wooden mortars with stone pestles, acorn or mesquite bean granaries, ceramic vessels, shell beads suggestive of extensive trading networks, and steatite implements such as pipes and arrow shaft straighteners.

Ethnohistoric Context

According to current ethnohistorical scholarship, what is now the City of Grand Terrace lies in an area where the traditional territories of three Native American groups overlap: the Serrano of the San

Bernardino Mountains, the Luiseño of the Perris-Elsinore region, and the Gabrielino of the San Gabriel Valley. Kroeber (1925:Plate 57) suggests that the Native Americans in this area were probably Luiseño, Reid (1968:8-9) states that they were Serrano, and Strong (1929:7-9, 275) considers them to be Gabrielino. In any case, there also occurred a late influx of Cahuilla during the 19th century (Bean 1978). All of these groups spoke languages of the Shoshonean group, which in turn is part of the Uto-Aztecan stock, a family of languages that covers most of the southwest United States and reaches southward as far as Mexico City (Kroeber 1925:577).

Whatever the linguistic affiliation, Native Americans along the Santa Ana River exhibited similar social organization and resource procurement strategies. Villages were based on clan or lineage groups. Their home/base sites are marked by midden deposits, often with bedrock mortar features. During their seasonal rounds to exploit plant resources, small groups often ranged some distances in search of specific plants and animals. Their gathering strategies often left behind signs of special use sites, usually grinding slicks on bedrock boulders, at the locations of the resources.

In terms of subsistence practices, a variety of animal and plant resources were evidently exploited by the tribes. The women focused on gathering, while the men were primarily hunters and fishers. The main plant foods varied according to season and locality. Acorns and piñon nuts were a staple for groups in the mountains while honey mesquite, screw bean mesquite, yucca roots, and cacti fruits were collected from the desert. These principle foods were supplemented with all types of edible roots, tubers, bulbs, shoots, flowers, and seeds. The main game animals were deer, mountain sheep, antelope, rabbits, birds, and small rodents. Every year desert groups would travel to the foothills to collect resources and trade goods from different ecosystems.

As would be expected, the ecosystem these populations occupied would have implications regarding subsistence-related tools of the material culture (Dahdul 2013). Larger projectile points and associated manufacturing debitage accompanying the hunting of large game are likely to be found in greater quantities at mountain sites, whereas smaller points associated with small game hunting are better represented at sites at lower elevations. Similarly, mortars and pestles are more likely to occur at mountain sites where acorns were processed (Benedict 1924), while bedrock milling slicks, manos, and metates are more common at lower elevations where they were used to process seeds found in that environment.

Historic Context

The San Bernardino Valley, along with the rest of Alta California, was claimed by Spain in the late 18th century, and the first European explorers traveled through the area as early as 1772, only three years after the beginning of Spanish colonization. For nearly four decades afterwards, however, the arid inland valley received little attention from the Spanish and, later, Mexican colonizers, who concentrated their efforts along the Pacific coast. Following the establishment of Mission San Gabriel in 1771, the San Bernardino Valley became a part of the mission's vast land holdings. The name "San Bernardino" was bestowed on the region at least by 1819, when an *asistencia* and an associated mission rancho, both bearing that name, was established in the eastern end of the valley.

After Mexico gained independence from Spain in 1821, the new authorities in Alta California began to dismantle the mission system in 1834 through the process of secularization. During the next 12

years, former mission ranchos throughout Alta California were surrendered to the Mexican government, and subsequently divided and granted to various prominent citizens of the province. In 1842, the former mission rancho of San Bernardino was granted to members of a prominent Los Angeles family, the Lugos. After the American annexation of Alta California in 1848, the Lugos sold the entire land grant in 1851 to a group of Mormon settlers, who promptly founded the town of San Bernardino a few miles to the north of the project location.

The Grand Terrace area was not included in the Rancho San Bernardino land grant, and thus remained public land after the American annexation. The area was originally known simply as "the Terrace" because of its higher ground, with the name "Grand" added later as a reference to the scenic view (City of Grand Terrace n.d.). Situated at higher elevations than the first irrigation canals built in the area, the core area of present-day Grand Terrace was largely undeveloped until 1885-1886, when the completion of the Gage Canal opened the upper plain to irrigated agriculture.

Shortly after that, Grand Terrace emerged as an agricultural community focused primarily on citrus cultivation (Patterson 1996:183-186). Since the mid-20th century, with the increasing diversification of its economic livelihood, much of the once extensive citrus acreage in the Inland Empire has given way to urban expansion. Around the same time, Grand Terrace also embarked on the course of gradual suburbanization, with residential development becoming the catalyst in the growth of the community and leading to its incorporation in 1978 (City of Grand Terrace n.d.).

RESEARCH METHODS

RECORDS SEARCH

On January 9 and 11, 2017, CRM TECH archaeologist Nina Gallardo completed the records search at the South Central Coastal Information Center (SCCIC) and the Eastern Information Center (EIC). Located at the California State University, Fullerton, and the University of California, Riverside, the SCCIC and the EIC are the State of California's official cultural resource records repositories for the Counties of San Bernardino and Riverside, respectively. While the project area lies entirely within San Bernardino County, the scope of the records search extended into neighboring Riverside County, necessitating record search at both the SCCIC and the EIC.

During the records search, Gallardo examined maps and records on file at the SCCIC and the EIC for previously identified cultural resources and existing cultural resources reports within a one-mile radius of the project area. Previously identified cultural resources include properties designated as California Historical Landmarks, Points of Historical Interest, or San Bernardino/Riverside County landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

NATIVE AMERICAN PARTICIPATION

On January 9, 2017, CRM TECH submitted a written request to the State of California's Native American Heritage Commission (NAHC) for a records search in the commission's sacred lands file. Following the NAHC's recommendations and previously established consultation protocol, on

January 17 CRM TECH further contacted a total of 39 Native American representatives in the region in writing to solicit additional information on potential Native American cultural resources in the project vicinity. In the meantime, CRM TECH notified the Pechanga and Soboba Bands of Luiseño Indians of the upcoming archaeological fieldwork and invited tribal participation. The correspondence between CRM TECH and the Native American representatives is attached to this report as Appendix 2.

HISTORICAL BACKGROUND RESEARCH

Historical research for this study was completed in two phases. The preliminary background research was conducted by CRM TECH principal investigator Bai "Tom" Tang and project historian/architectural historian Terri Jacquemain on the basis of published literature in local and regional history, U.S. General Land Office (GLO) land survey plat maps dated 1876-1877, U.S. Geological Survey (USGS) topographic maps dated 1901-1980, and aerial photographs taken in 1938-2016. The historic maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley. The aerial photographs are available at the NETR Online website and through the Google Earth software.

After the identification of a historic-period building in the project area, Jacquemain pursued more focused and in-depth research on its construction and ownership history as well as potential associations with important historic figures or events. Sources consulted during this phase of the research included primarily the archival records of the County of San Bernardino, particularly real property tax assessment records, and various online genealogical databases.

FIELD SURVEY

On January 18, 2017, CRM TECH archaeologists Nina Gallardo and Salvadore Boites carried out the field survey of the project area. Ground visibility was poor (0-25%) over most of the property at the time of the survey due to the thick vegetation growth. As a result, the survey was conducted mostly at a reconnaissance level from the perimeters and along established footpaths penetrating the interior of the property. The portions of the project area with less ground cover, mainly in the southernmost portion, were surveyed more intensively along parallel north-south transects spaced 15 meters (approximately 50 feet) apart. Using these methods, the entire project area was systematically examined for any evidence of human activities dating to the prehistoric or historic period (i.e., 50 years or older). In light of past disturbances to the ground surface, the survey methods and the ground visibility were considered to be adequate for the purpose of this study.

In conjunction with the systematic archaeological survey, Gallardo completed a field inspection of all buildings, structures, and other built-environment features in the project area, and completed field recordation procedures on the residence at 21992 De Berry Street, which appeared to be more than 50 years old. In order to facilitate the proper recordation and evaluation of the building, Gallardo made detailed notations and preliminary photo-documentation of its structural and architectural characteristics and current conditions. The resulting field data, including architectural descriptions, locational data, maps, and photographs, were then compiled into standard record forms and submitted to the SCCIC for inclusion in the California Historical Resources Inventory.

RESULTS AND FINDINGS

PREVIOUS CULTURAL RESOURCES STUDIES IN THE VICINITY

According to SCCIC and EIC records, the project area was included in a large-scale archaeological resources survey completed in 1975 for a proposed sewer system expansion project (Portillo 1975; #1060249 in Fig. 5), but no cultural resources were recorded within the current project area as a result of that survey or any other previous studies. The 1975 survey, now more than 40 years old, is considered to be outdated for statutory compliance purposes today. Therefore, a systematic field survey of the property was deemed necessary for this study.

Within a one-mile radius of the project area, SCCIC and EIC records show more than 20 other previous cultural resources studies on various tracts of land and linear features, collectively covering roughly three-quarters of the land within the scope of the records search (Fig. 5). As a result, 70 recorded historical/archaeological sites were reported within the one-mile radius. Of these, two were of prehistoric—i.e., Native American—origin, one described as a temporary camp and millingstone site, the other a stone tool scatter (Smith 1940; Bell 1973). Both of them were found along the base of the La Loma Hills, nearly a mile northwest of the project area.

The rest of the sites dated to the historic period and included a number of buildings and linear features of the historical infrastructure, such as railroads, power transmission lines, and irrigation ditches, including the Gage Canal and the Riverside Upper Canal/Riverside-Warm Creek Canal. None of these sites was located in or near the project area, with the Riverside Upper Canal/ Riverside-Warm Creek Canal, at approximately 1,000 feet to the west, being the closest. As such, none of the 70 previously recorded cultural resources require further consideration during this study as future development at this location will have no potential to affect any of them.

NATIVE AMERICAN INPUT

In response to CRM TECH's inquiry, the NAHC reported in a letter dated January 10, 2017, that the sacred lands record search identified no Native American cultural resources within the project area, but recommended that local Native American groups be contacted for further information. For that purpose, the NAHC provided a list of potential contacts in the region (see App. 2). Upon receiving the NAHC's reply, CRM TECH sent written requests for comments to all 30 individuals on the referral list and the organizations they represent (see App. 2). In addition, as referred by the appropriate tribal government staff, the following nine designated spokespersons for the tribes were also contacted:

- David L. Saldivar, Tribal Government Affairs Manager, Augustine Band of Cahuilla Indians
- Judy Stapp, Director of Cultural Affairs, Cabazon Band of Mission Indians
- Andreas Heredia, Cultural Director, Cahuilla Band of Indians
- Sam Dunlap, Cultural Resources Director, Gabrielino Tongva Nation
- Rob Roy, Environmental Director, La Jolla Band of Luiseño Indians
- Raymond Huaute, Cultural Resource Specialist, Morongo Band of Mission Indians
- Chris Devers, Vice-Chairman, Pauma Band of Luiseño Indians

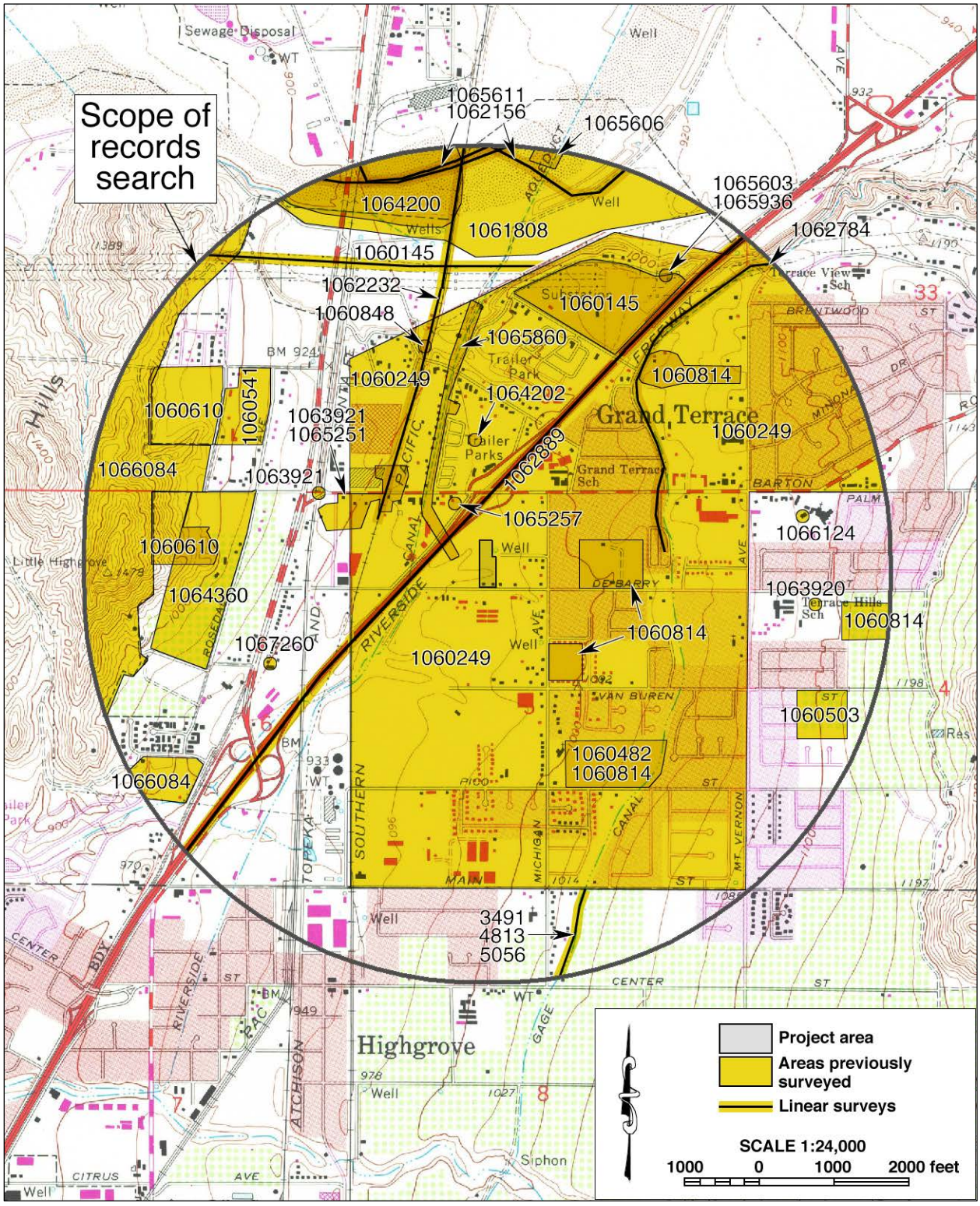


Figure 5. Previous cultural resources studies in the vicinity of the project area, listed by SCCIC and EIC file number. Locations of historical/archaeological sites are not shown as a protective measure.

- Vincent Whipple, Tribal Historic Preservation Officer, Rincon Band of Luiseño Indians
- Gabriella Rubalcava, Environmental Director, Santa Rosa Band of Cahuilla Indians

As of this time, six tribal representatives have responded in writing (see App. 2). Victoria Harvey, Archaeological Monitoring Coordinator for the Agua Caliente Band of Cahuilla Indians, and Anna M. Hoover, Deputy Tribal Historic Preservation Officer for the Pechanga Band of Luiseño Indians, both stated that the project area was outside their tribes' traditional use areas, and that they would defer to other tribes located in closer proximity. Jessica Valdez of the Soboba Band of Luiseño Indians Cultural Resources Department wrote that the tribe would defer specifically to the San Manuel Band of Mission Indians but requested notification of any inadvertent archaeological findings during the project. Judy Stapp of the Cabazon Band of Mission Indians indicated that the tribe had no specific information regarding any sites of Native American traditional cultural value in the project area.

Andrew Salas, Chairperson of the Gabrieleno Band of Mission Indians-Kizh Nation, found the project vicinity to be sensitive for Native American cultural resources in light of known village sites nearby, and thus requested monitoring of ground-disturbing activities in the project area by a representative of his group as well as an archaeologist. Ann Brierty, Cultural Resources Field Manager for the San Manuel Band of Mission Indians, requested further, government-to-government consultation with the City of Grand Terrace and recommended a number of procedural conditions, including potential Native American monitoring and protocols to address inadvertent archaeological discoveries during the project.

HISTORICAL OVERVIEW

Historical sources consulted for this study suggest that the project area remained unsettled and undeveloped until the 1940s (Figs 6-9; County Assessor 1941-1946). Prior to that, no man-made features were noted within the project area, although the property was evidently used for agriculture (Figs. 6-8; NETR Online 1938). During the 1850s-1890s era, the cultural landscape in the project vicinity was dominated by various transportation corridors, from at least three major wagon roads of the 1850s, all traversing about a half-mile to the east of the project location, to the Atchison, Topeka and Santa Fe (now Burlington Northern Santa Fe) Railway and the Southern Pacific (now Union Pacific) Railroad, both constructed in the 1880s roughly a half-mile to the west (Figs. 6, 7).

By the 1930s, the Grand Terrace area had established itself as an agricultural community specializing in citrus cultivation, and De Berry Street had appeared along the southern project boundary, the earliest man-made feature known to be present in the immediate vicinity (Fig. 8; NETR Online 1938). Between 1938 and 1968, most of the project area served as agricultural fields (NETR Online 1938-1968). A natural drainage that once crossed the southern portion of the property in a generally east-west direction was filled in sometime between 1959 and 1966 (*ibid.*). The farming operations on the property had evidently ceased by 1978, and the northern portion of the project area had remained largely unused since then (NETR Online 1978-2012; Google Earth 1995-2016).

Archival records indicate that the residence at 21992 De Berry Street, in the southeastern portion of the project area, was constructed around 1945, during the post-WWII boom that swept across the

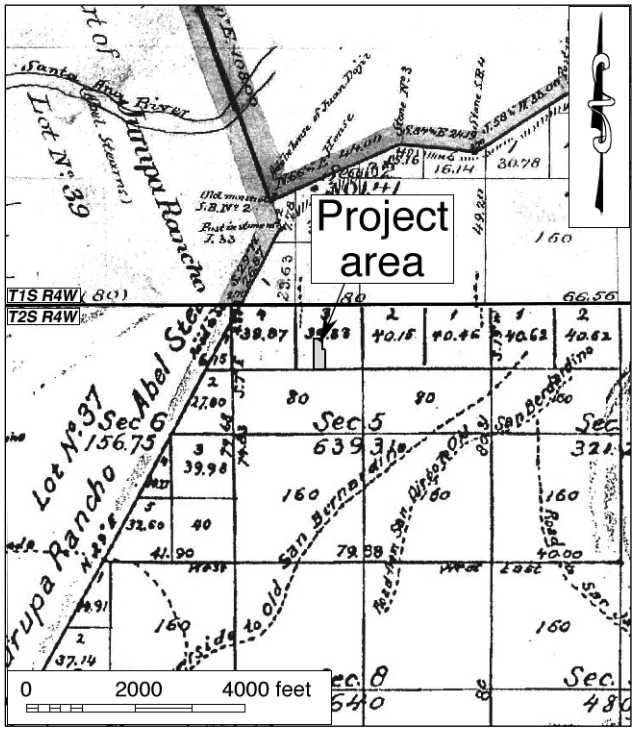


Figure 6. The project area and vicinity in 1852-1877. (Source: GLO 1876; 1877)

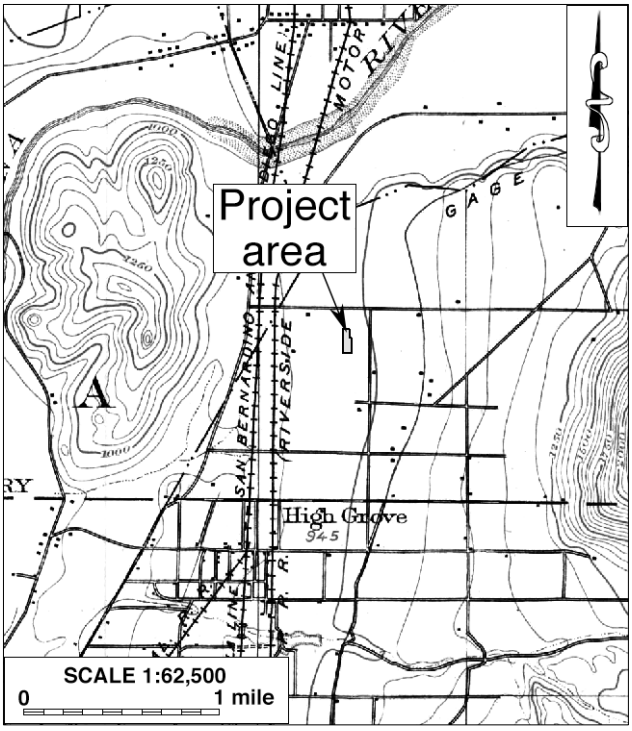


Figure 7. The project area and vicinity in 1893-1894. (Source: USGS 1901)

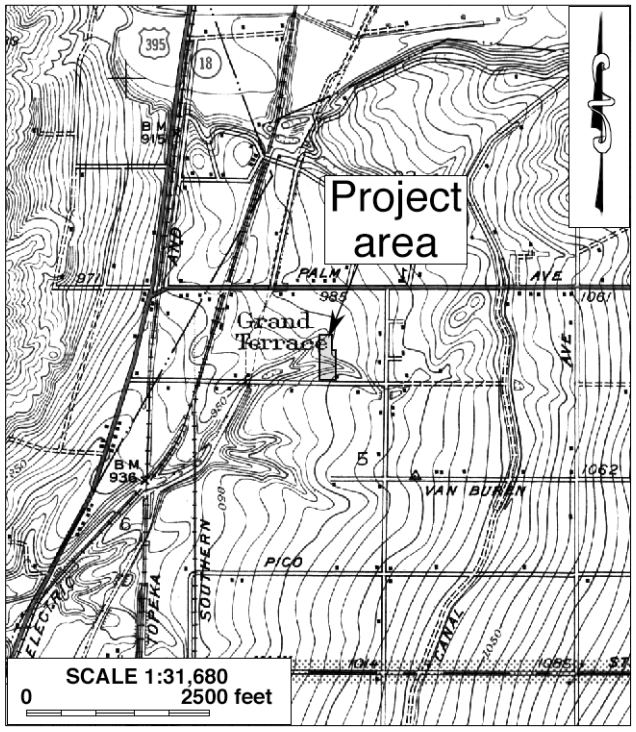


Figure 8. The project area and vicinity in 1936-1938. (Source: USGS 1943)

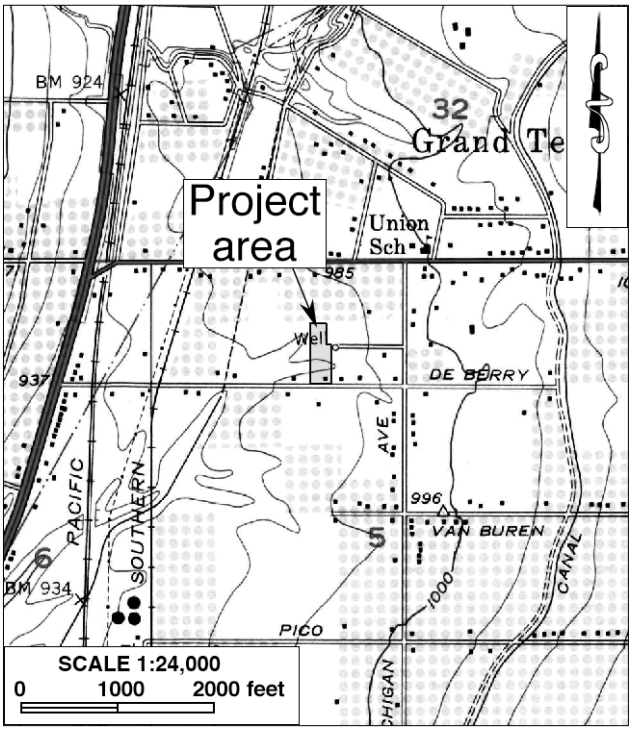


Figure 9. The project area and vicinity in 1952-1954. (Source: USGS 1954)

U.S. (County Assessor 1941-1946; Fig 9). Between 1959 and 1966, it was joined by a second residence in the southwestern portion of the project area, which was eventually demolished in 2011-2012 (NETR Online 1959; 1966; 2010-2012; Google Earth 2011-2012). The residence at 21992 De Berry Street is discussed further in the section below.

POTENTIAL CULTURAL RESOURCE IN THE PROJECT AREA

As mentioned above, the residence at 21992 De Berry Street proved to be more than 50 years of age, and the field inspection revealed that it retains most of its historical character. Therefore, it was recorded into the California Historical Resources Inventory during this study. No other potential cultural resources, either historical or prehistoric in origin, were encountered within the project area. The second residence in the project area, dating to the 1959-1966 era (see above), has been completely removed, and has left no identifiable archaeological remains.

The one-story single-family residence at 21992 De Berry Street, on Assessor's Parcel Number 1167-161-03, faces the street to the south (Fig. 10), and is L-shaped in plan due to a room-sized addition at the rear. The main mass is a brick structure with a low-pitched side-gable roof, which is covered with brown composition shingles and ends in medium eaves with scalloped green fascia boards in the front. The exterior walls are coated with gray and tan paint, with wide horizontal wood boards filling the gable peaks. The rear addition is surmounted by a shed roof of a lower pitch, and is clad with horizontal wood siding.

Figure 10. Single-family residence at 21992 De Berry Street. (Photograph taken on January 18, 2017)

The symmetrical front façade features a centered main entrance with an aluminum-framed screen door over an unglazed door painted light green. It is sheltered by an extension of the main roof, supported at the lower end by two square posts, and two wood-framed double-hung windows set above a band of protruding brick trim that wraps around the building. Similar windows are also found on the side façades, along with a smaller aluminum-framed slider on the west side. A second entrance on the rear addition is filled with an unglazed door that opens to the west. Louvered vents under the gable peaks are covered by aluminum-framed screens.

A low brick planter wraps the front and sides of the building while another is built around a mature tree immediately to the west. A metal shed is located to the rear of the residence, to the east of the addition, and a detached double carport stands to the northwest. The residence is situated several feet higher than the street level but only about 15 feet from the street, with a concrete block retaining wall across the front that breaks for a set of concrete steps leading to the main entrance. A replica antique light standard is embedded next to the steps. The modest residence is in fair condition and appears to be occupied.

According to archival records, the project area was part of a larger parcel owned by Glen E. McCord in 1941 (County Assessor 1941-1946). Bertha Larbarger acquired the three acres in the project area around 1944, and the first improvement assessment, likely representing the beginning of the residence, was reflected in the records in 1945 (*ibid*.), which is consistent with the Minimal Traditional style of its exterior design. A diligent search of genealogical databases yielded no further information on either McCord or Larbarger. More recently, Helen E. Dodson became trustee of the property in 1973, and her estate deeded the property to the City of Grand Terrace in 2005 (County Assessor n.d.).

DISCUSSION

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

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

> (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

For "tribal cultural resources," PRC §21074, enacted and codified as part of a 2014 amendment to CEQA through Assembly Bill 52, provides the statutory definition as follows:

"Tribal cultural resources" are either of the following:
(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
  (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

In summary of the research results presented above, the circa 1945 residence at 21992 De Berry Street represents the only potential "historical resource" present within or adjacent to the project area. The origin of the building dates to a time when the cultural landscape in the Grand Terrace area began a gradual transition from its agricultural roots to a more suburban role in the post-WWII era, and the building retains sufficient historic integrity to relate to this episode in the city's development. However, it does not demonstrate a particularly close or important association with this pattern of events, or with any other established themes in local history.

Historical background research during this study has identified no persons or specific events of recognized historic significance in association with this residence, nor any prominent architects, designers, or builders. In terms of architectural or aesthetic merits, the building does not qualify as an important example of any style, type, period, region, or method of construction, nor does it embody any particular architectural ideals or design concepts. As a relatively late historic-period residence reflecting typical building practices of the time, it holds little promise for any important historical/archaeological data. Based on these considerations, the present study concludes that the residence at 21992 De Berry Street does not appear eligible for listing in the California Register of Historical Resources, and does not qualify as a "historical resource," as defined above.

CONCLUSION AND RECOMMENDATIONS

CEQA establishes that a project that may cause a substantial adverse change in the significance of a "historical resource" or a "tribal cultural resource" is a project that may have a significant effect on the environment (PRC §21084.1-2). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

As stated above, a historic-period residential building was identified and recorded within the project area during this study, but was determined not to meet CEQA's definition of a "historical resource." No other potential "historical resources" or "tribal cultural resources" were encountered throughout the course of the study. While the field survey efforts were somewhat hampered by the poor ground visibility due to heavy vegetation growth, in light of past land use and ground disturbances the project area does not appear to be particularly sensitive for as-yet undetected archaeological remains of either prehistoric or historical origin.

Based on these findings, CRM TECH presents the following recommendations to the City of Grand Terrace:

- No "historical resources" or "tribal cultural resources" exist within the project area, and thus future development of the property will not cause a substantial adverse change to any known "historical resources" or "tribal cultural resources."
- No further cultural resources investigation will be necessary on the two parcels covered by this study.
- If buried cultural materials are discovered during future earth-moving operations within the project area, all work in the immediate vicinity should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

REFERENCES

Basgall, Mark E., and D.L. True
1985 Archaeological Investigations in Crowder Canyon, 1973-1984: Excavations at Sites SBR-421B, SBR-421C, SBR-421D, and SBR-713, San Bernardino County, California. On file, South Central Coastal Information Center, California State University, Fullerton.

Bean, Lowell John
1978 Cahuilla. In *Handbook of North American Indians*, Vol. 8: *California*, edited by Robert F. Heizer; pp. 575-587. Smithsonian Institution, Washington, D.C.

Bell, S.
1973 California Historical Resource Information System record forms, 36-000792. On file, South Central Coastal Information Center, California State University, Fullerton.

Benedict, Ruth F.
1924 A Brief Sketch of Serrano Culture. *American Anthropologist* 26:366-392.

Chartkoff, Joseph L., and Kerry Kona Chartkoff
1984 *The Archaeology of California*. Stanford University Press, Stanford, California.

City of Grand Terrace.
n.d. City History. https://web.archive.org/web/20130326065037/http://www.cityofgrandterrace.org/index.aspx?NID=56.

County Assessor, San Bernardino
1941-1946 Real property tax assessment records, Book 115, Map 32. On file, San Bernardino County Historical Archive, San Bernardino.
n.d. Real property information database. San Bernardino County Assessor's Office, San Bernardino.

Dahdul, Mariam
2013 A Regional and Diachronic Study of Hunter-Gatherer Mobility and Mortuary Practices in the Salton Basin, Southeastern California. Ph.D. dissertation, Department of Anthropology, University of California, Santa Barbara.
GLO (General Land Office, U.S. Department of the Interior)
1876 Plat Map: Township No. 1 South Range No. 4 West, San Bernardino Meridian, surveyed in 1852-1875.
1877 Plat Map: Township No. 2 South Range No. 4 West, San Bernardino Meridian; surveyed in 1853-1877.
Goldberg, Susan K. (editor)
2001 Metropolitan Water District of Southern California Eastside Reservoir Project: Final Report of Archaeological Investigations. On file, Eastern Information Center, University of California, Riverside.
Goodman, John D., II
2002 Archaeological Survey of the Charter Communications Cable Project, Mountaintop Ranger District, San Bernardino National Forest, California. San Bernardino National Forest Technical Report 05-12-BB-102. San Bernardino.
Goodman, John D., II, and M. McDonald
2001 Archaeological Survey of the Southern California Trials Association Event Area, Little Pine Flats, Mountaintop Ranger District, San Bernardino National Forest, California. San Bernardino National Forest Technical Report 05-12-BB-106. San Bernardino.
Google Earth
1995-2016 Aerial photographs of the project vicinity; taken in 1995, 2002-2007, 2009, 2011-2014, and 2016. Available through the Google Earth software.
Grenda, Donn
1993 Archaeological Treatment Plan for CA-RIV-2798/H, Lake Elsinore, Riverside County, California. On file, Eastern Information Center, University of California, Riverside.
1997 Continuity and Change: 8,500 Years of Lacustrine Adaptation on the Shores of Lake Elsinore. Statistical Research Technical Series 59. Statistical Research, Inc., Tucson, Arizona.
Horne, Melinda C., and Dennis P. McDougall
2008 CA-RIV-6069: Early Archaic Settlement and Subsistence in the San Jacinto Valley, Western Riverside County, California. On file, Eastern Information Center, University of California, Riverside.
Keller, Jean S., and Daniel F. McCarthy
1989 Data Recovery at the Cole Canyon Site (CA-RIV-1139), Riverside County, California. *Pacific Coast Archeological Society Quarterly* 25.
Kroeber, Alfred L.
1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Government Printing Office, Washington, D.C.
McDonald, Meg, Philip J. Wilke, and Andrea Kauss
1987 McCue: An Elko Site in Riverside County. *Journal of California and Great Basin Anthropology* 9(1):46-73.
Milburn, Doug, U.K. Doan, and John D. Goodman II
2008 Archaeological Investigation at Baldy Mesa-Cajon Divide for the Baldy Mesa Off-Highway-Vehicle Recreation Trails Project, San Bernardino National Forest, San Bernardino

County, California. San Bernardino National Forest Technical Report 05-12-53-091. San Bernardino.

NETR Online
1938-2012 Aerial photographs of the project vicinity; taken in 1938, 1948, 1959, 1966-1968, 1978, 1980, 1995, 2002, 2005, 2009, 2010, and 2012. http://www.historicaerials.com.

O'Connell, James F., Philip J. Wilke, Thomas F. King, and Carol L. Mix (editors)
1974 Perris Reservoir Archaeology: Late Prehistoric Demographic Change in Southeastern California. On file, Eastern Information Center, University of California, Riverside.

Patterson, Tom
1996 *A Colony for California: Riverside's First Hundred Years*, second edition. The Museum Press of the Riverside Museum Associates, Riverside.

Portillo, Garth
1975 Archaeology of Proposed Additions to the Grand Terrace Sanitary Sewer System, Grand Terrace, California. On file, Eastern Information Center, University of California, Riverside.

Reid, Hugo
1968 The Indians of Los Angeles County: Hugo Reid's Letters of 1852; edited by Robert F. Heizer. Southwest Museum Papers 21.

Smith, Gerald
1940 California Historical Resource Information System record forms, 36-001577. On file, South Central Coastal Information Center, California State University, Fullerton.

Strong, William Duncan
1929 *Aboriginal Society in Southern California*. University of California Publications in American Archaeology and Ethnology, Vol. 26. Reprinted by Malki Museum Press, Banning, California, 1972.

USGS (United States Geological Survey, U.S. Department of the Interior)
1901 Map: San Bernardino, Calif. (15', 1:62,500); surveyed in 1893-1894.
1943 Map: Colton, Calif. (1:31,680); surveyed in 1936-1938.
1954 Map: San Bernardino South, Calif. (7.5', 1:24,000); aerial photographs taken in 1952, field-checked in 1954.
1969 Map: San Bernardino, Calif. (1:250,000); 1958 edition revised.
1979 Map: Santa Ana, Calif. (1:250,000); 1959 edition revised.
1980 Map: San Bernardino South, Calif. (7.5', 1:24,000); 1967 edition photorevised in 1979.

Warren, Claude N.
1984 The Desert Region. In *California Archaeology*, edited by Michael J. Moratto; pp. 339-430. Academic Press, Orlando, Florida.

APPENDIX 1:
PERSONNEL QUALIFICATIONS

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

Education

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

Professional Experience

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

Cultural Resources Management Reports

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

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

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

Education

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

Professional Experience

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

Research Interests

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

Cultural Resources Management Reports

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

Memberships

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

PROJECT HISTORIAN/ARCHITECTURAL HISTORIAN/REPORT WRITER
Terri Jacquemain, M.A.

Education

2004 M.A., Public History and Historic Resource Management, University of California, Riverside.
- M.A. thesis: Managing Cultural Outreach, Public Affairs and Tribal Policies of the Cabazon Band of Mission Indians, Indio, California; internship served as interim Public Information Officer, Cabazon Band of Mission Indians, June-October, 2002.

2002 B.S., Anthropology, University of California, Riverside.
2001 Archaeological Field School, University of California, Riverside.
1991 A.A., Riverside Community College, Norco Campus.

Professional Experience

2003- Historian/Architectural Historian/Report Writer, CRM TECH, Riverside/Colton, California.
- Author/co-author of legally defensible cultural resources reports for CEQA and NHPA Section 106;
- Historic context development, historical/archival research, oral historical interviews, consultation with local communities and historical organizations;
- Historic building surveys and recordation, research in architectural history; architectural description

2002-2003 Teaching Assistant, Religious Studies Department, University of California, Riverside.
2002 Interim Public Information Officer, Cabazon Band of Mission Indians.
2000 Administrative Assistant, Native American Student Programs, University of California, Riverside.
1997-2000 Reporter, *Inland Valley Daily Bulletin*, Ontario, California.
1991-1997 Reporter, *The Press-Enterprise*, Riverside, California.

PROJECT ARCHAEOLOGIST
Salvadore Boites, M.A.

Education

2013	M.A., Applied Anthropology, California State University, Long Beach.
2003	B.A., Anthropology/Sociology, University of California, Riverside.
1996-1998	Archaeological Field School, Fullerton Community College, Fullerton, CA.

Professional Experience

2014-	Project Archaeologist, CRM TECH, Colton, California.
2010-2011	Adjunct Instructor, Anthropology etc., Everest College, Anaheim, California.
2003-2008	Project Archaeologist, CRM TECH, Riverside/Colton, California.
2001-2002	Teaching Assistant, Moreno Elementary School, Moreno Valley, California.
1999-2003	Research Assistant, Anthropology Department, University of California, Riverside.

PROJECT ARCHAEOLOGIST
Nina Gallardo, B.A.

Education

2004	B.A., Anthropology/Law and Society, University of California, Riverside.

Professional Experience

2004- Project Archaeologist, CRM TECH, Riverside/Colton, California.

- Surveys, excavations, construction monitoring, field recordation, mapping, records searches, and Native American liaison.

APPENDIX 2

CORRESPONDENCE WITH NATIVE AMERICAN REPRESENTATIVES*

* 39 local Native American representatives were contacted; a sample letter is included in this report.

SACRED LANDS FILE & NATIVE AMERICAN CONTACTS LIST REQUEST
NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916)373-3710
(916)373-5471 Fax
nahc@pacbell.net

Project: Grand Terrace Grand Crossing and Grand Terrace De Berry Projects (CRM TECH Contract No. 3168)

County: San Bernardino

USGS Quadrangle Name: San Bernardino South, Calif.

Township 2 South **Range** 4 West SB **BM; Section(s)** 5 & 6

Company/Firm/Agency: CRM TECH

Contact Person: Nina Gallardo

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

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

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

Email: ngallardo@crmtech.us

Project Description: This request entails two residential development projects on 48 acres of land located east of the I-215 Freeway between De Berry and Pico Streets in the City of Grand Terrace, San Bernardino County, California.

January 9, 2017

STATE OF CALIFORNIA — Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

January 10, 2017

Nina Gallardo
CRM TECH

Sent by E-mail: ngallardo@crmtech.us

RE: Proposed Grand Terrace, Grand Crossing, and Grand Terrace De Berry Projects, City of Grand Terrace; San Bernardino South USGS Quadrangle, San Bernardino County, California

Dear Ms. Gallardo:

Attached is a contact list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. A search of the SFL was completed for the USGS quadrangle information provided with negative results.

Our records indicate that the lead agency for this project has not requested a Native American Consultation List for the purposes of formal consultation. Lists for cultural resource assessments are different than consultation lists. Please note that the intent of the referenced codes below is to avoid or mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects under AB-52.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 **require public agencies** to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

> **Within 14 days** of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.

   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.
   - All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

The results of these searches and surveys should be included in the "Tribal Cultural Resources" section or in a separate subsection of the Cultural Resources section of the environmental document submitted for review. Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

Native American Heritage Commission
Tribal Consultation List
San Bernardino County
1/10/2017

Agua Caliente Band of Cahuilla Indians
Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264 — Luiseno
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Agua Caliente Band of Cahuilla Indians
Jeff Grubbe, Chairperson
5401 Dinah Shore Drive — Cahuilla
Palm Springs, CA, 92264 — Luiseno
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Augustine Band of Cahuilla Mission Indians
Amanda Vance, Chairperson
P.O. Box 846 — Cahuilla
Coachella, CA, 92236
Phone: (760)398-4722
Fax: (760)369-7161

Cabazon Band of Mission Indians
Doug Welmas, Chairperson
84-245 Indio Springs Parkway — Cahuilla
Indio, CA, 92203
Phone: (760)342-2593
Fax: (760)347-7880

Cahuilla Band of Indians
Luther Salgado, Chairperson
52701 U.S. Highway 371 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 5549
Fax: (951) 763-2808
Chairman@cahuilla.net

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chariperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
gabrielenoindians@yahoo.com

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626)483-3564
Fax: (626)286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., — Gabrielino
#231
Los Angeles, CA, 90012
Phone: (951)807-0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Linda Candelaria, Co-Chairperson
1999 Avenue of the Stars, Suite — Gabrielino
1100
Los Angeles, CA, 90067
Phone: (626)676-1184

La Jolla Band of Luiseno Indians
Thomas Rodriguez, Chairperson
22000 Highway 76 — Luiseno
Pauma Valley, CA, 92061
Phone: (760)742-3771

Los Coyotes Band of Mission Indians
Shane Chapparosa, Chairperson
P.O. Box 189 — Cahuilla
Warner Springs, CA, 92086-0189
Phone: (760)782-0711
Fax: (760)782-0712
Chapparosa@msn.com

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Grand Terrace Grand Crossing and Grand Terrace De Berry Projects, San Bernardino County.

Native American Heritage Commission
Tribal Consultation List
San Bernardino County
1/10/2017

Los Coyotes Band of Mission Indians
John Perada, Environmental Director
P. O. Box 189 — Cahuilla
Warner Springs, CA, 92086
Phone: (760) 782 - 0712
Fax: (760) 782-2730

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

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

Pala Band of Mission Indians
Shasta Gaughen, Tribal Historic Preservation Officer
PMB 50, 35008 Pala Temecula Rd. — Cupeno, Luiseno
Pala, CA, 92059
Phone: (760) 891 - 3515
Fax: (760) 742-3189
sgaughen@palatribe.com

Pauma Band of Luiseno Indians - Pauma & Yuima Reservation
Temet Aguilar, Chairperson
P.O. Box 369, Ext. 303 — Luiseno
Pauma Valley, CA, 92061
Phone: (760)742-1289
Fax: (760)742-3422

Pechanga band of Mission Indians
Anna Hoover, Cultural Analyst
P. O. Box 2183 — Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 8104
Fax: (951) 694-0446
ahoover@pechanga-nsn.gov

Pechanga Band of Mission Indians
Paul Macarro, Cultural Resources Manager
P.O. Box 1477 — Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 8100
Fax: (951) 506-9491
pmacarro@pechanga-nsn.gov

Pechanga Band of Mission Indians
Mark Macarro, Chairperson
P.O. Box 1477 — Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6000
Fax: (951) 695-1778
striplett@pechanga-nsn.gov

Ramona Band of Mission Indians
John Gomez, Environmental Coordinator
P. O. Box 391670 — Cahuilla
Anza, CA, 92539
Phone: (951) 763 - 4105
Fax: (951) 763-4325
jgomez@ramonatribe.com

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

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Grand Terrace Grand Crossing and Grand Terrace De Berry Projects, San Bernardino County.

Native American Heritage Commission
Tribal Consultation List
San Bernardino County
1/10/2017

Rincon Band of Mission Indians
Jim McPherson, Tribal Historic Preservation Officer
1 West Tribal Road — Luiseno
Valley Center, CA, 92082
Phone: (760)749-1051
Fax: (760)749-5144
vwhipple@rincontribe.org

Rincon Band of Mission Indians
Bo Mazzetti, Chairperson
1 West Tribal Road — Luiseno
Valley Center, CA, 92082
Phone: (760)749-1051
Fax: (760)749-5144
bomazzetti@aol.com

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 — Kitanemuk
Newhall, CA, 91322 — Serrano
Phone: (760)885-0955 — Tataviam
tsen2u@hotmail.com

San Manuel Band of Mission Indians
Lee Clauss, Director of Cultural Resources
26569 Community Center Drive — Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
Fax: (909) 864-3370
lclauss@sanmanuel-nsn.gov

Santa Rosa Band of Mission Indians
Steven Estrada, Chairperson
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951)659-2700
Fax: (951)659-2228

Serrano Nation of Mission Indians
Goldie Walker, Chairperson
P.O. Box 343 — Serrano
Patton, CA, 92369
Phone: (909)528-9027

Soboba Band of Luiseno Indians
Carrie Garcia, Cultural Resources Manager
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92583 — Luiseno
Phone: (951)654-2765
Fax: (951)654-4198
carrieg@soboba-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla
San Jacinto, CA, 92581 — Luiseno
Phone: (951)663-5279
Fax: (951)654-4198
jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Rosemary Morillo, Chairperson
P. O. Box 487 — Cahuilla
San Jacinto, CA, 92583 — Luiseno
Phone: (951) 654 - 2765
Fax: (951) 654-4198
rmorillo@soboba-nsn.gov

Torres-Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P.O. Box 1160 — Cahuilla
Thermal, CA, 92274
Phone: (760)399-0022,Ext.1213
Fax: (760)397-8146
mmirelez@tmdci.org

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Grand Terrace Grand Crossing and Grand Terrace De Berry Projects, San Bernardino County.

January 17, 2017

Jeff Grubbe, Chairperson
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA 92264

RE: Grand Terrace Grand Crossing and Grand Terrace De Berry Projects
48 Acres in the City of Grand Terrace
San Bernardino County, California
CRM TECH Contract #3168

Dear Mr. Grubbe:

I am writing to bring your attention to ongoing CEQA-compliance studies for the proposed projects referenced above, which entail the construction of a multi-family residential community on approximately 48 acres of undeveloped land located just east of the I-215 Freeway between De Berry and Pico Streets in the City of Grand Terrace. The accompanying map, based on the USGS San Bernardino South, Calif., 7.5' quadrangle, depicts the location of both project areas in Sections 5 and 6, T2S R4W, SBBM.

According to records on file at the Eastern Information Center (EIC) and South Central Coastal Information Center (SCCIC), there are no known historical/archaeological sites within the project boundaries. Outside the project boundaries but within a one-mile radius, EIC and SCCIC records indicate that 98 historical/archaeological sites and three isolates—i.e., localities with fewer than three artifacts—were previously identified. Twenty of these sites and two of the isolates were of prehistoric−i.e., Native American−origin, consisting of bedrock milling features, a few habitation sites, several rock shelters, and yoni features. These sites were concentrated among granitic boulder outcrops in the La Loma Hills and along the Santa Ana River to the west of the project location.

The prehistoric site closest to the project location, 36-019816, consisted of three bedrock milling features and a rock shelter. It was recorded about 0.7 mile west of the southwestern project area. The two isolates were described as a granite mano and three mano fragments. The other 78 sites and the third isolate dated to the historic period and included buildings, structural remains, bridges, canals, refuse scatters, roads, railroads, and electrical power facilities and transmission lines.

In a letter dated January 10, 2017, the Native American Heritage Commission reports that the sacred lands file search identified no Native American cultural resources within the subject property, but recommends that local Native American groups be contacted for further information (see attached). Therefore, as part of the cultural resources study for this project, I am writing to request your input on potential Native American cultural resources in or near the project area.

Please respond at your earliest convenience if you have any specific knowledge of sacred/religious sites or other "tribal cultural resources" in or near the project area, or any other information to consider during the cultural resources investigations. Any information or concerns may be

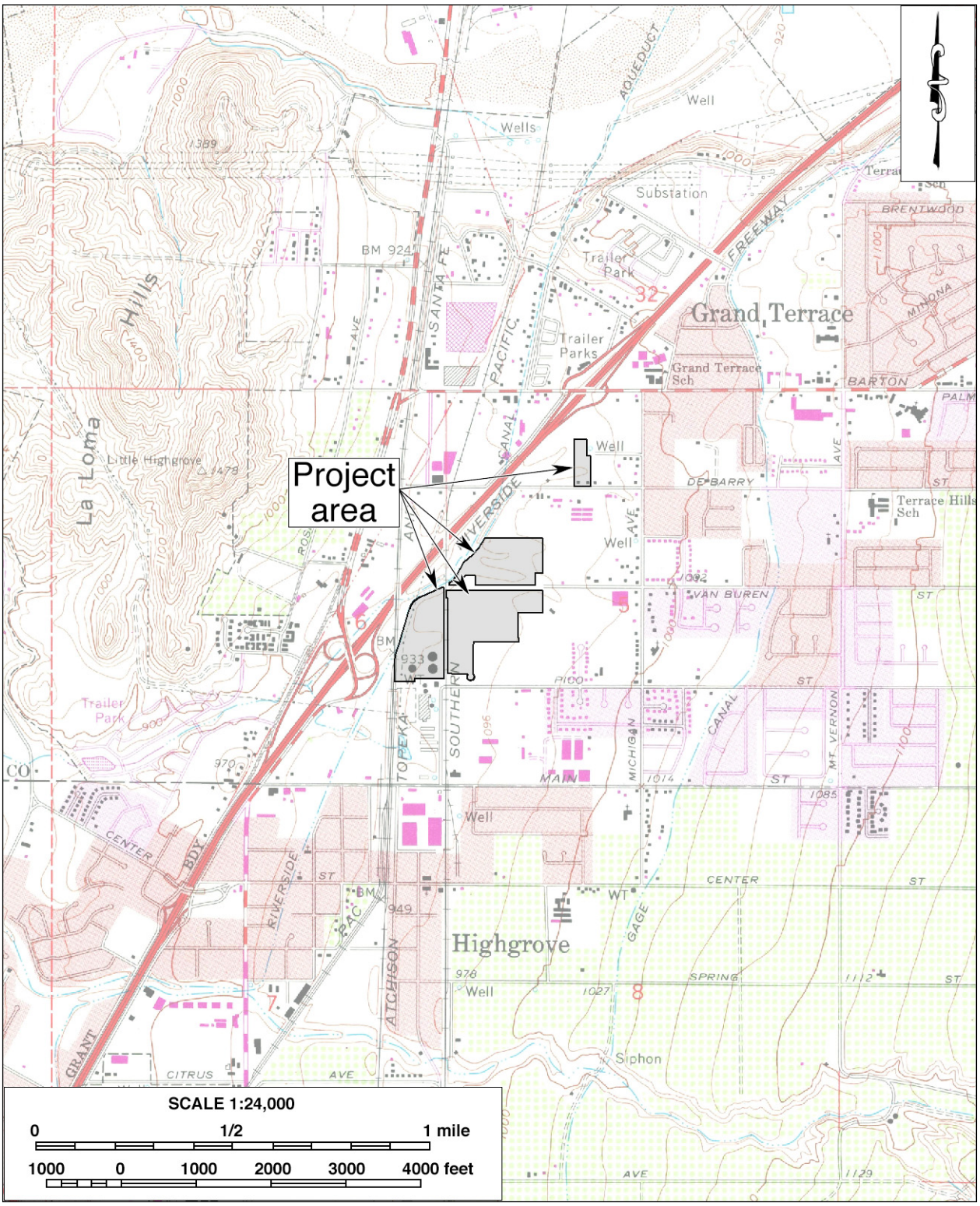
forwarded to CRM TECH by telephone, e-mail, facsimile, or standard mail. Requests for documentation or information we cannot provide will be forwarded to our client and/or the lead agency, namely the City of Grand Terrace.

We would also like to clarify that, as the cultural resources consultant for the project, CRM TECH is not involved in the AB 52-compliance process or in government-to-government consultations. The purpose of this letter is to seek any information that you may have to help us determine if there are cultural resources in or near the project area that we should be aware of. Thank you for your time and effort in addressing this important matter.

Respectfully,

Nina Gallardo
Project Archaeologist/Native American liaison
CRM TECH
Email: ngallardo@crmtech.us

Encl.: NAHC response letter and project location map


Project area
Grand Terrace
Highgrove
Well
Wells
Substation
Trailer Park
Trailer Parks
Grand Terrace Sch
Terrace Hills Sch
Siphon
Little Highgrove
La Loma Hills
SCALE 1:24,000
0 1/2 1 mile
1000 0 1000 2000 3000 4000 feet

From: Nina Gallardo <ngallardo@crmtech.us>
Sent: Tuesday, January 17, 2017 10:55 AM
To: Joseph Ontiveros; 'Jessica Valdez'
Subject: Cultural Study & Participation in Fieldwork for the Grand Terrace Grand Crossing and Grand Terrace De Berry Projects in the City of Grand Terrace, San Bernardino County (CRM TECH No. 3168)

Hello,

I'm emailing to inform you that CRM TECH will be conducting a cultural study for the Grand Terrace Grand Crossing and Grand Terrace De Berry Projects in the City of Grand Terrace, San Bernardino County (CRM TECH # 3168). I'm contacting you to see if the tribe would like to participate in the field survey for these projects this Wednesday (1/18/17) morning at 7 am. We apologize for the short notice on the fieldwork notification. CRM TECH would appreciate any information regarding the project area. We will be sending an NA scoping letter with additional information very soon. I'm attaching the proposed project area map and information.

Thank you for your time and input on this project.

Nina Gallardo

From: Nina Gallardo <ngallardo@crmtech.us>
Sent: Tuesday, January 17, 2017 10:58 AM
To: Tony Foussat; ahoover@pechanga-nsn.gov
Subject: Cultural Study & Participation in Fieldwork for the Grand Terrace Grand Crossing and Grand Terrace De Berry Projects in the City of Grand Terrace, San Bernardino County (CRM TECH No. 3168)

Hello,

I'm emailing to inform you that CRM TECH will be conducting a cultural study for the Grand Terrace Grand Crossing and Grand Terrace De Berry Projects in the City of Grand Terrace, San Bernardino County (CRM TECH # 3168). I'm contacting you to see if the tribe would like to participate in the field survey for these projects this Wednesday (1/18/17) morning at 7 am. We apologize for the short notice on the fieldwork notification. CRM TECH would appreciate any information regarding the project area. We will be sending an NA scoping letter with additional information very soon. I'm attaching the proposed project area map and information.

Thank you for your time and input on this project.

Nina Gallardo

From: Jessica Valdez <JValdez@soboba-nsn.gov>
Sent: Tuesday, January 17, 2017 4:57 PM
To: Nina Gallardo
Cc: Joseph Ontiveros

Subject: RE: Cultural Study & Participation in Fieldwork for the Grand Terrace Grand Crossing and Grand Terrace De Berry Projects in the City of Grand Terrace, San Bernardino County (CRM TECH No. 3168)

Nina,

Thank you for the notification. The Soboba wishes to defer this project over to the San Manuel Band of Mission Indians, and requests notification of any inadvertent discoveries during the course of the project.

Jessica Valdez
Soboba Band of Luiseño Indians
Cultural Resource Department
Office: (951)-654-5544 Ext: 4139
JValdez@soboba-nsn.gov

From: Anna Hoover <ahoover@pechanga-nsn.gov>
Sent: Thursday, January 19, 2017 11:58 AM
To: Nina Gallardo
Cc: Tony Foussat
Subject: RE: NA Scoping Letter for the Grand Terrace Grand Crossing and Grand Terrace De Berry Projects in the City of Grand Terrace, San Bernardino County (CRM TECH No. 3168)

Hi Nina,

Thank you for contacting the Pechanga Band of Luiseño Indians regarding the above project. At this time, Pechanga defers to a closer tribe as the project is located outside our Traditional Territory. We have no comments at this time.

Thank you and have a pleasant day!

Anna M. Hoover
Deputy THPO/Cultural Analyst
Pechanga Band of Luiseno Indians
P.O. Box 2183
Temecula, CA 92593

951-770-8104 (O)
951-694-0446 (F)
951-757-6139 (C)
ahoover@pechanga-nsn.gov

CABAZON BAND OF MISSION INDIANS ~Indio••CA~

January 24, 2017

Nina Gallardo
CRM TECH
1016 E. Cooley Drive, Suite A/B
Colton, CA 92324

Re.: Grand Terrace Grand Crossing and Grand Terrace De Berry Projects
48 Acres in the City of Grand Terrace
San Bernardino County, California
CRM TECH Contract #3168

Dear Ms. Gallardo:

Thank you for contacting the Cabazon Band of Mission Indians concerning cultural resource information relative to the above referenced project.

The project is located outside of the Tribe's current reservation boundaries. The Tribe has no specific archival information on the site indicating that it may be a sacred/religious site or other site of Native American traditional cultural value within the project area.

We look forward to continued collaboration in the preservation of cultural resources or areas of traditional cultural importance.

Best regards,

Judy Stapp
Director of Cultural Affairs

RECEIVED
JAN 27 2017

84-245 INDIO SPRINGS PARKWAY • INDIO, CALIFORNIA 92203-3499 • 760.342.2593 • FAX: 760.347.7880

From: THPO Consulting <ACBCI-THPO@aguacaliente.net>
Sent: Friday, January 27, 2017 2:09 PM
To: Nina Gallardo
Subject: Grand Terrace Grand Crossing and Grand Terrace De Berry Projects

Good Morning, Ms. Gallardo,

Thank you for including us in the consultation process for this project. However, a records check of the ACBCI cultural registry revealed that this project is not located within the Tribe's Traditional Use Area (TUA). Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts.

Have a good day,

Victoria Harvey M.A., R.P.A.
Archaeological Monitoring Coordinator, Agua Caliente Band of Cahuilla Indians
760-699-6981 (Desk), (760) 406-1909 (Cell)
vharvey@aguacaliente.net

GABRIELENO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The San Gabriel Band of Mission Indians
Recognized by the State of California as the aboriginal tribe of the Los Angeles basin

Dear Nina Gallardo,

Subject: Grand Terrace Grand Crossing and Grand Terrace De Berry Projects 48 Acres in the City of Grand Terrace San Bernardino County, California CRM TECH Contract #3168

"The project locale lies in an area where the Ancestral & traditional territories of the Kizh(Kitc) Gabrieleño villages, adjoined and overlapped with each other, at least during the Late Prehistoric and Protohistoric Periods. The homeland of the Kizh (Kitc) Gabrieleños , probably the most influential Native American group in aboriginal southern California (Bean and Smith 1978a:538), was centered in the Los Angeles Basin, and reached as far east as the San Bernardino-Riverside area. The homeland of the Serranos was primarily the San Bernardino Mountains, including the slopes and lowlands on the north and south flanks. Whatever the linguistic affiliation, Native Americans in and around the project area exhibited similar organization and resource procurement strategies. Villages were based on clan or lineage groups. Their home/ base sites are marked by midden deposits, often with bedrock mortars. During their seasonal rounds to exploit plant resources, small groups would migrate within their traditional territory in search of specific plants and animals. Their gathering strategies often left behind signs of special use sites, usually grinding slicks on bedrock boulders, at the locations of the resources. Therefore, in order to protect our resources we're requesting one of our experienced & certified Native American monitor as well as a Archeo- Monitor to be on site during any & all ground disturbances (this includes but is not limited to pavement removal, pot-holing, or grubbing, auguring, boring, grading, excavation and trenching).

In all cases, when the NAHC states there are "No" records of sacred sites" in the subject area; they always refer the contractors back to the Native American Tribes whose tribal territory the project area is in. This is due to the fact, that the NAHC is only aware of general information on each California NA Tribe they are "NOT " the "experts" on our Tribe. Our Elder Committee & Tribal Historians are the experts and is the reason why the NAHC will always refer contractors to the local tribes.

In addition, we are also often told that an area has been previously developed or disturbed and thus there are no concerns for cultural resources and thus minimal impacts would be expected. I have two major recent examples of how similar statements on other projects were proven very inadequate. An archaeological study claimed there would be no impacts to an area adjacent to the Plaza Church at Olvera Street, the original Spanish settlement of Los Angeles, now in downtown Los Angeles. In fact, this site was the Gabrieleno village of Yangna long before it became what it is now today. The new development wrongfully began their construction and they, in the process, dug up and desecrated 118 burials. The area that was dismissed as culturally sensitive was in fact the First Cemetery of Los Angeles where it had been well documented at the Huntington Library that 400 of our Tribe's ancestors were buried there along with the founding families of Los Angeles (Pico's, Sepulveda's, and Alvarado's to name a few). In addition, there was another inappropriate study for the development of a new sports complex at Fedde Middle School in the City of Hawaiian Gardens could commence. Again, a village and burial site were desecrated despite their mitigation measures. Thankfully, we were able to work alongside the school district to quickly and respectfully mitigate a mutually beneficial resolution.

Given all the above, the proper thing to do for your project would be for our Tribe to monitor ground disturbing construction work. Native American monitors and/or consultant can see that cultural resources are treated appropriately from the Native American point of view. Because we are the lineal descendants of the vast area of Los Angeles and Orange Counties, we hold sacred the ability to protect what little of our culture remains. We thank you for taking seriously your role and responsibility in assisting us in preserving our culture.

With respect,

Please contact our office regarding this project to coordinate a Native American Monitor to be present. Thank You

Andrew Salas, Chairman
Cell (626) 926-4131

Addendum: clarification regarding some confusions regarding consultation under AB52:

AB52 clearly states that consultation must occur with tribes that claim traditional and cultural affiliation with a project site. Unfortunately, this statement has been left open to interpretation so much that neighboring tribes are claiming affiliation with projects well outside their traditional tribal territory. The territories of our surrounding Native American tribes such as the Luiseno, Chumash, and Cahuilla tribal entities. Each of our tribal territories has been well defined by historians, ethnographers, archaeologists, and ethnographers – a list of resources we can provide upon request. Often, each Tribe as well educates the public on their very own website as to the definition of their tribal boundaries. You may have received a consultation request from another Tribe. However we are responding because your project site lies within our Ancestral tribal territory, which, again, has been well documented. What does Ancestrally or Ancestral mean? The people who were in your family in past times, Of, belonging to, inherited from, or denoting an ancestor or ancestors http://www.thefreedictionary.com/ancestral. . If you have questions regarding the validity of the "traditional and cultural affiliation" of another Tribe, we urge you to contact the Native American Heritage Commission directly. Section 5 section 21080.3.1 (c) states "…the Native American Heritage Commission shall assist the lead agency in identifying the California Native American tribes that are traditionally and culturally affiliated with the project area." In addition, ***please see the map below.***

CC: NAHC

APPENDIX 1: Map 1-2; Bean and Smith 1978 map.

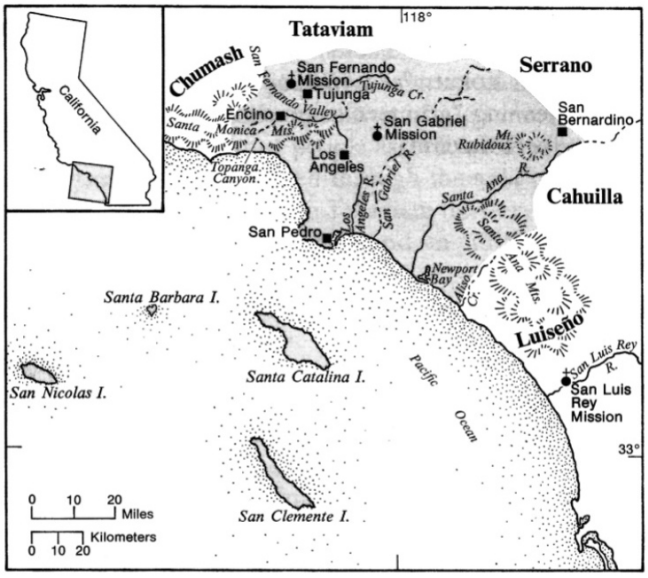


Fig. 1. Tribal territory.

The United States National Museum's Map of Gabrielino Territory:

Bean, Lowell John and Charles R. Smith
1978 Gabrielino IN *Handbook of North American Indians, California*, Vol. 8, edited by R.F. Heizer, Smithsonian Institution Press, Washington, D.C., pp. 538-549

From: SMConsultation <SMConsultation@sanmanuel-nsn.gov>
Sent: Friday, March 3, 2017 8:07 PM
To: 'Nina' (ngallardo@crmtech.us)
Cc: Ann Brierty
Subject: FW: NA Scoping Letter for the Grand Terrace Grand Crossing and Grand Terrace De Berry Projects in the City of Grand Terrace, San Bernardino County (CRM TECH No. 3168)

March 3, 2017

Re: NA Scoping Letter for the Grand Terrace Grand Crossing and Grand Terrace De Berry Projects in the City of Grand Terrace, San Bernardino County (CRM TECH No. 3168)

Dear Ms. Gallardo:

Thank you for contacting the San Manuel Band of Mission Indians (SMBMI) regarding the above referenced project(s). SMBMI appreciates and looks forward to the opportunity to review the project documentation, of which a notification letter was received by our Cultural Resources Management Department on January 30, 2017. By this e-mail, SMBMI requests to consult with the City of Grand Terrace, pursuant to CEQA (as amended, 2015) and CA PRC 21080.3.1. The proposed project area exists within Serrano ancestral territory and, therefore, is of interest to the Tribe. SMBMI is particularly concerned as this proposed project is in proximity to the Santa Ana River. Even though the records search did not identify "no known historical/archaeological sites within the project area boundaries", the record search did identify a greater number of historic/archaeological sites within a one-mile radius, these are recognized as significant to the Tribe.

Due to the nature and location of the proposed project, SMBMI respectfully requests that:

_X_. A records search of the Sacred Lands Files managed by the CA Native American Heritage Commission and a site file and associated literature search at the appropriate California Historical Resources Information System Information Center to identify any and all recorded cultural resources within a 1-mile radius of the proposed project location(s), as well as general background research using GLO maps, Sanborn maps, historical atlases, city and state records, and other historical documents. Noting this has been completed by CRM Tech, please forward to Tribe the DPR forms, and any/all cultural resources assessment reports.
_X_. Additional maps/illustrations be provided, specifically including:
_X_ an aerial map;
_X_ a USGS quadrangle map;
_X_ a map indicating the search radius of the background research, as well as the locations where previous studies were conducted and where known historic resources are located;
_X_ photographs of the proposed project area;
_X_ engineering/design plans for the proposed project, especially plans indicating where ground-disturbing activities will occur and to what horizontal and vertical extent.
___. A Phase I archaeological investigation of the totality (100%) of the proposed project's area of potential effect (APE) via the employ of a number of methods, including pedestrian survey that

employs a transect interval of no more than 10 meters, shovel test probes, remote sensing, and/or deep testing via controlled units or trenching of appropriate landscapes. The use of specific field methods and techniques must be justifiable and dependent upon the type and amount of ground cover present (visibility), the topographic setting (degree of slope, proximity to water, etc.), past land use (degree of prior disturbance), and probability for encountering previously undocumented resources during the proposed project (low, moderate, high probability). We strongly recommend that visibility must equal 50% or greater of the ground surface area to use pedestrian survey/reconnaissance only. Areas that have not been disturbed in the past and/or high probability areas must be explored using sub-surface testing methods in addition to pedestrian survey. Additionally, we ask that there be no collection of artifacts or excavation of features during any Phase I archaeological survey.

Please understand that receipt of this letter does not constitute "meaningful" tribal consultation nor does it conclude the consultation process. This letter is merely intended to initiate consultation between the Tribe and lead agency, which may be followed up with additional emails, phone calls or face-to-face consultation if deemed necessary. Please inform the City of Grand Terrace and your firm that SMBMI expects consultation and that SMBMI will be requesting a number of items in preparation for and as mitigation measures are drafted for this proposed project. Among those items:

* For all ground-disturbing activity a Native American participant/monitor will work alongside the archaeological monitor that you have recommended. SMBMI participant/monitor will be hired by the developers environmental or CRM firm consultant(s) or the construction company, from a list of SMBMI approved monitors. The monitors will be present during all grubbing, grading, demolition, excavation, trenching for utilities, and landscaping.
* Language for any permitting by the City of Grand Terrace will include provisions for discoveries of Tribal cultural items and human remains/cremations. Language will include protocols to follow in the event that discoveries are made either in surface context or in subsurface contexts.
* Language for any permitting by the City of Grand Terrance will include plans made for the curation or other final disposition of any items collected during the project.
* Should CRM TECH decide to undertake archaeological testing in preparation for this project, SMBMI respectfully requests that a SMBMI participant/monitor be present during the testing phase.

Additionally, the CRM Department asks that the requested information be disseminated digitally via e-mail, FTP site, or some other similar technology. Once again, the San Manuel Band of Mission Indians appreciates the opportunity to comment on this proposed project and looks forward to consulting with the City of Grand Terrace, lead agency.

If you should have any further questions with regard to this matter, please do not hesitate to contact me at your convenience, as I will be your Point of Contact (POC) for SMBMI with respect to this project.

Respectfully,

Ann Brierty, San Manuel Band of Mission Indians,
Cultural Resources Management Department, Cultural Resources Field Manager
O: (909) 864.8933 x3250 M: (909) 649.1585 F: (909) 425.1409

ATTACHMENT B

2017 RECONNAISSANCE-LEVEL SURVEY

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

September 13, 2017

Stephanie Standerfer
Albert Webb and Associates
3788 McCray Street
Riverside, CA 92506

Re: Historical, Archaeological, and Paleontological Resources Reconnaissance
Grand Crossing Specific Plan/Taylor Street-Commerce Way Alignment Project
City of Grand Terrace, San Bernardino County, California
CRM TECH Contract No. 3241

Dear Ms. Standerfer:

At your request, CRM TECH has completed a historical, archaeological, and paleontological resources reconnaissance for the proposed Grand Crossing Specific Plan in the City of Grand Terrace, San Bernardino County, California (Fig. 1). The planning area consists of approximately 120.4 acres of partially developed semi-rural land on the southwestern edge of the city, located generally southeast of the Interstate 215 Freeway and north of Main Street, in the west half of Section 5 and the east half of Section 6, T2S R4W, San Bernardino Baseline and Meridian (Figs. 1, 2). As you know, nearly half of the planning area, totaling approximately 56 acres, was previously surveyed for historical and archaeological resources at an intensive level by CRM TECH earlier this year, between January and March (Tang et al. 2017a; 2017b; Fig. 2).

The City of Grand Terrace, as the lead agency under the California Environmental Quality Act (CEQA), required this study as part of the environmental review process for the specific plan. The purpose of the study is to identify and inventory all potential historical, archaeological, and paleontological resources within the planning area for future consideration in the planning process. In order to accomplish this objective, CRM TECH reviewed the previously completed historical/archaeological resources records search, conducted a paleontological records search and historical background research, and carried out a reconnaissance-level field survey. This letter presents a brief summary of the methods and results of these research procedures.

HISTORICAL/ARCHAEOLOGICAL RESOURCES RECORDS SEARCH

The historical/archaeological resources records search was originally completed on January 9 and 11, at the South Central Coastal Information Center (SCCIC) and the Eastern Information Center (EIC) of the California Historical Resources Information System, which are the official repositories of cultural resource records for the Counties of San Bernardino and Riverside, respectively. While the planning area lies entirely within San Bernardino County, the one-mile scope of the records search extended into Riverside County, necessitating record search at both information centers.

During the records search, CRM TECH archaeologist Nina Gallardo, B.A., examined maps and records on file at the SCCIC and the EIC for previously identified cultural resources and existing cultural resources studies in the project vicinity. Previously identified cultural resources include

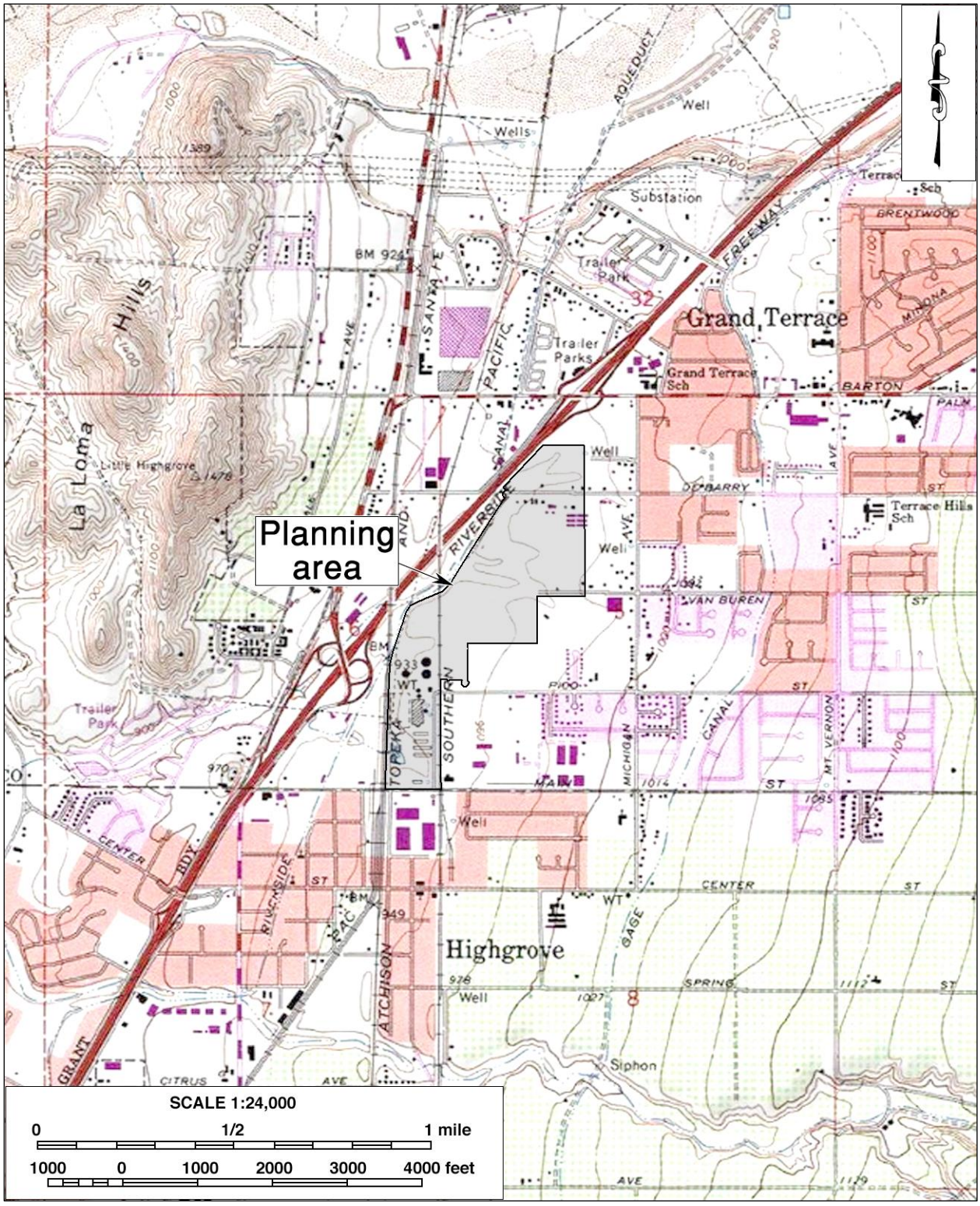


Figure 1. Project location. (Based on USGS San Bernardino South, Calif., 7.5' quadrangle, 1980 edition)

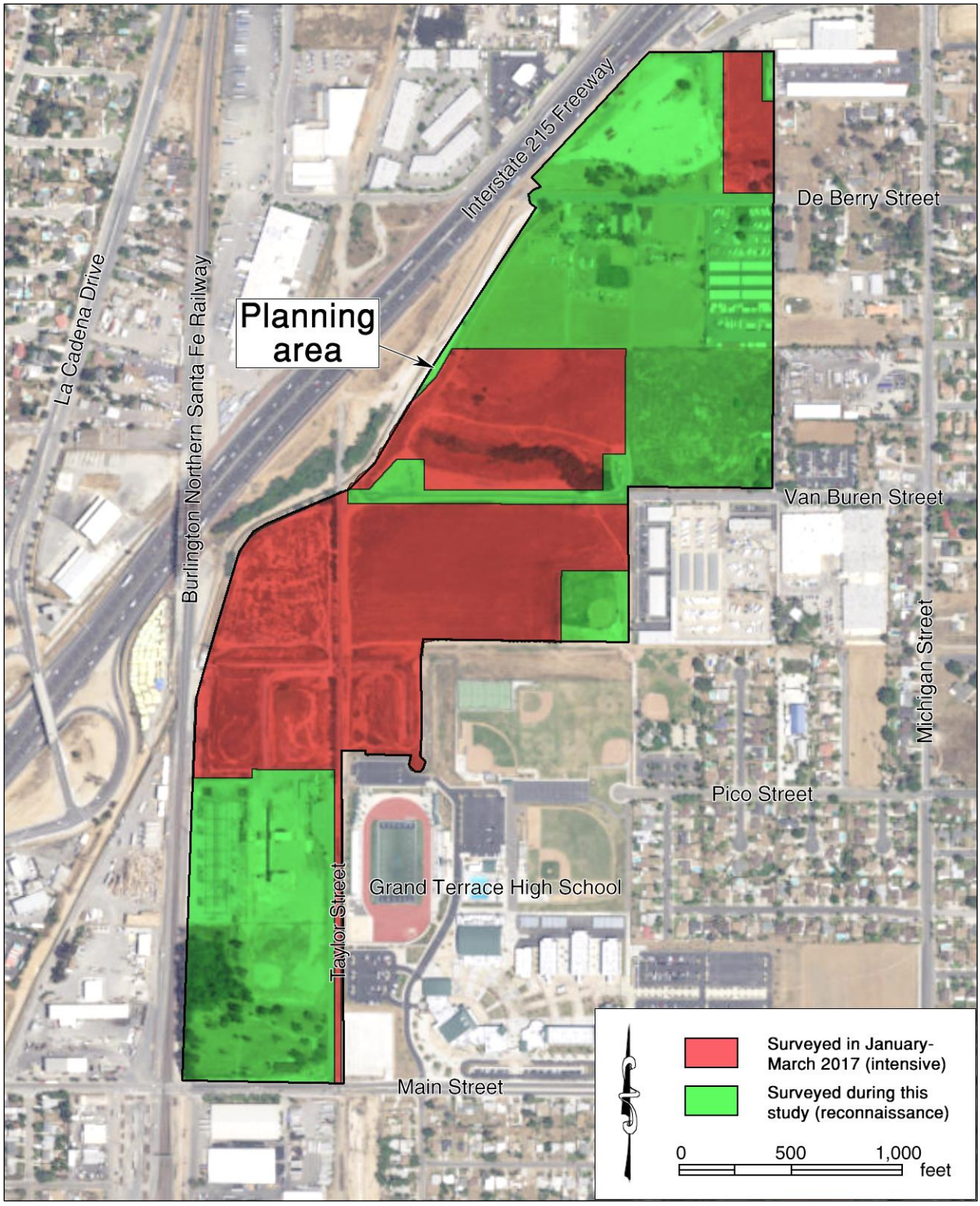


Figure 2. Survey coverage.

properties designated as California Historical Landmarks, Points of Historical Interest, or San Bernardino/Riverside County Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Inventory.

According to SCCIC and EIC records, most of the planning area, lying to the east of Taylor Street, was covered by a large-scale archaeological resources survey completed in 1975, but no cultural resources were recorded within the planning area boundaries during that study (Portillo 1975:3). However, during other similar studies that have been completed in or near the planning area since then, six historic-period sites were recorded as lying within, partially within, or adjacent to the planning area, as listed below (Fig. 3; see App. 1 for record forms). No prehistoric—i.e., Native American—cultural resources were identified within or adjacent to the planning area. The nearest known prehistoric archaeological resources were found on the slopes of the La Loma Hills to the west, at least a half-mile from the planning area.

Riverside Upper Canal/Riverside-Warm Creek Canal (33-004495/36-007169)

In 1886, the Riverside Water Company constructed the Riverside-Warm Creek Canal (36-007169) along the northwestern edge of the planning area (Scott 1977:77). Some two miles to the southwest, the Riverside-Warm Creek Canal merged into the Riverside Upper Canal (33-004495), which was built in 1870 as the first water supply line for the Riverside colony (*ibid.*:67, 73). The combined course of the Riverside Upper Canal and the Riverside-Warm Creek Canal became known in later years as the Riverside Canal.

Despite the important role it played in the early development of the present-day City of Riverside, the entire Riverside Canal system, including the Riverside Upper Canal/Riverside-Warm Creek Canal, was determined not to be eligible for listing in the National Register of Historic Places during a systematic historic significance evaluation in 2001 (Gustafson and McGrath 2001:9, 12). The determination was based on the canal system's overall lack of historic integrity due to substantial alterations along its course, although the 2001 study further concluded that it might become eligible if the integrity was restored (*ibid.*:9).

Southern Pacific Railroad (36-006101)

The former course of the Southern Pacific Railroad (36-006101) crosses the central portion of the planning area. A branch line between San Bernardino and Riverside, it was constructed in 1888 and removed in this area in 2011-2012 (Tibbet 2009-2010a:2; Google Earth 2011-2012). Due to the loss of historic integrity, various segments of the Southern Pacific Railroad have been previously found not to be eligible for the National Register of Historic Places or the California Register of Historical Resources (Harper 2008a:1; Tibbet 2009-2010a:2).

During the CRM TECH studies earlier this year, it was observed that nearly all of the physical components of the Southern Pacific Railroad have been removed within that portion of the planning area, leaving little more than a gravel path marking its former alignment (Tang et al. 2017b:14). As a result, this segment of the Southern Pacific Railroad no longer retains any historical characteristics to contribute to the potential significance or integrity of Site 36-006101 as a whole, and thus does not constitute a potential "historical resource," as defined by CEQA (*ibid.*:16).

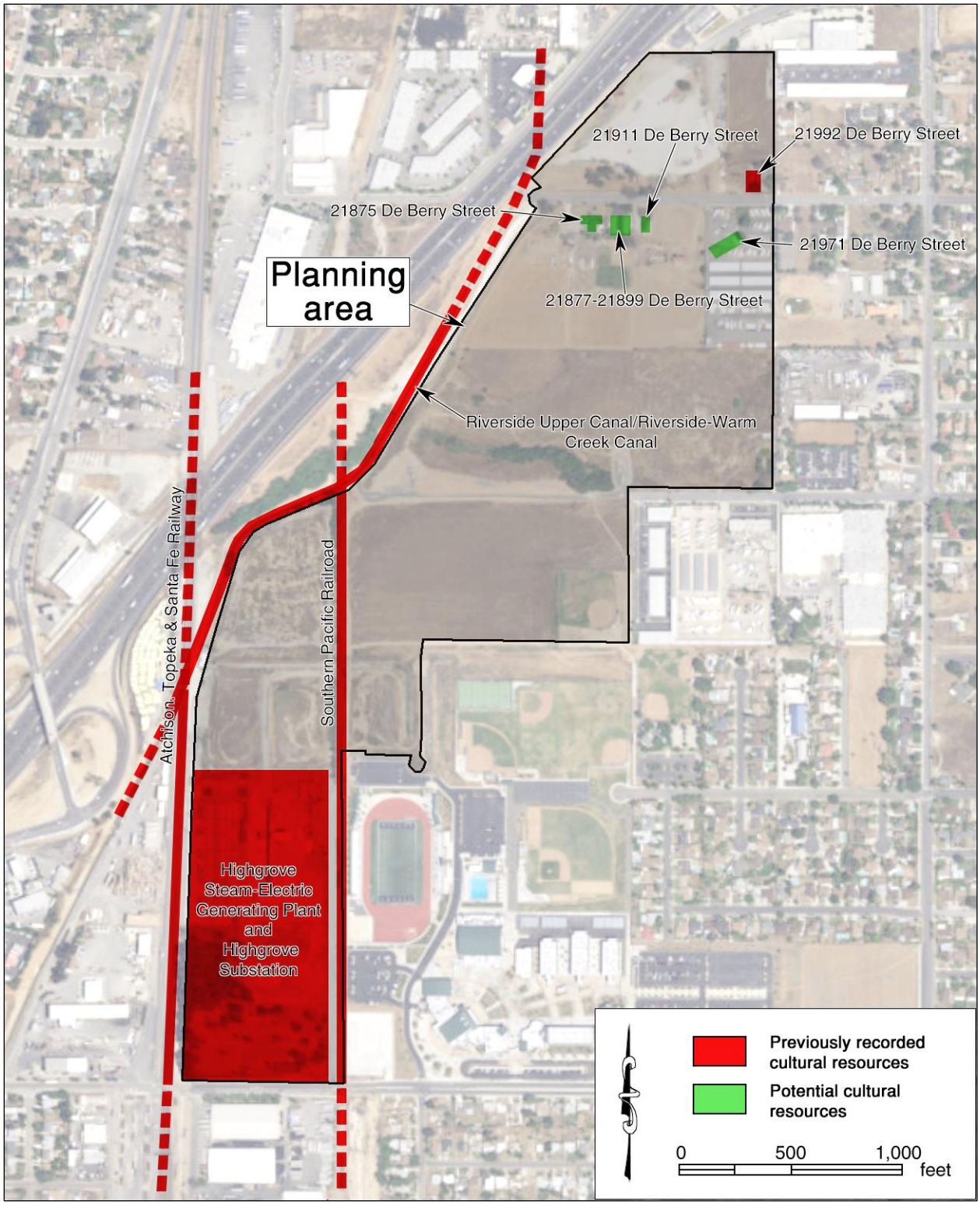


Figure 3. Locations of recorded and potential* historical/archaeological resources within or adjacent to the planning area.

* See further discussion below.

Atchison, Topeka, and Santa Fe Railway (36-006847)

Adjacent to portions of the western boundary of the planning area, the former Atchison, Topeka and Santa Fe Railway (36-006847; now the Burlington Northern Santa Fe Railway) was constructed in 1883 by the California Southern Railroad, the first Santa Fe subsidiary in California, as a part of its mainline from San Diego to San Bernardino (Bryant 1974:98-99; Serpico 1988:18-19). A momentous event in late 19th century California history, the completion of the California Southern Railroad marked the end of the Southern Pacific Railroad's virtual monopoly on modern transportation in the state, which in turn triggered a phenomenal land boom in southern California during the 1880s (Bryant 1974:98-101; Serpico 1988:18-22).

Although its historic significance can hardly be overstated, various segments of the Atchison, Topeka, and Santa Fe Railway that have been previously recorded and evaluated, including the segment adjacent to the planning area, were deemed ineligible for the National Register of Historic Places or the California Register of Historical Resources by various previous studies (OHP 1995; Horne 1998; Tang et al. 2007; 2009; Harper 2008b; Tibbet 2009-2010b). Again, these conclusions were based primarily on the lack of proper historic integrity to relate to the potential period of significance.

Highgrove Steam-Electric Generating Plant (36-021711) and Highgrove Substation (36-021712)

Recorded in 2006 as two separate but contiguous sites in the southwest portion of the planning area, the Highgrove Steam-Electric Generating Plant (36-021711) and the Highgrove Substation (36-021712) were both built in 1951-1955, along with an associated seven-acre private park known today as Cage Park (Herbert and Brookshcar 2006a; 2006b; Tibbet 2009-2010c). The California Electric Power Company, which built these facilities, was founded in 1904 and merged with Southern California Edison in 1964 (Herbert and Brookshcar 2006a:2, 13; 2006b:2, 4). Edison decommissioned the plant in 1996, but the substation was left in operation (*ibid*.). Both sites were determined to be ineligible for the National Register of Historic Places or the California Register of Historical Resources during previous studies (Herbert and Brookshcar 2006a; 2006b; Tibbet 2009-2010c; 2009-2010d; LSA 2010).

Single-Family Residence at 21992 De Berry Street

Recorded during one of the CRM TECH studies earlier this year, the single-family residence at 21992 De Berry Street is a modest Minimal Traditional-style building that evidently dates to the early post-World War II era, circa 1945 (Tang et al. 2017a:14). The building was found not to meet any of the criteria for listing in the California Register of Historical Resources as a result of that study (*ibid*.:15).

HISTORICAL BACKGROUND RESEARCH

The historical background research was conducted by CRM TECH historian Terri Jacquemain, M.A., on the basis of published literature in local and regional history, historic maps dated 1876-1967, and aerial photographs taken in 1938-2016. These sources indicate that other than the various

roads, railroads, and canals crisscrossing the landscape, the planning area was used mainly for agricultural purposes, including citrus cultivation, during the historic period. (GLO 1876; 1877; USGS 1901-1967; NETR Online 1938-1978; Figs. 4-7). Except for the agricultural fields, two apparent farmsteads that were present by the mid-1930s, one on the south side of De Berry Street and the other at the site of the Highgrove Steam-Electric Generating Plant, represented the first notable development activities within the planning area (NETR Online 1938; Fig. 6).

During the post-World War II era, two clusters of new development appeared within the planning area (Fig. 7). In the southwestern portion, the Highgrove Steam-Electric Generating Plant and the Highgrove Substation were constructed in the 1950s (NETR Online 1938-1959; wikimapia.org n.d.). In the northeastern portion, a number of buildings had sprung up by then along both sides of De Berry Street, evidently representing additional rural residences and agriculture-related structures (NETR Online 1938-1959). Elsewhere in the planning area, farming operations remained the dominant land use less than a decade ago, when most of the agricultural fields were eventually abandoned (NETR Online 1959-2012; Google Earth 1995-2016).

PALEONTOLOGICAL RESOURCES RECORDS SEARCH

Paleontological records search services for this study were provided by the San Bernardino County Museum (SBCM) in Redlands and the Natural History Museum of Los Angeles County (NHMLAC) in Los Angeles (see App. 2). These institutions maintain regional paleontological locality inventories as well as supporting maps and documents. The records search results were used to identify known paleontological localities in the vicinity of the planning area.

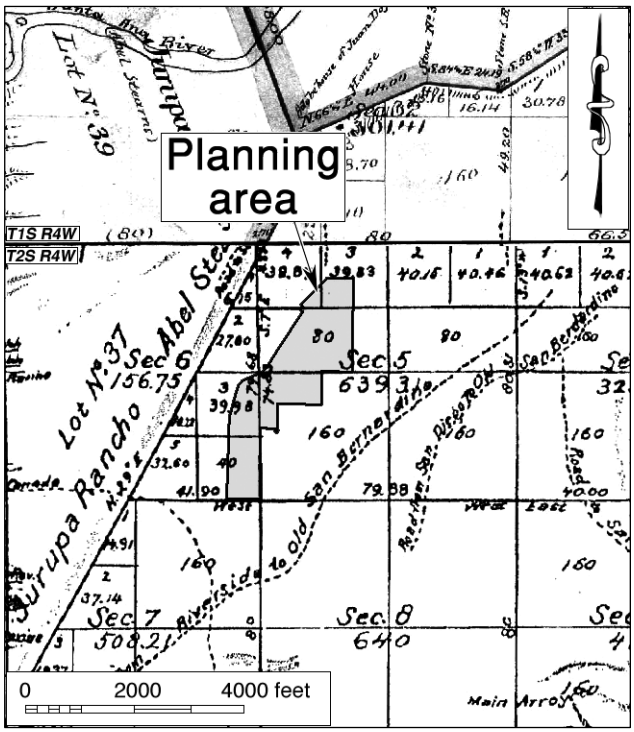


Figure 4. The planning area and vicinity in 1852-1877. (Source: GLO 1876; 1877)

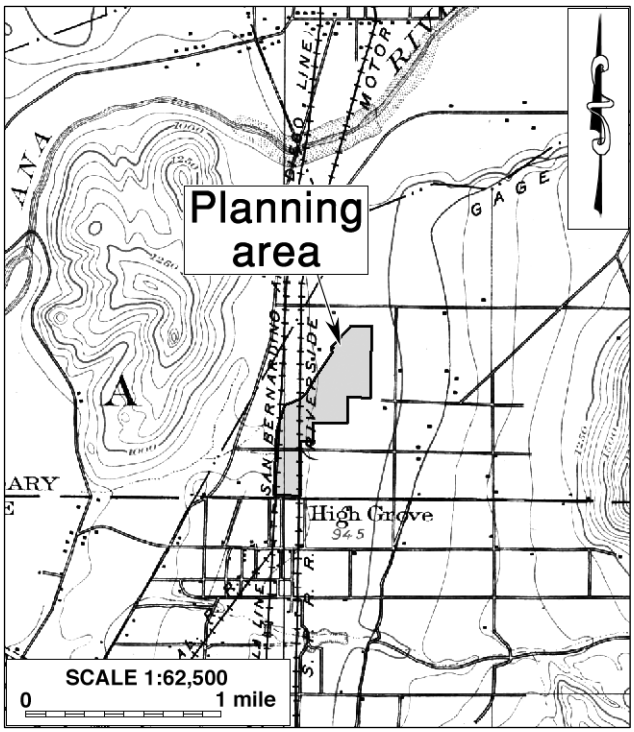


Figure 5. The planning area and vicinity in 1893-1894. (Source: USGS 1901)

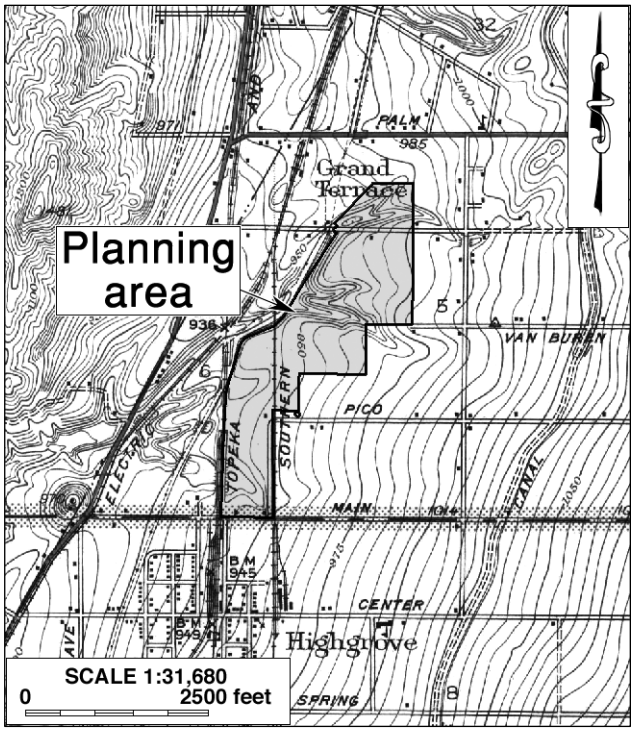


Figure 6. The planning area and vicinity in 1936-1938. (Source: USGS 1943)

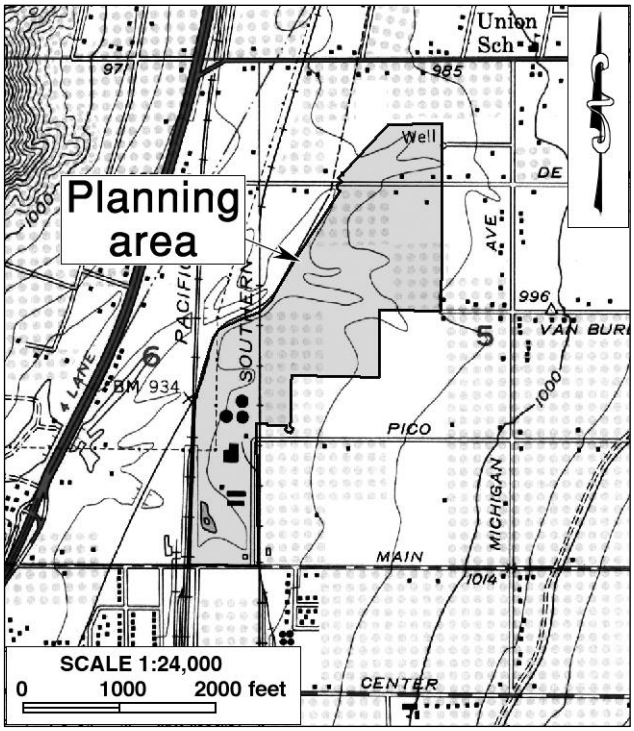


Figure 7. The planning area and vicinity in 1952-1954. (Source: USGS 1954)

The SBCM and the NHMLAC identified no paleontological localities within the planning area or within a one-mile radius (Gilbert 2017; McLeod 2017; see App. 2). McLeod (2017) finds the planning area to be located on surface deposits of older Quaternary alluvium, and thus considers shallow excavations at this location unlikely to uncover significant fossil vertebrate remains. However, he concludes that deeper excavation may encounter such remains (*ibid*.). Gilbert (2017) shows the planning area to be situated mostly on middle to early Pleistocene-age alluvium ($Qvof_3$) and late to middle Pleistocene-age alluvium (Qof_3; Fig. 8). He notes that the older alluvial fan deposits generally have a high potential to yield significant nonrenewable paleontological resources (Gilbert 2017).

FIELD SURVEY

On August 31, 2017, CRM TECH archaeologist Daniel Ballester, M.S., carried out the field reconnaissance by driving along each of the public roadways across the planning area and inspecting all built-environment features encountered and visible ground surface for any notable archaeological remains. Aided by the historical data summarized above, Ballester identified, in addition to the six previously recorded cultural resources, four buildings or groups of buildings that are evidently historical in origin (i.e., more than 45 years of age; Fig. 3). All of the buildings have been altered to some extent, most notably through replacement of windows, sidings, and roofs, but all of them retain at least a recognizable level of historical character (Fig. 9). These four properties are as follows:

- Single-family residence at 21875 De Berry Street;
- Two duplexes at 21877-21899 De Berry Street;

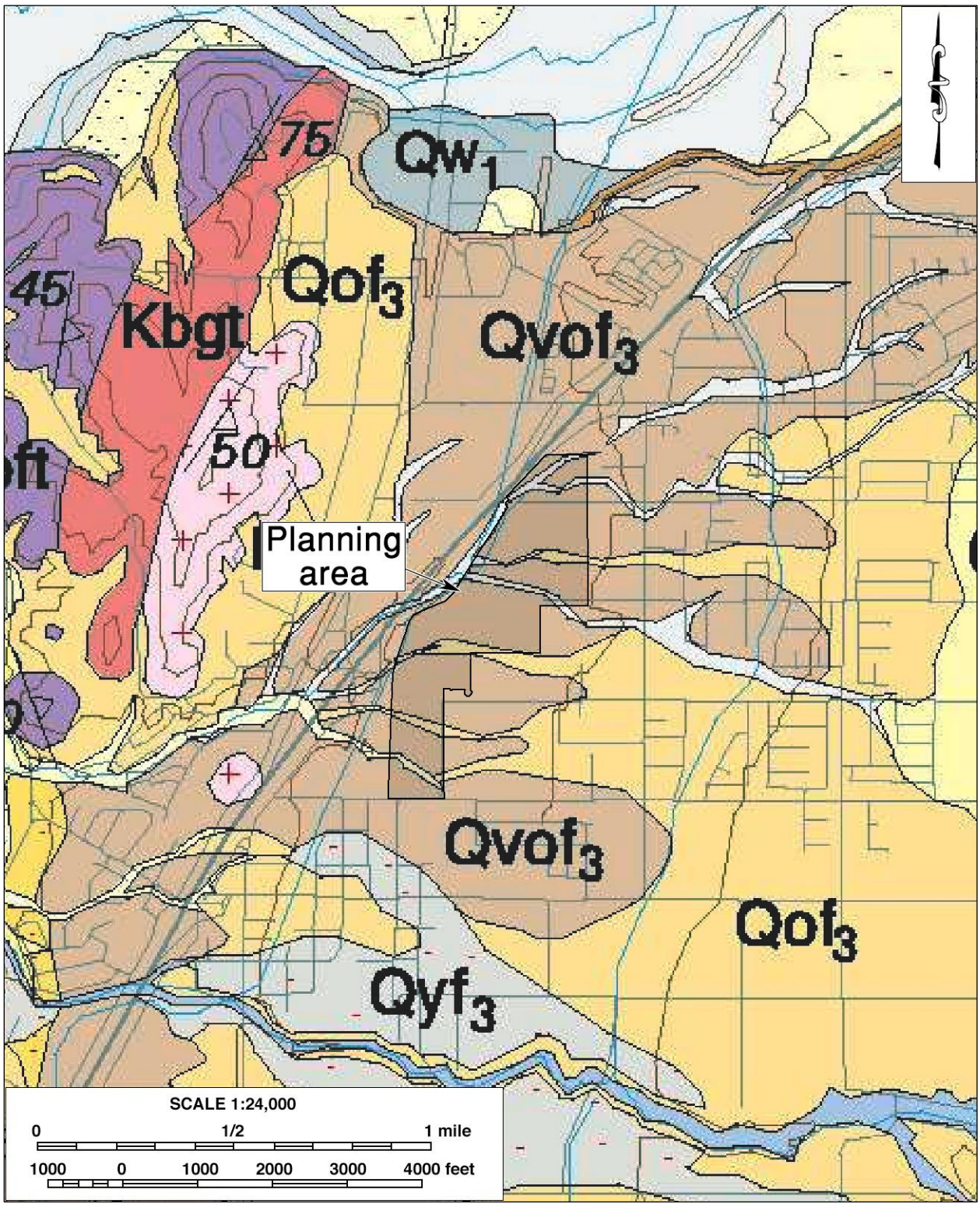


Figure 8. Geologic map of the planning area and vicinity. (Source: Morton and Miller 2006)

Figure 9. Potential historic buildings in the planning area: single-family residence at 21875 De Berry Street (*top*, view to the south), duplexes at 21877-21899 De Berry Street (*middle right*, view to the south), single-family residence with outbuilding at 21911 De Berry Street (*middle left*, view to the south), and former farm complex at 21971 De Berry Street (*bottom*, view to the southwest). (Photographs taken on August 31, 2017)

- Single-family residence with outbuilding at 21911 De Berry Street;
- Former farm complex at 21971 De Berry Street (now a part of A Storage Place).

As a part of the field survey, the previously recorded cultural resources within or adjacent to the planning area were visited to ascertain their current condition. Among them, the Highgrove Substation (36-021712) appears to be intact, but the adjacent Highgrove Steam-Electric Generating Plant (36-021711) was partially demolished around 2011 (Google Earth 2009-2012), leaving only three buildings standing at the site. The associated Cage Park remains extant, although it is apparently no longer in use and suffers from neglect. The Southern Pacific Railroad (36-006101), as observed earlier this year, has been dismantled across the entire planning area, and its former course is marked today by a gravel path with minor culverts over the various drainages. The Riverside Upper Canal/Riverside-Warm Creek Canal (33-004495/36-007169) and the Atchison, Topeka, and Santa Fe Railway (36-006847) remain extant just outside the planning area boundary.

As mentioned above, the planning area is semi-rural in character, and the existing land uses feature a mixture of residential, commercial, and light industrial development as well as large expanses of undeveloped open land. The ground surface has been extensively disturbed by past agricultural operations, nearby construction activities, and periodic disking. Additionally, the open areas bear evidence of other disturbances, such dirt roads, bike path with dirt jumps, and modified drainages. No undisturbed native land surface was noted during the survey.

CONCLUSION AND RECOMMENDATIONS

Historical and Archaeological Resources

In summary of the research results presented above, six historic-period sites have been recorded in the past as lying within, partially within, or adjacent to the planning area, as listed below (see Fig. 3 for locations):

- Riverside Upper Canal/Riverside-Warm Creek Canal (33-004495/36-007169);
- Southern Pacific Railroad (36-006101);
- Atchison, Topeka, and Santa Fe Railway (36-006847);
- Highgrove Steam-Electric Generating Plant (36-021711);
- Highgrove Substation (36-021712);
- Single-Family Residence at 21992 De Berry Street.

While most of these properties remain extant, all six of them were previously determined not to be eligible for listing in the National Register of Historic Places and/or the California Register of Historical Resources, and none of them is currently included in a local register of historical resources. As such, these six properties do not meet the statutory definition of "historical resources," and require no further treatment under CEQA provisions on cultural resources.

Records indicate that all but the westernmost portion of the planning area was included in a large-scale archaeological resources survey in 1975 (Portillo 1975:3), but that survey is now more than 40 years old and is considered obsolete. Earlier this year, however, approximately 56 acres in the central and northeastern portions of the planning area were surveyed at an intensive level for CEQA-

compliance purposes, and no "historical resources" or "tribal cultural resource," as defined by CEQA, were identified (Tang et al. 2017a; 2017b; Fig. 2). These areas do not require further cultural resources investigations in connection with the proposed specific plan. The remaining 64.4 acres will need to be covered with a standard Phase I historical/archaeological survey prior to any ground disturbances associated with future development projects.

During this study, four historic-period buildings or groups of buildings were identified at 21875, 21877-21899, 21911, and 21971 De Berry Street, within the 64.4-acre portion of the planning area that has yet to be surveyed at an intensive level (Fig. 3). Since formal recordation of the buildings and focused research to establish their historical background are beyond the scope of this reconnaissance, none of these properties was evaluated for historical significance under CEQA provisions. Therefore, they should be treated as potential "historical resources" in the planning process. If any future project will impact these buildings, further study will be needed to determine whether they constitute "historical resources." If a federal agency is involved in project planning, permitting, licensing, or funding, the buildings will also need to be addressed as potential "historic properties" under Section 106 of the National Historic Preservation Act.

In addition to these specific recommendations, CRM TECH further recommends a general condition that all ground disturbances associated with future development projects be halted or diverted if buried archaeological materials are encountered until a qualified archaeologist can evaluate the nature and significance of the finds.

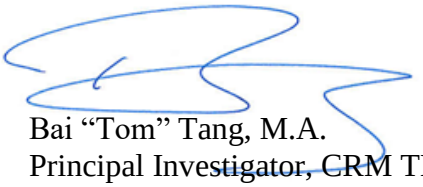
Paleontological Resources

For paleontological resources, the disturbed surface and near-surface soils in the planning area appear to be low in sensitivity, but the relatively undisturbed, fine-grained sediments underneath are considered sensitive for Pleistocene-age vertebrate fossil remains (Gilbert 2017; McLeod 2017). Prior to any ground disturbances in the planning area, CRM TECH recommends that a mitigation program be developed and implemented for the pertinent property in order to prevent potential impact on paleontological resources or reduce such impact to a level less than significant. The program should be developed in accordance with the provisions of CEQA as well as the proposed guidelines of the society of Vertebrate Paleontology (2010), and should include but not be limited to the following:

- All earth-moving operations reaching beyond the disturbed surface soils, generally below the depth of two feet, should be monitored for paleontological resources. The monitor should be prepared to quickly salvage fossil remains as they are unearthed to avoid construction delays, and should also collect samples of sediments that are likely to contain fossils of small invertebrates and vertebrates. However, the monitor must have the power to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.
- Collected samples of sediments should be processed to recover small invertebrate and vertebrate fossils, and the recovered specimens should be identified and prepared for curation at a repository with permanent retrievable storage.
- A report of findings, including an itemized inventory of recovered specimens, should be prepared upon completion of the steps outlined above. Approval of the report by the City of Grand Terrace would signify the completion of the mitigation program.

Thank you for this opportunity to be of service.

Sincerely,



Bai "Tom" Tang, M.A.
Principal Investigator, CRM TECH

REFERENCES CITED

Bryant, Keith L., Jr.
1974 *History of the Atchison, Topeka and Santa Fe Railway*. University of Nebraska Press, Lincoln.

Gilbert, Ian
2017 Paleontology Literature/Records Review, Taylor Street-Commerce Way Alignment Project (CRM TECH Contract No. 3241P). Records review letter report prepared by the San Bernardino County Museum, Division of Earth Sciences, Redlands.

GLO (General Land Office, U.S. Department of the Interior)
1876 Plat Map: Township No. 1 South Range No. 4 West, San Bernardino Meridian, surveyed in 1852-1875.
1877 Plat Map: Township No. 2 South Range No. 4 West, San Bernardino Meridian; surveyed in 1853-1877.

Google Earth
1995-2016 Aerial photographs of the project vicinity; taken in 1995, 2002-2007, 2009, 2011-2014, and 2016. Available through the Google Earth software.

Gustafson, Angie, and Mike McGrath
2001 California Historical Resource Information System record forms, 33-004495/33-004791/36-007172 (update). On file, Eastern Information Center, University of California, Riverside, and South Central Coastal Information Center, California State University, Fullerton.

Harper, Caprice D.
2008a California Historical Resource Information System record forms, 36-006101 (update). On file, South Central Coastal Information Center, California State University, Fullerton.
2008b California Historical Resource Information System record forms, 36-006847 (update). On file, South Central Coastal Information Center, California State University, Fullerton.

Herbert, Rand, and Cheryl Brookshcar
2006a California Historical Resource Information System record forms, 36-021711. On file, South Central Coastal Information Center, California State University, Fullerton.
2006b California Historical Resource Information System record forms, 36-021712. On file, South Central Coastal Information Center, California State University, Fullerton.

Horne, Melinda C.
1998 California Historical Resource Information System record forms, 36-006847 (update). On file, South Central Coastal Information Center, California State University, Fullerton.

LSA (LSA Associates, Inc.)
2010 Historical Resource Evaluation Report: Interstate 215 HOV Lane Gap Closure Project in San Bernardino and Riverside Counties. On file, Eastern Information Center, University of California, Riverside, and South Central Coastal Information Center, California State University, Fullerton.

McLeod, Samuel A.
2017 Paleontological Resources for the Proposed Taylor Street-Commerce Way Alignment Project, CRM TECH Contract No. 3241P, in the City of Grand Terrace, San Bernardino County. Records review letter report prepared by the Natural History Museum of Los Angeles County, Vertebrate Paleontology Section, Los Angeles.

NETR Online
1938-2012 Aerial photographs of the project vicinity; taken in 1938, 1948, 1959, 1966-1968, 1978, 1980, 1995, 2002, 2005, 2009, 2010, and 2012. http://www.historicaerials.com.

OHP (Office of Historic Preservation, State of California)
1995 Determination of Eligibility, Orange Show Road Extension, Arrowhead Avenue to Tippicanoe Avenue, San Bernardino, San Bernardino County. Letter from Cherilyn Widell, State Historic Preservation Officer, to Fred J. Hempel, Division Manager, Federal Highway Administration, October 17.

Portillo, Garth
1975 Archaeological Impact Evaluation: Archaeology of Proposed Additions to the Grand Terrace Sanitary Sewer System, Grand Terrace, California. On file, South Central Coastal Information Center, California State University, Fullerton.

Reid, Hugo
1968 The Indians of Los Angeles County: Hugo Reid's Letters of 1852; edited by Robert F. Heizer. Southwest Museum Papers 21.

Scott, M.B.
1977 Development of Water Facilities in the Santa Ana River Basin, California, 1810-1968. On file, Eastern Information Center, University of California, Riverside, and South Central Coastal Information Center, California State University, Fullerton.

Serpico, Philip C.
1988 *Santa Fe Route to the Pacific*. Omni Publications, Palmdale, California.

Society of Vertebrate Paleontology
2010 Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. http://vertpaleo.org/Membership/Member-Resources/SVP_Impact_Mitigation_Guidelines.aspx.

Tang, Bai "Tom," Deirdre Encarnación, Terri Jacquemain, Daniel Ballester, and Josh Smallwood
2007 Historical/Archaeological Resources Survey Report: Mountain View Avenue Widening Project, Cities of Redlands and San Bernardino, San Bernardino County, California. On file, South Central Coastal Information Center, California State University, Fullerton.
2009 Identification and Evaluation of Historic Properties: Mountain View Avenue Widening Project, Cities of Redlands and San Bernardino, San Bernardino County, California. On file, South Central Coastal Information Center, California State University, Fullerton.

Tang, Bai "Tom," Terri Jacquemain, Ben Kerridge, Nina Gallardo, and Salvadore Boites
2017a Historical/Archaeological Resources Survey Report: Assessor's Parcel Numbers 1167-161-03 and -04, City of Grand Terrace, San Bernardino County, California. On file, South Central Coastal Information Center, California State University, Fullerton.

Tang, Bai "Tom," Terri Jacquemain, Nina Gallardo, and Salvadore Boites
2017b Historical/Archaeological Resources Survey Report: Grand Terrace Crossing Project, City of Grand Terrace, San Bernardino County, California. On file, South Central Coastal Information Center, California State University, Fullerton.

Tibbet, Casey
2009-2010a California Historical Resource Information System record forms, 36-006101 (update). On file, South Central Coastal Information Center, California State University, Fullerton.
2009-2010b California Historical Resource Information System record forms, 36-006847 (update). On file, South Central Coastal Information Center, California State University, Fullerton.
2009-2010c California Historical Resource Information System record forms, 36-021711 (update). On file, South Central Coastal Information Center, California State University, Fullerton.
2009-2010d California Historical Resource Information System record forms, 36-021712 (update). On file, South Central Coastal Information Center, California State University, Fullerton.

USGS (United States Geological Survey, U.S. Department of the Interior)
1901 Map: San Bernardino, Calif. (15', 1:62,500); surveyed in 1893-1894.
1943 Map: Colton, Calif. (1:31,680); surveyed in 1936-1938.
1954 Map: San Bernardino South, Calif. (7.5', 1:24,000); aerial photographs taken in 1952, field-checked in 1954.
1967 Map: San Bernardino South, Calif. (7.5', 1:24,000); aerial photographs taken in 1966, field-checked in 1967.

APPENDIX 1

HISTORICAL/ARCHAEOLOGICAL RESOURCES RECORD FORMS

33-004495/36-007169, 36-006101,
36-006847, 36-021711, and 36-021712

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # 33-004495 update
HRI #
Trinomial CA-RIV-4495H

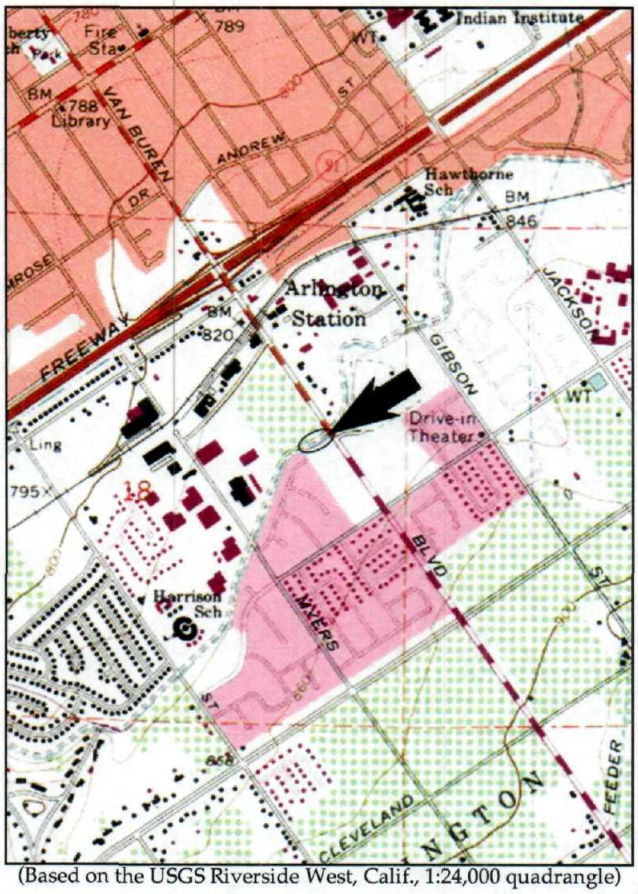
Page 1 of 1 **Resource name or #** (Assigned by recorder)

Recorded by Daniel Ballester **Date** March 10, 2009 ___Continuation √ Update
Affiliation: CRM TECH, Colton **Project No:** CRM TECH 2331

Site CA-RIV-4495H represents the historic Upper Riverside Canal, which was constructed of mortared stone retaining walls lined with concrete. On March 10, 2009, a portion of the canal was inspected during an intensive-level archaeological field survey of the adjacent parcel to the southeast of the canal, along the southwest side of Van Buren Boulevard. The segment of the canal inspected is approximately 350 feet in total length, but only some 50 feet of it is still in the original state. Near its crossing under Van Buren Boulevard, the canal is lined with concrete and measures approximately eight feet wide at the top and 2.5 feet wide at the bottom. The concrete lining is now in very poor condition, with many cracks and some fragments missing. Fifty feet from Van Buren Boulevard, the open canal turns into large concrete pipe with an opening of 2-3 feet. The pipeline is partially covered with dirt, and runs in a southwesterly direction toward a nearby residential neighborhood.

Report Citation:

Deirdre Encarnación, Daniel Ballester, and Laura H. Shaker
2009 Historical/Archaeological Resources Survey Report: Assessor's Parcel No. 234-270-020, City of Riverside, Riverside County, California. On file, Eastern Information Center, University of California, Riverside.



(Based on the USGS Riverside West, Calif., 1:24,000 quadrangle)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 33-4495
HRI #
Trinomial CA-RIV-4495H, CA-RIV-4791H, CA-SBR-7172H Update
NRHP Status Code
Other Listings
Review Code _____ Reviewer _____ Date RECEIVED IN

DEC 1 0 2001

EIC

Page 1 of 12 *Resource Name or #: Riverside Canal

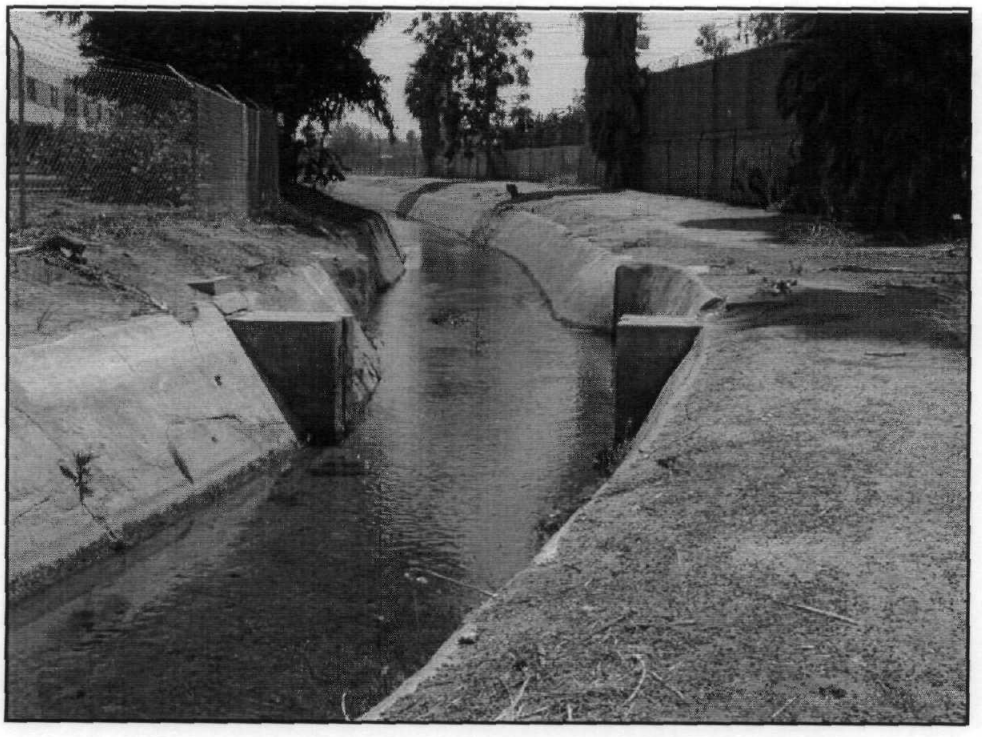
P1. **Other Identifier:** Riverside Upper Canal, Riverside Lower Canal

*P2. **Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County** Riverside and San Bernardino **and** P2c, P2e, and P2b or P2d.
***b. USGS 7.5′ Quad** San Bernardino South **Date** 1980 **T** ; **R** ¼ of ¼ of **Sec** ; **B.M.**
c. Address **City** Riverside **Zip**
d. UTM: Zone: 11 ; 46780 mE/ 3761110 mN
***e. Other Locational Data:** Canal begins at Warm Creek in Colton, travels through downtown Riverside, and ends at the Temescal Wash in Home Gardens. Headgates are located off of Mount Vernon Drive and I-10.

*P3a. **Description:** The canal is approximately 19 miles long, constructed of mortared stone retaining walls lined with concrete. Wooden and concrete bridges cross the canal along its length. The associated features of the canal are the headgates, levees, suction pipes, division walls, flume remains, canal intakes, overflow gates, gate controls, siphons, and conduits. Construction of the Upper Canal began in October, 1870. The initial canal was7 1/4 miles long, from the river to the Mile Square. Riverside extended the canal to fourteen miles by 1874. See Continuation Sheet.

*P3b. **Resource Attributes:** HP20. canal/aqueduct AH6. water conveyance system

*P4. **Resources Present:** ☐ Building ■ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)



P5b. Description of Photo: View of canal at Palmyrita Ave., looking south. 08/08/01, 1K048-02-DSC-a11

***P6. Date Constructed / Age and Sources:** ■ Historic ☐ Prehistoric ☐ Both
1870- 1875

***P7. Owner and Address:**
City of Riverside, 3900 Main Street, Riverside, CA 95722

***P8. Recorded by:** Angie Gustafson and Mike McGrath
EDAW Inc.
1420 Kettner Blvd., Ste. 620
San Diego, CA 92101

***P9. Date Recorded:** 08/08/01

***P10. Survey Type:** intensive survey

***P11. Report Citation:** Cultural Resource Survey of the Riverside Canal

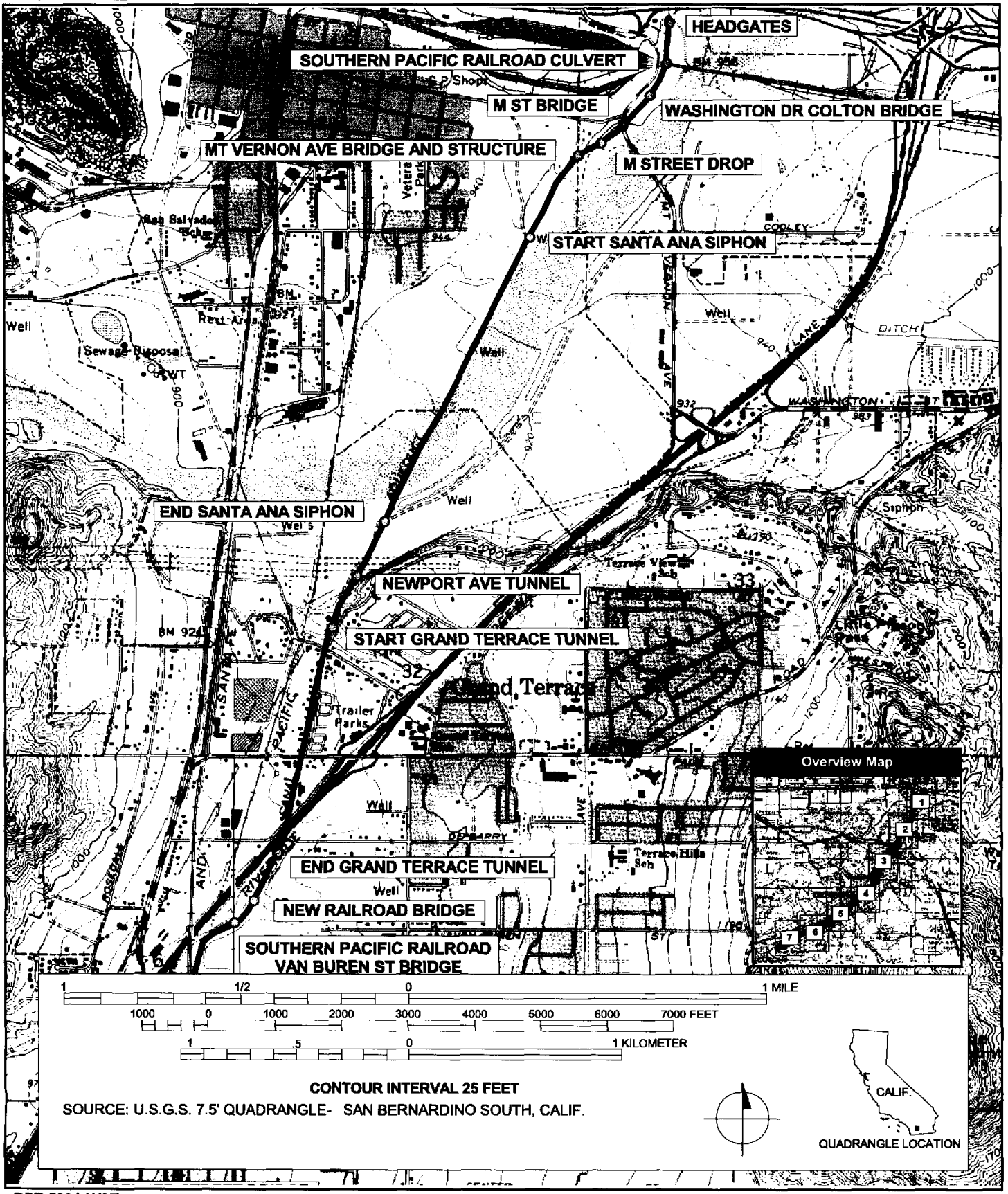
*Attachments: ☐ None ■ Location Map ☐ Sketch Map ■ Continuation Sheet ■ Building, Structure, and Object Record ■ Linear Resource Record ☐ Archaeological Record ☐ District Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List)

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI #
Trinomial CA-RIV-4495H, CA-RIV-4791H, CA-SBR-7172H Update

Page 2 of 12 * Resource Name or # (Assigned by recorder) Riverside Canal

* Map Name: San Bernardino South * Scale: 1:24,000 * Date of Map: 1980



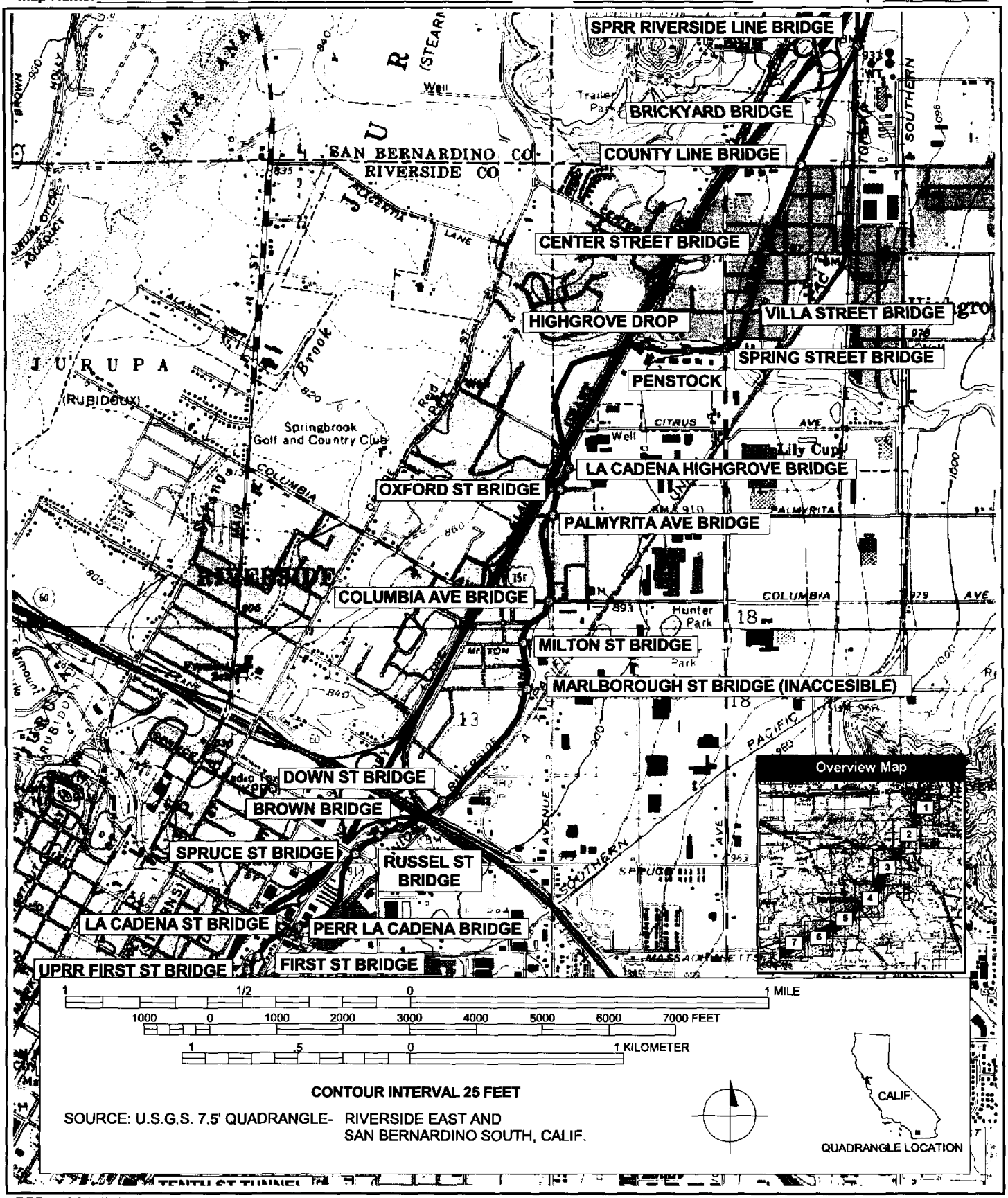
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial CA-RIV-4495H, CA-RIV-4791H, CA-7172H Update

Page 3 of 12 * Resource Name or # (Assigned by recorder) Riverside Canal

* Map Name: Riverside East, San Bernardino South * Scale: 1:24,000 * Date of Map: 1980



DPR 523J (1/95)

*Required Information

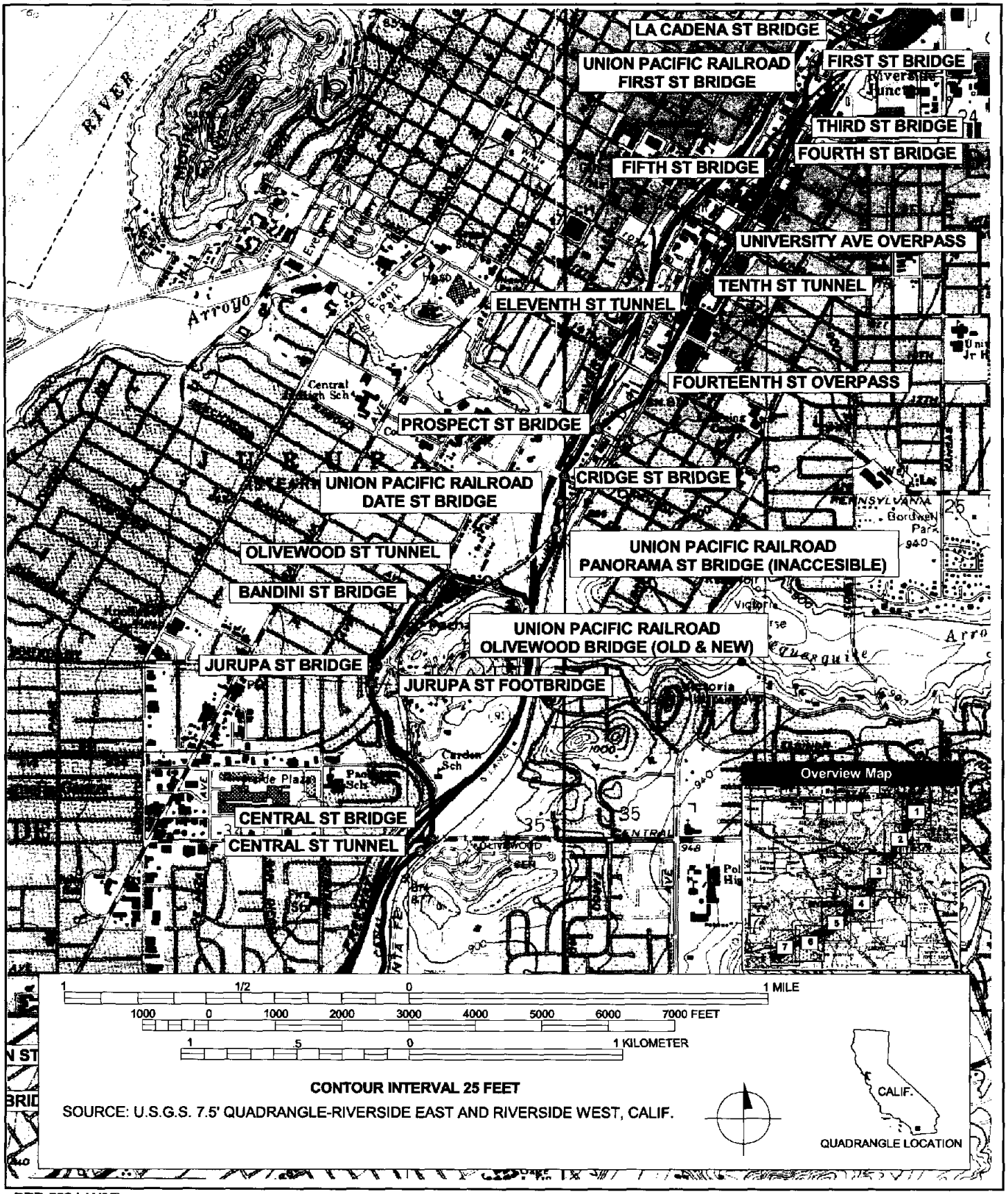
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # _____
HRI # _____
Trinomial CA-RIV-4495H, CA-RIV-4791H, CA-SBR-7172H Update

Page 4 of 12 * Resource Name or # (Assigned by recorder) Riverside Canal

* Map Name: Riverside East, Riverside West * Scale: 1:24,000 * Date of Map: 1980



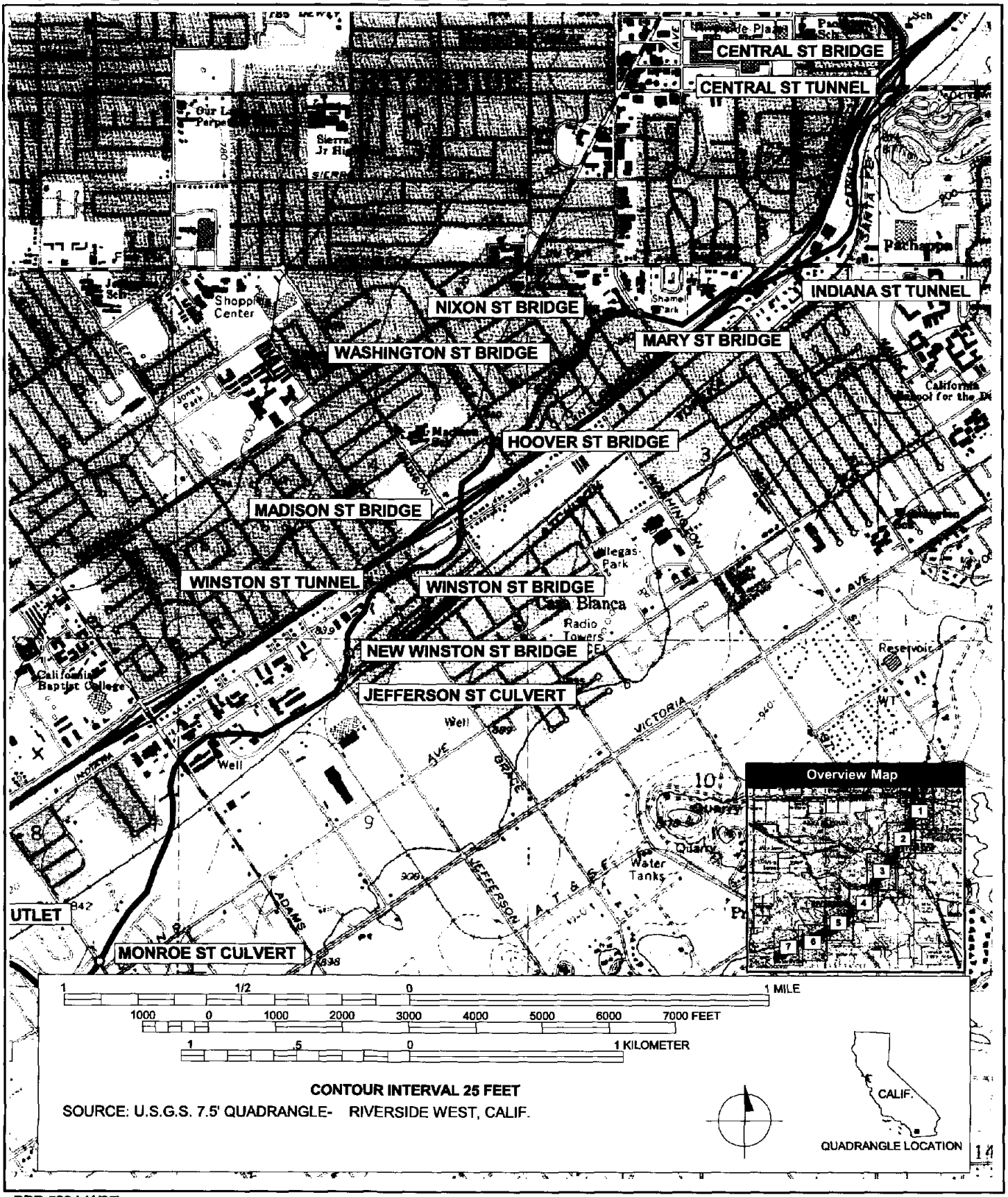
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial CA-RIV-4495H, CA-RIV-4791H, CA-SBR-7172H Update

Page 5 of 12 * Resource Name or # (Assigned by recorder) Riverside Canal

* Map Name: Riverside West * Scale: 1:24,000 * Date of Map: 1980



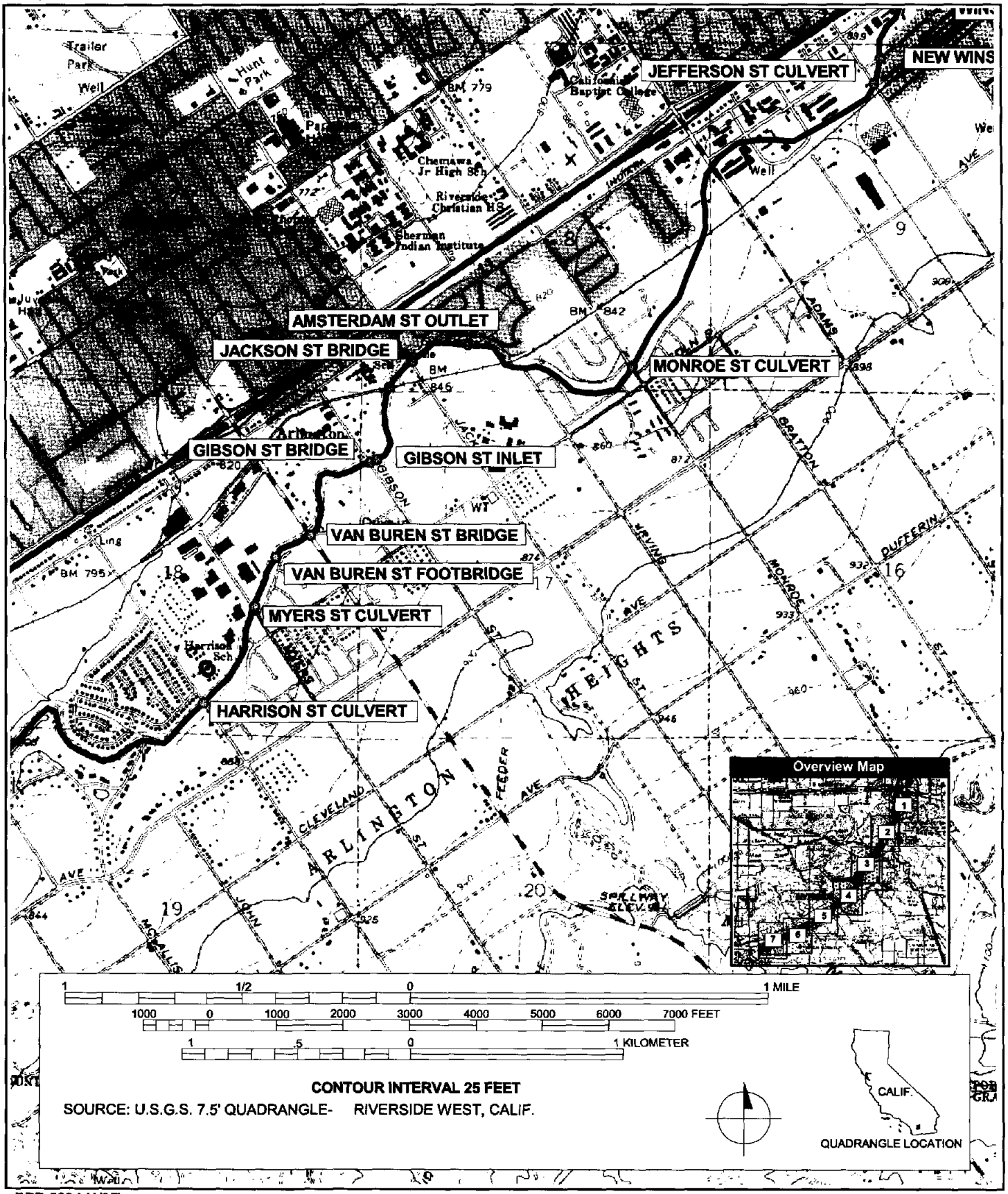
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial CA-RIV-4495H, CA-RIV-4791H, CA-SBR-7172H Update

Page 6 of 12 * Resource Name or # (Assigned by recorder) Riverside Canal

* Map Name: Riverside West * Scale: 1:24,000 * Date of Map: 1980



DPR 523J (1/95)

*Required Information

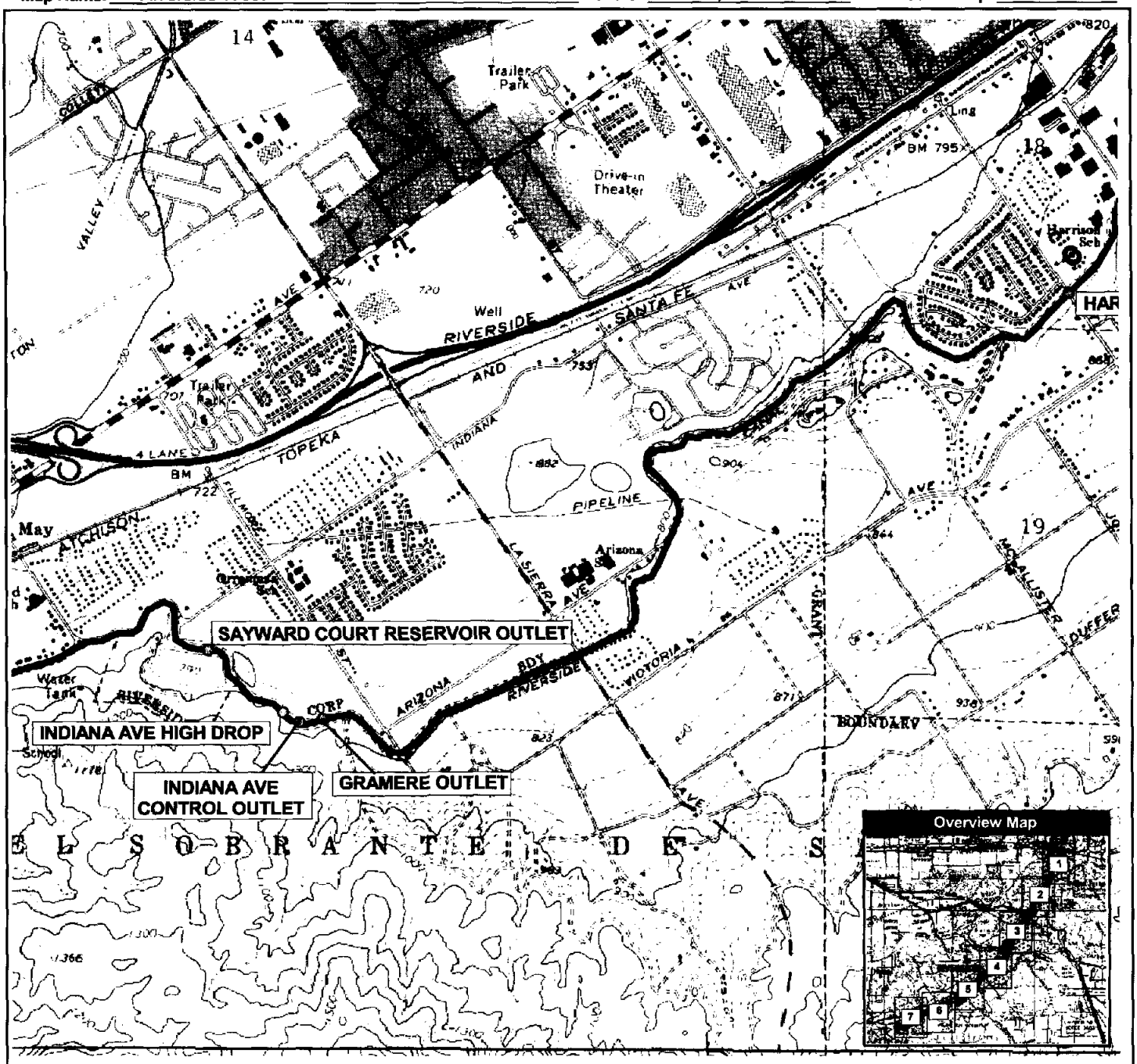
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial CA-RIV-4495H, CA-RIV-4791H, CA-SBR-7172H Update

* Resource Name or # (Assigned by recorder) Riverside Canal

* Map Name: Riverside West * Scale: 1:24,000 * Date of Map: 1980



*Required Information

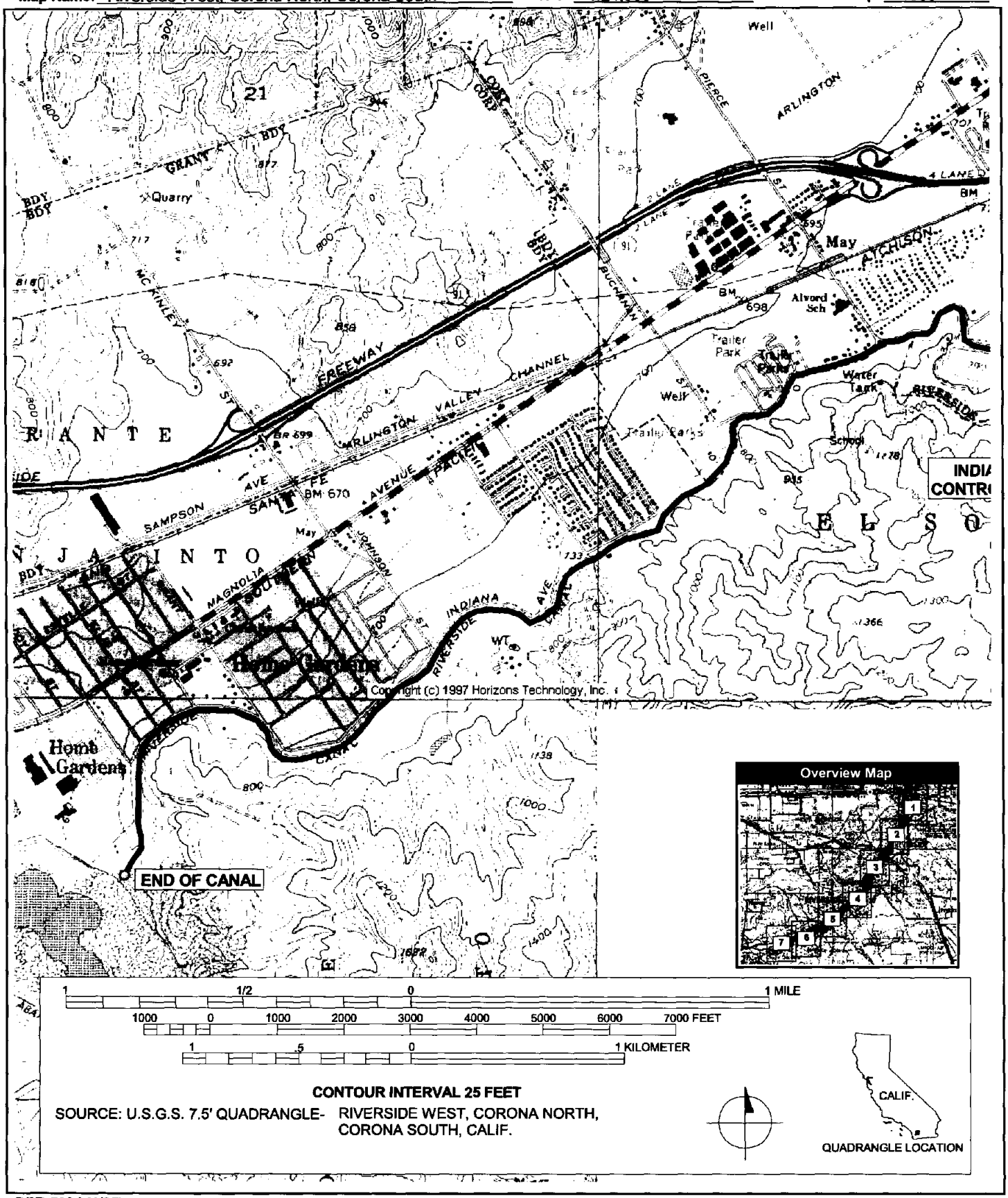
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial CA-RIV-4495H, CA-RIV-4791H, CA-SBR-7172H Update

Page 8 of 12 * Resource Name or # (Assigned by recorder) Riverside Canal

* Map Name: Riverside West, Corona North, Corona South * Scale: 1:24,000 * Date of Map: 1980



DPR 523J (1/95)

*Required Information

*NRPH Status Code 4S7
*Resource Name or # Riverside Canal

B1. Historic Name: Riverside Upper Canal, Riverside Lower Canal

B2. Common Name: Riverside Canal

B3. Original Use: Irrigation canal

B4. Present Use: Storm water runoff and irrigation canal

***B5. Architectural Style:** n/a

***B6. Construction History:** The Riverside Canal is actually the composite of two different canals, the Upper Canal and the Lower Canal, with an addition at the head of the Upper Canal near the Santa Ana River. The Association built the Upper Canal first, and a competing colony constructed the Lower Canal shortly after. The water company combined the canals after completion of the Lower Canal. The community built the Warm Creek Canal, an extension to the head of the Upper Canal, in 1886. Construction of the Upper Canal began in October, 1870. The initial canal was7 1/4 miles long, from the river to the Mile Square. Riverside extended the canal to fourteen miles by 1874. The water company built the original headworks on the south side of the Santa Ana River, about1/2 mile downstream from the Atchison, Topeka, and Santa Fe Railway bridge. From there it followed a contoured grade on the west side of La Loma Hills, and down to the existing canal. It then crossed La Cadena near Spring Street, followed the route of La Cadena to downtown. The total path was approximately nineteen miles. See Continuation Sheet.

***B7. Moved?** ■ **No** □ **Yes** □ **Unknown** **Date:** **Original Location:**

***B8. Related Features:** The associated features of the canal are the headgates, levees, suction pipes, division walls, flume remains, canal intakes, overflow gates, gate controls, siphons, and conduits

B9a. Architect: Goldsworthy & Higbie (Surveyors) **B9b. Builder:** Thomas Cover, Superintendent

***B10. Significance: Theme** Irrigation **Area** Southern California
Period of Significance 1870-1915 **Property Type** Canal **Applicable Criteria** N/A

The City of Riverside with the Southern California Colony Association in 1870. The mission of the Association was to buy and sell land already equipped with a water conveyance system. In most of the advertisements for the community, the colonists stressed the significance of the navel orange and tropical fruit industry. The navel orange, Riverside's biggest export, soon became the supporting agriculture of the area. The following excerpt, from a leaflet named "The Riverside Colony," describes the new colony in 1875. See Continuation Sheet.

B11. Additional Resource Attributes:

***B12. References:** see Continuation Sheet

B13. Remarks:

***B14. Evaluator:** Angie Gustafson, EDAW, Inc., San Diego, CA

***Date of Evaluation:** 08/20/01

(Sketch Map with north arrow required.)

See Location Maps.

(This space reserved for official comments.)

California—The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary # _____
HRI # _____
Trinomial CA-RIV-4495H, CA-RIV-4791H, CA-SBR-7172H Update

Resource Name or # (Assigned by recorder) Riverside Canal

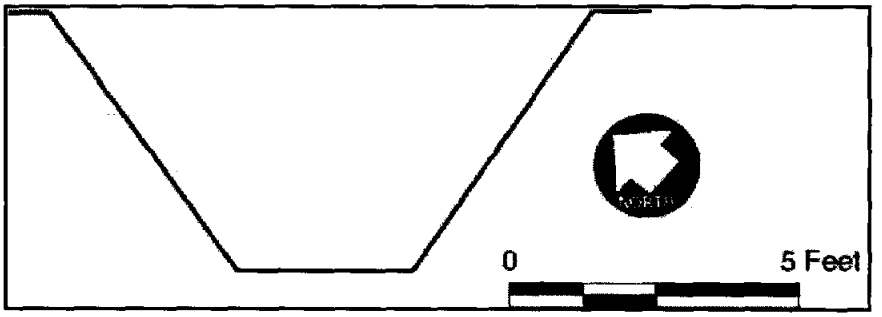
L1. Historic and/or Common Name: Riverside Upper Canal, Riverside Lower Canal

L2a. Portion Described: ■ Entire Resource □ Segment □ Point Observation **Designation:**

b. Location of point or segment: Canal begins at Warm Creek in Colton, travels through downtown Riverside, and ends at the Temescal Wash in Home Gardens. Headgates are located off of Mount Vernon Drive and I-10.

L3. Description: The canal is approximately 19 miles long, constructed of mortared stone retaining walls lined with concrete. Wooden and concrete bridges cross the canal along its length. The associated features of the canal are the headgates, levees, suction pipes, division walls, flume remains, canal intakes, overflow gates, gate controls, siphons, and conduits. Construction of the Upper Canal began in October, 1870. The initial canal was7 1/4 miles long, from the river to the Mile Square. Riverside extended the canal to fourteen miles by 1874. See Continuation Sheet.

L4. Dimensions: (In feet) Approximate
- **a. Top Width** 8' - 11', varies
- **b. Bottom Width** 2' - 4', varies
- **c. Height or Depth** 4'
- **d. Length of Segment** 19 miles



L5. Associated Resources: The associated features of the canal are the headgates, levees, suction pipes, division walls, flume remains, canal intakes, overflow gates, gate controls, siphons, and conduits.

L6. Setting: The canal begins north of the Santa Ana River. A siphon transfers the water under the dry bed of the river. It runs through downtown Riverside, along commercial, residential, and industrial properties. Most of the land along the canal is cleared, and a dirt vehicle path runs along one side of the canal for most of its length. Mature palms line the length of the canal.

L7. Integrity Considerations: Approximately 40% of the canal is in use for its original purpose of irrigation. Portions of the Lower Canal have been abandoned. The canal follows the original route set out by the Riverside colony. Sections of the canal have been removed and replaced with newer materials. The setting of the canal has changed over time, with the build-up of Riverside. The landscape has changed from rural agricultural lands to industrial, residential, and commercial properties. Portions of the canal have been replaced with culverts, underground pipes, or concrete tunnels.

L8b. Describe of Photo, Map, or Drawing View of Upper Canal at I-215, looking northeast, 1K048-01-DSC00005, 08/08/01

L9. Remarks:

L10. Form Prepared by: Angie Gustafson
EDAW, Inc.
1420 Kettner Blvd., Suite 620
San Diego, CA 92101

L11. Date: 08/20/01

P3/L3. Description (continued): The water company built the original headworks on the south side of the Santa Ana River, about1/2 mile downstream from the Atchison, Topeka, and Santa Fe Railway bridge. From there it followed a contoured grade on the west side of La Loma Hills, and down to the existing canal. It then crossed La Cadena near Spring Street, followed the route of La Cadena to downtown. The total path was approximately nineteen miles. The canal diverted water from the Santa Ana River to the main area of Riverside, the Mile Square. Originally just a ditch, the canal irrigated the farm lands along its path. The upper part of the Lower Canal, built in 1875, originally followed the route of an older canal, the Trujillo Ditch, serving the La Placita (originally known as Spanishtown) community. The Lower Canal diverted water from the Santa Ana River, downstream from the headworks of the Upper Canal. It followed roughly parallel to the Upper Canal to the Mile Square, and then traveled by Casa Blanca on its way to Arlington. The water company built a small canal to carry water from the Upper to the Lower Canal following the Box Springs Arroyo, entering the Mile Square near Eleventh Street. It connected with the Lower Canal at Market Street. The total cost of the Upper and Lower Canals in 1885 was approximately $225,631. The canal begins north of the Santa Ana River, and a siphon transfers the water under the dry bed of the river. It runs through downtown Riverside, along commercial, residential, and industrial properties. Most of the land along the canal is cleared, and a dirt vehicle path runs along one side of the canal for most of its length. Mature palms line the length of the canal. An early description of the canal, written in 1888, documented its construction.

"As originally projected the canal was eight feet wide on the bottom, twelve feet on the top, and three feet deep, and with a grade of 52.8 inches per mile, or one inch per hundred feet. The work was prosecuted continuously during the winter and spring of 1870-71, but the excavation was not made uniform in width, and in places not taken down to grade. It was very crooked – running far up into the arroyos or depressions before crossing them, and skirting outside of many low points in the plain, instead of cutting through them (Hall 1888:223)."

The original specifications for the Upper Canal called for a depth of 3' 6", a width of 12' at the surface, and 8' 6" at the bottom. The Spanishtown Flume, across the Highgrove arroyo, was 528' long, the longest of the canal. It is no longer standing.

B6. Construction History (continued): The canal diverted water from the Santa Ana River to the main area of Riverside, the Mile Square. Originally just a ditch, the canal irrigated the farm lands along its path.

The upper part of the Lower Canal, built in 1875, originally followed the route of an older canal, the Trujillo Ditch, serving the La Placita (originally known as Spanishtown) community. The Lower Canal diverted water from the Santa Ana River, downstream from the headworks of the Upper Canal. It followed roughly parallel to the Upper Canal to the Mile Square, and then traveled by Casa Blanca on its way to Arlington. The water company built a small canal to carry water from the Upper to the Lower Canal following the Box Springs Arroyo, entering the Mile Square near Eleventh Street. It connected with the Lower Canal at Market Street. The total cost of the Upper and Lower Canals in 1885 was approximately $225,631 (Creason 1975:23; Hall 1888:204).

The water company completed the first major repair, the addition of the Warm Creek Canal to the head of the Upper Canal, in 1886. Part of the new construction included building a tunnel on a portion of the Upper Canal and constructing the first hydroelectric development in South California at the Highgrove drop of the canal. The total cost of the Warm Creek Canal was approximately $72,883 in 1886 (Hall 1888:207).

Although the canal served the needs of the community during the early settlement period, about half of the water was lost due to seepage and evaporation by the time it reached the Mile Square. To solve this problem, the water company lined the canal in concrete up to the Mile Square in 1892 (Creason 1975:3). The concrete lining increased the speed of the water, and decreased the amount lost to seepage.

The water company maintained the intakes of the Upper and Lower Canals until 1914, to assure water rights for every drop of water that could be collected. Riverside abandoned the Lower Canal in 1914, due to the extreme maintenance costs. At the same time, the water company abandoned the original headworks of the Upper Canal, although they can still partially be seen. After the flood of 1938, Riverside rebuilt the Upper Canal from the second headworks to Mill Drop. Diversion from the river ended in 1959 and the water supply came from wells located in downtown Riverside.

B6. Construction History (continued): Riverside depended on the Riverside Canal during the town's initial period of growth. The canal no longer has the importance that it once did, but the Upper Canal is operational and used for the original purpose of irrigation. The Lower Canal is only used for storm water run-off and has been abandoned. Much of the land has been sold and parts of the Lower Canal have been removed.

B10. Significance (continued): "We now have about 300 inhabitants, 3,000 acres under cultivation, 10,000 shade and ornamental trees, 10,000 fruit trees in orchard and 200,000 in nursery. We are already receiving fruit from our trees and vines. Grapes, limes, pomegranites (sic) and strawberries are raised the present season and the time is near when our orange and lemon groves will be in bearing. The wonderful growth of our trees, vines and flowers has far surpassed our expectations. Riverside has a post office, hotel, store, drug store, meat market, mechanic shops, school house, public library and church (Patterson 1971:56)."

Spanish missionaries grew oranges and other citrus fruit from the 1770s, but it wasn't until the Southern pacific Railroad linked Southern California with the rest of the nation that the citrus culture boomed. The Agricultural Department sent the first three navel orange trees to Riverside from Brazil in the mid-1870s. Coming from Brazil by request of the U.S. Secretary of Agriculture, Senora Tibbetts brought the orange trees to Riverside. The three trees were planted in different places, and were not initially impressive. It was not until a tree had been planted near the Santa Ana River, that the navel orange got attention. The fruit grown from this tree trumped that produced by its neighbors, and the tree was propagated by the new technique of grafting. The navel orange became the most important crop of Riverside growers by 1887. The citrus industry was so successful that population boomed, and the City of Riverside was incorporated in 1883. Riverside quickly surpassed the other colonies in California in the cultivation of citrus, especially oranges and lemons. One component of Riverside's success was due to the fact that, unlike any other grove in California, the Riverside trees were free from black fungus and scale (Riverside Museum Associates 1965:154).

Although the navel orange was an important part of the agricultural community, the citrus groves were also the main cause of the real estate boom in the area. In 1902, the estimated cost of land without trees was from $250 to $300 per acre, while the land with bearing orange trees, was valued as high as $2000 per acre. The profits of a navel orange grower could reach approximately 12% per year.

The prosperity of Riverside and the surrounding communities depended on the supply of water. The Riverside Canal provided the water needed for the citrus industry of La Placita, High Grove, and Riverside. Today, the canal is used for irrigation from the headgates to Olivewood Ave. The rest of the canal is used for seasonal storm water run off. The City of Riverside owns most of the canal, although portions of the Lower Canal are owned by individual property owners.

Approximately 40% of the canal is in use for its original purpose of irrigation. Portions of the Lower Canal have been abandoned. The canal follows the original route set out by the Riverside colony. Sections of the canal have been removed and replaced with newer materials. The setting of the canal has changed over time, with the build-up of Riverside. The landscape has changed from rural agricultural lands to industrial, residential, and commercial properties. Portions of the canal have been replaced with culverts, underground pipes, or concrete tunnels. The overall integrity of the resource is poor, although individual segments and features of the canal retain a greater degree of integrity.

References:

Creason, Howard
1975 *History of Riverside Water Company Canal System.* Riverside Press, Riverside.
Hall, William H.
1888 *Irrigation in Southern California.* State Printing Office, Sacramento.
Patterson, Tom.
1971 *A Colony for California: Riverside's First Hundred Years.* Riverside: Press- Enterprise Co.
Riverside Museum Associates.
1965 Reproduction of Wallace W. Elliott's History of San Bernardino and San Diego Counties California with Illustrations, 1883. Riverside: Riverside Museum Press.

UPDATE ASDE-33-97-033-00

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

UPDATE

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial CA-RIV-004495/H
NRHP Status Code 3S (Portions) 252 A
Other Listings _____
Review Code _____ Reviewer _____ Date / /

*Resource Name or #: Riverside Upper Canal

P1. Other Identifier: _____

*P2. Location: ☐ Not for Publication ☒ Unrestricted a. County Riverside

b. USGS 7.5' Quad Riverside East Date 1980 T ____; R ____; ____1/4 of ____1/4 of Sec ____; _____B.M.

c. Address _____ City Riverside Zip _____

d. UTM: (Give more than one for large and/or linear feature) Zone 11 , 467130 mE/ 3761060 mN

e. Other Locational Data: (e.g. parcel #, legal description, directions to resource, elevation, additional UTMs, etc. as appropriate)

APE Map L-3. Site Number 38. Headwaters located near I-215, La Cadena, Cannes, and Chase, Riverside. Terminus of the canal is at Temescal Canyon, Corona. UTM above is for NE point in APE, SW point is 466830mE 3760640mN.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

The Riverside Upper Canal is a cement lined irrigation ditch which includes headgates, levees, suction pipes, division walls, flume remains, canal intakes, overflow gates, gate controls, siphons, and conduits. The original headworks were located on the south side of the Santa Ana River, about a half mile downstream from the Atchison, Topeka and Santa Fe Railway bridge, but was changed in 1886 to its present location near La Cadena, I-215, Chase and Cannes. The portions analyzed near the project area are limited to the cement slab bridges and gently rounded open trenches, U-shape in cross section. Many of the slab bridges also have associated cement pedestrian railings with decorative panels and corner piers. Near the portion within the Area of Potential Effects at the La Cadena East realignment are some remnants of granite block retaining walls. In some neighborhoods, such as the nineteenth century group at 1st and Vine Streets, residential retaining walls of a pebble-textured art stone have also been incorporated in an attempt to be stylistically compatible. In places of high traffic, such as the railroad yards between Commerce and Vine, unadorned slab covers span the trenches. The terminus of the canal is at Temescal Canyon. Mature palms follow the canal along its course.

*P3b. Resource Attributes: (List attributes and codes) 20-Canal/Aqueduct

*P4. Resources Present: ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (View, date, etc.)
Photo #pp-27, 02/04/1997 view of La Cadena crossing in APE

*P6. Date Constructed/Age and Sources:
☐ Prehistoric ☒ Historic ☐ Both
1870-71 Factual
1886 (headworks)

*P7. Owner and Address:
City Of Riverside

C--City

*P8. Recorded by:(Name, affiliation, address)
Rick Starzak, Molly Fitzgerald
Myra L. Frank & Assoc., Inc.
811 West 7th Street, Suite 800
Los Angeles, CA 90017

*P9. Date Recorded: 09/13/1996

*P10. Survey Type: (Describe)
Intensive survey effort
Section 106 Eligibility Findings
P--Project Review

P11. Report Citation: (Cite survey report/other sources or "none") RCTC/I-215 Improvement Project, Riverside County Historic Architectural Survey Report. FHWA, RCTC, Caltrans--May 1996/Feb. 1997

*Attachments: ☐ NONE ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure and Object Record
☐ Archaeological Record ☐ District Record ☒ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record
☐ Photograph Record ☐ Other: (List) _____

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI # _____

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 5 *NRHP Status Code 3S (Portions)

Resource Name or #: Riverside Upper Canal

B1. Historic Name: Riverside Upper Canal

B2. Common Name: Same

B3. Original Use: Irrigation Canal B4. Present Use: P--Public

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations.)

No significant alterations except nineteenth century extensions, early twentieth century lining with concrete and decking over at some locations.

*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____

*B8. Related Features:

Palm and pepper trees, access road.

B9a. Architect: Goldsworthy & Higbie (Surveyors) b. Builder: Cover, Thomas (Superintendent)

*B10. Significance: Theme Citrus Industry Area Riverside

Period of Significance 1870-1946 Property Type Canal Applicable Criteria A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Upper Canal was constructed by the Southern California Colony Association from 1870 to 1871 under the supervision of Thomas Cover. Major wooden flumes were constructed on trestles to maintain the grade, the longest having been known as the Spanishtown Flume which spanned 528 feet (no longer extant). The introduction of the Upper Canal water supply was essential to the survival of the young colony and the development of the early citrus industry in La Placita, High Grove, and Riverside. Its flow was supplemented in 1875-76 with the addition of the Lower Canal by the Riverside Land and Irrigating Company. The Lower Canal was abandoned in 1914 but the Upper Canal is still operational. The Riverside Upper Canal appears eligible for inclusion in the National Register of Historic Places under Criterion A, for its role as the earliest reliable water supply to the Southern California Colony Association and its historic association with the origin, development and growth of the citrus industry in Riverside. Although a full evaluation of contributing and non-contributing elements are out of a reasonable scope for this project, the "open" segments illustrated on the location map should be considered the most intact portions of the resource.

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. References:

Brown, James T. Harvest of the Sun; An Illustrated History of Riverside County. Windsor Publications, 1985.

LSA Associates, Inc. "Historic Property Clearance Report
See CONTINUATION SHEET

B13. Remarks:

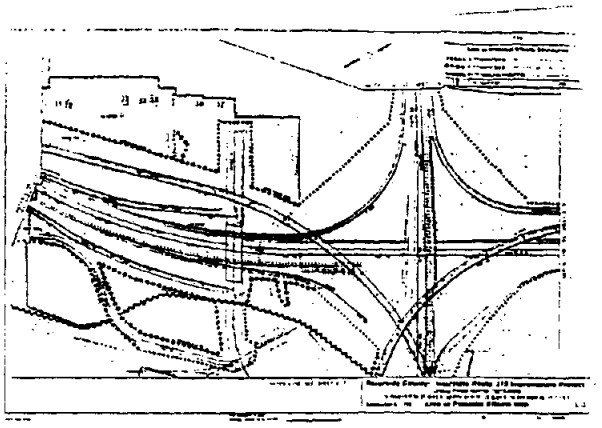
Threats: Project related -- La Cadena Drive East realignment would cross the canal at grade.

*B14. Evaluator: Richard Starzak, MFA, Inc.

Date of Evaluation: 11/20/1992

(This space reserved for official comments.)

(Sketch Map with north arrow required)



State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary # _____
HRI # _____
Trinomial CA-RIV-004495/H

Resource Name or #: Riverside Upper Canal

L1. Historic and/or Common Name: Riverside Upper Canal

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation Designation: _____

b. Location of point or segment: (Provide UTM coordinates, legal description, etc. Show field inspected area on a Location Map.)

This segment of the Riverside Upper Canal is bounded by Spruce Street to the north and the Union Pacific Railroad to the south. It is located between East La Cadena to the west and the Atchison, Topeka and Santa Fe Railroad to the east.

L3. Description: (Describe construction details, materials, and artifacts found at this segment or point. Provide plans or sections as appropriate.)

This segment of the Riverside Upper Canal ran through the estate of E.G. Brown, one of the founders of the Southern California Colony Association. It is believed that this portion of the estate was devoted to agriculture because the resources found along this segment are agriculture-related. The northern end of this segment contains remnants of a granite block retaining wall. The height of the wall is about 16 to 18 inches and 12 inches wide. The exposed section extends 17 feet. Other portions are visible for 71 feet to the south. Two historic archaeological features, a weir box and structural building remnants, are See CONTINUATION SHEET

L4. Dimensions: (In feet for historic features and meters for prehistoric features.)

a. Top Width From 13.4 to 20 ft
b. Bottom Width From 8.25 to 16.8 ft
c. Height or Depth 4.1 ft
d. Length of Segment Approx. 1400 ft

L5. Associated Resources:

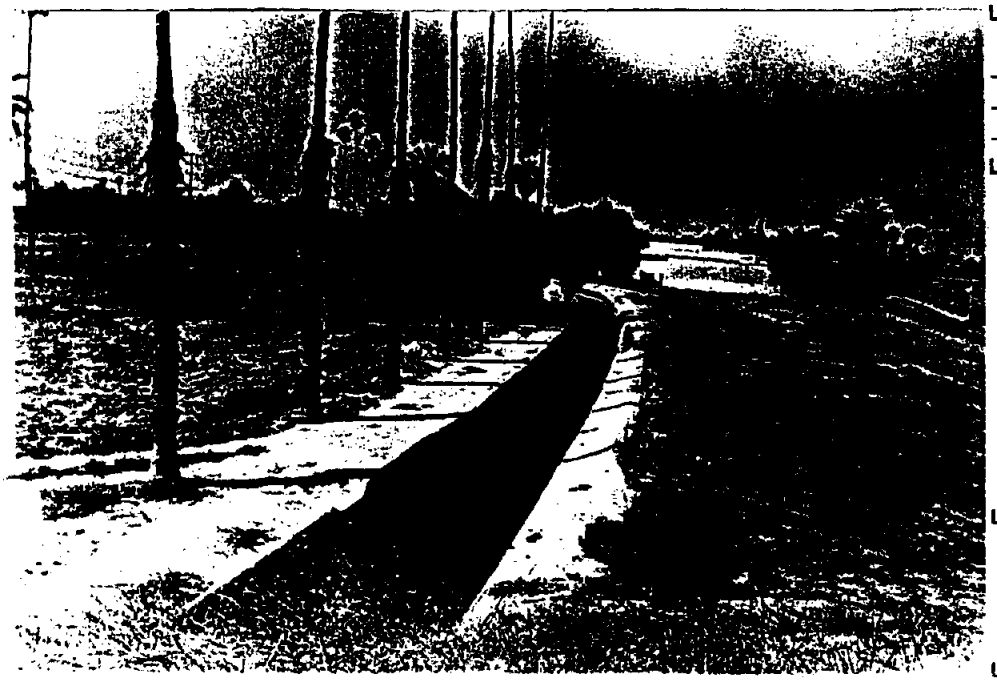
L4e. Sketch of Cross-Section (include scale) Facing: _____

L6. Setting: (Describe natural features, landscape characteristics, slope, etc. as appropriate.):

This segment of the canal sits in an open field with trees along the canal.

L7. Integrity Considerations:

This portion of the Upper Canal retains a high degree of all aspects of integrity. The granite wall, which is part of the original Upper Canal, contributes to the integrity of materials, workmanship, See CONTINUATION SHEET



L8b. Description of Photo, Map, or Drawing: (View, scale, etc.)

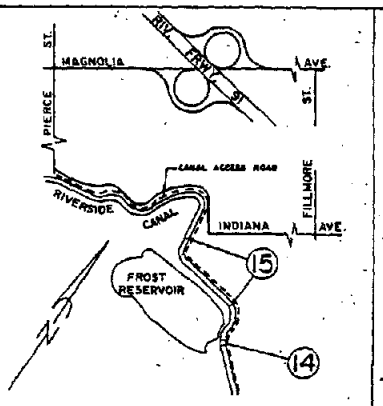
L9. Remarks:

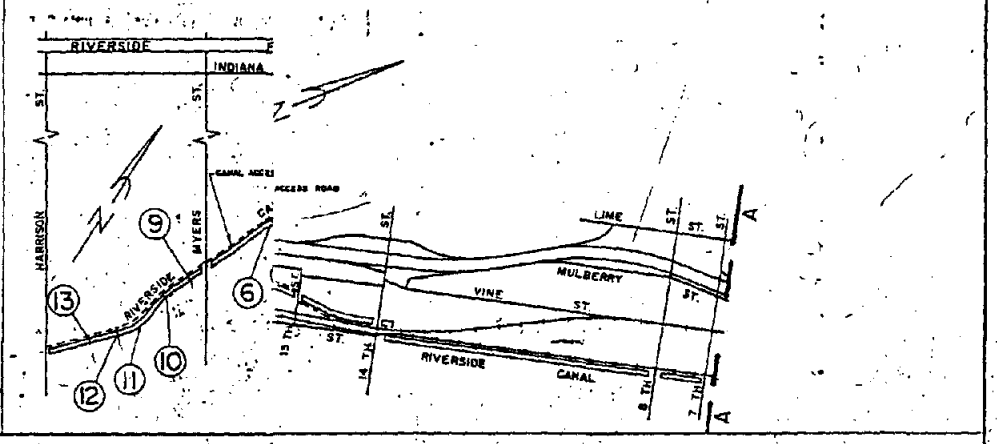
L10. Form Prepared by: (Name, affiliation & address)

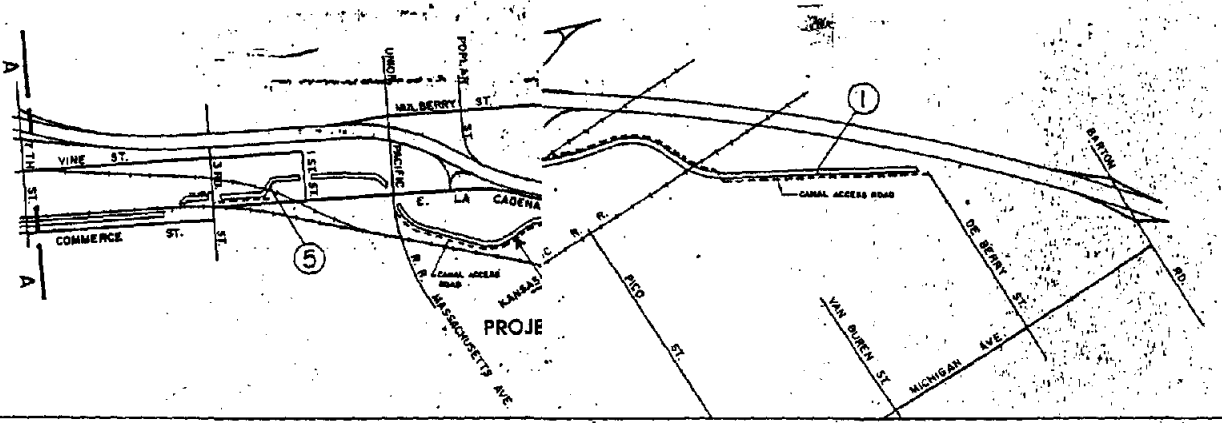
Richard Starzak
Myra L. Frank & Associates, Inc.
811 West 7th Street; Suite 800
Los Angeles, CA 90017

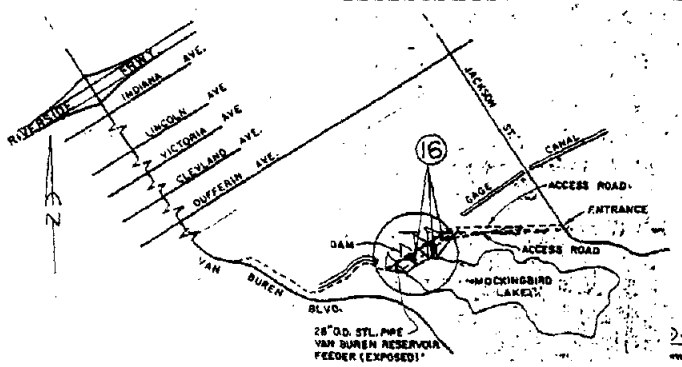
L11. Date: 09/13/1996

GT.









RIVERSIDE CANAL

SCALE 1" = 800'	DRAWN W.E.F.	CITY OF RIVERSIDE DEPARTMENT OF PUBLIC UTILITIES	
DATE 4-26-83	CHECKED		
JOB No. 1829	APPROVED 5/12/83	W DIV.	DRAWING No. 83D5-1829-1

55-751-754

CONTINUED from B12.
for the Proposed Acquisition of Two Parcels in Southeast and Southwest Quadrants of Route 60/91/215 Interchange." Prepared by Beth Padon, December 20, 1991.

CONTINUED from L3.
also located near this segment of the canal. The weir box was used to irrigate land by drawing water from the canal via an intake pipe. It is located immediately east of the canal in the northern portion of this segment. The weir box consists of a concrete platform with a concrete block measuring 2.75 feet square and 1 foot high. Four wood planks form a square on top of the concrete block.

Remnants of a structural foundation are also located about 38 meters (125 feet) east of the weir box. The foundation measures 9.6 meters (31 feet 6 inches) by 10.8 meters (35 feet 7 inches). The foundation remnants are constructed of stucco over chicken wire and wood pieces. Trash and debris lay about the remnants. It appears that the original use of this building was farm-worker housing.

CONTINUED from L7.
and design. The weir box and structural foundation remnants contribute to the setting, feeling, and association of the historic agricultural uses of this property. The canal, granite retaining wall, weir box, and structural foundation remnants remain in their original location.

RECEIVED IN

JUN 0 9 1992

EIC

CA-RIV- 4495 H

ARCHAEOLOGICAL SITE RECORD

PAGE: 1 OF 14

PERMANENT TRINOMIAL: CA-RIV-4495-H
OTHER DESIGNATIONS: MFA-3H/Riverside Upper Canal

1. COUNTY: Riverside
2. USGS QUADRANGLES: San Bernardino, South 7.5 minute (1967:Photorevised-1980); Riverside West, 7.5 minute (1967:Photorevised-1980); Riverside East, 7.5 minute (1967:Photorevised-1980); .

3. UTM COORDINATES: Zone 11: 468020m-3763270m EASTING/NORTHING (northern terminus); 458395m-3751300m EASTING/NORTHING (southern terminus).
400

4. TOWNSHIP: 2S; RANGE: 4W; SECTIONS: 7, 18; TOWNSHIP: 2S; RANGE: 5W; SECTIONS: 13, 23, 24, 26, 34, 35; TOWNSHIP: 3S; RANGE 5W; SECTIONS: 3, 4, 8, 9, 17, 18. BASE MERIDIAN: San Bernardino.

5. MAP COORDINATES: 1090mm EAST; 510mm NORTH [northern terminus] (SW corner).
1925mm EAST; 1278mm NORTH [southern terminus] (SW corner).

6. ELEVATION: 880 feet (northern terminus); 800 feet (southern terminus).

7. LOCATION: northern terminus of the Riverside Upper Canal is located west of LaCadena and the I-215, south of Cannes Avenue and north of Chase Road. The canal then travels approximately ten miles northeast to southwest, with it's southern terminus at Hughes Alley between Balmoral Court, Shady View Street, and Tyler Street. The Upper and Lower canals joined at Hughes Alley, with the Lower Canal continuing to Temescal Canyon in Home Gardens. Portions of the canal lie within the Area of Potential Effects [APE] (Pages 9 of 14 through 14 of 14.

8. PREHISTORIC_____; HISTORIC X ; PROTOHISTORIC_____; ETHNOGRAPHIC_____

9. SITE DESCRIPTION: Construction of an upper and lower canal system began in October of 1870 and was completed in 1877. The headworks for the canal was on the south side of the Santa Ana River, about a half a mile downstream from the present Atchison, Topeka and Santa Fe railroad bridge, near the base of the La Loma Hills. The canal passed through La Placita, High Grove and Riverside, skirting arroyos which cut through the floodplain, or by way of flumes which were constructed to bridge the low areas. By 1886, forty-six miles of canals, and two hundred miles of laterals wound through Riverside. Improvements occurred from 1877 to 1886 including the extension of the Upper Canal to Hughes Alley.

10. AREA: 15,455 meters in length (51,000 feet - 9.7 miles].
METHOD OF DETERMINATION: Historic maps; field inspection.

11. DEPTH OF DEPOSIT: The open canal was approximately 91 cm. [3 feet] to 122 cm. [4 feet] below ground surface. Underground pipes, conduits and other related features exist along its route.
METHOD OF DETERMINATION: Historical information; field inspection.

12. FEATURES: Cement-lined canal with headgates; levees; suction pipes; division walls; flume remains; canal intakes; overflow gates; gate controls; intakes; siphons and conduits.

13. ARTIFACTS: See feature description.
14. NON-ARTIFACTUAL CONSTITUENTS AND FAUNAL REMAINS: None observed.
15. DATE RECORDED: 6-4-92 16. RECORDED BY: Robert Wlodarski & Dan Larson.

PERMANENT TRINOMIAL: CA-RIV-4495-H
OTHER DESIGNATIONS: MFA-3H/Riverside Upper Canal

17. AFFILIATION: Historical, Environmental, Archaeological, Research, Team, 5516 Las Virgenes Road, Calabasas, California 91302-1080, (818) 880-6338

18. HUMAN REMAINS: None observed

19. INTEGRITY OF SITE/SITE DISTURBANCES: Good to Very Good. Water still flows through the open canal to Jefferson Street where the canal is then used for overflow, drainage and runoff.

20. NEAREST WATER: Type: Spring Brook Creek adjacent at the northern terminus; and Mockingbird Creek to the east of the southern terminus.

21. VEGETATION COMMUNITY (site vicinity): Non-native plants/agricultural crops.

22. VEGETATION COMMUNITY (on-site): Non-native plants/agricultural crops.

23. SITE SOIL: Alluvial fan and terrace deposits; alluvial adobe; gray clay; marly earth; and heavy red mesa soil.

24. SURROUNDING SOIL: Alluvial fan and terrace deposits and gravels.

25. GEOLOGY: Recent alluvium/Pleistocene Non-marine Sedimentary Deposits/Mesozoic Granitic Rocks.

26. LANDFORM: Santa Ana river; floodplain; alluvial fan and terrace.

27. SLOPE: Less than 5 percent. 28. EXPOSURE: Total.

29. LANDOWNER/TENANT (Address): City of Riverside Public Utilities Department, 3900 Main Street, Riverside, California 92522.

30. REMARKS: The construction of the Upper and Lower Riverside canals allowed Riverside to grow and flourish. Without water, there was nothing but dry, arid, undeveloped land which could not sustain a large settlement. The canal system still appears to possess integrity of location, design, setting, workmanship, feeling and association that have made a significant contribution to local and regional history.

31. REFERENCES: (1897) Riverside 15 min. USGS (1901 edition); (1940-1941) Arrowhead 15 min. USGS (1936 edition); Scott (1976) Development of Water Facilities in the Santa Ana River Basin, California.

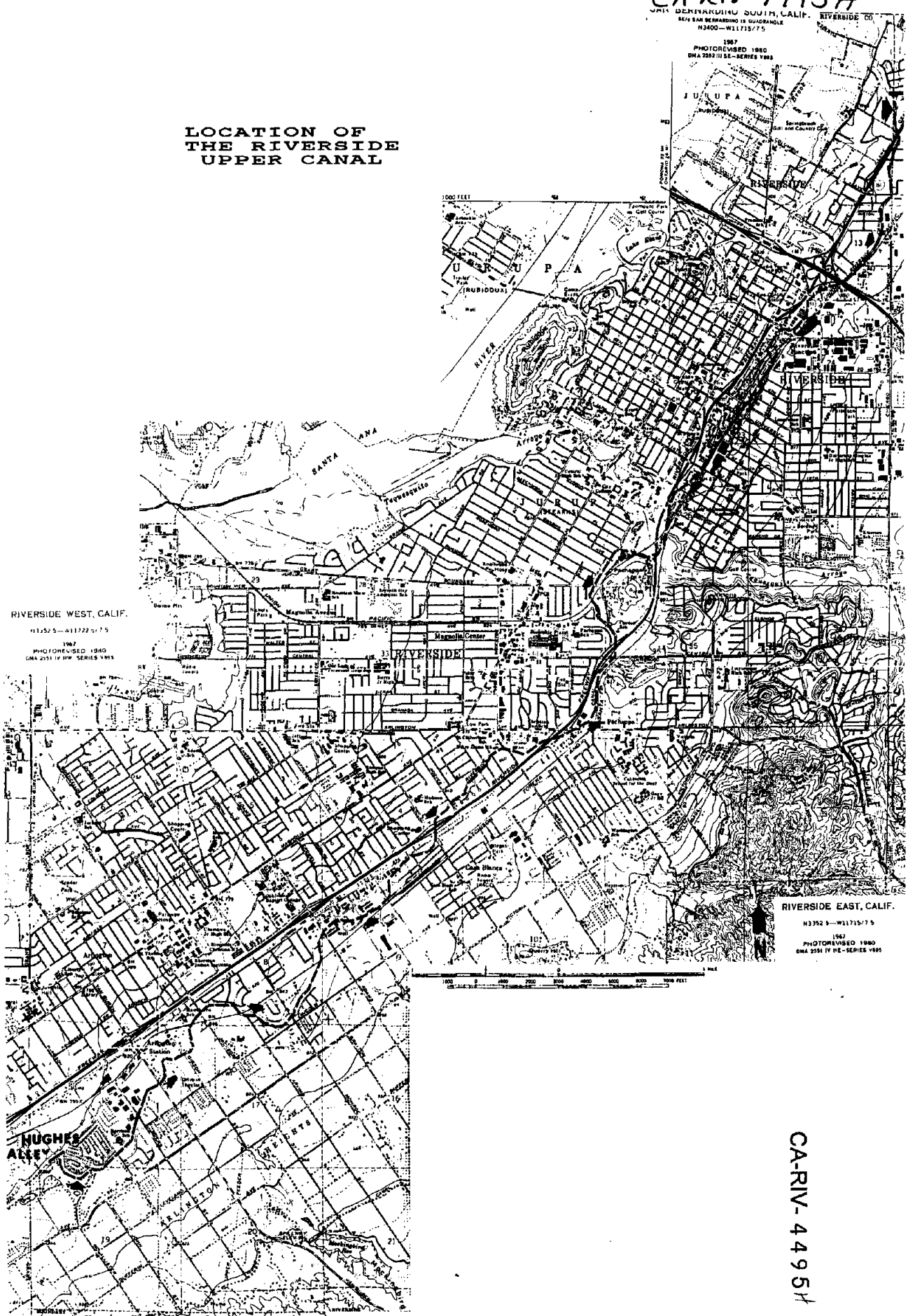
32. NAME OF PROJECT: An Archaeological Survey Report (ASR) Documenting the Effects of Widening Interstate 215 (I-215) From the Route 60/I-125 Interchange in Moreno Valley, Riverside County, to Orange Show Road in the City of San Bernardino, San Bernardino County, California.

33. TYPE OF INVESTIGATION: Phase I Archaeological Study - Archaeological Survey Report (ASR).

34. SITE ACCESSION NUMBER: None. CURATED AT: None.
35. PHOTOGRAPHS: None TAKEN BY: N/A

CA-RIV-4495H

LOCATION OF
THE RIVERSIDE
UPPER CANAL



CA-RIV-4495H

CA-RIV-4495H

CA-RIV-4495H

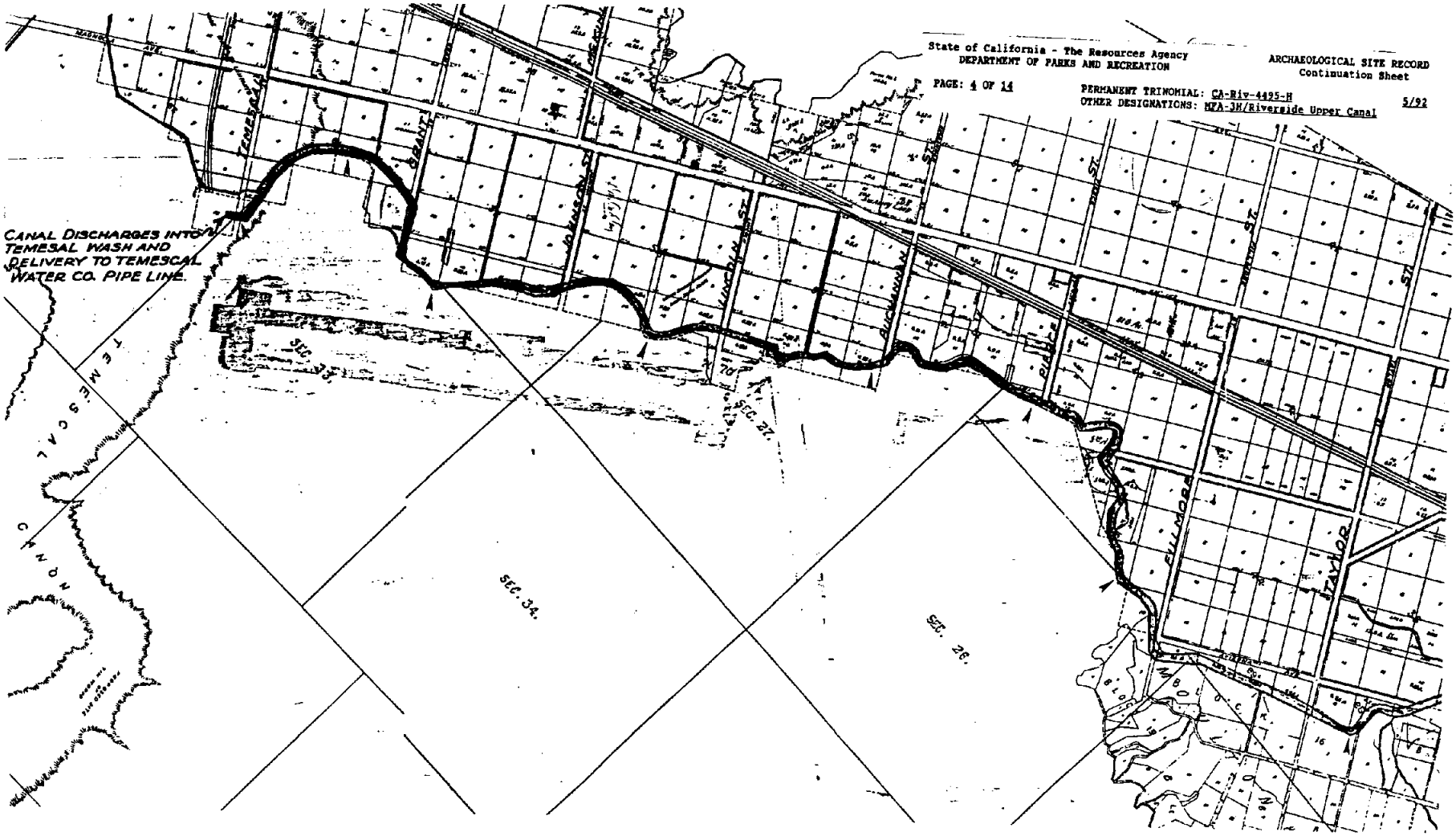
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

PAGE: 4 OF 14

PERMANENT TRINOMIAL: CA-Riv-4495-H
OTHER DESIGNATIONS: HFA-3H/Riverside Upper Canal

5/92



4914

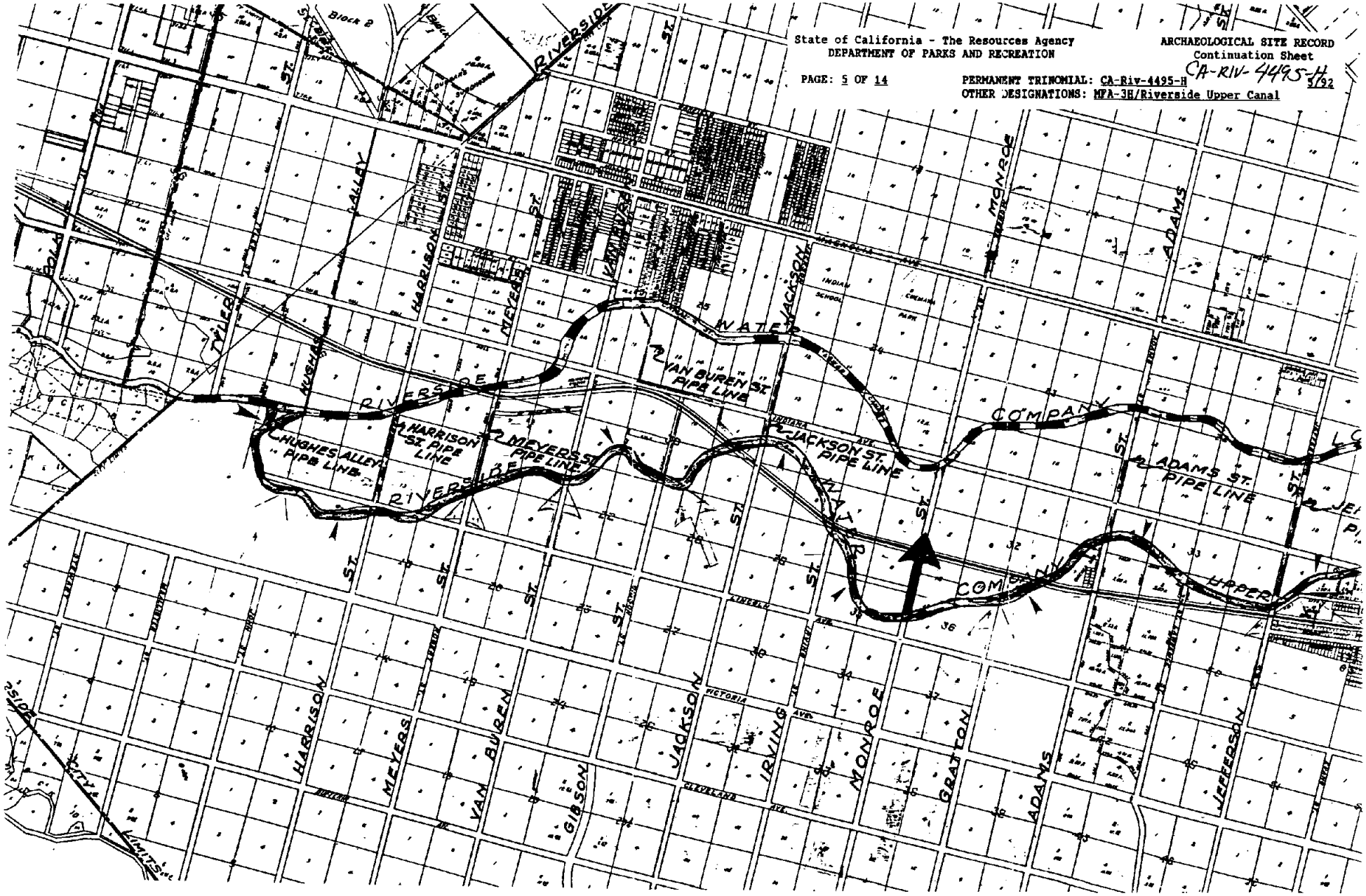
CA-RIV-4495H

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHAEOLOGICAL SITE RECORD
Continuation Sheet
CA-RIV-4495-H 3/92

PAGE: 5 OF 14

PERMANENT TRINOMIAL: CA-Riv-4495-H
OTHER DESIGNATIONS: MFA-3H/Riverside Upper Canal



5 of 14

CA-RIV-4495H

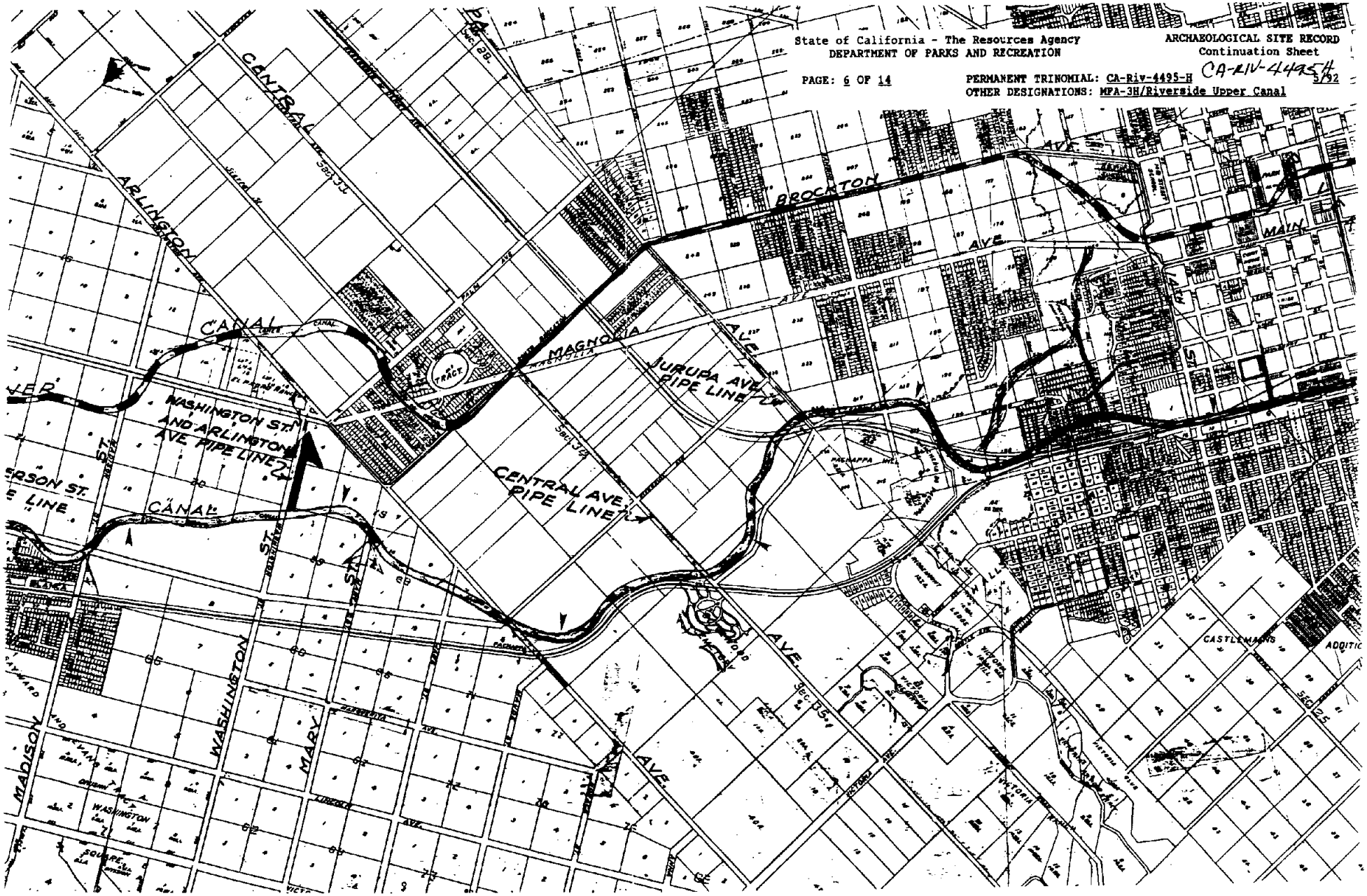
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHAEOLOGICAL SITE RECORD
Continuation Sheet
CA-RIV-4495H

PAGE: 6 OF 14

PERMANENT TRINOMIAL: CA-Riv-4495-H
OTHER DESIGNATIONS: MFA-3H/Riverside Upper Canal

5/92



6 of 14

CA-RIV-4495 H

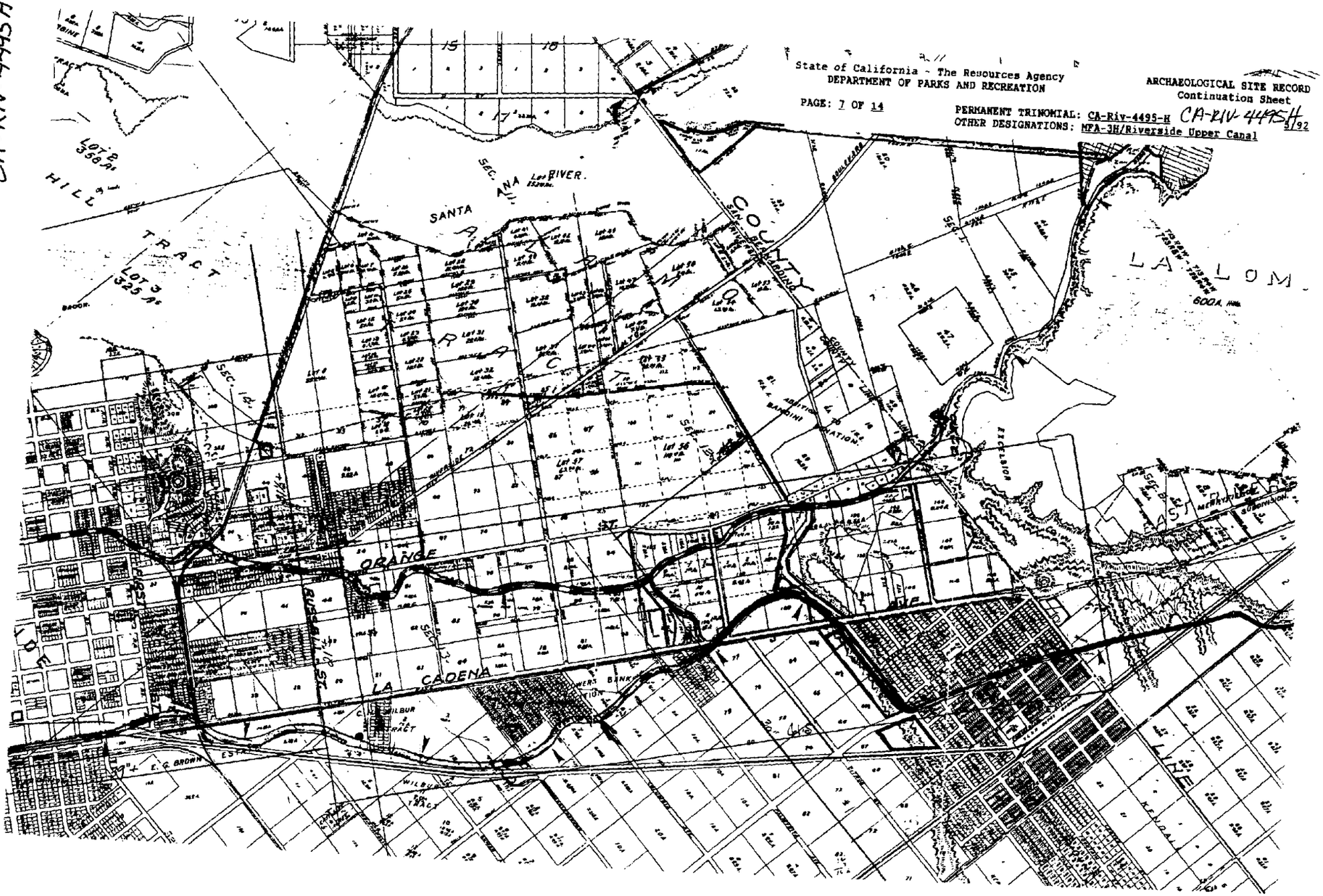
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

PAGE: 7 OF 14

PERMANENT TRINOMIAL: CA-Riv-4495-H CA-RIV-4495H
OTHER DESIGNATIONS: MFA-3H/Riverside Upper Canal

5/92



7 of 14

CA-RIV-4495 H

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

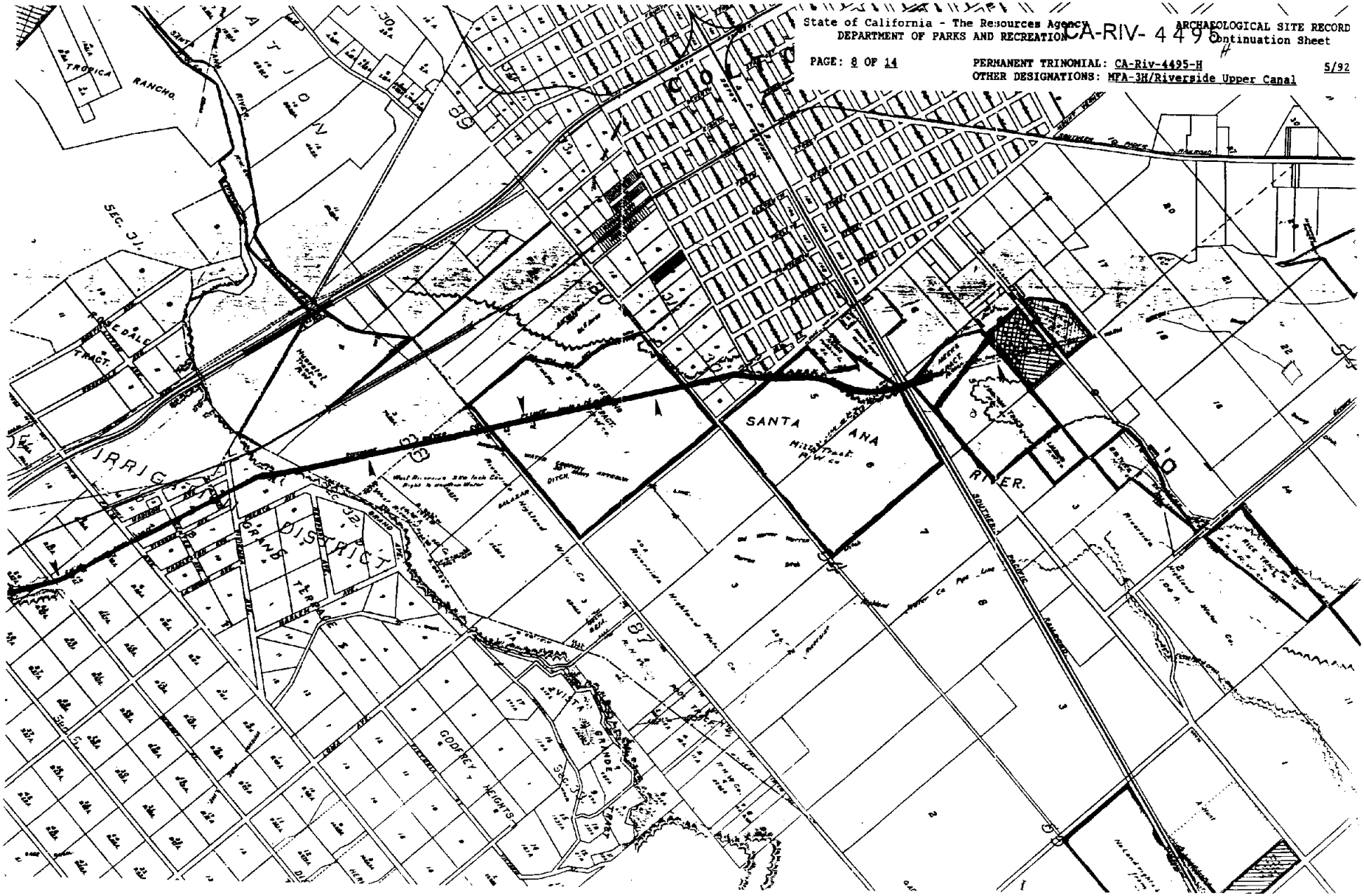
ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

CA-RIV- 4495 H

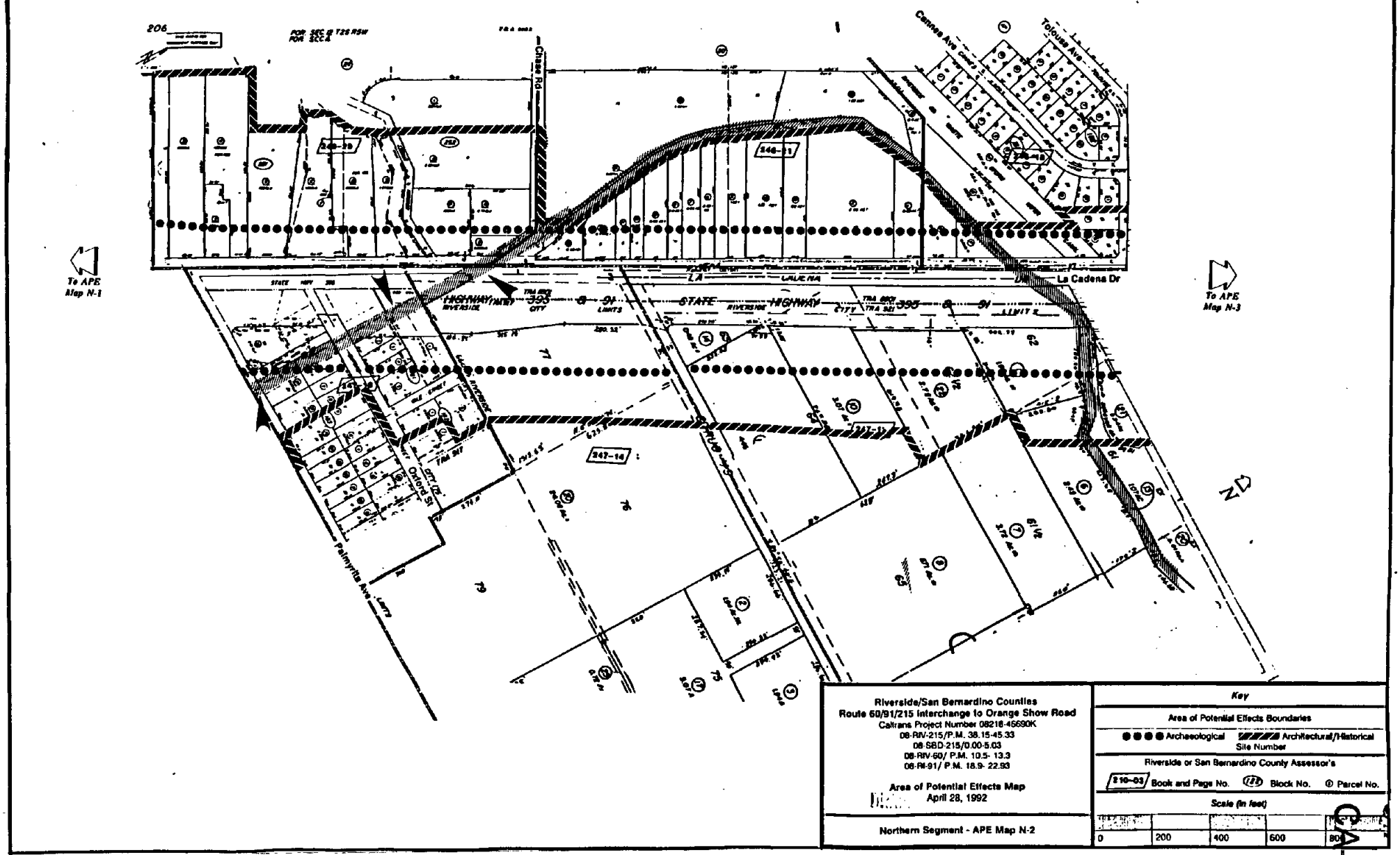
PAGE: 8 OF 14

PERMANENT TRINOMIAL: CA-Riv-4495-H
OTHER DESIGNATIONS: MFA-3H/Riverside Upper Canal

5/92



8 8/14



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

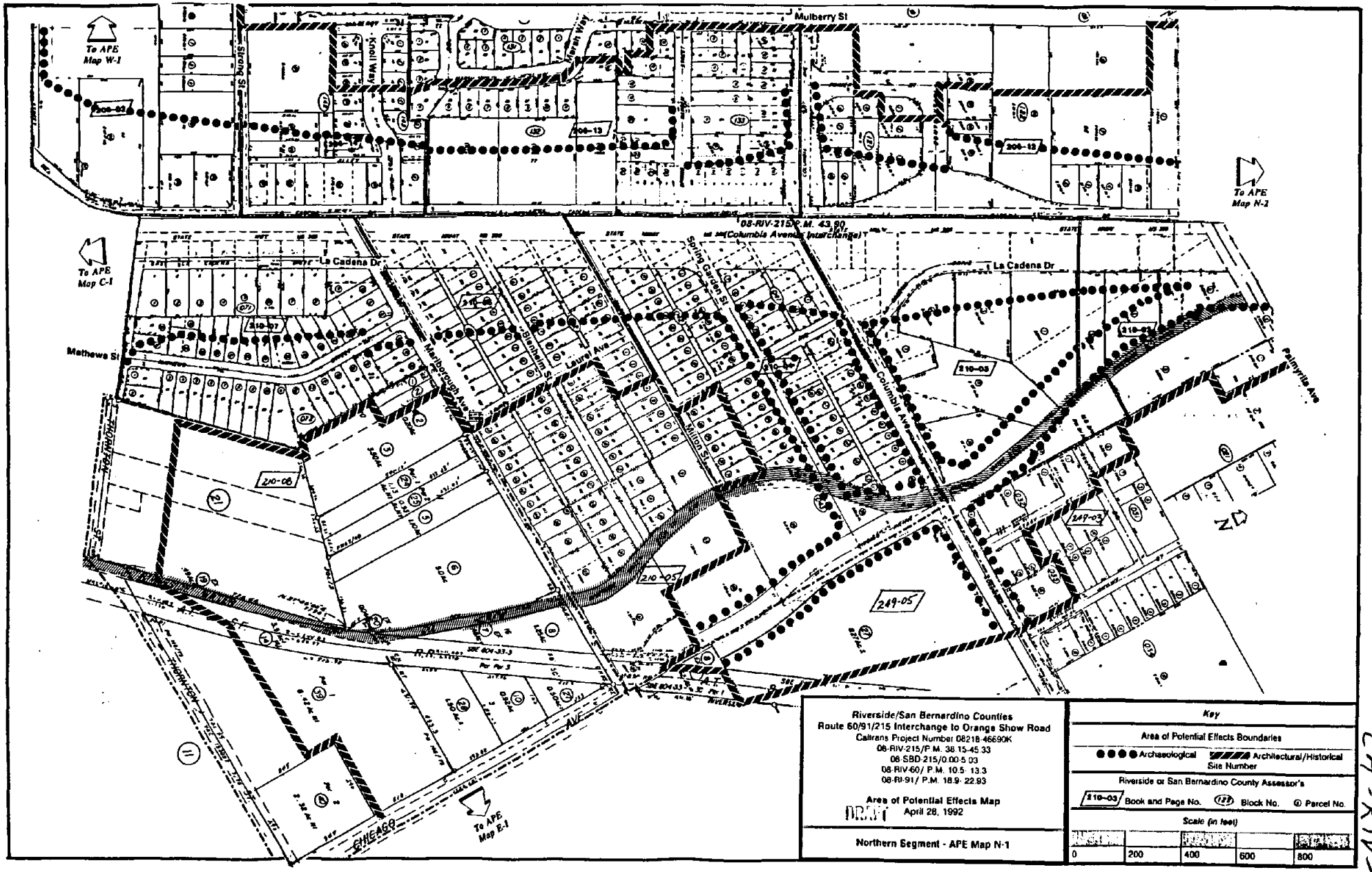
PAGE: 9 OF 14

PERMANENT TRINOMIAL: CA-Riv-4495-H

5/92

OTHER DESIGNATIONS: MFA-3H/Riverside Upper Canal

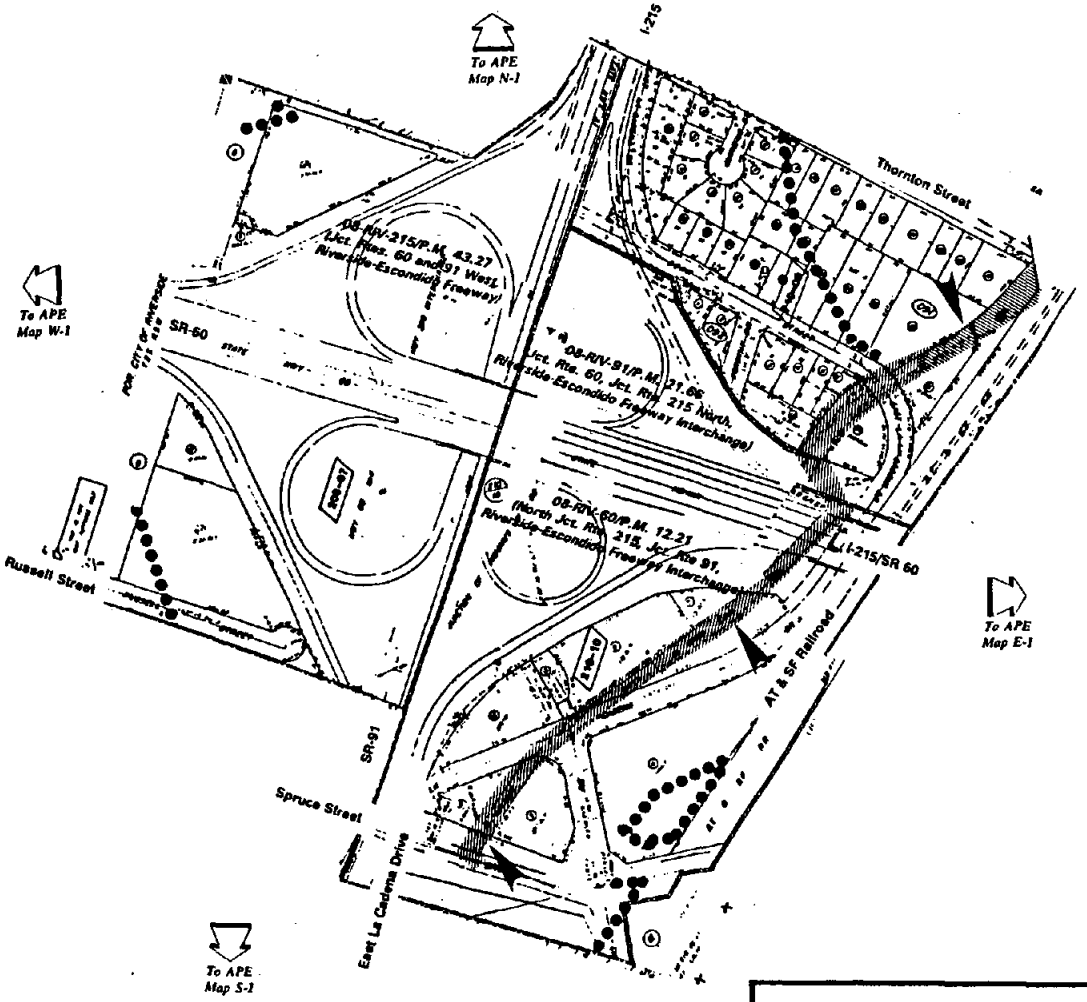
CA-RIV-4495H



CA-RIV-4495-H

CA-RIV-4495-H

4/2/91



Riverside/San Bernardino Counties
Route 60/91/215 Interchange to Orange Show Road
Caltrans Project Number 08218-46690K
08-RIV-215/P.M. 38.15-45.33
08-SBD-215/0.00-5.03
08-RIV-60/ P.M. 10.5- 13.3
08-RIV-91/ P.M. 18.9- 22.93

Area of Potential Effects Map
DRAFT April 28, 1992

Central Interchange Segment - APE Map C-1

Key

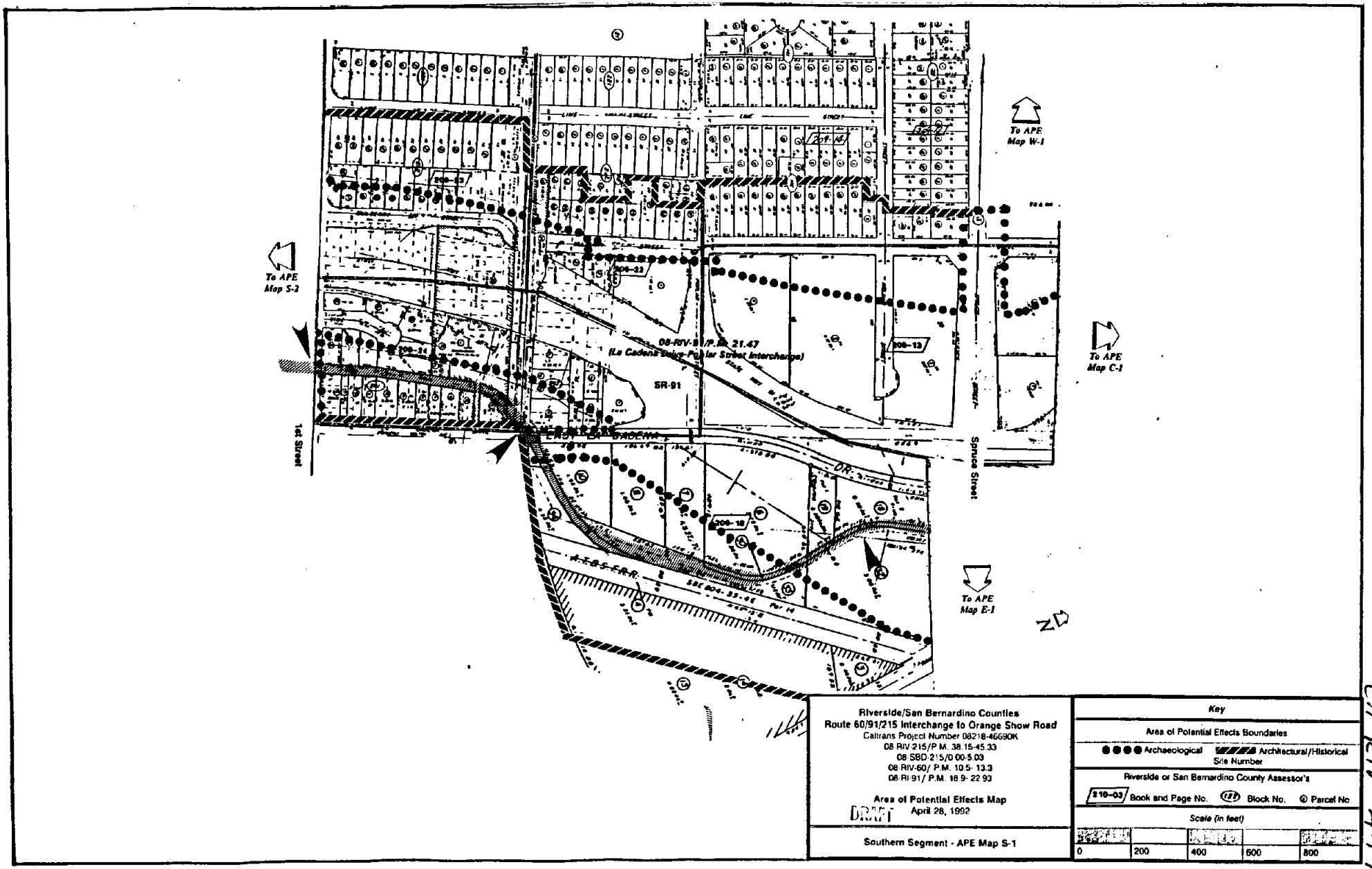
Area of Potential Effects Boundaries

Archaeological / Architectural/Historical Site Number

Riverside or San Bernardino County Assessor's
210-03 Book and Page No. (127) Block No. @ Parcel No.

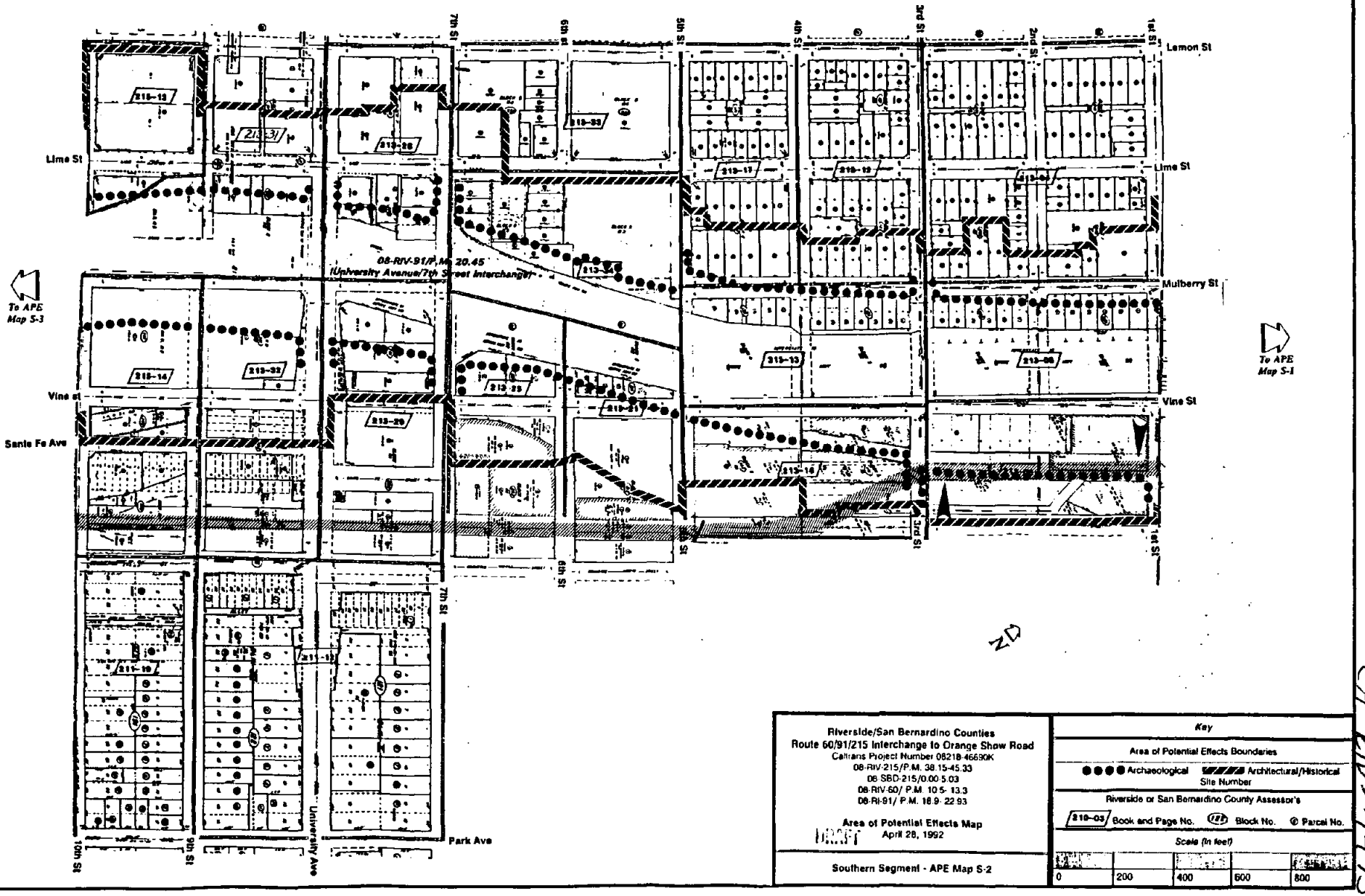
Scale (in feet)

0	200	400	600	800



CA-RIV-4495-H

12 of 14



CA-RIV-4495-H

CA-RIV-4495-H

13 of 14

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

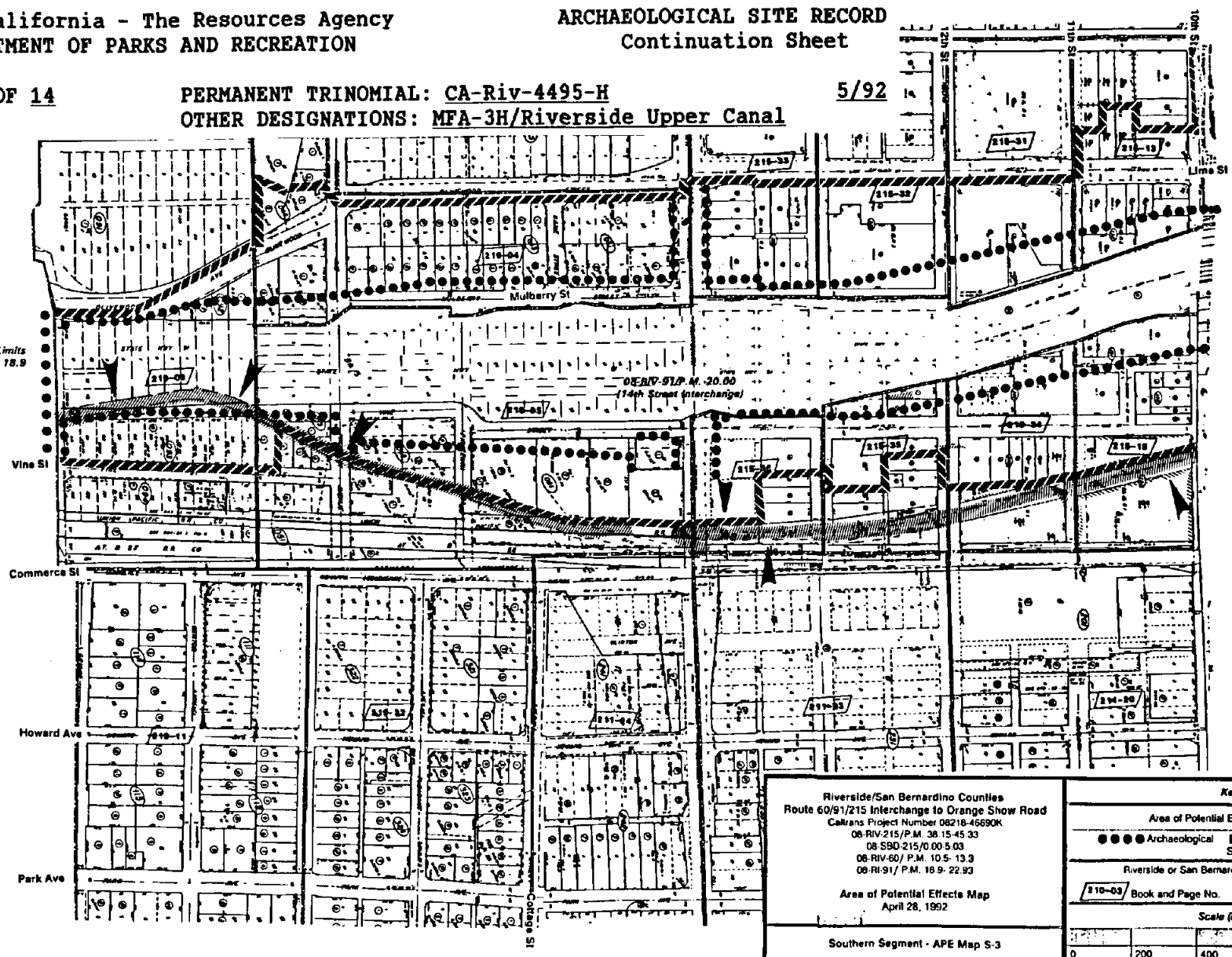
ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

PAGE: 14 OF 14

PERMANENT TRINOMIAL: CA-Riv-4495-H

5/92

OTHER DESIGNATIONS: MFA-3H/Riverside Upper Canal



CA-RIV-4495H

Riverside/San Bernardino Counties
Route 60/91/215 Interchange to Orange Show Road
Caltrans Project Number 08218-46690K
08-RIV-215/P.M. 38.15-45.33
08-SBD-215/0.00-5.03
08-RIV-60/ P.M. 10.5- 13.3
08-RI-91/ P.M. 18.9- 22.93

Area of Potential Effects Map
April 28, 1992

Southern Segment - APE Map S-3

Key

Area of Potential Effects Boundaries

Archaeological / Architectural/Historical Site Number

Riverside or San Bernardino County Assessor's

210-03 Book and Page No. (12) Block No. ② Parcel No.

Scale (in feet)

0	200	400	600	800

H-4495

CA-RIV- 4495H

State of California - The Resources Agency Permanent Trinomial: CA-Riv-4495H Supplement ____

DEPARTMENT OF PARKS AND RECREATION

ARCHAEOLOGICAL SITE RECORD

Other Designations: RCTC Parcel 5 - Upper Canal Remnants

Page 1 of 8

1. County: Riverside

2. USGS Quad: Riverside East (7.5') 1967 (15') _____ Photorevised 1980

3. UTM Coordinate: Zone |1|1| |4|6|6|9|2|0| m Easting |3|7|6|0|8|6|0| m Northing ( )

4. Township 2 South Range 5 West : NW ¼ of NE ¼ NE ¼ NW ¼ of Section 24 Base Mer. SBM ( )

5. Map Coordinates: 48 mmS 65 mmE (from NW corner of map) 6. Elevation 880' ( )

7. Location: Assessor Parcel Number 210-180-018. The Upper Canal remnants are located on the west side of the canal on the southeast side of the parcel. East La Cadena Drive is approximately 210 feet west and Spruce St. is approximately 400' north, of the wall location. The original Upper Canal is now the Riverside Water Company Canal. ( )

8. Prehistoric ___ Historic X Protohistoric ___ 9. Site Description 17 feet of granite block retaining wall is exposed with an additional 71 feet partially exposed to the south. The granite blocks appear to have been covered over with the concrete canal lining. The exposed wall is 16" to 18" high and 12" to 15" wide. ( )

10. Area 88 feet long m( )x _____ m( ) _____ m^2

Method of Determination: Tape ( )

11. Depth: None apparent cm Method of Determination: Visual ( )

12. Features: Dressed granite blocks generally three courses high. No other associated features. ( )

13. Artifacts: None observed. ( )

14. Non-Artifactual Constituents and Faunal Remains: None observed. ( )

15. Date Recorded: 9/12/91 16. Recorded By: Patricia Jertberg ( )

17. Affiliation and Address: LSA Associates, Inc., 3403 10th Street, Suite 520, Riverside, CA 92501 ( )

WPFORMS\ARCH.1

See Continuation Sheet (X)

CA-RIV- 4495 H

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Permanent Trinomial: CA-Riv-4495H

9 | 91
Mo. Yr.

ARCHAEOLOGICAL SITE RECORD

Other Designations: RCTC Parcel 5 - Upper Canal Remnants

18. Human Remains: None observed ( )

19. Site Disturbances: Upper Canal has been lined with concrete and may have covered original granite block construction present in some places. Erosion has damaged some of the concrete and granite block retaining wall. ( )

20. Nearest Water (type, distance, direction) Canal is on the east side of the granite retaining wall. ( )

21. Vegetation Community (site vicinity): Non-native Plant List ( )

22. Vegetation (on site): Introduced grasses and weeds. A large pepper tree is adjacent to the granite wall on the west side. Some Datura plants are in the disced area west of the canal.

23. Site Soil: Recent alluvium, medium brown with some cobbles. ( )

24. Surrounding Soil: Same as above. ( )

25. Geology: Recent alluvium with some granite and metavolcanic cobbles and boulders. ( )

26. Landform: Alluvial deposition area. ( )

27. Slope: Vertical 28. Exposure: Open ( )

29. Landowner(s) (and/or tenants) and Address: Riverside County Transportation Commission (RCTC), 3560 University Avenue, Suite 100, Riverside, CA 92501 (in process of purchasing). ( )

30. Remarks: Per Howard Creason (personal communication) the granite block retaining wall may have been part of the early efforts to improve the original earthen canal and prevent seepage after the drought of the 1890s. The land on the west is below the canal and a retaining wall would have been necessary. ( )

31. References: Historic Property Clearance Report - Supplement. November 1991 (in progress). ( )

32. Name of Project: RCTC (RCT901) ( )

33. Type of Investigation: Phase I - Archaeological survey for proposed property acquisition by RCTC ( )

34. Site Accession Number: None Curated At:

35. Photos: Photo record forms included. Color prints. ( )

CA-RIV- 4495H

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Permanent Trinomial: CA-Riv-4495H 9/91
Mo. Yr.

ARCHAEOLOGICAL PHOTOGRAPHIC RECORD

Other Designations: RCTC Parcels 4 and 5 (RCT901)

Page 3 of 8

Camera and Lens Types
Minolta 7000i: 23-135

Film Type and Speed
Color print 400: Roll #1

On File at: LSA Associates, Inc.
3403 10th Street, Suite 520
Riverside, CA 92501

Mo.	Day	Time	Exposure/ Frame	Subject/Description	View Toward	Accession Number
9	12	9:00	14	Friis parcel - Friis and Company	south	
9	12	9:00	15	Friis parcel - overview	south	
9	12	9:00	16	Friis parcel - overview	south	
9	12	9:30	17	Saedi parcel overview from northeast corner, Spruce overcross in background	west	
9	12	9:30	18	Saedi parcel overview from northeast corner, Call America building in background	southwest	
9	12	9:30	19	Saedi parcel overview from northeast corner, RR on left	south	
9	12	9:30	20	Saedi parcel, former structure site	southeast	
9	12	9:30	21	Saedi parcel, former structure site	north	
9	12	9:30	22	Saedi parcel, structure remnants, east wall	west	
9	12	9:30	23	Saedi parcel, structure remnants, north wall	south	
9	12	9:30	24	Saedi parcel, structure remnants, west wall	east	
9	12	9:30	25	Saedi parcel, structure remnants, south wall	north	
9	12	9:30	26	Saedi parcel, old metal door knob	NA	
9	12	9:30	27	Saedi parcel, structure, stucco skin	NA	
9	12	9:30	28	Saedi parcel, structure, exterior wall	northeast	
9	12	9:30	29	Saedi parcel, structure, curve in northwest corner exterior wall	west	
9	12	9:30	30	Saedi parcel, west side overview from southwest corner, Call America on right	east	
9	12	9:30	31	Saedi parcel, west side overview from southwest corner	northeast	
9	12	9:30	32	Saedi parcel, west side overview from southwest corner, La Cadena East on left	north	
9	12	9:30	33	Saedi parcel, Upper Canal wall area	east	
9	12	9:30	34	Saedi parcel, Upper Canal exposed granite block wall area	east	
9	12	9:30	35	Saedi parcel, Upper Canal exposed granite block wall, close up	east	
9	12	9:30	36	Saedi parcel, Upper Canal exposed granite block wall	north	

CA-RIV- 4495 H

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Permanent Trinomial: ~~CA-RIV-4495H~~ 9/91 Mo./Yr.

ARCHAEOLOGICAL PHOTOGRAPHIC RECORD

Other Designations: RCTC Parcel 5 - Historic Features (RCT901)/Jurupa Ave. Extension (CTR101)

Camera and Lens Types
Minolta 7000i: 28-135

Film Type and Speed
Color Print 400: Roll #2

On File at: LSA Associates, Inc.
3403 10th Street, Suite 520
Riverside, CA 92501

Mo.	Day	Time	Exposure/ Frame	Subject/Description	View Toward	Accession Number
11	5	10:00	1	Irrigation weir box	north	
11	5	10:00	2	Irrigation weir box	east	
11	5	10:00	3	Irrigation weir box	west	
11	5	10:00	4	Upper Canal from weir box	north	
11	5	10:00	5	Outlet to weir box, vertical	east	
11	5	10:00	6	Outlet to weir box, horizontal	east	
11	5	10:00	7	Outlet north of weir box with brick	east	
11	5	10:00	8	Quartz rock exposed beneath concrete overcoat on west side of canal	north	
11	5	10:00	9	Exposed wall - area mapped	southeast	
11	5	10:00	10	Close-up of wall construction	east	
11	5	10:00	11	Canal with wall	south	
11	5	10:00	12	Canal from wall area	north	
11	5	10:00	13	Wall close-up	south	
11	5	10:00	14	Canal and wall	south	
11	5	10:00	15	Canal with exposed rock area center from southeast corner of fence line and canal, with tape	north	
11	5	10:00	16	Same as above without tape	north	
11	5	10:00	17	Exposed wall and canal	north	
11	7	9:00	18	Parcel 6 overview from Orange Street	northwest	
11	7	9:00	19	Parcel 6 overview from Orange Street	west	
11	7	9:00	20	Parcel 6 overview from Orange Street	southwest	
11	7	10:00	21	Jurupa Avenue Extension, drainage and levee	north	
11	7	10:00	22	Jurupa Avenue Extension, east portion of project area	east	

CA-RIV- 4495 H

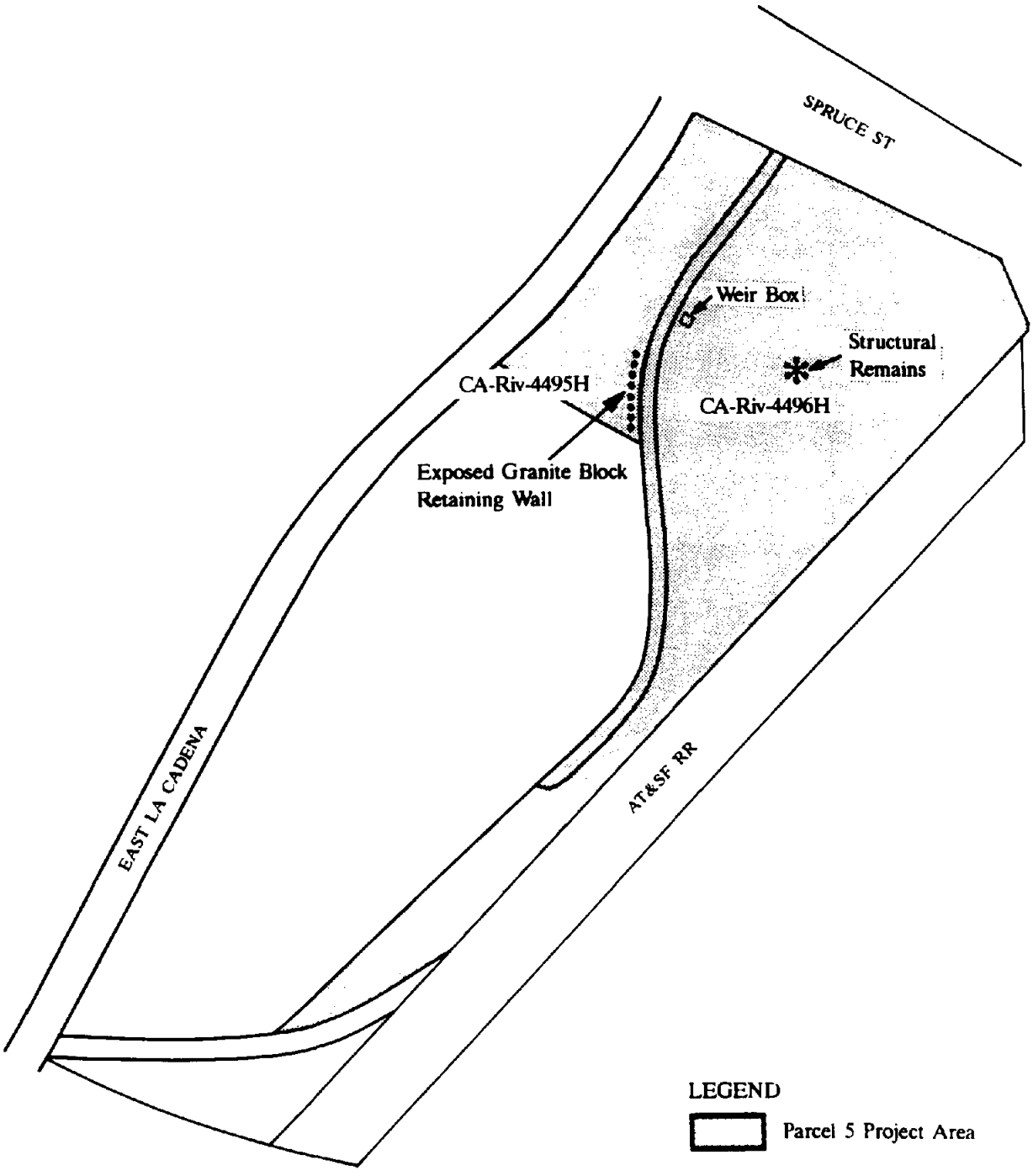
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHEOLOGICAL SITE MAP

Page 5 of 8.

Permanent Trinomial: CA-Riv-4495H 9 | 91 (Mo. Yr.)

Other Designations: RCTC - Parcel 5 Historic Features



DPR 422 F (Rev. 4/88)

CA-RIV- 4495 H

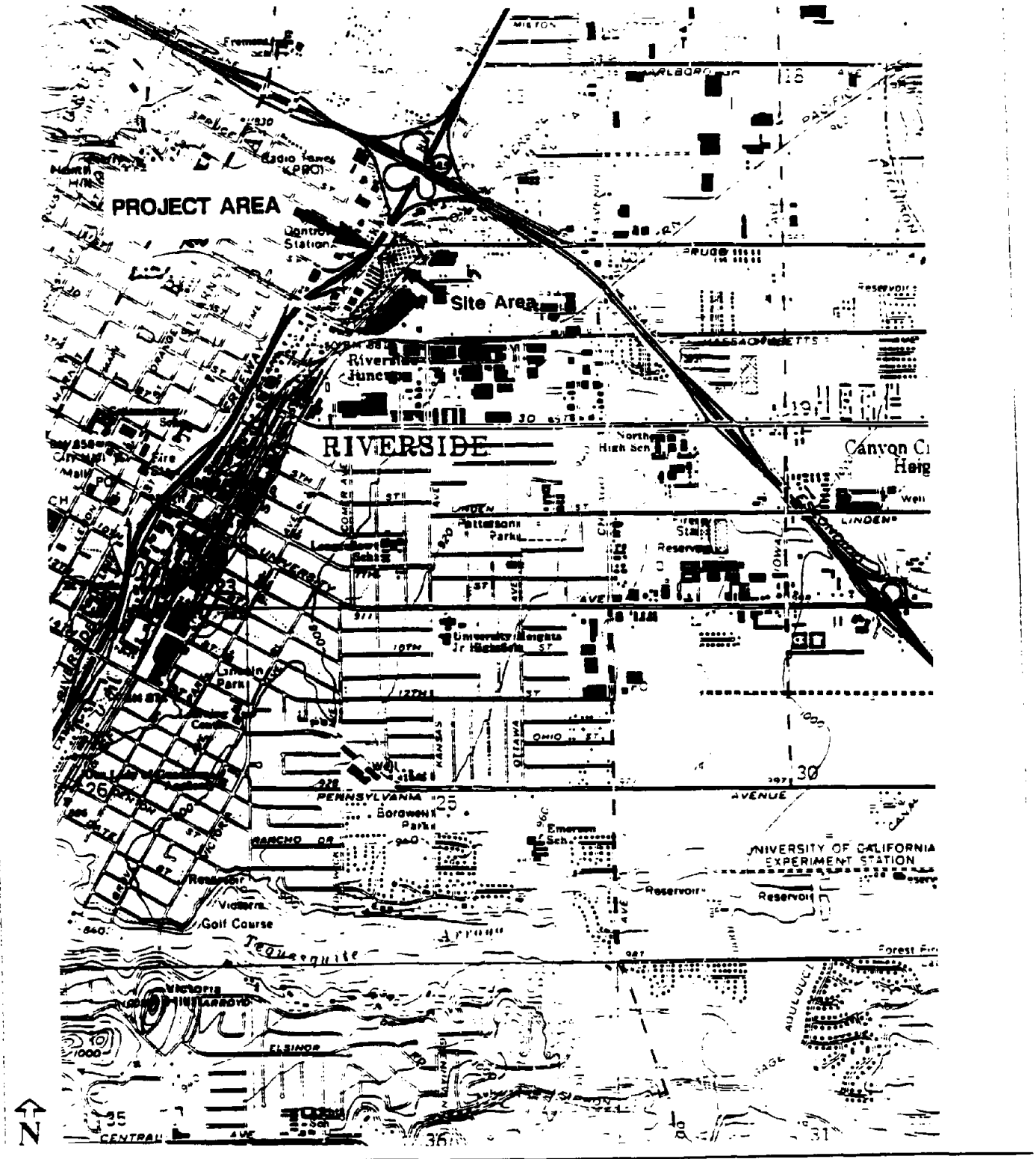
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHEOLOGICAL SITE LOCATION MAP

Permanent Trinomial: CA-Riv-4495H

9 / 91
Mo. Yr.

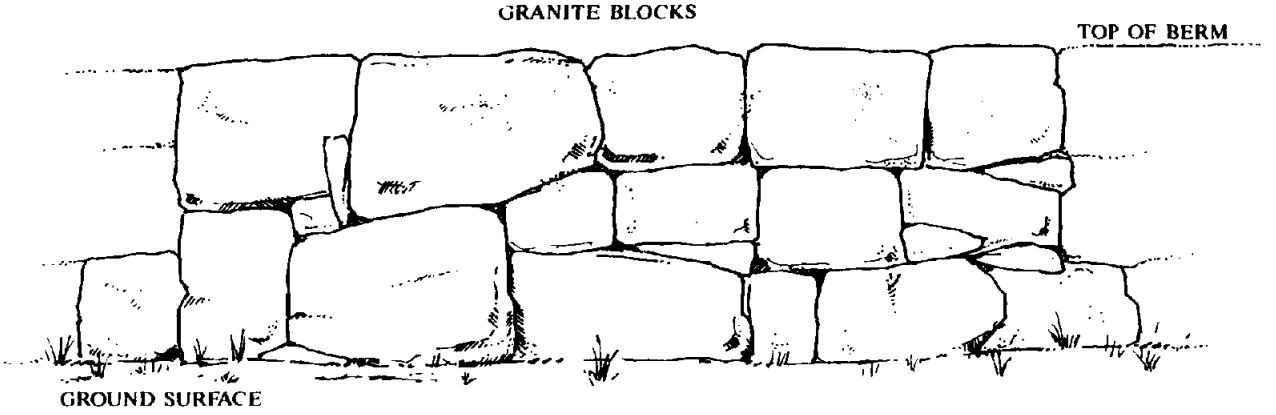
Other Designations: RCTC Parcel 5 - Upper Canal Remnants



Scale: 1" = 2000'

USGS 7.5' Riverside East Quadrangle

DPR 422 G (Rev. 4/86)



TN

Scale in Feet

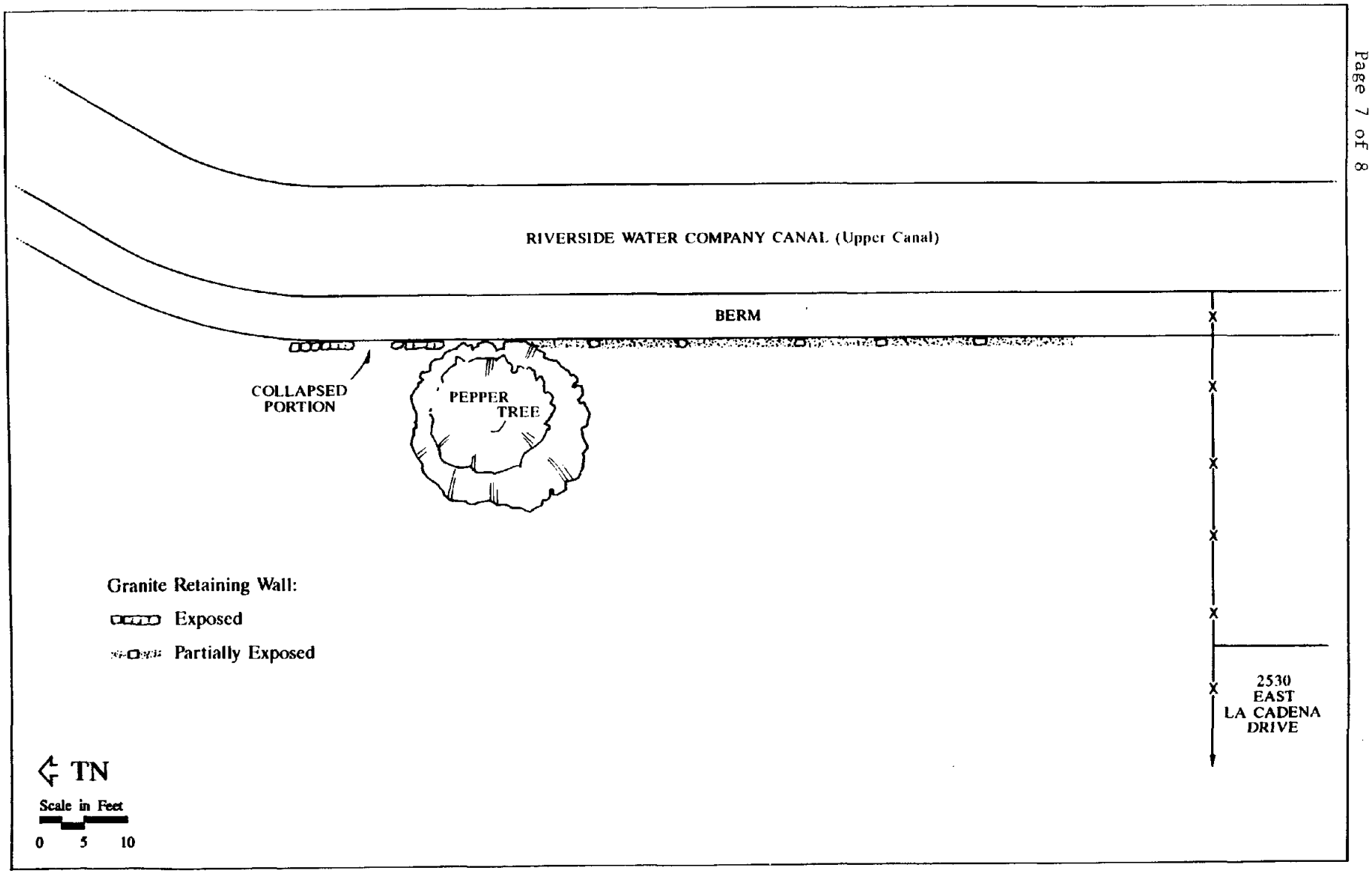
0 .5 1

11/20/91

Route 60/91/215 Interchange
Riverside County
Post Miles: 08-Riv-91/21.47
08-Riv-60/11.82
Charge unit: 08213
E.A.: 462702

CA-Riv-4495H
Parcel 5
Partial Profile of Exposed Granite Retaining Wall

CA-RIV-4495H



11/20/91

Route 60/91/215 Interchange
Riverside County
Post Miles: 08-Riv-91/21.47
08-Riv-60/11.82
Charge unit: 08213
E.A.: 462702

CA-Riv-4495H
Parcel 5 - Plan View
Exposed & Partially Exposed Granite Retaining Wall

CA-RIV-4495H

update 10/09

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # 36-007169; update
HRI #
Trinomial CA-SBR-7169; update
NRHP Status Code
Other Listings
Review Code Reviewer Date

*Resource Name or # (Assigned by recorder) CRM TECH 2297-1

P1. Other Identifier: Riverside-Warm Creek Canal/Riverside Water Company's flume wells

*P2. Location: √ Not for Publication ____ Unrestricted *a. County San Bernardino

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quads San Bernardino South, Calif. Date 1967, photo-revised 1979

Within a portion of the Rancho San Bernardino land grant lying in T1S; R4W; S.B. B.M.

Elevation: Approx. 920-950 feet above mean sea level

c. Address N/A City Colton Zip Code 92324

d. UTM: Zone 11; A: 470,952 mE/ 3,768,601 mN;
B: 470,349 mE/ 3,767,624 mN
UTM Derivation: ____ USGS Quad √ GPS; NAD 1983

e. Other Locational Data: (e.g., parcel #, directions to resource, etc., as appropriate) The six wells are located along the northwestern bank of the Santa Ana River and extend a distance of approximately 3,800 feet. The northernmost well, known as Flume Well #1, is located approximately 1,000 feet southwest of the Mount Vernon Avenue Bridge over the Santa Ana River. A segment of the concrete-lined canal is located near Flume Well #2.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) This update is to include a total of six wells, known as the City of Riverside's Flume Wells Nos. 1-6. This system of wells, originally constructed by the Riverside Water Company in the early 20th century, are a part of the City of Riverside's water diversion, extraction, and conveyance system along this part of the Santa Ana River, some of which has been previously recorded as Site 36-007169. Five of the six wells are modern in appearance and contained within a fenced enclosure. Flume Well #5, however, is

(Continued on page 2)

*P3b. Resource Attributes: (List attributes and codes) HP20: Canal/aqueduct system

*P4. Resources Present: ____ Building __√__ Structure ____ Object ____ Site ____ District ____ Element of District ____ Other (isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

See pg. 3 for photographs

P5b. Description of Photo: (view, date, accession #) Photos taken on March 30, 2009

*P6. Date Constructed/Age of Sources:
√ Historic ____ Prehistoric ____ Both

*P7. Owner and Address:
City of Riverside Public Utilities Department, 3901 Orange Street, Riverside, CA 92501

*P8. Recorded by: (Name, affiliation, and address)
Josh Smallwood, CRM TECH, 1016 E. Cooley Drive, Suite A/B, Colton, CA 92324

*P9. Date Recorded: March 30, 2009

*P10. Survey Type: Project-related survey for compliance with CEQA and Section 106 of the NHPA (intensive-level)

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Smallwood, Josh, and Laura Hensley Shaker (2009): Identification and Evaluation of Historic Properties: Riverside North Basin Recharge and Recreational Park Project, City of Colton, San Bernardino County, California. On file, Archaeological Information Center, San Bernardino County Museum, Redlands.

*Attachments: ____ None __√__ Location Map __√__ Continuation Sheet ____ Building, Structure, and Object Record ____ Archaeological Record ____ District Record ____ Linear Resource Record ____ Milling Station Record ____ Rock Art Record ____ Artifact Record ____ Photograph Record __√__ Other (List): Site Sketch Map

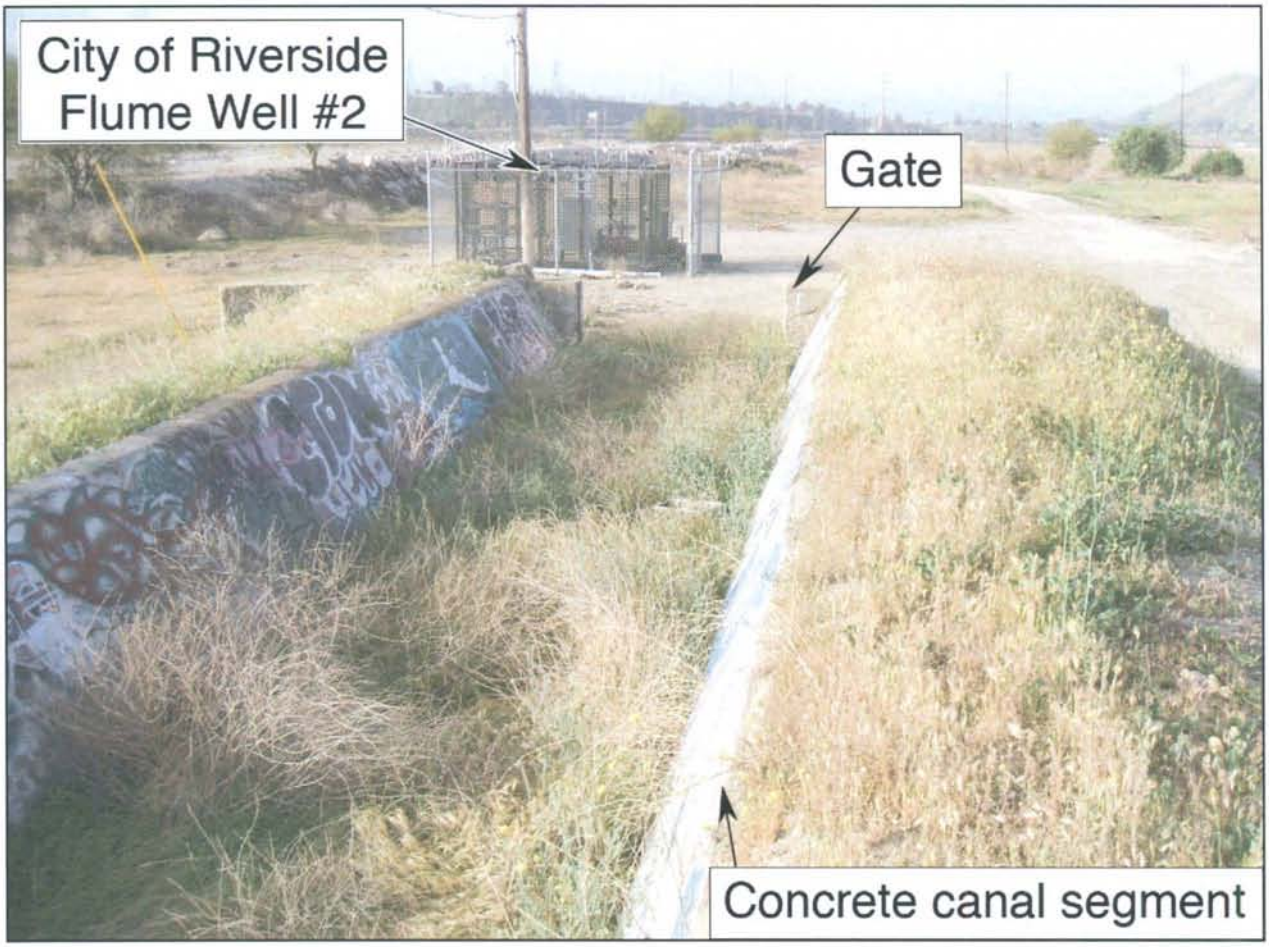
Recorded by Josh Smallwood Date March 30, 2009 ___Continuation _√_ Update
Affiliation: CRM TECH, Colton, CA 92324 Project No: CRM TECH 2297

P3a. **Description (continued):** not enclosed and has not yet been upgraded to modern standards as the others have. It consists of a short length of vertical casing topped with a concrete superstructure. City of Riverside records show that the well was drilled in July-August, 1927, but no other records are available that would reveal later alterations or new construction on the well. As such, it is impossible to determine whether the materials, design, and construction of the well superstructure is original to its 1927 construction, or otherwise historic in age. Well Nos. 1-5 were all drilled between 1925 and 1928, while Flume Well No. 6 was drilled in 1972. These six flume wells are part of a system of groundwater wells drilled in the late 1920s to improve the City of Riverside's water supply.

The concrete canal segment measures approximately 500 feet long, six feet wide, and three feet deep, and is bounded on one side by a raised earthen berm that measures about six feet wide and three feet tall. It apparently dates to the late 19th or early 20th century. The southeastern end of the canal segment features a concrete dam-wall with a slotted, rectangular opening that likely once functioned as a control gate. The canal segment is abandoned, and it appears that the water conveyance system at this location has been replaced with underground pipes. The City of Riverside's Flume Well #2, originally drilled by the Riverside Water Company in 1928, is situated near the gate end of the canal, along the current alignment of an underground siphoning system.

This water system, once based on earthen canals that delivered surface waters from Warm Creek, and later modified to procure groundwater through wells, conveying the flow through pipes, is associated with the late 19th and early 20th century development of the City of Riverside. The Riverside-Warm Creek Canal system's potential period of significance, therefore, is identified as the 1880s-1920s.

The portion of Site 36-007169 identified during this study, consisting of a fragmented segment of concrete-lined canal that replaced the original earthen canal around 1900 and now in a state of disuse and disrepair, and groundwater wells drilled in the late 1920s that have been completely modernized as a working component of the City of Riverside's water supply system, lacks sufficient integrity in terms of design, materials, workmanship, and feeling to relate to its period of significance. As such, this portion of Site 36-007169 does not appear to be eligible for listing in the National Register of Historic Places or in the California Register of Historical Resources, and therefore, is not considered a "historic property" under Section 106 or a "historical resource" under CEQA.



A segment of the concrete-lined canal, part of the Riverside-Warm Creek Canal system. (View to the southwest)

Two of the City of Riverside's six flume wells recorded as part of Site 36-007169. *Left:* Flume Well No. 2, view to the east; *right:* Flume Well No. 5, view to the north.

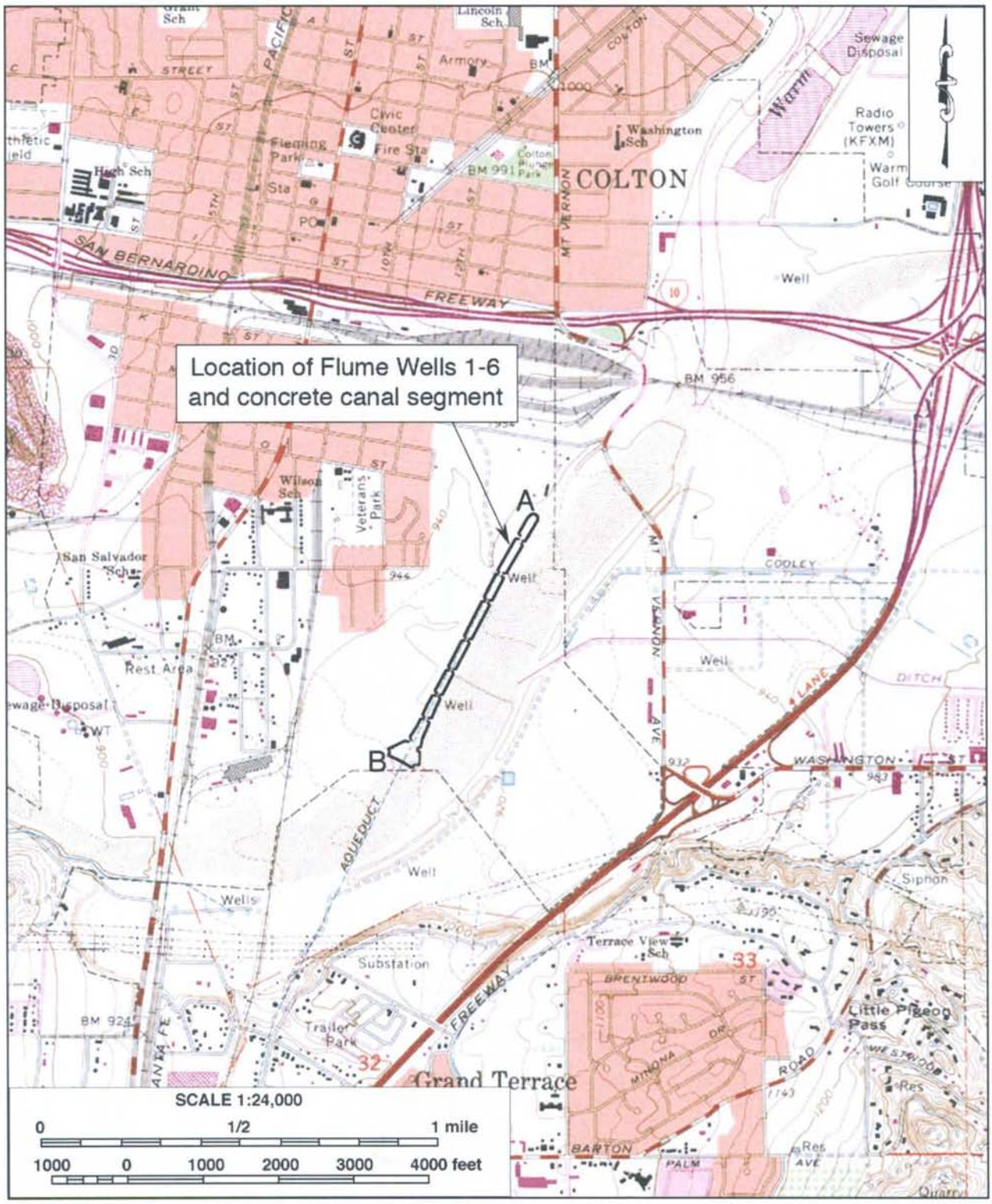
State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # 36-007169; update
HRI #
Trinomial CA-SBR-7169; update

*Resource Name or # (Assigned by recorder) CRM TECH 2297-1

*Map Name: San Bernardino South, Calif. *Scale: 1:24,000 *Date of Map: 1979



*Required information

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

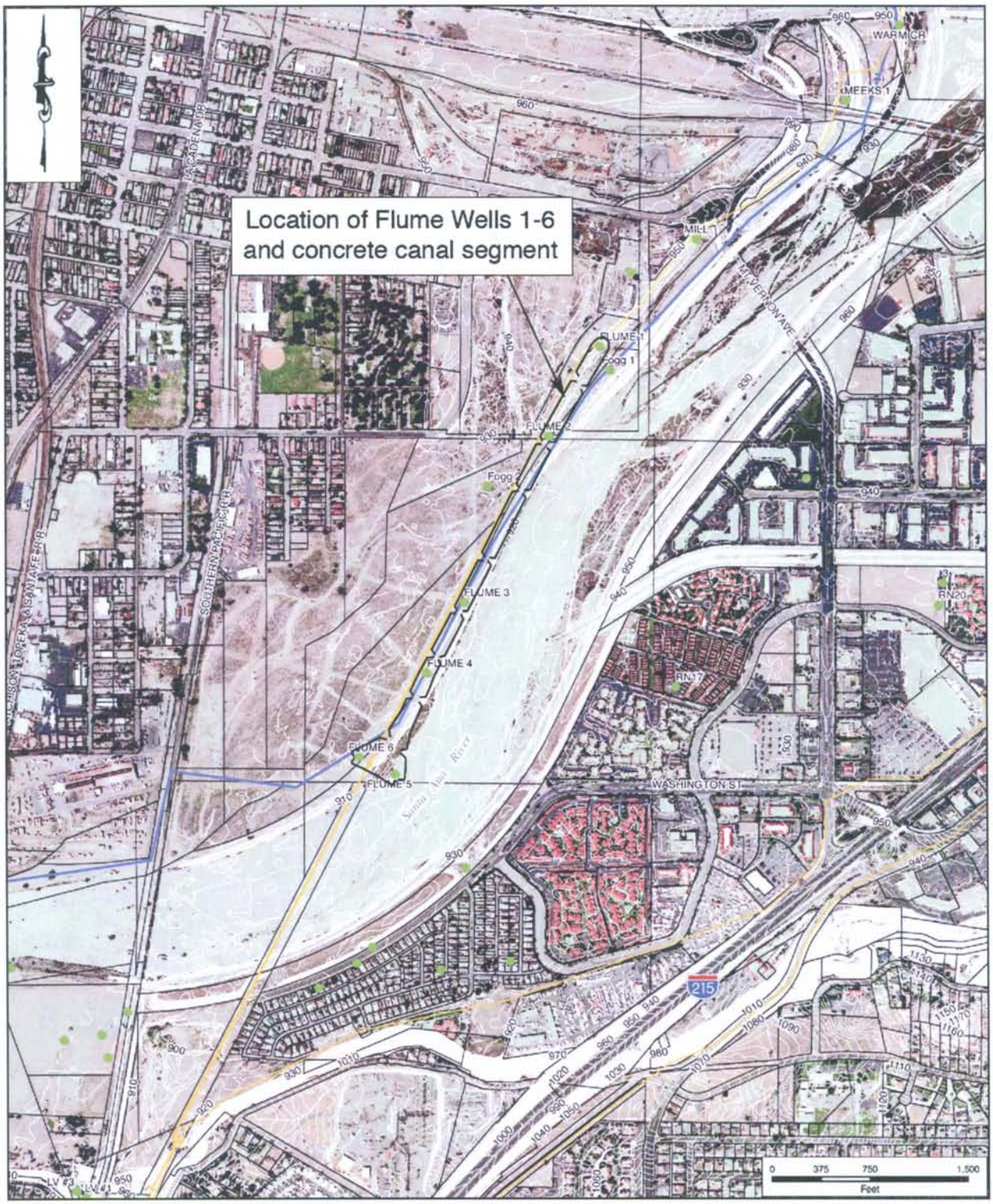
SKETCH MAP

Primary # 36-007169; update
HRI #
Trinomial CA-SBR-7169; update

*Resource Name or # (Assigned by recorder) CRM TECH 2297-1

*Drawn by: Based on aerial image

*Date: April 14, 2009



*Required information

1065606 Update 8/07

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P36-007169
HRI #
Trinomial CA-RIV-4787H / CA-SBR-7169; Update
NRHP Status Code

Other Listings
Review Code **Reviewer** **Date**

***Resource Name or #:** Santa Ana Siphon

P1. Other Identifier:

***P2. Location:** ***a. County** San Bernardino, CA ☒ Not for Publication ☐Unrestricted
***b. USGS 7.5′ Quad** San Bernardino, South **Date** 1967, Photorevised 1980
T 1 S; **R 4** W; unsectioned **of of Sec S.B.B.M.**
c. Address: **City** **Zip**
d. Zone: 11 470483 **mE/** 3767392 **mN** (NE end)
470337 **mE/** 3767107 **mN** (SW end; NAD 27)
e. Other Locational Data (e.g., parcel #, legal description, directions to resource, additional UTMs, etc., when appropriate):

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): The Santa Ana Siphon is an underground component of the Riverside Warm Creek Canal, which was part of the water conveyance system of the Riverside Water Company. The siphon was constructed in 1943 after flood damaged the original wood flume that had crossed the Santa Ana River. This section of the canal is located beneath the modern channel surface of the Santa Ana River within the APE for a Phase I cultural resources investigation. The beginning and ending points for the updated portion of this resource are denoted above. The updated portion is also depicted on the attached Location Map.

The Santa Ana Siphon consists of two barrels, one 48 inches in diameter, and one 42 inches in diameter. The siphon is connected to the canal on the north and south banks of the river. The 48-inch barrel was connected to a series of wells which were a source of underground water. The siphon is constructed of precast spun concrete pipes, which were fabricated by pumping concrete into a mold, then spinning it so that the water in the concrete mix was squeezed out. Such pipes are extremely durable and waterproof. A notation on the plan and profile of the siphon indicates that the Concrete Conduit Company probably constructed the siphon.

***P3b. Resource Attributes** (List all attributes and codes): HP20: Canal/aqueduct.

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other:

P5. Photograph or Drawing: (Photograph required for buildings, structures, and objects.)

***P6. Date Constructed/Age and Source:** ☐ Prehistoric ☒ Historic ☐ Both

***P7. Owner and Address:**

***P8. Recorded by** (Name, affiliation, address): P. Beedle, Applied EarthWorks, Inc., 3292 E. Florida Ave., Suite A, Hemet, CA 92544.

P9. Date Recorded: 12 May 2007

***P10. Type of Survey:** ☒ Intensive ☐ Reconnaissance ☐ Other
Describe: Maximum of 15 m pedestrian transects.

***P11. Report Citation** (Provide full citation or enter "none"): Formica, Beedle, and Earle (2007) *Cultural Resources Report for the City of Riverside Flume Water Transmission Main Relocation Project, Colton, San Bernardino County, California.* Report prepared by Applied EarthWorks, Inc., Hemet, California. Report submitted to City of Riverside Public Utilities Department, Riverside, California.

Attachments: ☐ None ☒ Location Map ☐ Site Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Site Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record Other:

State of Calfornia — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #: P36-007169
HRI#
Trinomial: CA-RIV-4787H / CA-SBR-7169H; Update

***Resource Name or #:** Santa Ana Siphon

***Map Name:** San Bernardino South, CA

***Scale:** 1:24,000

***Date:** 1967 (1980)

SCALE 1:24,000

TRUE NORTH

1 0.5 0 1 Miles

1,000 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

1 0.5 0 1 Kilometers

P36-007169

1074

ARCHAEOLOGICAL SITE RECORD

PAGE: 1 OF 7

PERMANENT TRINOMIAL: CA-RIV-4787-H/CA-SBr-7169H
OTHER DESIGNATIONS: P1074-117H/MFA-2H
Riverside-Warm Creek Canal
PRIMARY # P36-007169

1. COUNTY: Riverside/San Bernardino
2. USGS QUADRANGLES: San Bernardino, South 7.5 minute (1967:Photorevised-1980).

3. UTM COORDINATES: Zone 11: 470080m-3768180m EASTING/NORTHING (northern terminus); 468020m-3763260m EASTING/NORTHING (southern terminus).

4. TOWNSHIP: 1S; RANGE: 4W; Unsectioned portion of Rancho San Bernardino and SECTION: 32; TOWNSHIP: 2S; RANGE: 4W; SECTIONS: 5, 6, 7.
BASE MERIDIAN: San Bernardino.

5. MAP COORDINATES: 2292mm EAST; 2555mm NORTH [northern terminus] (SW corner).
1085mm EAST; 510mm NORTH [southern terminus] (SW corner).

6. ELEVATION: 940 feet (northern terminus); 860 feet (southern terminus).

7. LOCATION: The Riverside-Warm Creek canal is located south of Grand Terrace and north of Riverside. The northern terminus of the canal is located on the north side of the headwaters of the Santa Ana River; the southern terminus is located on the west side of I-215 near Spring Street along Spring Brook Creek. In general, the canal trends northeast to southwest, passing through Grand Terrace and Highgrove, and travels a distance of approximately three and eight-tenths of a mile. Portions of the canal lie within the Area of Potential Effects [APE] (Pages 4 of 7 through 7 of 7).

8. PREHISTORIC_____; HISTORIC X ; PROTOHISTORIC_____; ETHNOGRAPHIC_____

9. SITE DESCRIPTION: Constructed in 1886, the water initially traveled across the Santa Ana River my means of a 1,943 meter (6,412 feet) redwood flume. Upon reaching the south side, the open, concrete canal traveled southwest 3,485 meters (11,500 feet) until reaching Spring Street in Highgrove. From there, the canal traveled an additional 667 meters (2,200 feet) until it connected with the existing Riverside Canal near La Cadena Drive. The original flume was replaced in 1943 by an inverted siphon and by means of underground pipe, now crosses under the Santa Ana River.

10. AREA: 6,095 meters in length (20,112 feet - 3.8 miles].
METHOD OF DETERMINATION: Historic maps; field inspection.

11. DEPTH OF DEPOSIT: The open canal varied from 91 cm. [3 feet] to 122 cm. [4 feet] below the natural surface. Siphons, underground pipes and other related features occur along its length.

METHOD OF DETERMINATION: Historical information; field inspection.

12. FEATURES: Cement-lined canal with headgates; levees; suction pipes; transformers; receiving chambers; division walls; float wells; canal intakes; overflow gates; gate controls; intake flumes; siphons; and artesian wells.

13. ARTIFACTS: See feature description.

14. NON-ARTIFACTUAL CONSTITUENTS AND FAUNAL REMAINS: None observed.
15. DATE RECORDED: May 30, 1992 16. RECORDED BY: Robert J. Wlodarski.

P36007169

ARCHAEOLOGICAL SITE RECORD

PAGE: 2 OF 7

PERMANENT TRINOMIAL: CA-RIV-4787-H/CA-SBr-7169H
OTHER DESIGNATIONS: P1074-117H/MFA-2H
Riverside-Warm Creek Canal

17. AFFILIATION: Historical, Environmental, Archaeological, Research, Team, 5516 Las Virgenes Road, Calabasas, California 91302-1080, (818) 880-6338

18. HUMAN REMAINS: None observed

19. INTEGRITY OF SITE/SITE DISTURBANCES: Fair to Good. Water still flows through the open canal from north of the Santa Ana River to its connection with the original Riverside Canal near Spring and La Cadena on the west side of I-215. The original wooden flume was replaced in 1943 by underground pipe across the Santa Ana River. Some of the original concrete lining is still visible. Plaster and concrete have been used to repair and maintain the canal.

20. NEAREST WATER: Type: Spring Brook Creek adjacent at the southern terminus; and the Santa Ana River, adjacent at the northern terminus.

21. VEGETATION COMMUNITY (site vicinity): Non-native plants/agricultural crops.
22. VEGETATION COMMUNITY (on-site): Non-native plants/agricultural crops.

23. SITE SOIL: Alluvial fan and terrace deposits; alluvial adobe; gray clay; marly earth; and heavy red mesa soil.
24. SURROUNDING SOIL: Alluvial fan and terrace deposits and gravels.

25. GEOLOGY: Recent alluvium/Pleistocene Non-marine Sedimentary Deposits/Mesozoic Granitic Rocks.

26. LANDFORM: Santa Ana river; floodplain; alluvial fan and terrace.

27. SLOPE: Less than 5 percent. 28. EXPOSURE: Total.

29. LANDOWNER/TENANT (Address): City of Riverside Public Utilities Department, 3900 Main Street, Riverside, California 92522.

30. REMARKS: The canal was initially constructed as a an ancillary water diversion feeder system from the Santa Ana River to the Highgrove area, to support and eventually replace the upper and lower canal headwater connectors which ran along the base of the La Loma Hills. It appears to possess integrity of location, design, setting, workmanship, feeling and association that have made a significant contribution to local and regional history.

31. REFERENCES: (1897) Riverside 15 min. USGS (1901 edition); (1940-1941) Arrowhead 15 min. USGS (1936 edition); Scott (1976) Development of Water Facilities in the Santa Ana River Basin, California.

32. NAME OF PROJECT: An Archaeological Survey Report (ASR) Documenting the Effects of Widening Interstate 215 (I-215) From the Route 60/I-125 Interchange in Moreno Valley, Riverside County, to Orange Show Road in the City of San Bernardino, San Bernardino County, California.

33. TYPE OF INVESTIGATION: Phase I Archaeological Study - Archaeological Survey Report (ASR).
34. SITE ACCESSION NUMBER: None. CURATED AT: None.
35. PHOTOGRAPHS: None TAKEN BY: N/A

P36007169

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

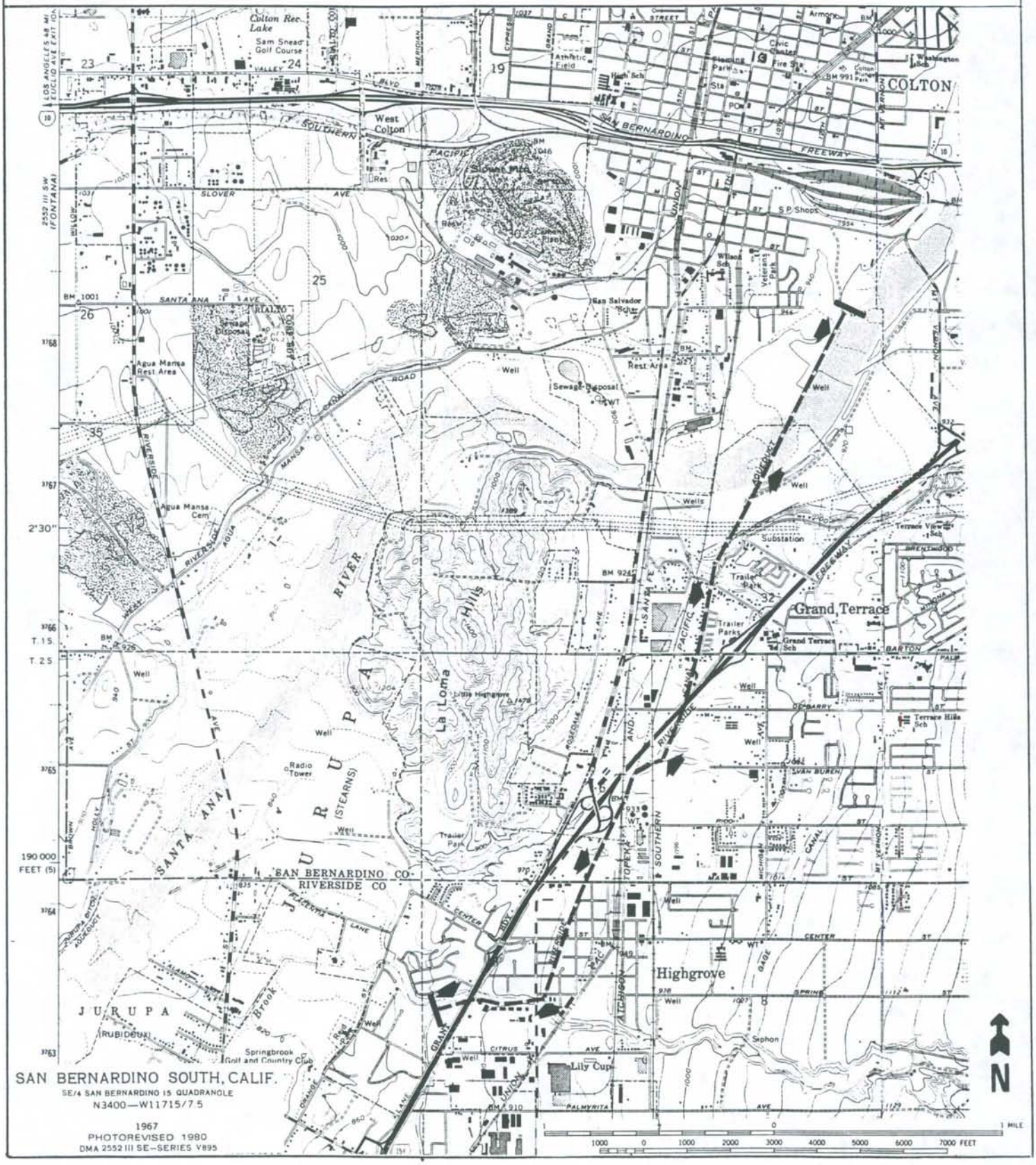
ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

PAGE: 3 OF 7

PERMANENT TRINOMIAL:

5/92

OTHER DESIGNATIONS: CA-RIV-4787-H/CA-SBr-7169H
Riverside-Warm Creek Canal



DPR 422 F (Rev. 4/86)

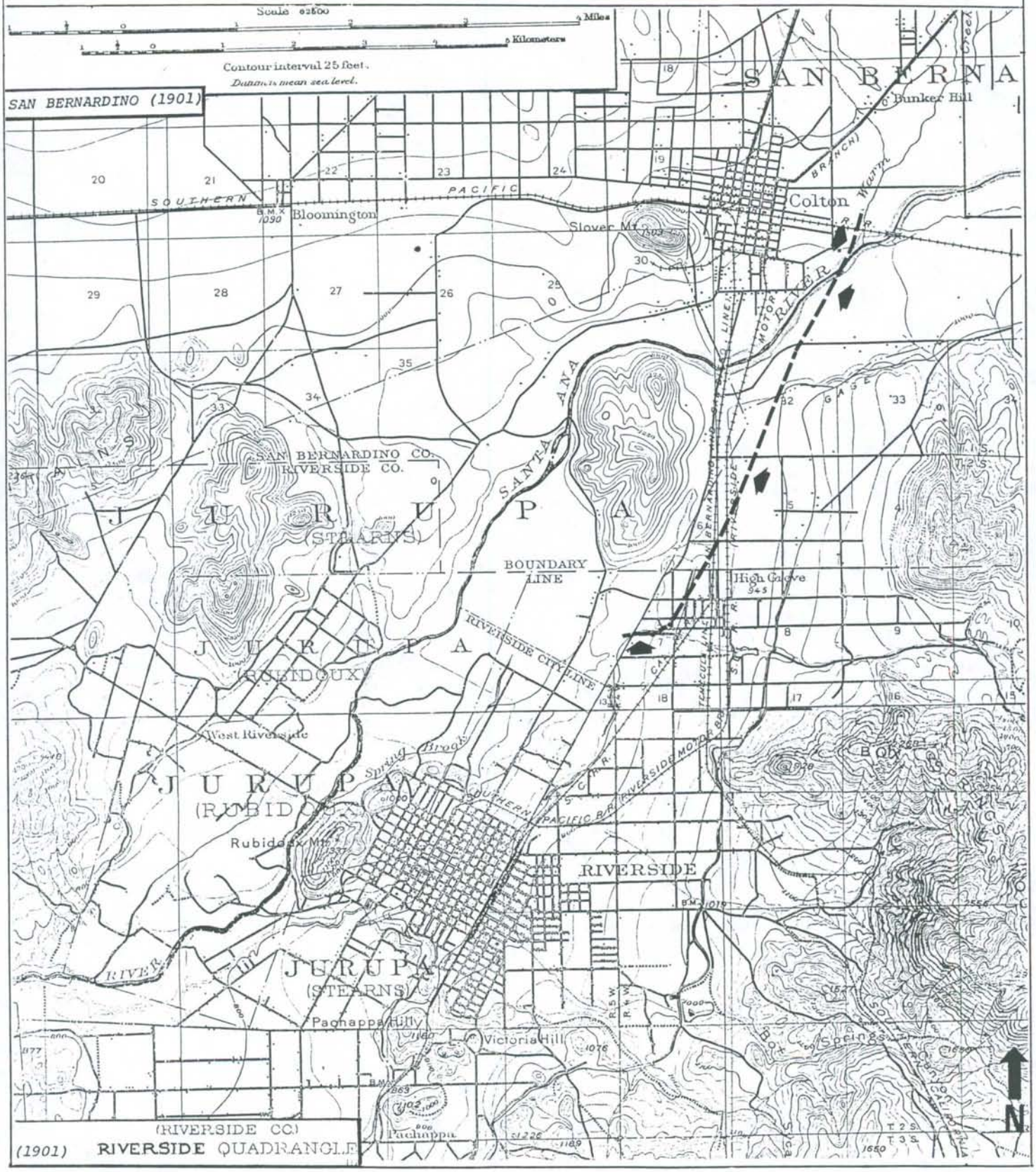
P36-007169

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

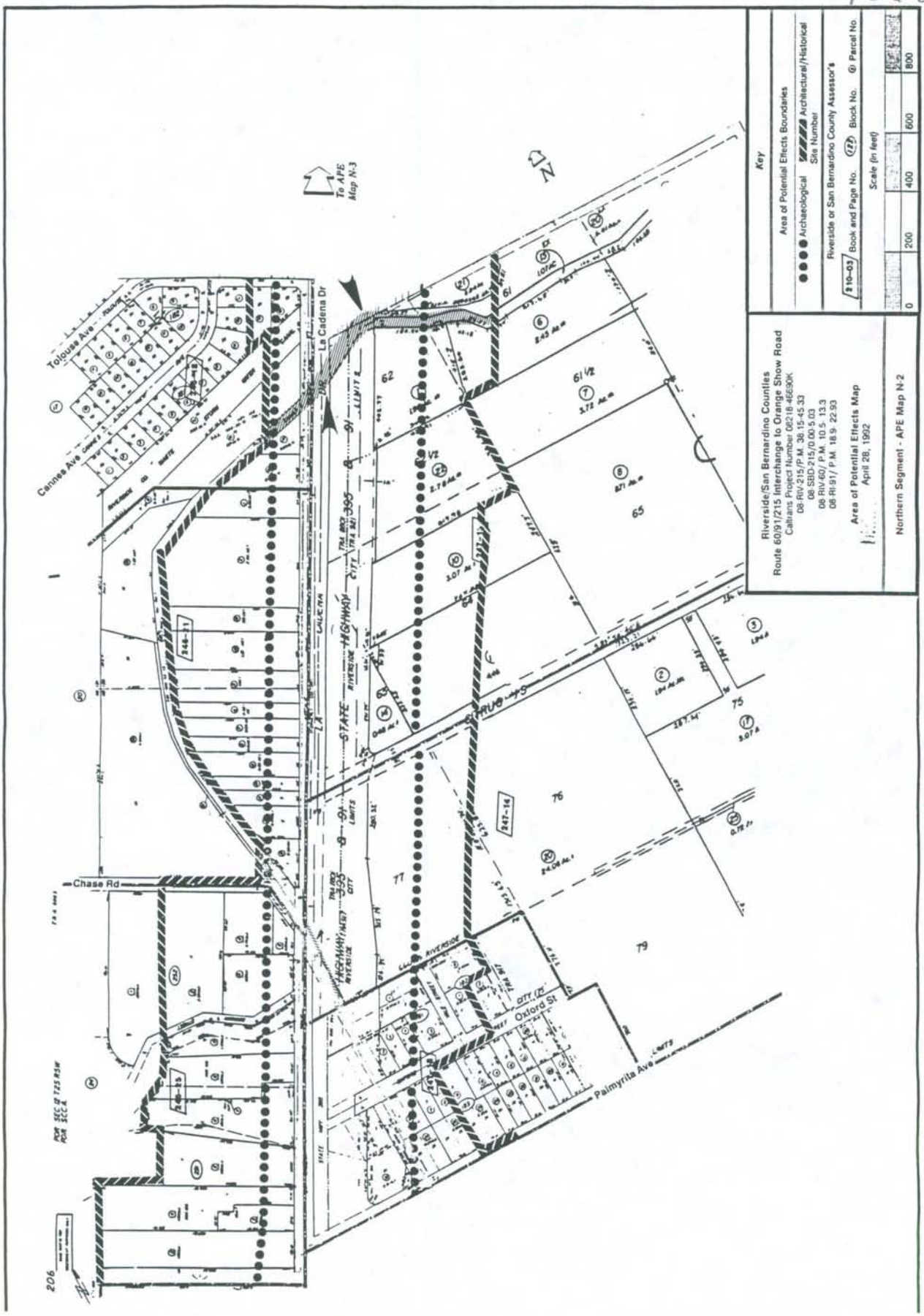
ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

PAGE: 4 OF 7

PERMANENT TRINOMIAL: CA-RIV-4787-H/CA-SBr-7169H 5/92
OTHER DESIGNATIONS: P1074-117H/MFA-2H
Riverside-Warm Creek Canal



P3600071169



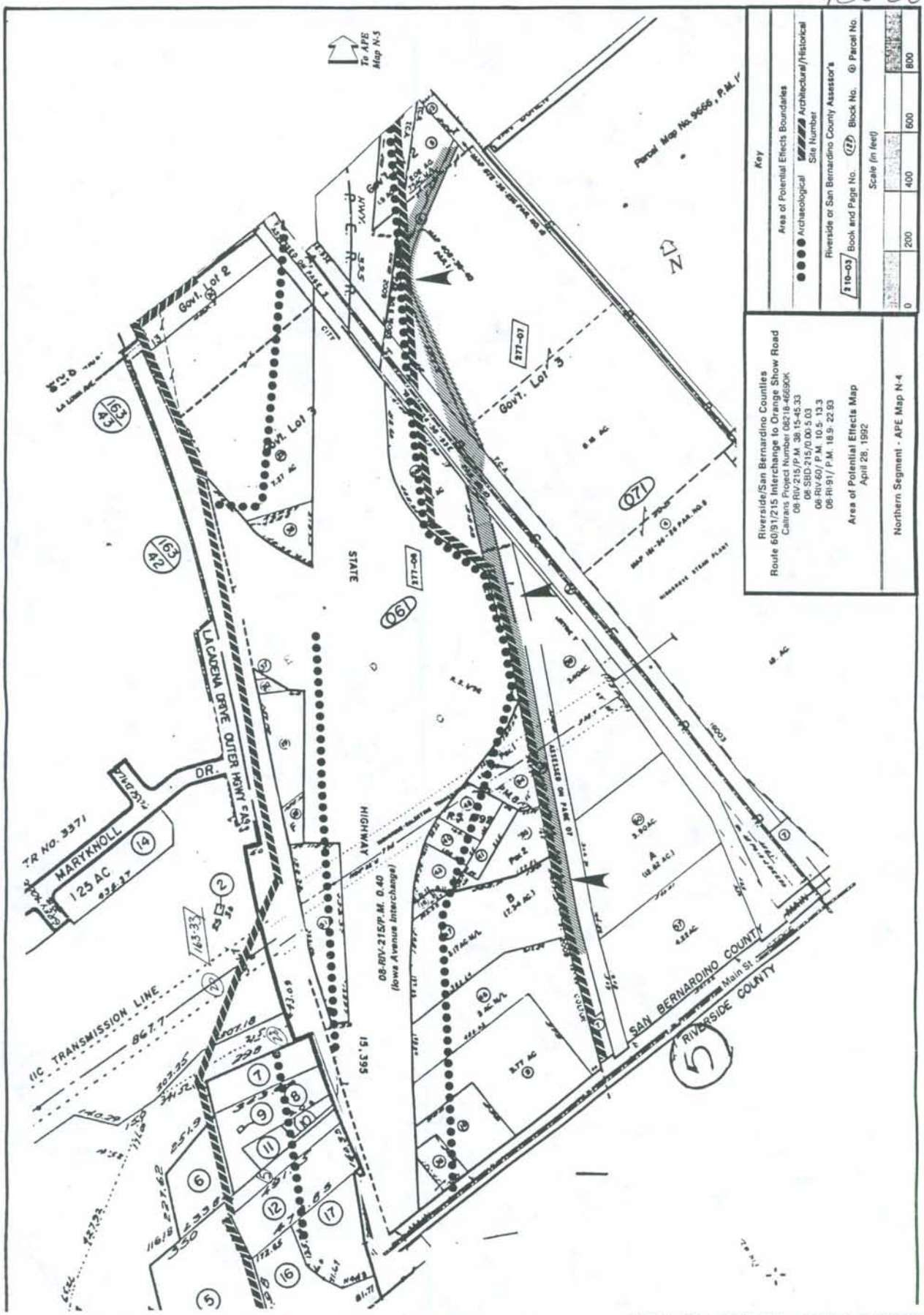
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

PAGE: 5 OF 7

PERMANENT TRINOMIAL: CA-RIV-4787-H/CA-SBr-7169H 5/92
OTHER DESIGNATIONS: P1074-117H/MFA-2H
Riverside-Warm Creek Canal

P3600071169



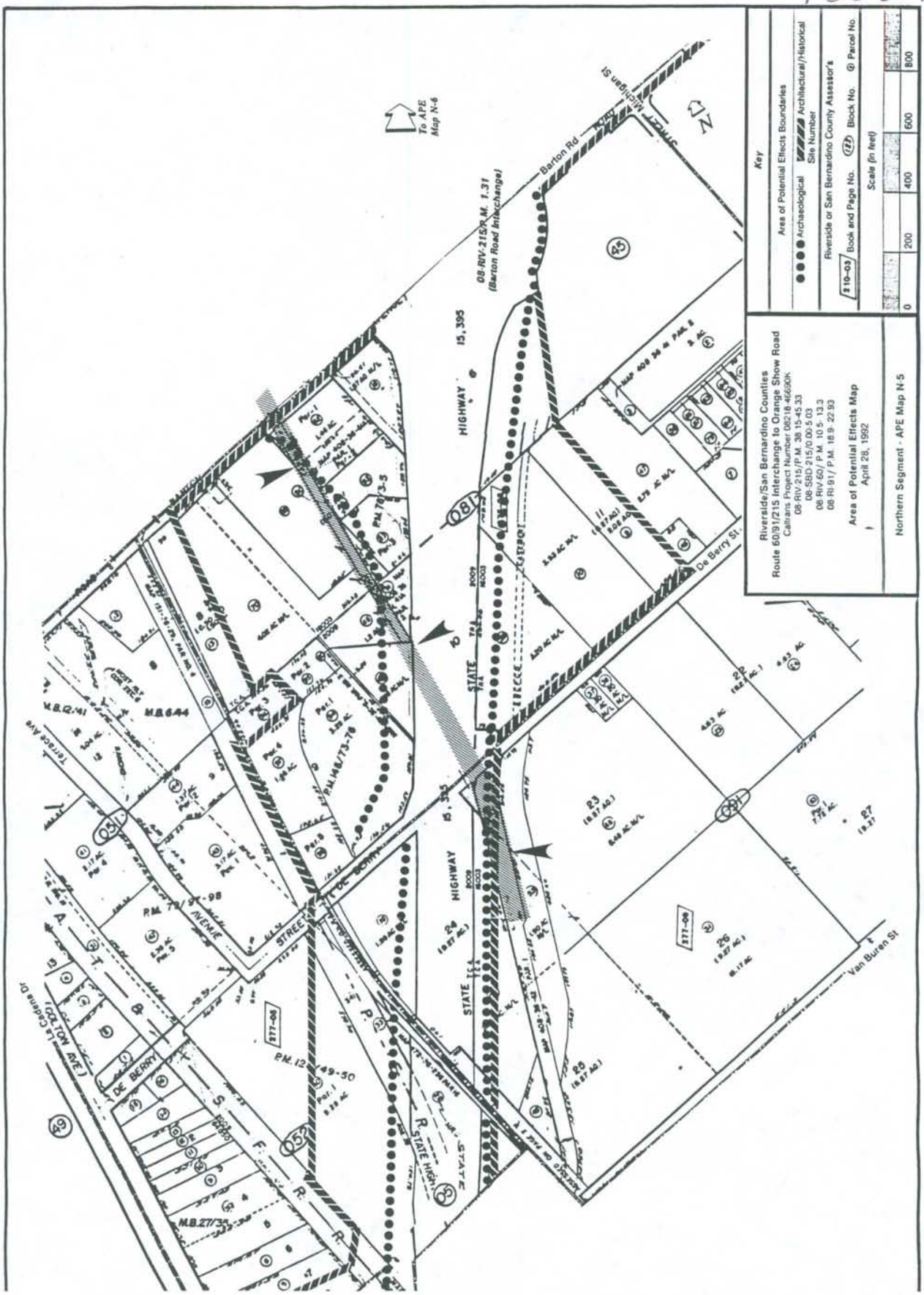
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

PAGE: 6 OF 7

PERMANENT TRINOMIAL: CA-RIV-4787-H/CA-SBr-7169H 5/92
OTHER DESIGNATIONS: P1074-117H/MFA-2H
Riverside-Warm Creek Canal

P3600116 9



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHAEOLOGICAL SITE RECORD
Continuation Sheet

PAGE: 7 OF 7

PERMANENT TRINOMIAL: CA-RIV-4787-H/CA-SBr-7169H 5/92
OTHER DESIGNATIONS: P1074-117H/MFA-2H
Riverside-Warm Creek Canal

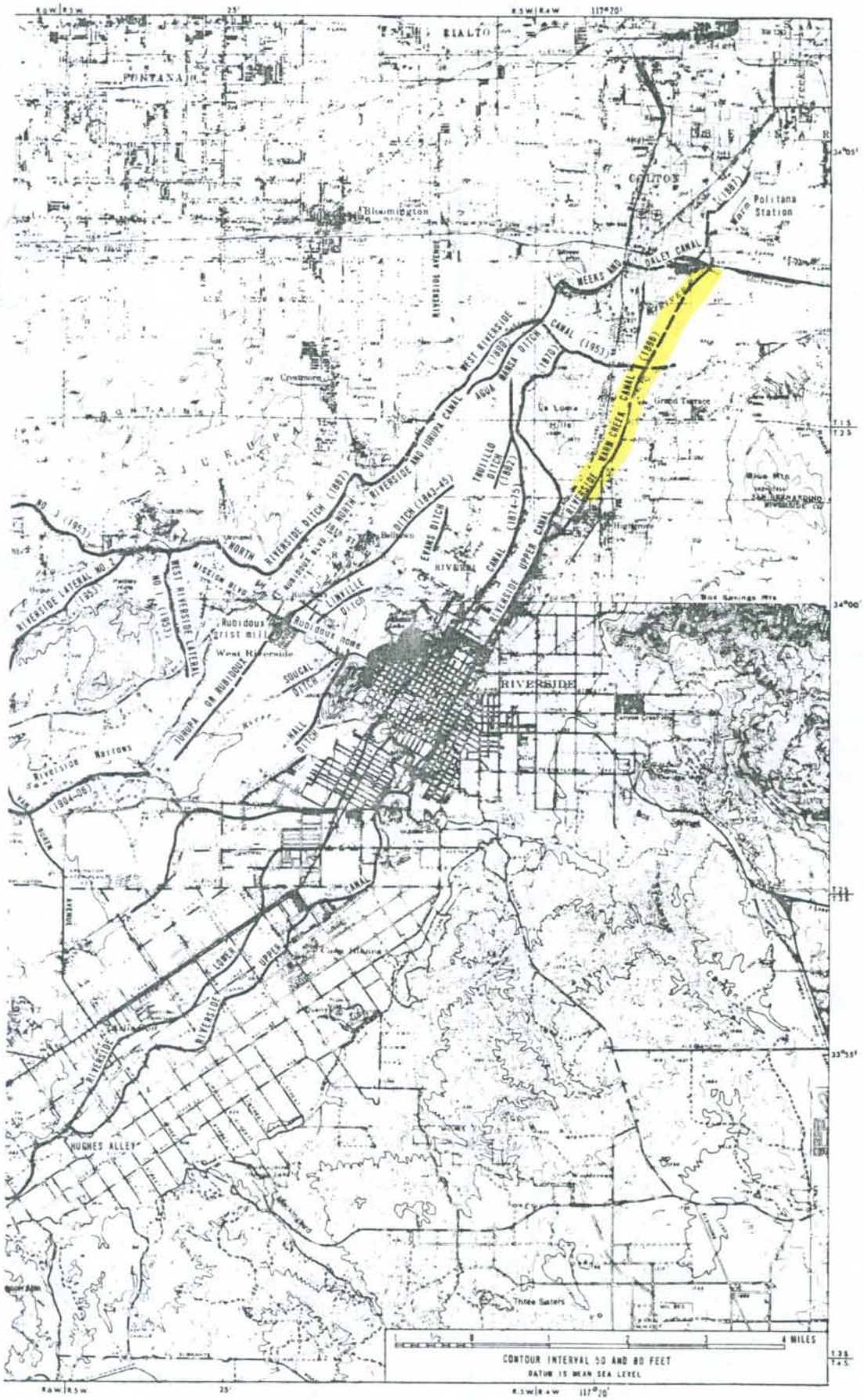


FIGURE 26.--
Continued.

acquire, hold, or transfer water rights, canals, and other interests, and do everything necessary for managing the water interests of the community of Riverside. The stock was issued only to owners of specified lands at the rate of two shares per acre and could not be separated from the title to the land.

The purchase agreement included the issuance of stock for 6,000 acres of land irrigated or sold by the Riverside Land and Irrigating Co., and for several thousand acres not irrigated at the time. The terms of the agreement also stated that if sufficient water were available after the irrigation of the first 6,000 acres was provided for, water stock could be sold for the irrigation of an additional 6,000 acres of land formerly owned by the Riverside Land and Irrigating Co. By the terms of the sale, the water property was transferred to a newly organized company called the Riverside Land Co. The Riverside Water Co. held half the stock of the new company, and Evans and Felton owned the other half.

After accepting all water properties and interests transferred by the Riverside Canal Co. and by the Riverside Land and Irrigation Co., and after accepting the half-interest in 6,000 acres transferred to the Riverside Land Co., the Riverside Water Co. purchased the Evans and Felton interest for $70,120 in 20-year 6-percent bonds. The Riverside Water Co. also agreed to take the stock of other holders of water rights in the Riverside Canal Co. at the rate of two shares for one. Before long the irrigating landowners of the community of Riverside, by virtue of their ownership of Riverside Water Co. stock, became complete owners of all the water property in the community.

Not only did the Riverside Water Co. rapidly consolidate water rights in the area, but it also proceeded with its charge to improve the water supply of the area. The Riverside Upper Canal was extended to Hughes Alley, and in 1886 construction began on the Riverside-Warm Creek Canal (fig. 26). The latter canal had its intake on Warm Creek a short distance upstream from the junction of Warm Creek and the Santa Ana River and about 500 feet upstream from the Southern Pacific railroad bridge. That diversion supplemented the diversion from the Santa Ana River and was necessary to reduce the seepage losses that occurred in the streambed of the Santa Ana River downstream from Warm Creek.

The Riverside-Warm Creek Canal followed the line of the old Meeks Mill Canal, using the mill drop to develop power. Below the old mill the water was carried across the Santa Ana River in a flume 6,412 feet long (replaced with an inverted siphon in 1943) (figs. 30, 31, and 32). From the end of the flume the water was carried in tunnels and in an open canal across the Highgrove mesa to join the original Riverside Upper Canal near La Cadena Drive and Spring Street. A drop of 40 feet was used to develop power for the towns of Riverside and Colton. Although water from the Riverside-Warm Creek Canal above the powerplant could have been used to serve a large area on the Riverside mesa, none was diverted for that purpose until after the water had entered the Riverside Upper Canal. After completion of the Riverside-Warm Creek Canal, flow in the Riverside Upper Canal was turned into the Riverside Lower Canal, thereby conserving water that otherwise would have been lost by seepage into the riverbed before reaching the lower canal intake.

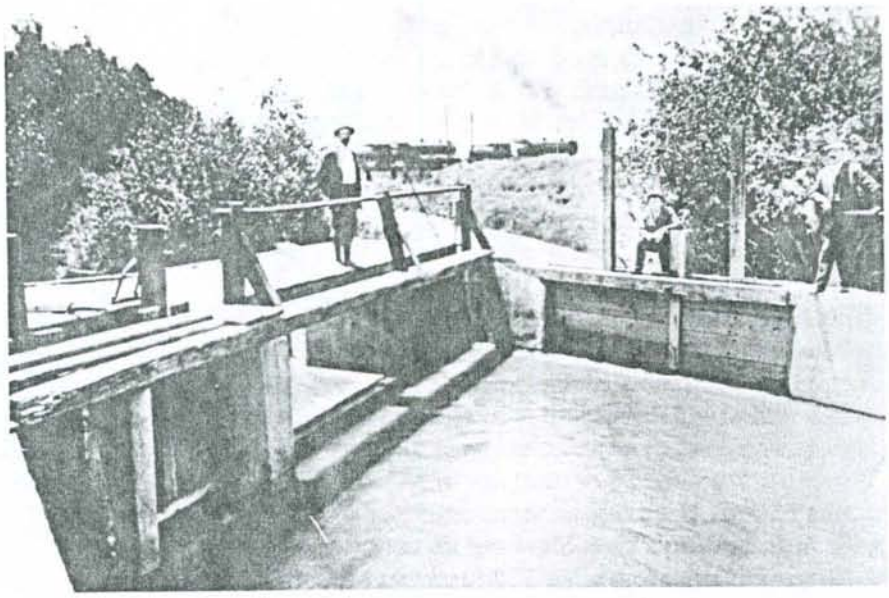


FIGURE 30.--Intake of Riverside-Warm Creek flume, built in 1886. (Photographed prior to 1916; courtesy of city of Riverside.)

FIGURE 31.--Riverside-Warm Creek flume across Santa Ana River (length, 6,412 feet); used 1886-1944. (Courtesy of city of Riverside.)

FIGURE 32.--Riverside-Warm Creek flume. (Courtesy of city of Riverside.)

At about the time that construction started on the Riverside-Warm Creek Canal, the Riverside Water Co. began purchasing parcels of land and water rights along Warm Creek. These purchases of water rights and their effects on the operations of the other diverters of Warm Creek water were discussed throughout the history of the development of Warm Creek (p. 51-72).

As mentioned earlier (p. 61-65) water rights to the flow of Warm Creek and the Santa Ana River near their junction were established in the agreements of 1887 between the Riverside Water Co. and the owners of the water rights of the Meeks and Daley, Agua Mansa, San Salvador, and Jaramillo ditches. As a result of these agreements the only remaining diversion immediately downstream from the mouth of Warm Creek was the Belarde and Salazar ditch. The Riverside Water Co. recognized the prior right of that ditch and agreed to allow sufficient water to pass its Warm Creek heading so that 75 to 100 miner's inches of water would be available at the Belarde and Salazar ditch heading. To reduce the channel seepage losses upstream from that ditch heading, the Riverside Water Co. agreed, some time prior to 1902, to deliver the Belarde and Salazar water to the North Riverside and Jurupa Canal at the point where

that canal is crossed by the Riverside Canal (Lippincott, 1902a, p. 27). That agreement eliminated all surface diversions from the Santa Ana River for a considerable distance downstream from the mouth of Warm Creek, except for the Jurupa or Rubidoux ditch, which is discussed in the history of that ditch (p. 82-84).

During the first 15 years after the incorporation of the Riverside Water Co. in 1885, the company improved its canals. By 1890 the Riverside Lower Canal was extended from Hughes Alley to Temescal Creek where it terminated (fig. 26). For several years the natural flow in Warm Creek had been supplemented by the flow of artesian wells drilled in the basin upstream from the Bunker Hill dike (p. 51). After the agreements of 1887, surface diversions from the Santa Ana River in the Riverside Upper and Lower Canals were almost entirely eliminated; such diversions were made only when there was considerable flow in the river. By 1912 surface diversions had entirely ceased. In that year, a pipeline was built from the Riverside-Warm Creek Canal (currently called the Riverside Canal) to the Trujillo system (fig. 15) to satisfy the Trujillo agreement (p. 81-82).

The Riverside Lower Canal was used as a part of the distribution system of the Riverside Upper Canal after 1912. In 1913 the upper canal was deeded to the city of Riverside for use as a storm drain, and no deliveries were made from it upstream from Hughes Alley (fig. 26). By an agreement made in that same year, the city of Riverside was also granted the right to use parts of the upper canal as a storm drain, and the canal has been so used through 1967.

The city of Riverside purchased the holdings of the Riverside Water Co. in May 1961 and has continued to operate the system. In 1967 the system, as shown in figure 15, consisted of open canals, inverted siphons, and closed conduits. Water was supplied exclusively from ground-water sources, about 60 percent of it for agricultural use and 40 percent for domestic use.

Salazar Water Company

The Belarde and Salazar ditch (fig. 25) was approved by the water commissioners in 1875, and named after the two owners listed in the petition to the commissioners (Hall, 1888, p. 267). In the petition no specified quantity of water was claimed, but later the irrigators claimed half the flow in the river. This diversion was made at a brush-and-sand dam in the Santa Ana River that was replaced after the high-water season of each year. The diversion ditch had a capacity of 75 to 100 miner's inches. The upper end of the ditch was dug through porous soil, but the rest of the ditch was less permeable. The ditch ran along the base of a bluff, passed under the flume of the Riverside Water Co.'s canal from Warm Creek and under the Atchison, Topeka and Santa Fe railroad trestle. Water from the ditch irrigated about 55 acres of alfalfa and summer crops near the railroad.

1067451 Update

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial CA-SBR-6101H (Update)
NRHP Status Code 6
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 3 Resource Name or #: Union Pacific Railroad segment

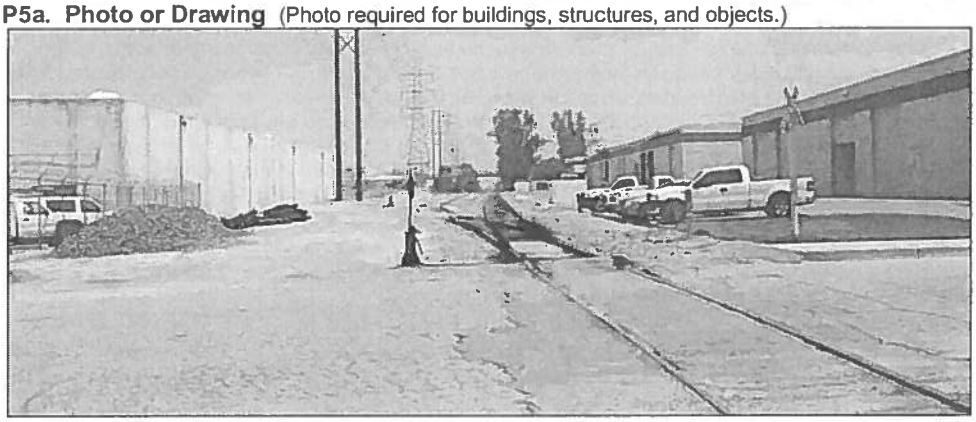
P1. Other Identifier: APE Map Reference #5, former Southern Pacific Railroad
*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County: San Bernardino and (P2b and P2c or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quad: San Bernardino South Date: 1967 PR 1980 T 2S ; R 4W; Sec 6 ; S.B.B.M.
c. Address: _____ City: Grand Terrace and Colton Zip: _____
d. UTM: Zone: 11; _____mE/ _____mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate): An approximately .84 mile long segment of the railroad extending from a point approximately 300 feet south of Pico Street to a point approximately 250 feet north of Barton Road and crossing above Interstate 215 (I-215).

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This segment of the railroad consists of one set of railroad ties that supports a pair of rails. A layer of volcanic rocks lines the rail bed. In some areas there are spurs that provide rail access to adjacent properties. A metal-sided bridge (54 0519 Grand Terrace UP, see Map Reference #6) supported by three sets of concrete piers carries the tracks over I-215. The adjacent properties are primarily vacant or developed with modern commercial and industrial buildings, billboards, or power poles.

The tracks appear to retain integrity of location, design, and association, but integrity of setting, materials, workmanship, and feeling have been compromised by routine maintenance and the construction of modern buildings and I-215.

*P3b. Resource Attributes: (List attributes and codes) HP39-Other (railroad); HP19-Bridge
*P4. Resources Present: ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Top: UP tracks facing north from East DeBerry Street; Bottom: UP bridge over I-215 looking south from East DeBerry Street. Photos taken on May 28, 2009.

*P6. Date Constructed/Age and Sources: ☒Historic ☐Prehistoric ☐Both
Original track: 1888
Bridge: 1959 (Caltrans)

*P7. Owner and Address:
Unknown

*P8. Recorded by: (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

*P9. Date Recorded:
May 2009 – April 2010

*P10. Survey Type: (Describe)
Intensive-level Section 106 compliance

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Historical Resource Evaluation Report, Interstate 215 HOV Lane Gap Closure Project, Caltrans, February 2010

*Attachments: ☐NONE ☐Location Map ☐Sketch Map ☐Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # CA-SBR-6101H (Update)
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6

*Resource Name or # (Assigned by recorder) Union Pacific Railroad segment

B1. Historic Name: Southern Pacific Railroad
B2. Common Name: UPRR
B3. Original Use: Railroad **B4. Present Use:** Railroad
***B5. Architectural Style:** NA
***B6. Construction History:** (Construction date, alterations, and date of alterations)
1888 – railroad segment constructed
1959 – bridge constructed over I-215
***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** _____ **Original Location:** _____
***B8. Related Features:**
Bridge (1959)
B9a. Architect: Unknown **b. Builder:** Unknown
***B10. Significance: Theme:** Transportation **Area:** Cities of Colton and Grand Terrace
Period of Significance: 1888-1959 **Property Type:** Railroad **Applicable Criteria:** NA
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

This approximately .84 mile long railroad segment does not appear to meet any of the criteria for listing in the National Register of Historic Places (National Register). The Southern Pacific Railroad (now Union Pacific Railroad [UPRR]), was constructed to Colton in 1875 and this segment was constructed in 1888 as part of a commuter line from Colton to Riverside (Patterson 1996). The Southern Pacific Railroad operated within a separate right-of-way than the Pacific Electric Railway, which ran along La Cadena Drive (formerly Colton Avenue). The bridge over I-215 was constructed in 1959 (Caltrans 2009). Since then, many of the adjacent properties have been developed with modern commercial and industrial buildings. Although other segments of the railroad have been documented, none appear to have been formally evaluated.

Under Criterion A, the railroad as a whole played an important role in the development and success of the City of Colton and surrounding areas and it appears to retain integrity of location and design. However, this segment's integrity of setting has been compromised by construction of modern buildings and structures and this has compromised its ability to convey its association with its period of significance. Due to the loss of historic setting and its representative but not distinctive use of tracks, miles of which exist throughout Southern California, the association is not significant for eligibility under Criterion A. Under Criterion B, the railroad as a whole may be associated with persons important in history, but this segment in particular does not appear to have any specific association with anyone significant in local, state, or national history. Under Criterion C, this segment is a representative but not a distinctive example of railroad construction similar to the thousands of miles of other railroad tracks in the region. In addition, the related concrete and steel girder bridge is a standard type that does not appear to be particularly distinctive or unique. Neither the tracks nor the bridge are the work of a master and neither possesses high artistic value. Under Criterion D, which is usually associated with archaeological resources, this segment of the railroad does not appear likely to yield information important in prehistory or history.

For these reasons, this segment of the railroad does not appear to meet the criteria for listing in the National Register and is not a historical resource for the purposes of the California Environmental Quality Act (CEQA). It would also not be a contributing segment to the historical significance of the overall railroad, should the railroad as a whole be determined significant. The bridge (54 0519 Grand Terrace UP, Map Reference #6) does not appear eligible because it is associated with the construction of the highway and is part of a segment of the line that is not eligible for listing at the national, state, or local levels.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

Caltrans
2009 Structure, Maintenance and Investigations – State Agency Bridges (June 2009). Accessed online in July 2009 at http://www.dot.ca.gov/hq/structur/strmaint/hs_state.pdf.

Patterson, Tom
1996 *A Colony for California.* The Museum Press, Riverside, California.

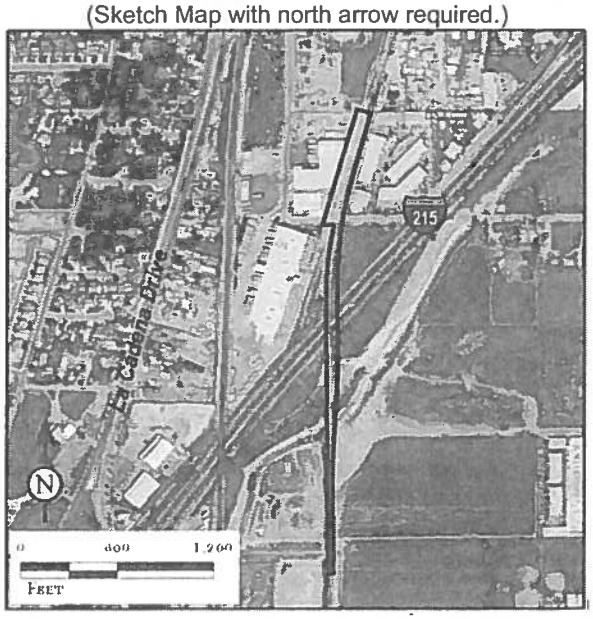
Walker, Jim, ed.
1976. *Lines of Pacific Electric: Northern & Eastern Districts.* Glendale, CA: Interurbans Publications, Inc. p. 90.

B13. Remarks:

***B14. Evaluator:** Casey Tibbet, M.A., LSA Associates, Inc., 1500 Iowa Avenue, Suite 200, Riverside, CA 92507

***Date of Evaluation:** July 2009 – April 2010

(Sketch Map with north arrow required.)



(This space reserved for official comments.)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LINEAR FEATURE RECORD

Primary # _____
HRI # _____
Trinomial CA-SBR-6101H (Update)
NRHP Status Code 6
Other Listings _____
Review Code _____ Reviewer _____ Date _____

 Resource Name or #: Union Pacific Railroad segment

L1. Historic and/or Common Name: Southern Pacific Railroad

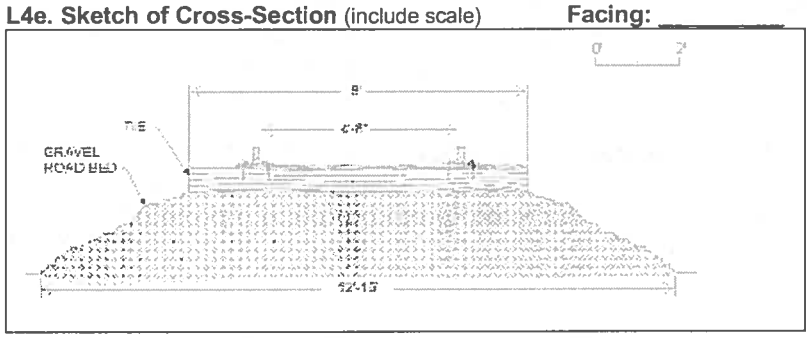
L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation **Designation:** _____

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) This segment is approximately .84 mile long and varies in width from approximately 20 feet to approximately 100 feet. It extends from a point approximately 300 feet south of Pico Street to a point approximately 250 feet north of Barton Road and crossing above I-215.

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.) This segment of the railroad consists of one set of railroad ties that supports a pair of rails. A layer of volcanic rocks lines the rail bed. In some areas there are spurs that provide rail access to adjacent properties. A metal-sided bridge (54 0519 Grand Terrace UP) supported by three sets of concrete piers carries the tracks over I-215.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
a. Top Width 4' 8.5"
b. Bottom Width 12' to 15'
c. Height or Depth Approx. 2'
d. Length of Segment Approx. 0.84 mile

L4e. Sketch of Cross-Section (include scale) **Facing:** _____



L5. Associated Resources: Bridge (54 0519)

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) The adjacent properties are primarily vacant, but some are developed with I-215, modern commercial and industrial buildings, billboards, or power poles, and a historic-period power station.

L7. Integrity Considerations: The tracks appear to retain integrity of location, design, and association, but integrity of setting, materials, workmanship, and feeling have been compromised by routine maintenance and the construction of modern buildings and features and I-215.

L8a. Photograph, Map, or Drawing

See Primary Record and Building, Structure, Object Record

L8b. Description of Photo, Map, or Drawing: (View, scale, etc.)

L9. Remarks:
The Union Pacific Railroad (former Southern Pacific Railroad, CA-SBR-6101H) was previously recorded in 1999 but was not previously evaluated.

L10. Form Prepared by: (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

L11. Date:
July 2009 – April 2010

1065606 update 8/07

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P36-006101
HRI #
Trinomial CA-SBR-6101H; Update
NRHP Status Code

Other Listings
Review Code **Reviewer** **Date**

***Resource Name or #:** Union Pacific Railroad Bridge
INCLUDES RAILROAD

P1. Other Identifier:

***P2. Location:** ***a. County** San Bernardino, CA ☒ Not for Publication ☐Unrestricted

***b. USGS 7.5' Quad** San Bernardino, South **Date** 1967, Photorevised 1980

T 1 S; **R** 4 W; unsectioned **of of Sec S.B.B.M.**

c. Address: **City** **Zip**

d. Zone: 11 North end: 470018 **mE/** 3767380 **mN**

South end: 469937 3766862 (NAD 27)

e. Other Locational Data (e.g., parcel #, legal description, directions to resource, additional UTMs, etc., when appropriate): At Grand Terrace, exit north on La Cadena Avenue from Highway 215. Follow La Cadena to the south bank of the Santa Ana River. Follow the south bank to the east (crossing the Santa Fe RR) for 450 m to the south end of the bridge.

***P3a. Description** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): The railroad bridge was part of the Southern Pacific Railway, now the Union Pacific. The bridge is a standard wood trestle with a relatively recent steel "I" beam reinforcement on its southern end. Dates of 1903 and 1912 appear on the rails. A date of 1933 appears on the bridge marker.

The 1938 flood of the Santa Ana River extensively damaged the Southern Pacific Railroad Tracks. It is likely that the bridge was damaged in this flood, and subsequently repaired. Since then, new tracks have been added to the north of the structure, and metal supports have been integrated into the original wood trestle.

***P3b. Resource Attributes** (List all attributes and codes): HP19: Bridge.

***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other:

P5. Photograph or Drawing: (Photograph required for buildings, structures, and objects.)

***P6. Date Constructed/Age and Source:** ☐ Prehistoric ☒ Historic ☐ Both

***P7. Owner and Address:**

***P8. Recorded by** (Name, affiliation, address): P. Beedle, Applied EarthWorks, Inc., 3292 E. Florida Ave., Suite A, Hemet, CA 92544.

P9. Date Recorded: 2007

***P10. Type of Survey:** ☒ Intensive ☐ Reconnaissance ☐ Other
Describe: Maximum of 15 m pedestrian transects.

***P11. Report Citation** (Provide full citation or enter "none"): Formica, Beedle, and Earle (2007) *Cultural Resources Report for the City of Riverside Flume Water Transmission Main Relocation Project, Colton, San Bernardino County, California.* Report prepared by Applied EarthWorks, Inc., Hemet, California. Report submitted to City of Riverside Public Utilities Department, Riverside, California.

Attachments: ☐ None ☒ Location Map ☐ Site Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Archaeological Site Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record Other:

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

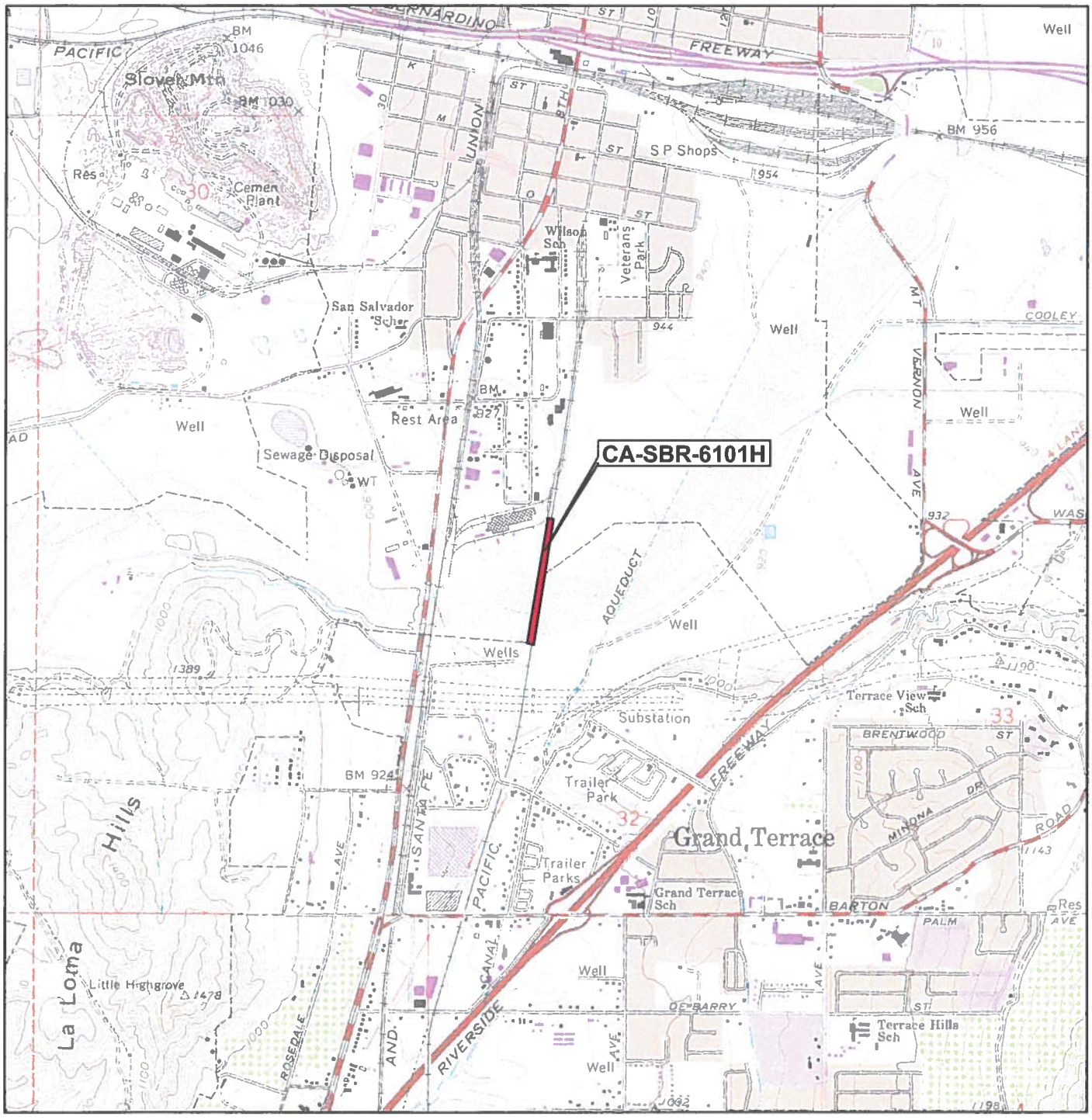
Primary #: P36-006101
HRI#
Trinomial: CA-SBR-6101H; Update

***Resource Name or #:** Union Pacific Railroad Bridge

***Map Name:** San Bernardino South, CA

***Scale:** 1:24,000

***Date:** 1967 (1980)



SCALE 1:24,000

TRUE NORTH

1 0.5 0 1 Miles

1,000 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 Feet

1 0.5 0 1 Kilometers

*Required information

1066291 Update 10/09

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-36-006101 (update)
HRI #
Trinomial CA-SBR-6101H
NRHP Status Code 6Z

Other Listings Review Code	Reviewer	Date

***Resource Name or #:** Union Pacific Railroad spur

P1. Other Identifier:

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted** ***a. County:** San Bernardino

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** San Bernardino South **Date:** 1967 (PR 1988) **T** 1S; **R** 4W ; unsectioned **¼ of ¼ of Sec ;** S.B **B.M.**

c. Address: City: San Bernardino Zip:

d. UTM: Zone: 11 ; 472850 mE/ 3773387 mN (GIS; NAD 1983)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

This railroad spur is located just southwest of the intersection of Rialto Avenue and S. E Street in the City of San Bernardino, within Assessor's Parcel Numbers (APNs) 013602123 and 013602124.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The site is the location of a former railroad spur of the Pacific Electric Railway line. The Pasadena and Los Angeles Railway Company was established in 1895 as the region's first interurban line, connecting Los Angeles to Pasadena. Henry Huntington acquired the line and formed the Pacific Electric Railway Company in 1901. The San Bernardino Line, constructed between 1906 and 1914, was the longest segment in the Pacific Electric system. Service peaked in the early 1920s but began to decline in 1936 (Hatheway 1991). Eventually, the Pacific Electric Line merged with the Southern Pacific and, later, the Union Pacific Railroad lines (Beedle 2007).

This spur was located north of the main tracks and was comprised of three tracks, one continuing north and two curved tracks, one which curved to the northeast, the other curved to the northwest. All three spurs terminated at Rialto Avenue (see attached map). The tracks were removed in 1951 (Hatheway 1991); however, the graded railroad beds are still visible. The site has been altered by removal of the railroad tracks. Because of the alteration, the subject property does not retain requisite integrity to qualify for listing in the National or California registers.

***P3b. Resource Attributes:** (List attributes and codes) AH7- Railroad Grade

***P4. Resources Present:** ☐Building ☐Structure ☐Object ■Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) Overview of eastern railroad grade and associated concrete channel, view to the southwest. Photo # 4430.

***P6. Date Constructed/Age and Sources:**
■Historic ☐Prehistoric ☐Both
circa 1906 and 1914

***P7. Owner and Address:**
Union Pacific Railroad
1400 Douglas Street
Omaha, NE 68179

***P8. Recorded by:** (Name, affiliation, and address)
Caprice D. (Kip) Harper
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

***P9. Date Recorded:**
October 7, 2008

***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")

Cultural Resources Technical Report, *sbX* E Street Corridor BRT Project, San Bernardino County, California (SWCA Environmental Consultants 2008)

Archaeological Site Record for P-36-006101 (Sorenson et. Al 1987) file at the San Bernardino Archaeological Information Center, (SBAIC) Redlands, CA

Site Record for CA-SBR-6101H, (Beedle, P., 2007) on file at the SBAIC

Historic Resources Inventory of Pacific Electric Substation #2 (Hatheway, 1991), on file at the SBAIC

***Attachments:** ☐NONE ■Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

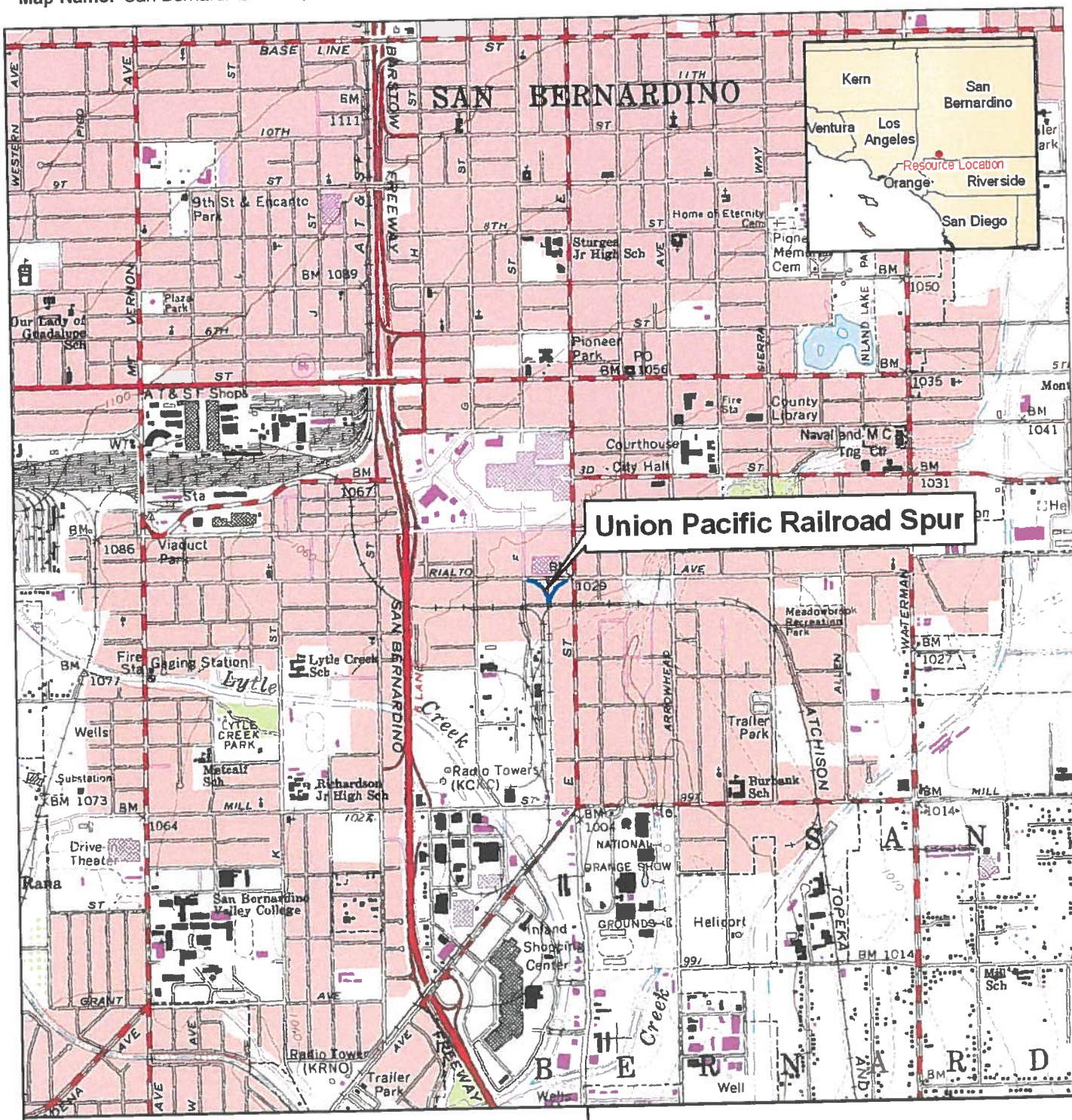
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # P-36-006101 (update)
HRI#
Trinomial CA-SBR-6101 (update)

 ***Resource Name or #:** Union Pacific Railroad Spur

***Map Name:** San Bernardino South, CA ***Scale:** 1:24,000 ***Date of Map:** 1967 (Photorevised 1980)



USGS 7.5' Quadrangle
San Bernardino South, CA 1967 (Photorevised 1980)

*Required information

DPR 523J (1/95)

P36-006101

1074

P36-006101

ARCHAEOLOGICAL SITE RECORD

PAGE: 1 OF 8
DATE OF ORIGINAL RECORD: 11/3/19087
DATE OF THIS FORM: 11/3/1987

PERMANENT TRINOMIAL: CA-SBR-6101-H
TEMPORARY NUMBER: C-21
AGENCY DESIGNATION:

1. COUNTY: San Bernardino

2. USGS QUAD: San Bernardino South 7.5' 1967 REVISED: 1980

3. UTM COORDINATES: ZONE 11
470020 to 469940 EASTING
3767340 to 3766900 NORTHING

4. TOWNSHIP 1S RANGE 4W
W 1/2 of NW 1/4 of
NE 1/4 of NE 1/4 of
NW 1/4 of NW 1/4 of
SEC 32 SEC 32

5. MAP COORDINATES:
355 to 373 mm S
193 190 mm E

6. ELEVATION: 920 feet

7. LOCATION: At Grand Terrace, exit north on La Cadena Ave. from Highway 215. Follow La Cadena to the south bank of the Santa Ana River. Follow the south bank to the east (crossing the Santa Fe RR) for 450 m to the south end of the bridge.

8. PREHISTORIC HISTORIC XXXX PROTOHISTORIC

9. SITE DESCRIPTION: Southern Pacific Railroad bridge. The bridge is a simple trestle style constructed of wood. There is, in addition, steel "I" beam reinforcing on the southern end.

10. AREA: 450+ m (length) x 10 m (width); 4,500+ m^2.
METHOD: Measured topographic map.

11. DEPTH: n/a METHOD: n/a

12. FEATURES: Wooden trestle construction with relatively recent steel reinforcing.

13. ARTIFACTS: Dates of 1903 and 1912 on rails.

14. NON-ARTIFACTUAL CONSTITUENTS: None observed.

15. DATE OF ORIGINAL RECORD: 11/03/1987 DATE OF THIS FORM: 11/03/1987

16. RECORDED BY: J. Sorensen, G. Toren, K. Vander Veen, M. Imwalle

17. AFFILIATION: Greenwood and Associates, 725 Jacon Way, Pacific Palisades, CA 90272 (213) 454-3091

P36-006101

ARCHAEOLOGICAL SITE RECORD

PERMANENT TRINOMIAL: CA-SBR-6101-H
DATE OF ORIGINAL RECORD: 11/03/1987
TEMPORARY NUMBER: C-21
DATE OF THIS FORM: 11/03/1987
AGENCY DESIGNATION:

18. HUMAN REMAINS: None observed.

19. SITE INTEGRITY: The bridge is currently in service and receives maintenance although it shows signs of wear at this time. Illegal dumping is occurring in the vicinity along with vandalism in the form of graffiti.

20. NEAREST WATER: Crosses Santa Ana River.

21. LARGEST BODY OF WATER WITHIN 1 KM: Same as #20.

22. VEGETATION COMMUNITY (SITE VICINITY): Riparian, pasture, and inland sage scrub.

23. VEGETATION COMMUNITY (ON SITE): Riparian, bamboo thickets.

REFERENCES FOR ABOVE: Symposium Proceedings: Plant Communities of Southern California, Special Publication No. 2, California Native Plant Society.

24. SITE SOIL: Construction fill for RR right-of-way and bridge footings.

25. SURROUNDING SOIL: Gravel filled sand.

26. GEOLOGY: Stream channel/terrace deposits.

27. LANDFORM: River channel and adjacent flood plain.

28. SLOPE: Crosses river channel. 29. EXPOSURE: Open.

30. LANDOWNER(S), (TENANTS), ADDRESS:

31. REMARKS:

32. REFERENCES:

33. NAME OF PROJECT: Cultural Resources Survey, Upper Santa Ana River.

34. TYPE OF INVESTIGATION: Intensive survey.

35. SITE ACCESSION NO.: n/a CURATED AT: n/a

36. PHOTOS: Black and white TAKEN BY: M. Imwalle

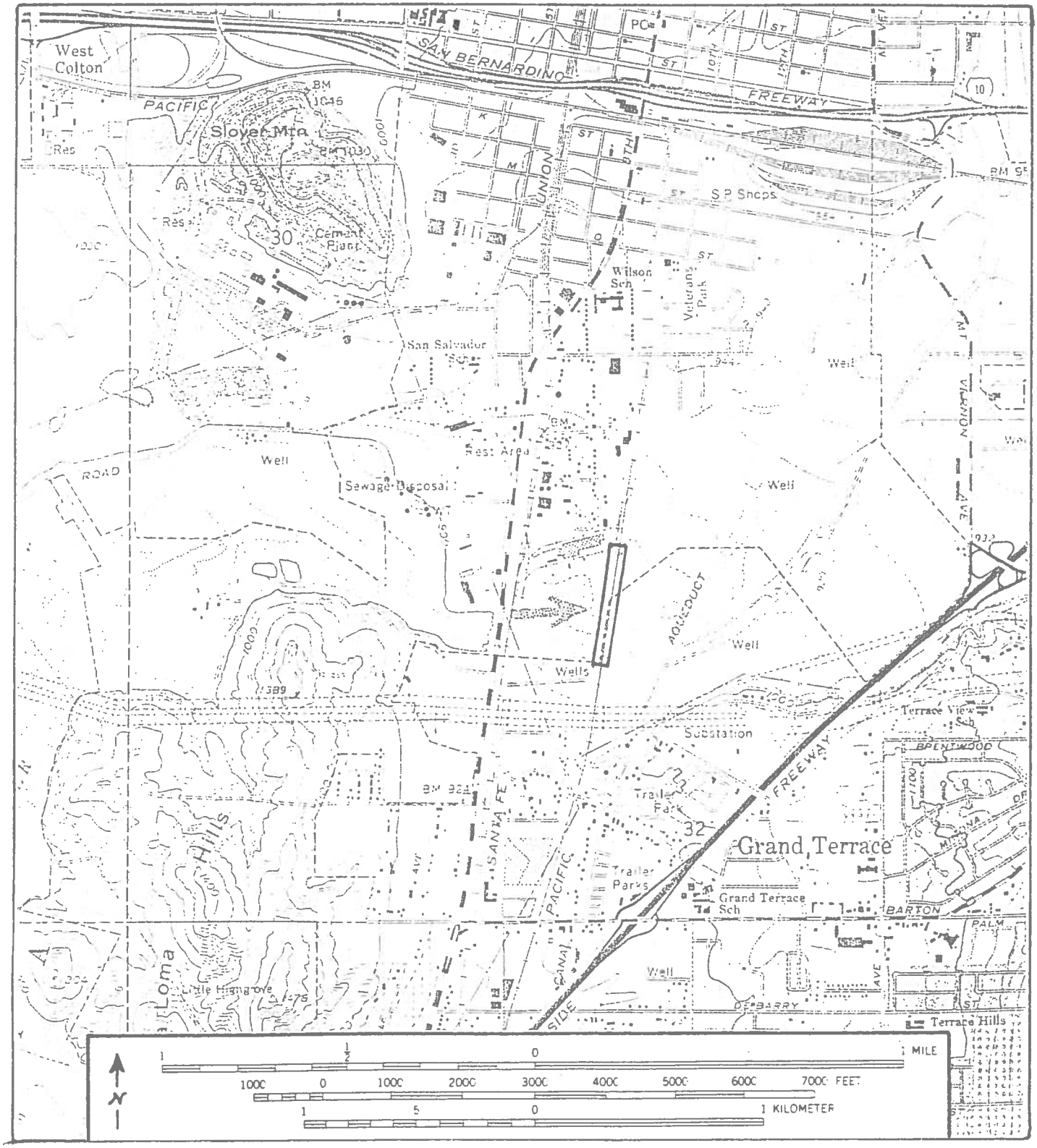
37. PHOTO ACCESSION NO. n/a ON FILE AT: San Bernardino County Museum

ARCHAEOLOGICAL SITE LOCATION MAP

PAGE: 3 OF 8
DATE OF ORIGINAL RECORD: 11/03/1987
DATE OF THIS FORM: 11/03/1987

PERMANENT TRINOMIAL: CA-SBR-6101-H
TEMPORARY NUMBER: C-21
AGENCY DESIGNATION:

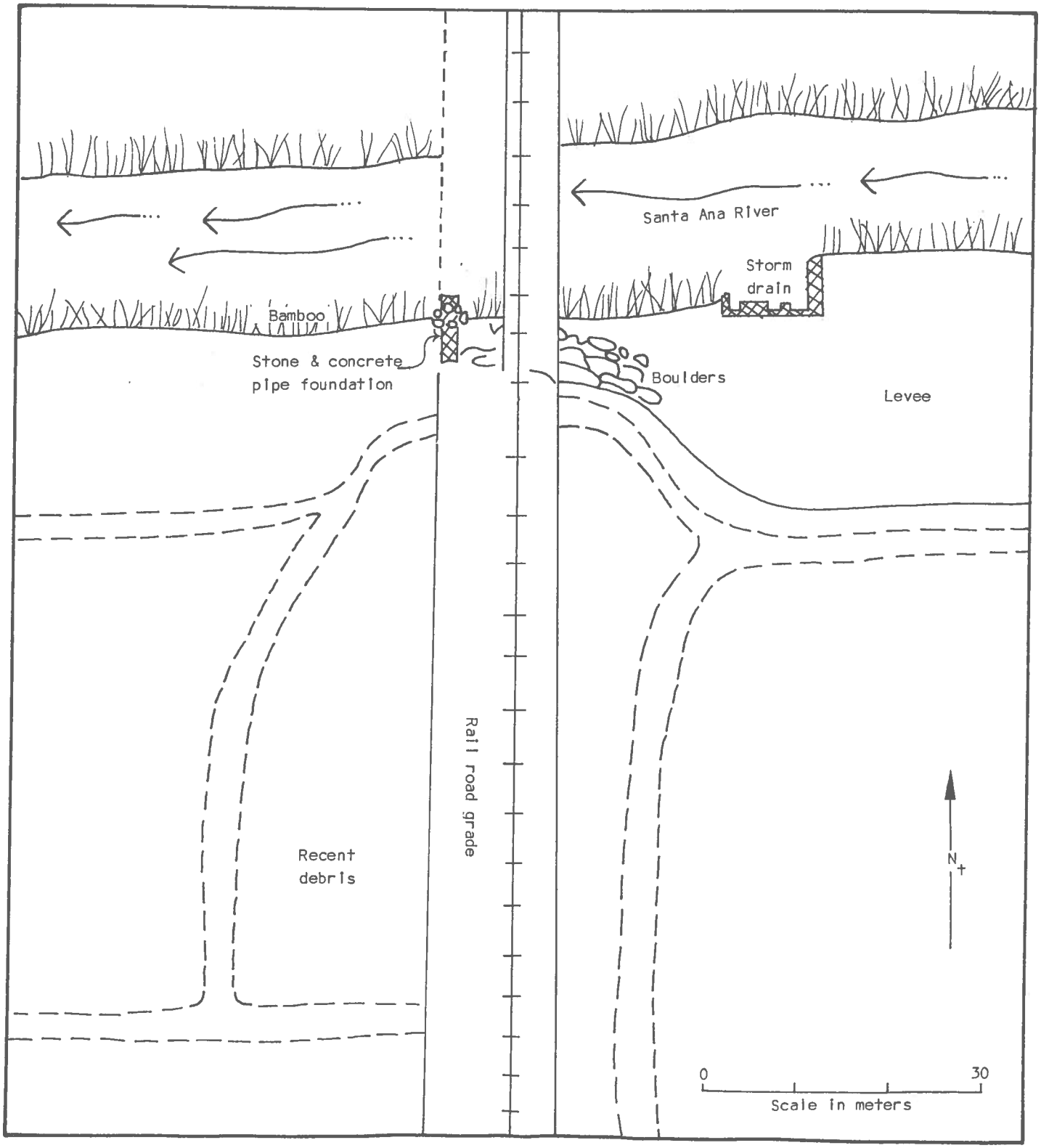
U.S.G.S. 7.5' QUADRANGLE: San Bernardino South



ARCHAEOLOGICAL SITE MAP

PAGE: 4 OF 8
DATE OF ORIGINAL RECORD: 11/03/1987
DATE OF THIS FORM: 11/03/1987

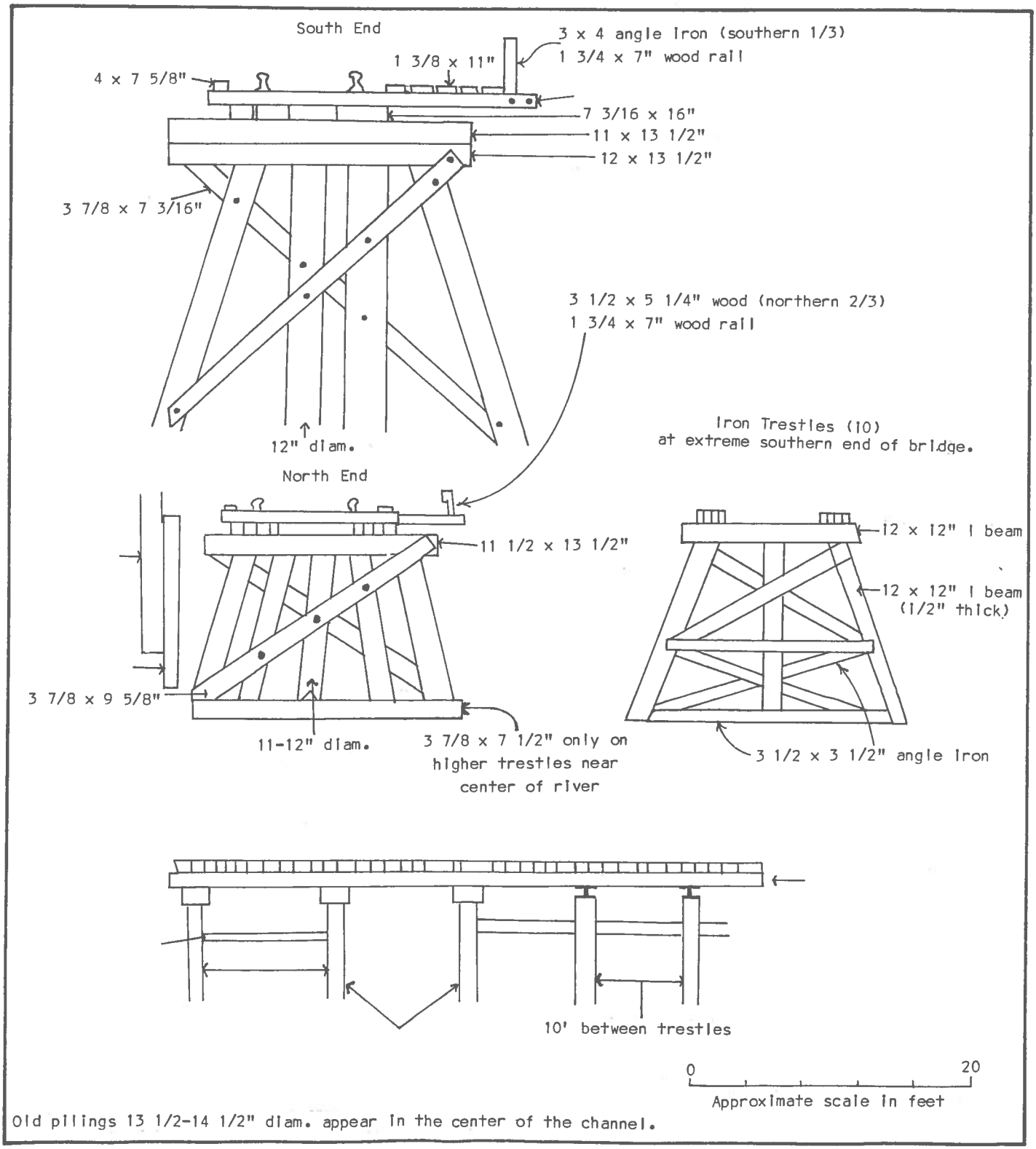
PERMANENT TRINOMIAL: CA-SBR-6101-H
TEMPORARY NUMBER: C-21
AGENCY DESIGNATION:



ARCHAEOLOGICAL FEATURE RECORD

PAGE: 5 OF 8
DATE OF ORIGINAL RECORD: 11/03/1987
DATE OF THIS FORM: 11/03/1987

PERMANENT TRINOMIAL: CA-SBR-6101-H
TEMPORARY NUMBER: C-21
AGENCY DESIGNATION:



Old pilings 13 1/2-14 1/2" diam. appear in the center of the channel.

P36-061101

SITE PHOTOGRAPHIC LOG

PAGE: 6 OF 8

PERMANENT TRINOMIAL: CA-SBR-6101-H
TEMPORARY NUMBER: C-21
AGENCY DESIGNATION:
ROLL NUMBER: C-7

DATE OF THIS FORM: 11/03/1987
PROJECT: UPPER SANTA ANA RIVER

CAMERA AND LENS TYPES: K1000/28-70mm

FILM TYPE AND SPEED: Tri-X 400

MO.	DAY	TIME	FRAME	SUBJECT/DESCRIPTION	VIEW TOWARD
11	3	9:00	2	C-21, Southern Pacific Railroad bridge, N end	NW
11	3	9:01	3	C-21, Southern Pacific Railroad bridge, N end	NW
11	3	9:04	4	C-21, S. P. bridge, general view	SW
11	3	9:05	5	C-21, S. P. bridge, general view	SW
11	3	9:07	6	C-21, S. P. bridge, view from tracks	S
11	3	9:08	7	C-21, S. P. bridge, view from tracks	S
11	3	9:10	8	C-21, S. P. bridge, rail mark "...1903..."	W
11	3	9:12	9	C-21, S. P. bridge, rail mark "CARNEGIE 1903 ET1"	W
11	3	9:14	10	C-21, S. P. bridge, rail mark "...1912..."	E
11	3	9:15	11	C-21, S. P. bridge, rail mark "...1912..."	E
11	3	9:17	12	C-21, S. P. bridge, west side, cut pilings	N
11	3	9:18	13	C-21, S. P. bridge, west side, cut pilings	N
11	3	9:20	14	C-21, west side, concrete pilings for pipe bridge	down
11	3	9:21	15	C-21, west side, concrete pilings for pipe bridge	down
11	3	9:24	16	C-21, east side, steel trestle (reconstruction?)	NW
11	3	9:25	17	C-21, east side, steel trestle (reconstruction?)	NW
11	3	9:27	18	C-21, S. P. bridge, view from tracks	N
11	3	9:28	19	C-21, S. P. bridge, view from tracks	N
11	3	9:30	20	C-21, view south end, incl. concrete pipe bridge	NW
11	3	9:31	21	C-21, view south end, incl. concrete pipe bridge	NW
11	3	9:33	22	C-21, concrete pipe bridge mark "1933"	down
11	3	9:34	23	C-21, concrete pipe bridge mark "1933"	down

PHOTOGRAPHIC RECORD

PAGE: 7 OF 8
DATE OF ORIGINAL RECORD: 11/03/1987
DATE OF THIS FORM: 11/03/1987

PERMANENT TRINOMIAL: CA-SBR-6101-H
TEMPORARY NUMBER: C-21
AGENCY DESIGNATION:

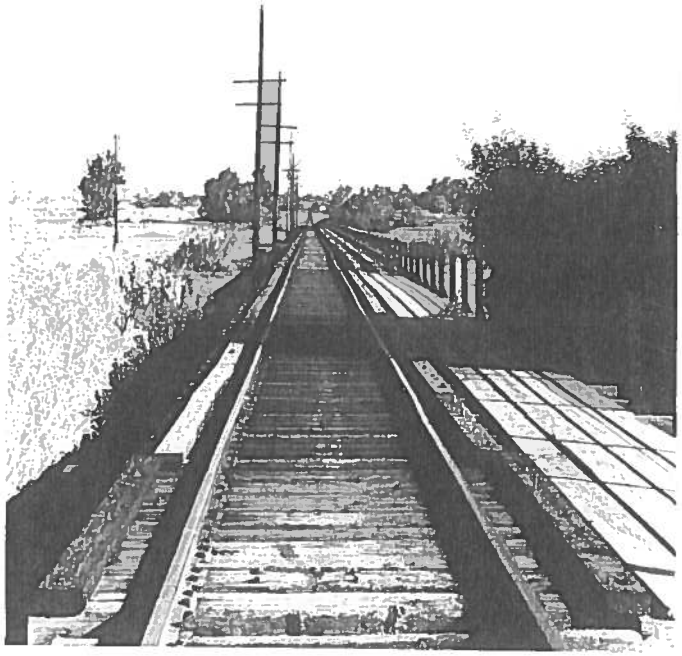
ROLL AND FRAME:
C-7 5

VIEW:
SW

SUBJECT: General view.

ROLL AND FRAME:
C-7 18

VIEW:
N



SUBJECT: General view.

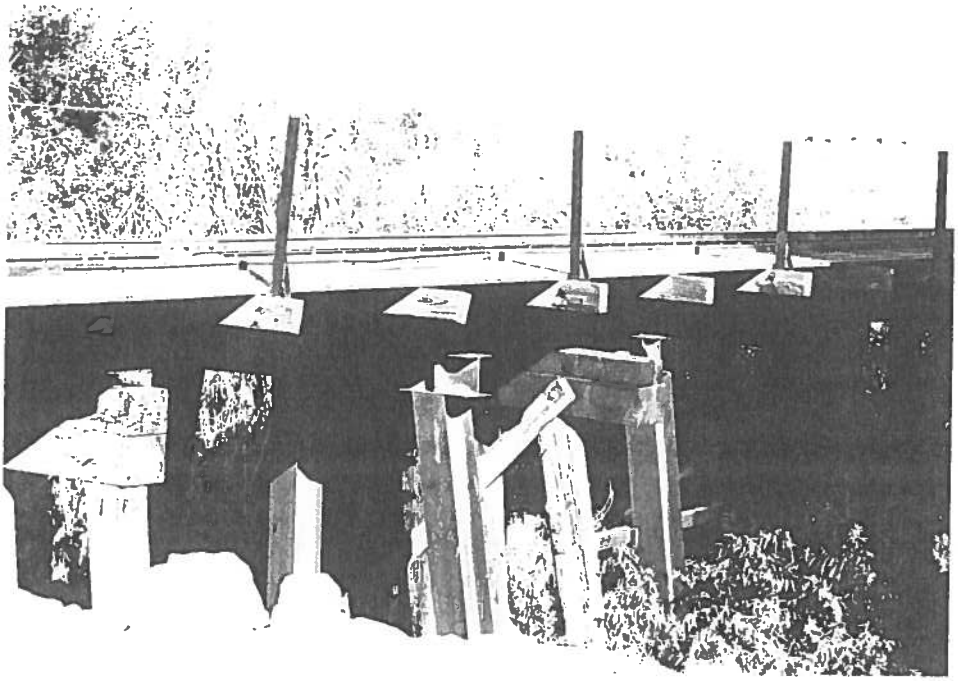
PHOTOGRAPHIC RECORD

PAGE: 8 OF 8
DATE OF ORIGINAL RECORD: 11/03/1987
DATE OF THIS FORM: 11/03/1987

PERMANENT TRINOMIAL: CA-SBR-6101-H
TEMPORARY NUMBER: C-21
AGENCY DESIGNATION:

ROLL AND FRAME:
C-7 17

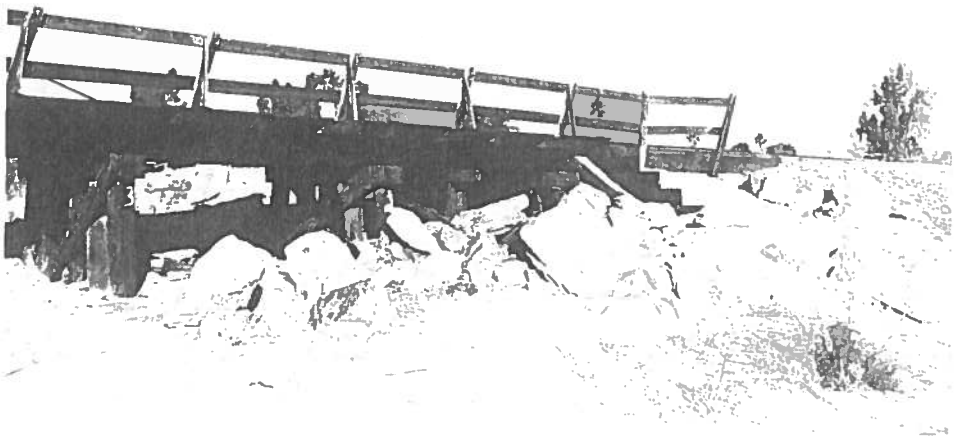
VIEW:
NW



SUBJECT: Detail, note steel I-beams, shims, hand rail for walkway.

ROLL AND FRAME:
C-7 2

VIEW:
NW



SUBJECT: Detail, note hand rail for walkway.

Update 11/14

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # 36-006847 UPDATE
HRI # _____
Trinomial _____

*Resource Name or #: P-36-006847
Recorded by: Matthew DeCarlo (ASM) and Doug Mengers (PanGIS)
Date: July 25, 2014
☐ Continuation ■ Update

*P2. **Location:** ■ Not for Publication ☐ Unrestricted
*a. **County:** San Bernardino
*b. **USGS 7.5' Quad:** Redlands, CA **Date:** 1988 **T** 1S; **R** 3W; Unsectioned; S.B.**B.M.**
d. UTM: Zone 11; NAD 83; 0477989 mE/ 3769773 mN
e. Other Locational Data: From Interstate 10, take the Mountain View Avenue exit in Redlands, CA and travel north for 0.5 miles. Turn right onto Almond Avenue and then turn right onto Research Drive. Travel 0.1 west on W. Lugonia Avenue and turn left into empty lot. Resource is adjacent to three transmission towers.

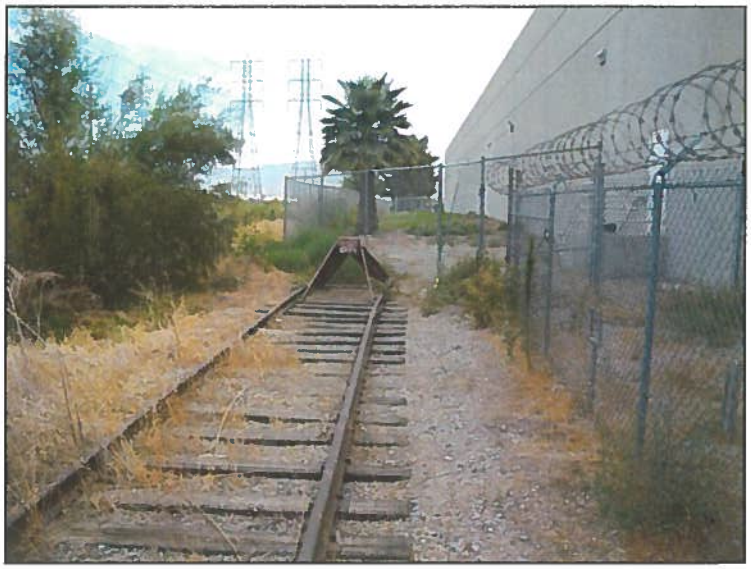
*P3a. **Description:** This resource is a spur of the historic Burlington Northern Santa Fe Railway that was associated with the Old Kite Route. This segment of track is no longer in service. The spur leaves the maintained and utilized track and extends roughly 800 ft. and ends where it meets the landscaping of a business park. The rails are stamped with a manufacturing date of 1912.

The resource is located immediately adjacent to a proposed component of a pending transmission line upgrade project so the railway spur was evaluated for listing on the National Register of Historic Places and the California Register of Historic Resources. ASM concurs with previous recommendations that site P-36-06847 (CA-SBR-6847H) does not meet any of the four criteria necessary for NRHP or CRHR eligibility.

*P3b. **Resource Attributes:** AH7: Railroad Grade

*P4. **Resources Present:** ☐ Building ☐ Structure ☐ Object ■ Site ☐ District ☐ Element of District ☐Other (Isolates, etc.)

P5a. Photograph or Drawing:



P5b. Description of Photo: View north of tracks ending into business park.

*P6. **Date Constructed/Age and Source:**
■ Historic ☐ Prehistoric ☐ Both

*P7. **Owner and Address:**
Private Owner
2455 West Lugonia Ave,
Redlands, CA 92374

*P8. **Recorded by:**
Matthew DeCarlo and Doug Mengers
ASM Affiliates Inc. and PanGIS
2034 Corte del Nogal,
Carlsbad, CA 92011

*P9. **Date Recorded:** July 25, 2014

*P10. **Survey Type:** Reconnaissance maintained

*P11. **Report Citation:**

DeCarlo, Matthew M, Diane L. Winslow, Audry Williams, and Andrew Belcourt
2014 *Engineering Refinements Survey and Recommendation of Eligibility for Cultural Resources Within Southern California Edison Company's West of Devers Upgrade Project, Riverside and San Bernardino Counties, California*.

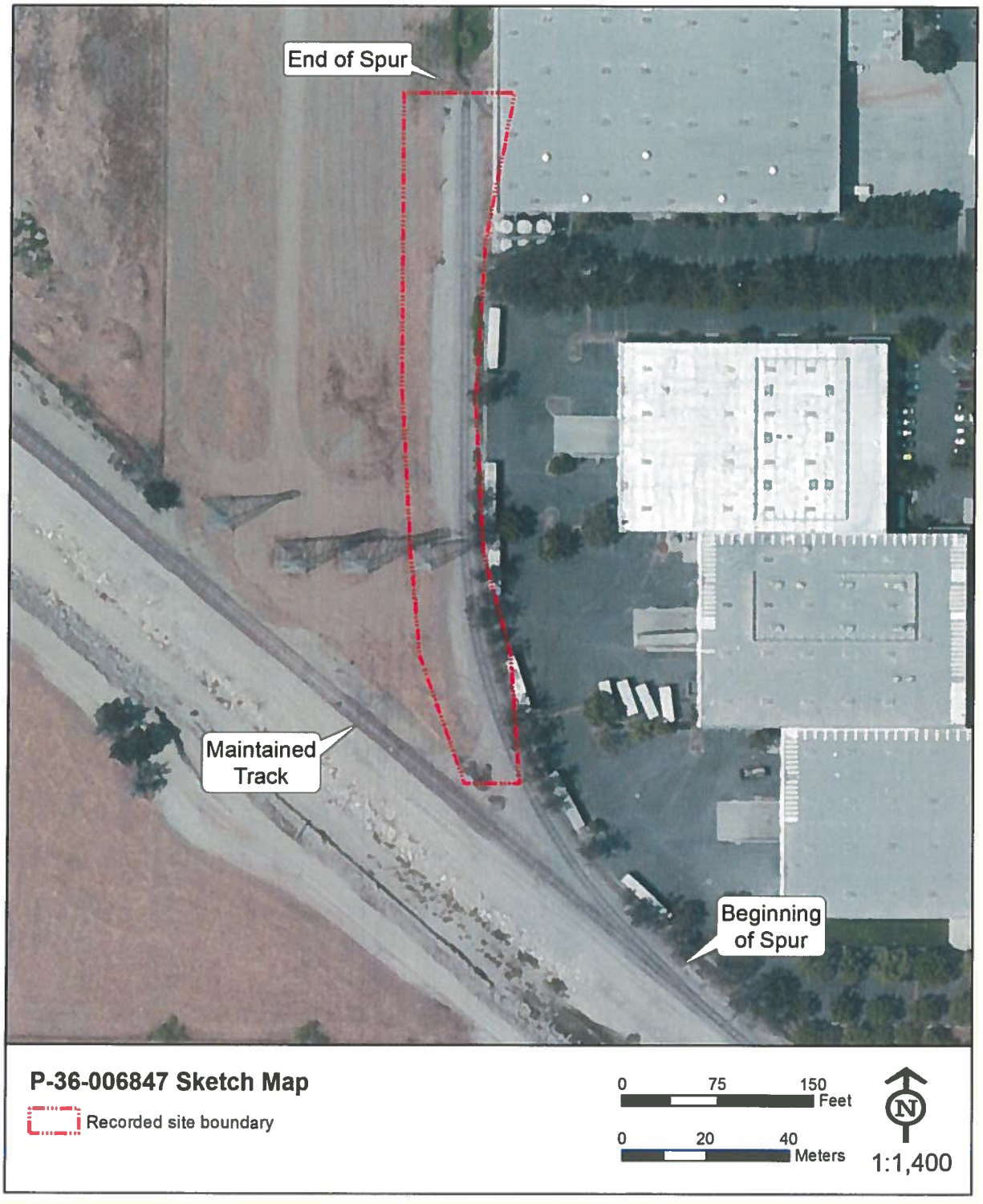
*Attachments: ☐ NONE ■ Location Map ■ Sketch Map ■ Continuation Sheet ☐ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
SKETCH MAP

Primary # 36-006847 UPDATE
HRI #
Trinomial

* Drawn by: Matthew DeCarlo

*Resource Name or #: P-36-006847
* Date of map: October 10, 2014

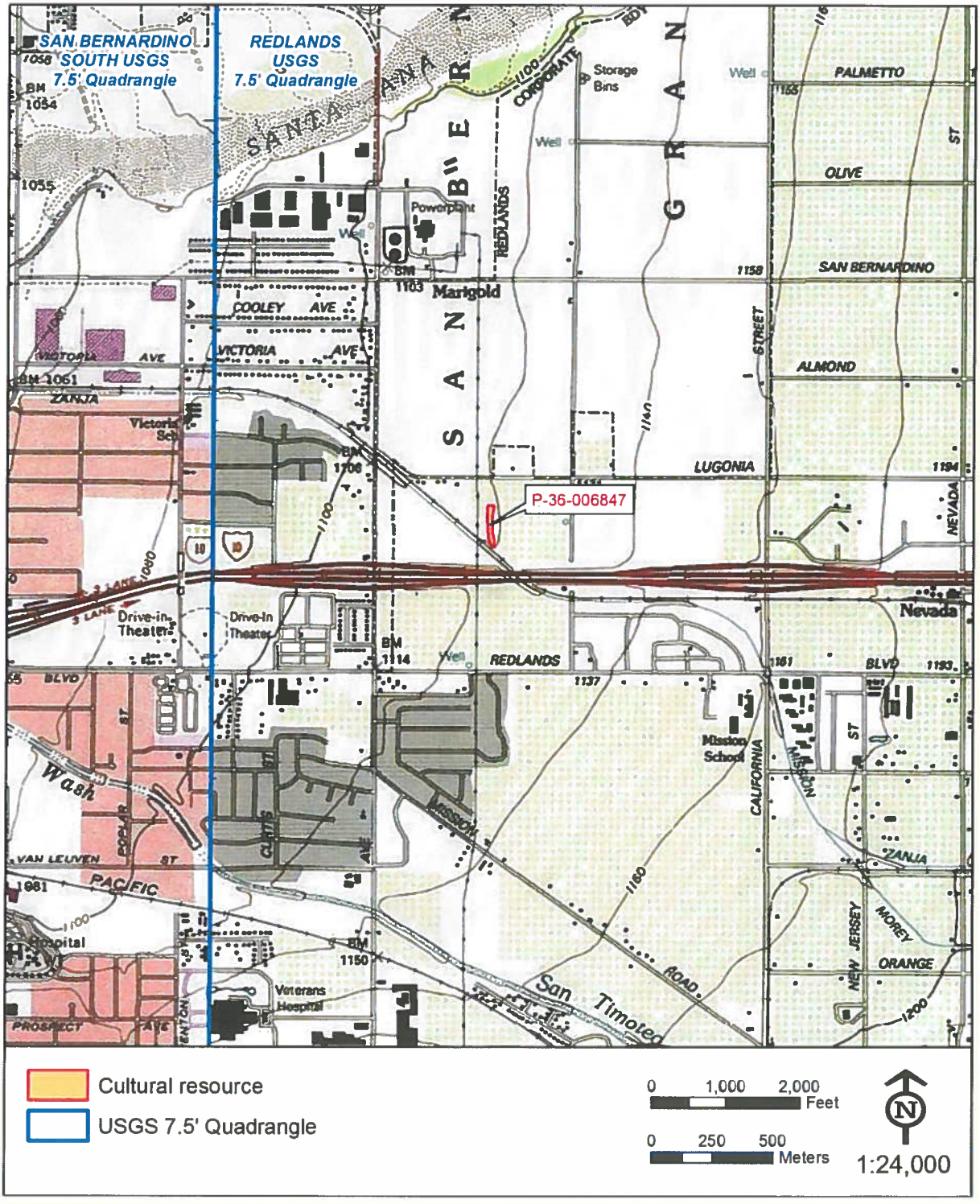


* Required Information

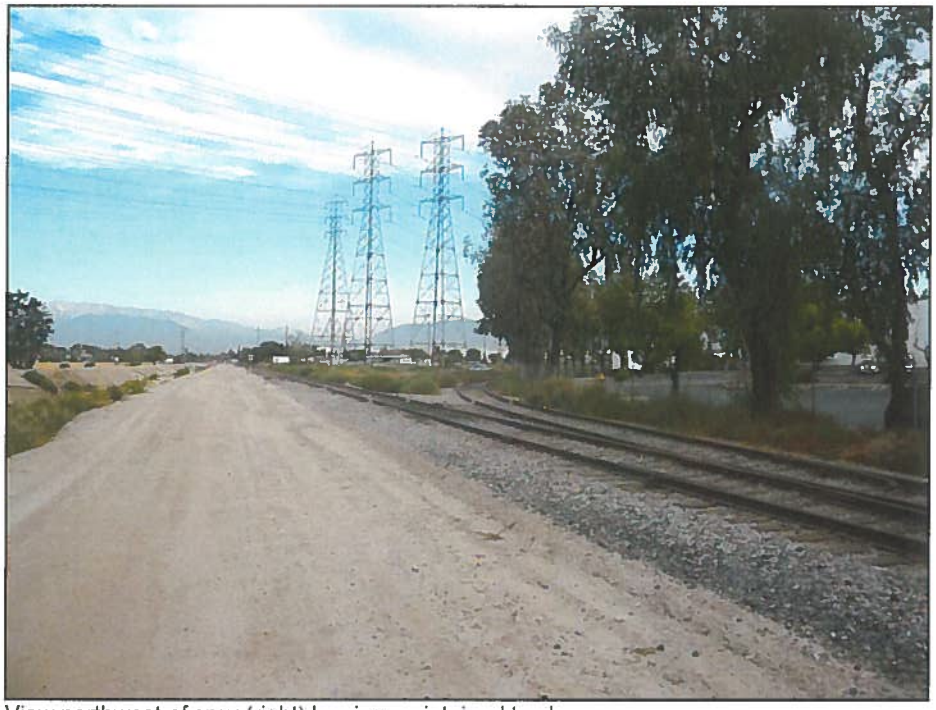
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # 36-006847 UPDATE
HRI # _____
Trinomial _____

* Map Name: Redlands, CA
*Scale: 1:24,000
*Resource Name or #: P-36-006847
* Date of map: 1988



* Required Information



View northwest of spur (right) leaving maintained track.

"1912" stamp on rail.

update 8/10

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _P36-006847_____
HRI # _____
Trinomial CA-SBR-6847 N
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Resource Name or #: SBRR-1

P1. Other Identifier:

P2. Location: ■ **Not for Publication** ☐ **Unrestricted**
- a. **County:** San Diego
- b. **USGS 7.5' Quad** Redlands **Date** 1997 **T** 1S; **R** 3W; **¼ of ¼ of Sec** unsectioned ; San Bernardino **B.M.**
- c. **Address City Zip**
- d. **UTM:** NAD 83 **Zone** 11S, 477975 **mE /**3769727 **mN**
- e. **Other Locational Data:**
This site is located north of the I-10 freeway and south of west Lugonia Avenue at the Y-split from the main Old Kite Route/Atchison, Topeka and Santa Fe Railway railroad line.

P3a. Description:
SBRR-1 is a railroad spur that is associated with the Old Kite Route/Atchison, Topeka and Santa Fe Railway, used for loading/unloading or storage. Certain segments of the Old Kite Route have been destroyed or altered while some are listed on the *National Register of Historic Places.* Originally this route was built between 1880 and 1892.

P3b. Resource Attributes: AH7. Railroad Grade

P4. Resources Present: ☐ Building ☐ Structure ☐ Object ■ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing:

P5b. Description of Photo:
05/26/2010: #11 Railroad spur; view to the northeast.

P6. Date Constructed/Age and Source:
■ Historic ☐ Prehistoric ☐ Both

P7. Owner and Address:
Unknown

P8. Recorded by:
Elizabeth Potter
ASM Affiliates, Inc.
2034 Corte Del Nogal,
Carlsbad, CA 92011

P9. Date Recorded:
05/26/2010

P10. Survey Type:
Intensive Pedestrian

P11. Report Citation:
Potter, Elizabeth
2010 *Cultural Resources Study for the Mountainview Power Project, San Bernardino County, California,* Submitted to Dudek.

Attachments: ☐ NONE ■ Location Map ■ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ■ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHAEOLOGICAL SITE RECORD

Primary # P36-006847
Trinomial SBR-6847 H

 Resource Name or # SBRR-1

A1. **Dimensions**: a. Length 500 ft (N/S) b. Width 7 ft (E/W)

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual Estimate ■ Other: Garmin etrex

Method of Determination: ☐ Artifacts ■ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ■ High ☐ Low Explain:

Limitations: ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined ■ Disturbances ☐ Vegetation ☐ Other: During construction of the surrounding industrial area the railroad may have been disturbed.

A2. **Depth**: ☐ None ■ Unknown Method of Determination: No subsurface investigation was conducted at this time.

A3. **Human Remains**: ☐ Present ☐ Absent ☐ Possible ■ Unknown : No subsurface testing conducted.

A4. **Features**: SBRR-1 consists of a railroad spur that is associated with the Old Kite Route/Atchison, Topeka and Santa Fe Railway, used for loading/unloading or storage. Due to its unique design, having two main loops, one in Los Angeles County and the other in San Bernardino County, it was considered a unique and scenic way to travel. Both loops were completed in 1892. Initially the track was created to transport citrus fruit; however, it became popular as a passenger train until after World War II when citrus was no longer transported by train. Eventually it was phased out of being a passenger train as well. In reviewing previously recorded segments of the railway line, one segment is listed on the National Register of Historic Places, because it is part of the Patton State Hospital Complex.

A5. **Cultural Constituents**: None observed

A6. **Were Specimens Collected?** ■ No ☐ Yes

A7. **Site Condition**: ☐ Good ■ Fair ☐ Poor : A fence, agricultural fields and industrial building may have disturbed the tracks, however no visible disturbance was observed.

A8. **Nearest Water**: This site is located one mile south of Santa Ana River

A9. **Elevation**: Approximately 1,120 AMSL.

A10. **Environmental Setting**:
Today this area is primarily orange groves, industrial parks and urban development.

A11. **Historical Information**:

A12. **Age**: ☐ Prehistoric ☐Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐1848-1880 ■ 1880-1914 ☐ 1914-1945 ☐ Post 1945 ☐ Undetermined: Historic

A13. **Interpretation**:

A14. **Remarks**:

A15. **References**:

A16. **Photographs**: Digital
Original Media/Negatives Kept at ASM Affiliates, Inc. Carlsbad, CA

A17. **Form Prepared by**: Elizabeth Potter **Date**: 07/20/2010
Affiliation and Address: ASM Affiliates, 2034 Corte Del Nogal, Carlsbad, CA 92011

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #__ P36-006847
HRI #
Trinomial SBR-6847 H

Map Name: USGS 7.5' Quadrangle: Redlands **Scale:** 1:24,000

Resource Name or # SBRR-1
Date of map: 1997

*Required information

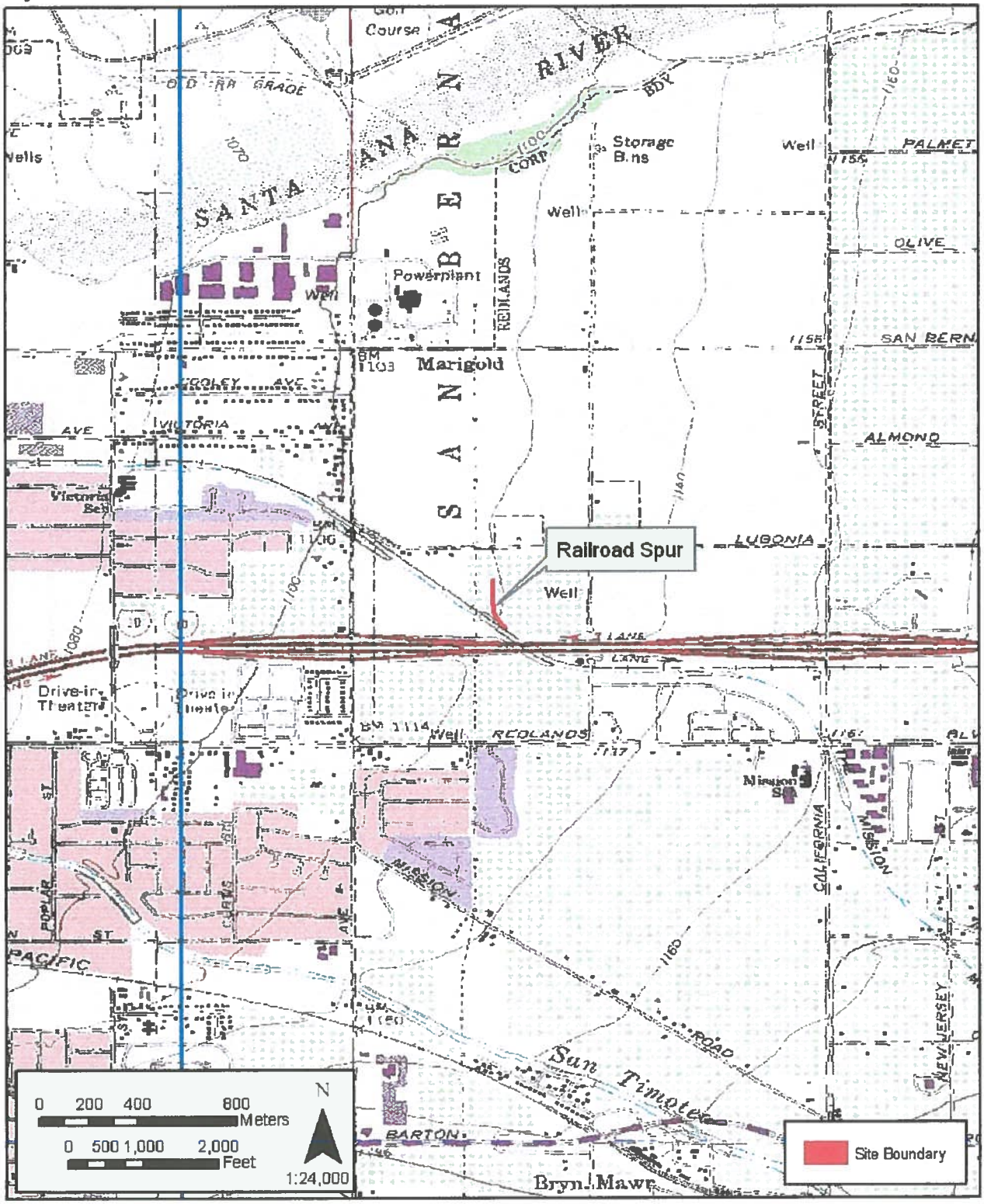
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary #_ P36-006847
HRI #
Trinomial

Drawn by: Alice Brewtser-Linlor

Resource Name or # SBRR-1
Date of map: 2010



*Required information

Update 9/12

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 36-006847 (Update)
HRI #
Trinomial CA-SBR-6847H (Update)
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

Resource Name or #: California Southern Railroad segment

P1. Other Identifier: Atchison, Topeka & Santa Fe (ATSF) Railway; Burlington Northern Santa Fe (BNSF) Railway; APE Map Reference #2

*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County: and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: San Bernardino South, CA Date: 1967 PR 1980 T 1S ; R 4W; unsectioned land; S.B.B.M.

c. Address: City: Zip:

d. UTM: Zone: 11; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate): This approximately 200-foot long segment of the BNSF railway extends south from Interstate 10 (I-10) to a point just south of the crossing with the Union Pacific Railroad (UPRR).

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This segment of the railroad consists of two north-south BNSF (formerly California Southern and ATSF) mainline tracks. Two sets of railroad ties support a pair of rails and a layer of volcanic rocks lines the rail bed. The property adjacent to this short segment is undeveloped except for the east-west UPRR tracks, which cross this segment at what is commonly referred to as Colton Crossing. This extant, but modernized crossing is one of numerous rail-to-rail crossings in California.

This approximately 200-foot long segment appears to retain a fair degree of integrity of location and design, but the setting has been compromised by removal of the crossing tower, construction of I-10, installation of additional tracks (sidings, spurs, wyes, etc.), realignments of tracks and local roads, and the construction, alteration, and demolition of homes and commercial buildings.

*P3b. Resource Attributes: (List attributes and codes) HP39 Other (railroad)

*P4. Resources Present: ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #)
BNSF tracks, view to the north June 17, 2010.

*P6. Date Constructed/Age and Sources: ☒Historic ☐Prehistoric ☐Both
1883

*P7. Owner and Address:
BNSF Railway
2650 Lou Menk Dr. 2nd Floor
Fort Worth, TX 76131-2830

*P8. Recorded by: (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

*P9. Date Recorded:
May 2010

*P10. Survey Type: (Describe)
Intensive-level Section 106 and CEQA compliance

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Historic Property Survey Report for the Colton Crossing Rail-to-Rail Grade Separation, Attachment B, Historic Resources Evaluation Report, 2011.

*Attachments: ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☒Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # 36-006847 (Update)
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6Z

*Resource Name or # (Assigned by recorder) California Southern Railroad segment

B1. Historic Name: California Southern; Atchison, Topeka & Santa Fe
B2. Common Name: Burlington Northern Santa Fe; Colton Crossing
B3. Original Use: Railroad **B4. Present Use:** Railroad
***B5. Architectural Style:** NA
***B6. Construction History:** (Construction date, alterations, and date of alterations)
1883 railroad segment constructed
***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** _____ **Original Location:** _____
***B8. Related Features:**
B9a. Architect: Unknown **b. Builder:** California Southern Railroad
***B10. Significance: Theme:** Transportation **Area:** City of Colton
Period of Significance: 1883–1960 **Property Type:** Railroad **Applicable Criteria:** NA
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Although linear features less than 0.25 mile in length are typically considered too short to warrant evaluation, this segment is being evaluated because it includes the Colton Crossing. This approximately 200-foot long railroad segment does not appear to meet any of the criteria for listing in the National Register of Historic Places (National Register). The California Southern (later Atchison, Topeka & Santa Fe [AT&SF] and now BNSF) was constructed to Colton, where it crossed the Southern Pacific (SP) creating the Colton Crossing, in 1883 as part of a longer line from San Diego to San Bernardino. Since then, the setting has been extensively altered: buildings were removed in conjunction with construction of I-10 adjacent to the north; tracks have been added, realigned, and otherwise modified; the tower at the crossing has been removed; and most of the nearby historic-period buildings, which were constructed after the railroad was in place, have been removed or significantly altered. (*See Continuation Sheet*)

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

Baxter, Tom
1947 Los Angeles Division, AT&SF, 487 miles of main and branch lines cross high mountains, arid deserts; serve agricultural and industrial districts of West Coast. *Trains*, June. Article on file in the vertical files in the Norman F. Feldheym Library, Arda Haenszel California Room.

Cataldo, Nicholas
2006 The Earp Clan: the Southern California Years. Black Roads Press, San Bernardino.

Ingersoll, L.A.
1904 *Ingersoll's Century Annals of San Bernardino County, 1769 to 1904. Volume One and Two.* Published by the author, Los Angeles, California.

Jones, Clark Harding
1951 A History of the Development and Progress of Colton, California 1873-1900. A Masters thesis on file at the Colton Public Library.

Los Angeles Times
1883 A Railroad War, the S.P.R.R. Bars the Progress of the C.S.R.R. at Colton. August 10, page 1.

Robinson, John W.
2005 *Gateways to Southern California: Indian Footpaths, Horse Trails, Wagon Roads, Railroads, and Highways.* Big Santa Anita Historical Society, USA.

Union Pacific Railroad
1895 Map of the Southern Pacific Railroad through Colton. Obtained from John Bromley, Director of Historic Programs, Union Pacific Railroad.

B13. Remarks:

***B14. Evaluator:** Casey Tibbet, M.A., LSA Associates, Inc., 1500 Iowa Avenue, Suite 200, Riverside, CA 92507

***Date of Evaluation:** May 2010

(Sketch Map with north arrow required.)

(This space reserved for official comments.)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LINEAR FEATURE RECORD

Primary # 36-006847 (Update)
HRI #
Trinomial CA-SBR-6847H
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

Resource Name or #: California Southern Railroad segment

L1. Historic and/or Common Name: California Southern Railroad; Atchison, Topeka & Santa Fe Railway; Colton Crossing

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation **Designation:**

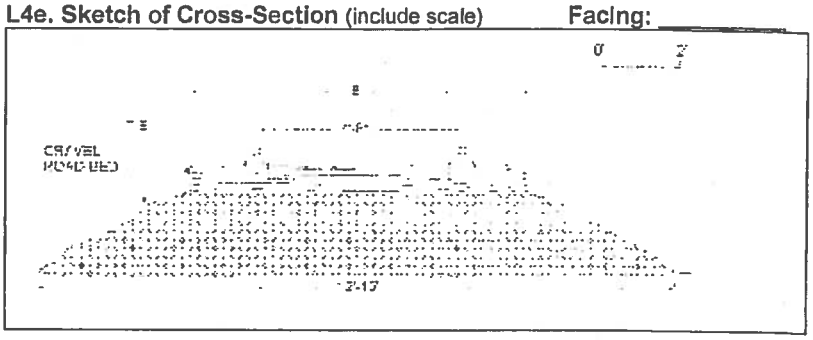
b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map)
This segment is located in the City of Colton and is approximately 200 feet long, extending south from Interstate 10 to a point just south of Colton Crossing.

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)
The segment consists of two sets of railroad ties that support a pair of rails. A layer of volcanic rocks lines the rail bed. (Refer to description in Primary Record, page 1)

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
a. Top Width 4' 8.5"
b. Bottom Width 12'–15'
c. Height or Depth Approx. 2'
d. Length of Segment Approx. 200 feet

L5. Associated Resources: None

L4e. Sketch of Cross-Section (include scale) **Facing:**



L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.)
The setting includes I-10 to the north and a historic-period neighborhood (most buildings extensively altered) to the southeast and southwest. (Refer to discussions in Primary Record and BSO Record, pages 1, 2, and 4).

L7. Integrity Considerations:
Although this segment retains integrity of location and design, its integrity of setting and feeling have been significantly compromised. (Refer to discussion in BSO Record, pages 2 and 4)

L8a. Photograph, Map, or Drawing

L8b. Description of Photo, Map, or Drawing: (View, scale, etc.)
Colton Crossing (BNSF tracks running under I-10 overpass), view to the east-northeast on June 17, 2010. (Also see Primary Record, page 1)

L9. Remarks:

L10. Form Prepared by: (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

L11. Date: May 2010

*B10. Significance: (Continued from page 2)

Historical Background. The California Southern was incorporated in 1880 with the intention of constructing a railroad from San Diego through Fallbrook and Temecula to San Bernardino and then over Cajon Pass to a junction with the Atlantic and Pacific Railroad (A&P), which was grading a line west along the 35th parallel to the Colorado River from points east (Robinson 2005:244). The A&P had an agreement with two other railroad companies, the St. Louis and San Francisco (known as the Frisco Line) and the AT&SF, to build all the way to the Pacific. In 1883, the A&P bridged the Colorado River to Needles where it was temporarily stopped by the Southern Pacific, which wanted to maintain a monopoly in California (ibid.). To solidify its position, the Southern Pacific (SP) quickly constructed a branch rail line from Mojave eastward to Needles (id. at 245).

Meanwhile, the California Southern Railroad opened from National City to Colton on August 21, 1882, and regular service began giving San Diego an outlet to the east and to San Francisco (Ingersoll 1904:260). However, it took over a year for the tracks to be completed to San Bernardino as SP "had interposed every possible obstacle—legal and material—to the advent of its rival" (Ingersoll 1904:260). In July 1883, California Southern engineer Fred T. Perris acquired the necessary track to build the crossing, but when it was delivered to National City, SP officials hired the sheriff there to seize it. The *San Diego Sun* later reported that while Deputy Sheriff Bradt napped at the hotel, California Southern organized a group of men to take the track and put it on a train bound for Colton (Ingersoll 1904:261). On August 9, 1883, "in the face of a danger signal held aloft by Mr. Victor, Superintendant of the California Southern Railroad" the SP parked an engine on the tracks in an effort to block construction of the crossing (*Los Angeles Times* 1883). One source reported that the engines were "guarded by Walter Earp, one of the notorious Earp boys, who is well armed and is furnished with his meals" (*The Press and Horticulturist* 1883). Earp helped secure the crossing for SP until Robert W. Waterman (future California Governor), Sherriff Burkhart, and a posse of deputized men delivered a court order stating that California Southern had the right to cross the SP tracks (Cataldo 2006). A month later "on September 13, 1883 the first California Southern train ... rolled across the Southern Pacific tracks from San Diego and arrived in San Bernardino..." (ibid.). It was at this time that the Colton Tower was constructed to direct traffic at the crossing. An 1895 map shows the Colton Tower located at the southeast corner of the crossing and a 1947 news article noted that it was the "only heavy duty tower on the Los Angeles Division that still is manually operated, having the old man-sized levers and long rods running to the switches and signals" (Union Pacific 1885; Baxter 1947). It has since been removed.

Severe flooding occurred in the winter of 1883–84 and several washouts occurred along the line, especially in the Temecula area (Ingersoll 1904:261). In November 1885, the California Southern was completed to Barstow and the transcontinental connection (with the A&P) was made (ibid.). In the boom years of 1886–87, numerous feeder lines were built in southern California, most of which were owned by AT&SF (ibid.). In 1893, the "loop," which became known as the "kite-shaped track," was completed through the San Bernardino Valley (id. at 266). This track connected Los Angeles with the San Gabriel and San Bernardino Valleys and boasted that nothing was seen twice. It appears that the segment evaluated here may have been utilized in that loop.

Significance Evaluation.

Under National Register criterion A and California Register criterion 1, railroads as a whole played an important role in the history of California. In addition, a portion of this segment known as Colton Crossing was the site of a standoff with the SP in 1883. Standoffs such as the one at Colton Crossing were a fairly common occurrence in the 19th century. There are several instances in United States history where a private railroad attempted to cross the tracks of another, resulting in lawsuits or even violence. These standoffs are known as "frog wars," named after the component of a railway switch that allows two tracks join or cross. A particularly famous frog war happened in Hopewell, New Jersey, in 1876 between the Pennsylvania Railroad and the Delaware and Bound Brook Railroad. In that instance, trains blocked the tracks and an armed fight broke out that included more than 100 people and required military involvement. Other examples of well-known frog wars include the Greater Grand Crossing feud in Chicago in 1853; Denver and Rio Grande Western Railroad vs. Atchison, Topeka & Santa Re Railroad vs. Union Pacific Railroad all vying for mountain passes in Colorado in the 1870s; and the Pennsylvania Railroad vs. the New Jersey Junction Connecting Railway (Lehigh Valley Railroad) in New Jersey in 1897. When the California Southern crossed the SP in Colton it was part of a series of events that resulted in the inevitable breaking of the SP monopoly (Jones 1951). However, after just two years, the AT&SF built its mainline from San Bernardino to Los Angeles and Colton was relegated to branch status, thus the real benefit of the crossing was reaped by San Bernardino which transformed from a stage station to a railroad center (Jones 1951:25; Ingersoll 1904:377). Although this short segment appears to retain integrity of location and design, as discussed above, its setting has been significantly altered and there is nothing physical at the crossing that demonstrates or conveys any significance under this criterion. Therefore, it does not appear to be significant under this criterion.

Under National Register criterion B and California Register criterion 2, the railroad as a whole is associated with persons important in history, but this segment does not appear to be more closely associated with those people than any other part of the railroad. However, Colton Crossing, which is the portion that crosses the Southern Pacific (now Union Pacific) tracks, has a minor association with Virgil Earp in his capacity as a law enforcement officer. In 1881, Virgil was Chief of Police in Tombstone, Arizona when the famed shootout at the O.K. Corral occurred. In retaliation for the shootout, Virgil was ambushed and his left elbow was shot. Shortly thereafter, to recuperate, he moved to Colton where his parents lived. In 1883, acting on behalf of the SPRR, Virgil stood guard against the construction of the railroad crossing by California Southern until a court order was produced allowing construction to proceed. In 1887, Virgil became the City's first Marshall and he lived in a home that still stands just north of I-10. He remained in Colton until 1893 when he moved to Vanderbilt. He returned to Colton for a short time in 1904 before moving to Goldfield where he (*See Continuation Sheet*)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # 36-006847 (Update)
HRI # _____
Trinomial CA-SBR-6847H

Page 5 of 5 *Resource Name or #: (Assigned by recorder) California Southern Railroad segment

*Recorded by LSA Associates, Inc. *Date: May 2010 X Continuation X Update

***B10. Significance:** (Continued from page 4)

died in 1905. Although Virgil Earp is a known figure in history, he is most famous as the brother of Wyatt Earp and for his involvement in the O.K. Corral shootout, rather than for his individual accomplishments as a lawman or any historically important contributions to the field of law enforcement. While he may have gained some importance in local history as the City's first Marshall, he was not elected to this position until four years after the Colton Crossing dispute. Further, the standoff at the crossing is just one of numerous law enforcement incidents in which Virgil was involved in his long career. For these reasons, this segment of railroad does not appear to be significant for its association with Virgil Earp.

Under Criterion C, although it has necessarily been modernized over time, this short segment embodies the typical characteristics of railroad construction and is representative of thousands of miles of other track in the region. Neither the tracks nor the few related features appear to be the work of a master and neither possesses high artistic value. As discussed above, the crossing itself is not particularly unique as there are numerous at-grade rail-to-rail crossings in California and throughout the country. Therefore, neither this segment nor the crossing appears to be significant under this criterion.

Under National Register criterion D and California Register criterion 4, which is usually associated with archaeological resources, this segment of the railroad has not yielded, nor is it likely to yield, information important in history or prehistory. In rare instances, structures can serve as sources of important information about historic construction materials or technologies under criteria D/4. However, this type of property is otherwise well-documented; it is well represented locally and on a statewide level, both in written and visual materials and there are better examples of railroads elsewhere in the area/region/state. It does not appear to be an important source of primary information.

For these reasons, this segment of the railroad does not appear to meet the criteria for listing in the National Register or the California Register. It would also not be a contributing segment to the historical significance of the overall railroad, should the railroad as a whole be determined significant. Although the railroad segment was not evaluated under the local preservation ordinance, research indicates that it is not currently listed in the City's register of historic resources or districts.

It should be noted that the larger area within which the segment and crossing are located was considered for potential as a historic district since it is the location of the original the Southern Pacific rail yard in Colton. However, most of the rail yard buildings have been demolished and tracks have been removed/realigned. Therefore, the area appears to lack the integrity necessary to qualify as a historic district.

1067451 update

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial CA-SBR-6847H (Update)
NRHP Status Code 6
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 3 Resource Name or #: Burlington Northern Santa Fe Railroad segment

P1. Other Identifier: APE Map Reference #7

*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County: San Bernardino and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: San Bernardino South Date: 1967 PR 1980 T 2S ; R 4W; Sec 6 ; S.B.B.M.

c. Address: _____ City: Grand Terrace and Colton Zip: _____

d. UTM: Zone: 11; _____mE/ _____mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate): An approximately 1.1 mile long segment of the railroad extending from a point approximately 200 feet south of Main Street to a point approximately 500 feet north of Barton Road and crossing above Interstate 215 (I-215).

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

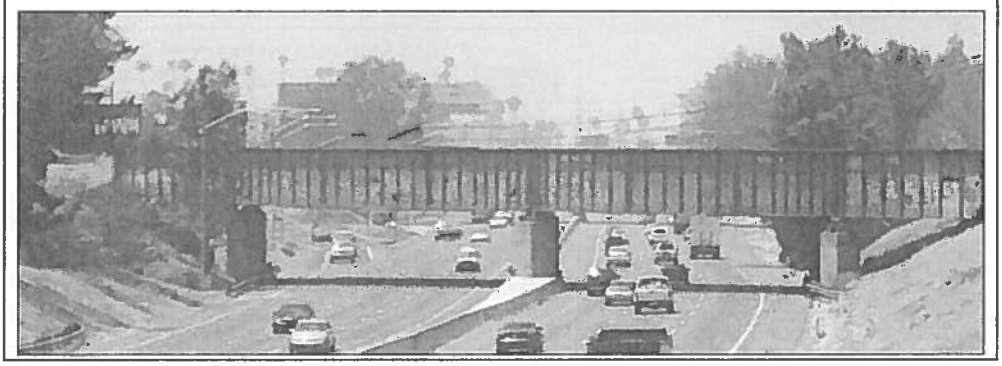
This segment of the railroad consists of two sets of railroad ties that support pairs of rails. A layer of volcanic rocks lines the rail bed. In some areas there are spurs that provide rail access to adjacent properties. At the south end of the segment there are three tracks, but the westernmost track joins with the other tracks a short distance north of Main Street. A metal-sided bridge (54 0518 Highgrove Underpass, see Map Reference #8) supported by three sets of concrete piers and dirt embankments, carries the tracks over I-215. The adjacent properties are primarily developed with historic-period single-family homes and modern commercial and industrial buildings.

The tracks appear to retain integrity of location, design, and association, but integrity of setting, materials, workmanship, and feeling have been compromised by routine maintenance and improvements, construction of the bridge over the freeway, the addition of tracks and spurs, and the construction of modern buildings and I-215.

*P3b. Resource Attributes: (List attributes and codes) HP39-Other (railroad); HP19-Bridge

*P4. Resources Present: ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Top: BNSF tracks facing north from Main Street; Bottom: BNSF bridge over I-215. Photos taken on May 28, 2009.

*P6. Date Constructed/Age and Sources: ☒Historic ☐Prehistoric ☐Both
Original track: 1882-1883
Bridge: 1959 (Caltrans)

*P7. Owner and Address:
Unknown

*P8. Recorded by: (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

*P9. Date Recorded:
May 2009 – April 2010

*P10. Survey Type: (Describe)
Intensive-level Section 106

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Historical Resource Evaluation Report, Interstate 215 HOV Lane Gap Closure Project, Caltrans, February 2010.

*Attachments: ☐NONE ☐Location Map ☐Sketch Map ☐Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # CA-SBR-6847H (Update)
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6

*Resource Name or # (Assigned by recorder) Burlington Northern Santa Fe Railroad segment

B1. Historic Name: California Southern Railroad; Atchison Topeka & Santa Fe Railway (ATSF)
B2. Common Name: BNSF
B3. Original Use: Railroad **B4. Present Use:** Railroad
***B5. Architectural Style:** NA
***B6. Construction History:** (Construction date, alterations, and date of alterations)
1882-1883 – first track; Pre-WWI – second track; 1959 – bridge constructed over I-215
***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** _____ **Original Location:** _____
***B8. Related Features:**
Bridge #54 0518, Highgrove Underpass (1959, See Map Reference #8)
B9a. Architect: Unknown **b. Builder:** Unknown
***B10. Significance: Theme:** Transportation **Area:** Cities of Colton and Grand Terrace
Period of Significance: 1882-1959 **Property Type:** Railroad **Applicable Criteria:** NA

This approximately 1.1 mile long railroad segment does not appear to meet any of the criteria for listing in the National Register of Historic Places (National Register). This segment of the railroad was constructed in 1882 and before World War I another track was added (The Cajon Pass Group n.d.). From 1892 to 1956, this segment was part of the 166 mile Kite-Shaped Track or Kite Route, which was a popular tourist excursion route connecting many Southern California cities from Los Angeles and Pasadena on the west to Mentone and Redlands on the east. The Kite Route was not purpose-built as a scenic railroad, rather it was series of existing rail segments laid by Santa Fe and its predecessors that were later used for passenger service where tourists could view the agricultural fields and mountain scenery of the region. Since then, many of the adjacent properties have been developed with modern commercial and industrial buildings. The bridge over I-215 was constructed in 1959 (Caltrans 2009). Although other segments of this railroad have been documented, none appear to have been evaluated under the National Register criteria.

Under Criterion A, the Santa Fe railroad as a whole played an important role in the development and success of the cities of Colton and Riverside and the surrounding areas and it appears to retain integrity of location. The Kite Route excursion did not stop within the APE, because there was no station between Colton and Riverside, lessening the strength of association with the surrounding area. This segment's integrity of setting has been compromised by construction of modern buildings and structures and this has lessened its ability to convey its appearance during its period of significance. Under Criterion B, the railroad as a whole may be associated with persons important in history, but this segment in particular does not appear to have any specific association with anyone significant in local, state, or national history. Under Criterion C, this segment is a representative but not distinctive example of the thousands of miles of railroad tracks in the region, including other segments of the Kite Route, which was a common type of railroad design during the time. The segment within the APE lacks integrity of materials because BNSF would have replaced the original tracks and ties as part of routine maintenance. Due to the loss of historic setting and materials, and its representative but not distinctive or original tracks, this Kite Route segment is not of significant design eligible under Criterion C. In addition, the related concrete girder bridge is a standard type that does not appear to be particularly distinctive or unique. The tracks, route, and bridge are not the work of a master nor do they possesses high artistic value. Under Criterion D, which is usually associated with archaeological resources, this segment of the railroad does not appear likely to yield information important in prehistory or history.

For these reasons, this segment of the railroad does not appear to meet the criteria for listing in the National Register and is not a historical resource for the purposes of the California Environmental Quality Act (CEQA). It would also not be a contributing segment to the historical significance of the overall railroad, should the railroad as a whole be determined significant. The bridge (54 0518 Highgrove Underpass, see Map Reference #8) does not appear eligible because it is associated with the construction of the highway and is part of a segment of the line that is not eligible for listing at the national, state, or local levels.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

Caltrans
2009 Structure, Maintenance and Investigations – State Agency Bridges (June 2009). Accessed online in July 2009 at http://www.dot.ca.gov/hq/structur/strmaint/hs_state.pdf.

Gustafson, Lee, and Phil Serpico
1992 *Santa Fe Coast Lines Depots: Los Angeles Division.* Omni Publications, Palmdale, California.

The Cajon Pass Group
n.d. A Brief History. Accessed online on February 20, 2006, at: http://www.trainweb.org/cajongroup/.

Donvan, Frank P., Jr., and Philip Horton
1943 "The Old Kite Route." In *Westways*, Sept. 1943, pp. 16-17.

B13. Remarks:

***B14. Evaluator:** Casey Tibbet, M.A., LSA Associates, Inc., 1500 Iowa Avenue, Suite 200, Riverside, CA 92507

***Date of Evaluation:** July 2009 – April 2010

(Sketch Map with north arrow required.)

(This space reserved for official comments.)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LINEAR FEATURE RECORD

Primary # _____
HRI # _____
Trinomial CA-SBR-6847H (Update)
NRHP Status Code 6
Other Listings _____
Review Code _____ Reviewer _____ Date _____

 Resource Name or #: Burlington Northern Santa Fe Railroad segment

L1. Historic and/or Common Name: California Southern Railroad; Atchison Topeka & Santa Fe (ATSF)

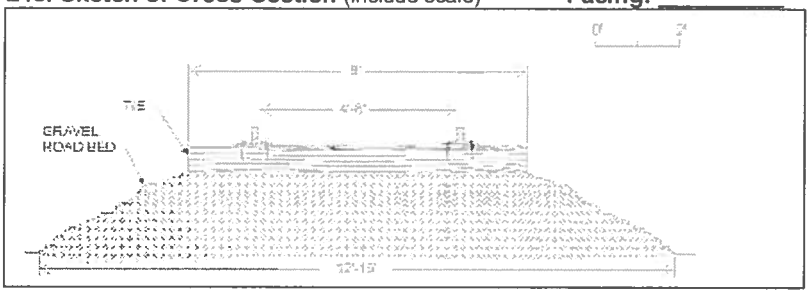
L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation **Designation:** _____

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) This segment is approximately 1.1 mile long and approximately 120 feet wide (right-of-way) and extends from a point approximately 200 feet south of Main Street to a point approximately 500 feet north of Barton Road and crossing above Interstate 215 (I-215).

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.) The segment consists of two sets of railroad ties that support pairs of rails. A layer of volcanic rocks lines the rail bed. In some areas there are spurs that provide rail access to adjacent properties. At the south end of the segment there are three tracks, but the westernmost track joins with the other tracks a short distance north of Main Street. A metal-sided bridge (54 0518 Highgrove Underpass) supported by three sets of concrete piers and dirt embankments, carries the tracks over I-215. The tracks are in good condition and are in use.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
a. Top Width 4'8.5"
b. Bottom Width 12'-15'
c. Height or Depth Approx. 2'
d. Length of Segment Approx. 1.1 mile

L4e. Sketch of Cross-Section (include scale) **Facing:** _____



L5. Associated Resources: Bridge (54 0518)

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.)
The adjacent properties are primarily developed with historic-period single-family homes, modern commercial and industrial buildings, a historic-period power plant, and I-215.

L7. Integrity Considerations: Although this segment retains integrity of location and design, its integrity of setting and feeling have been significantly compromised by adjacent modern development.

L8a. Photograph, Map, or Drawing

See Primary Record and Building, Structure, Object Record

L8b. Description of Photo, Map, or Drawing: (View, scale, etc.)

L9. Remarks:
The BNSF Railroad (CA-SBR-6847H) segment was previously recorded in 1999 but was not evaluated.

L10. Form Prepared by: (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

L11. Date:
July 2009 – April 2010

1066291 10/09

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-36-006847 (update)
HRI #
Trinomial CA-SBR-6847H
NRHP Status Code 6Z

Other Listings Review Code	Reviewer	Date

 ***Resource Name or #:** Old Kite Route

P1. Other Identifier:

***P2. Location:** ■ **Not for Publication** ☐ **Unrestricted** ***a. County:** San Bernardino

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** San Bernardino South **Date:** 1967 (PR 1988) **T** 1S; **R** 4W; unsectioned **¼ of ¼ of Sec** ; S.B **B.M.**

c. Address: City: San Bernardino Zip:

d. UTM: Zone: 11 ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 1,024-1,030 ft. amsl

This segment is located in the City of San Bernardino, just south of Rialto Street at where the railroad tracks cross N. E Street.

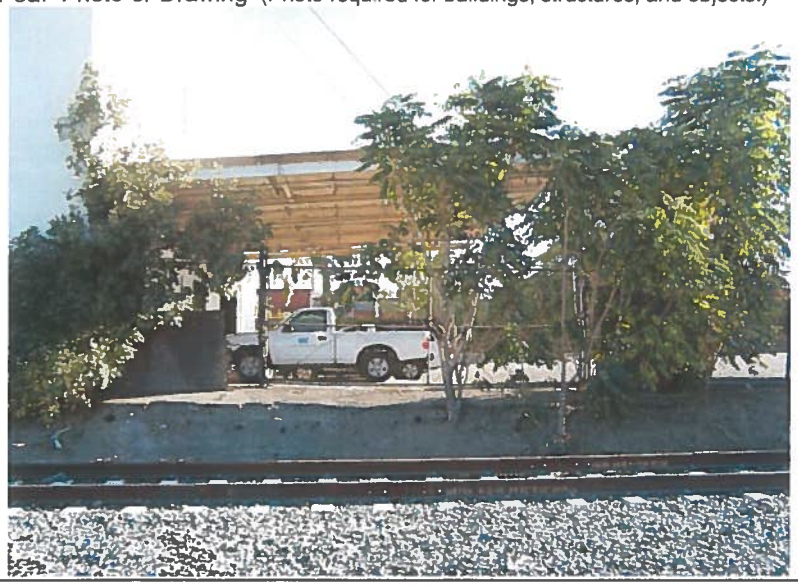
***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The "Old Kite Route" is a portion of the Burlington Northern Santa Fé Railway (formerly the Atchison, Topeka, & Santa Fé Railway [AT&SF]; see P-36-~~006793~~) that runs from Los Angeles along the foothills to Redlands, and loops back into Los Angeles via the Santa Ana Canyon and the Fullerton Valley. The route was completed in 1892, primarily intended to transport citrus fruits to and from packaging houses in the area, but soon became a popular weekend excursion for tourists (Caughey 1977). In 1892, AT&SF advertised the route to tourists calling it the"Kite Route Trip." The scenic train ride was just over 166 miles long and offered tourists a glimpse of classic Southern California images that were commonly featured on post cards. The route included miles of orange groves and never repeated a single mile or view along the way, a unique feature for a scenic train ride at the time (Duke 1995). "No scene twice seen on the kite-shaped track" became a popular slogan for the route (Caughey 1977). By the end of World War II, rail traffic became less popular; trucks became the primary method of transport for citrus packaging houses. Passenger train use also dwindled and eventually disappeared from the "loop." In 1956, the portion between Highland Junction and Del Rosa was closed. In 1967, more tracks were closed toward Patton, and by 1980, the Redlands Loop was closed to Mentone. As of 1995, the Redlands area had one branch line train that serviced various industries along the line (Duke 1995). The railroad grade is ballast and wood ties have been replaced with concrete (dates unknown).

A nearby segment of the track just west of the project APE was found not eligible for listing in the National Register in 1995, because so much of the original "loop" from which its significance under Criterion A/1 would have been based, had been removed and/or abandoned (Lerch 1995). Because of alterations to the railroad tracks, the transformation of setting over the past 100 years, and the fact that the once continuous loop is now disconnected, this segment of track does not retain requisite integrity to qualify for listing in the National or California registers.

***P3b. Resource Attributes:** (List attributes and codes) AH7- Railroad Grade

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



***P4. Resources Present:** ☐ Building ☐ Structure ☐Object ■ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #)
View to the southeast, Photo 1624

***P6. Date Constructed/Age and Sources:**
■Historic ☐Prehistoric ☐Both
circa 1892

***P7. Owner and Address:**
BNSF Railway Corporate Headquarters
2650 Lou Menk Drive
Fort Worth, TX 76131-2830

***P8. Recorded by:** (Name, affiliation, and address)
Caprice D. (Kip) Harper
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

***P9. Date Recorded:** October 7, 2008

***P10. Survey Type:** (Describe) Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Cultural Resources Technical Report *sbX* E Street Corridor BRT Project, Cities of San Bernardino and Loma Linda, San Bernardino County, California (SWCA Environmental Consultants 2008; Caughey, 1977. *Los Angeles: Biography of a City*, p. 221; Duke, 1995. *Santa Fe…The Railroad Gateway to the American West*, p. 24.; Lerch, 1995. Historic Property Survey Report: Orange Show Road Extension, City of San Bernardino, CA.; Primary Record for P-36-006847 (Horne and Inoway 1998; Robinson 2000); Archaeological Site Record for P-36-006847 (Romani et al. 1990)

***Attachments:** ☐NONE ■Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

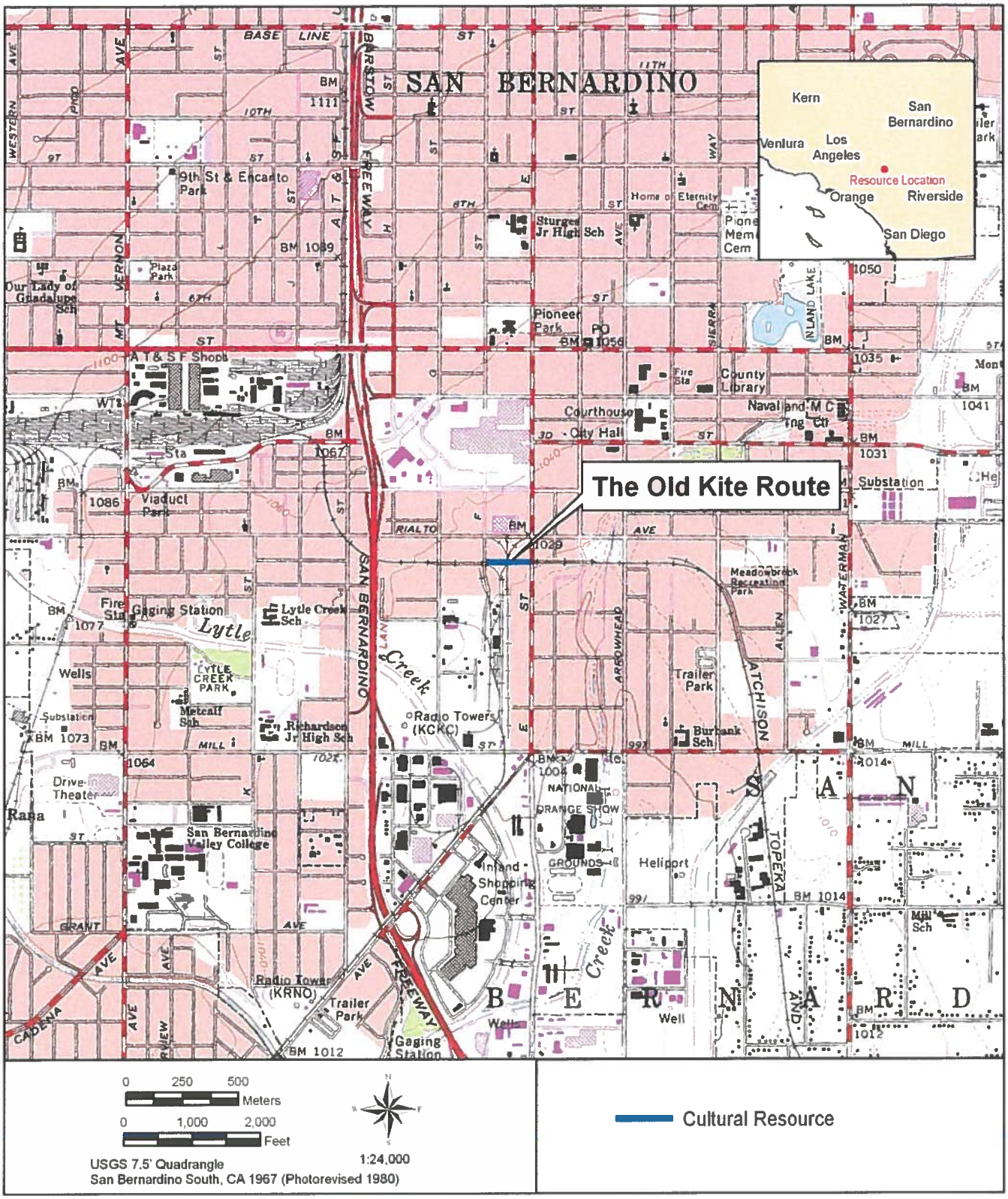
LOCATION MAP

Primary # P-36-006847 (update)
HRI#
Trinomial CA-SBR-6847H (update)

***Resource Name or #:** Old Kite Route

***Map Name:** San Bernardino South, CA

***Scale:** 1:24,000 ***Date of Map:** 1967 (Photorevised 1980)



*Required information

10/09

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # P-36-006793 (update)
HRI # 6847 6847
Trinomial CA-SBR-~~6793H~~ (update)
NRHP Status Code 6Z

Other Listings
Review Code Reviewer Date

*Resource Name or #: Burlington Northern Santa Fé Railway

P1. Other Identifier: Atchison, Topeka & Santa Fé Railway

*P2. Location: ■ Not for Publication ☐ Unrestricted *a. County: San Bernardino

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad: San Bernardino South Date: 1967 (PR 1988) T 1S ; R 4W; unsectioned ¼ of ¼ of Sec ; S.B B.M.

c. Address: City: San Bernardino Zip:

d. UTM: Zone: 11 ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 1,024-1,030 ft. amsl

This segment is located in the City of San Bernardino, just south of Rialto Street at where the railroad tracks cross N. E Street.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

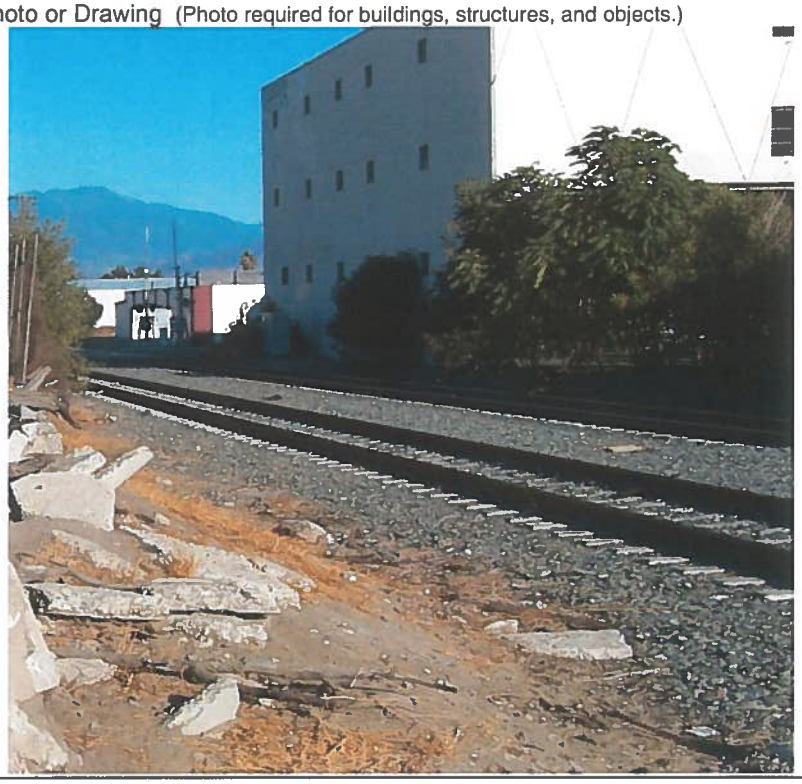
This segment of the Burlington Northern Santa Fé Railway (formerly the Atchison, Topeka, & Santa Fé Railway) is located in the City of San Bernardino, just south of the intersection of North E and Rialto streets, in a highly urbanized area. This segment was also associated with the Old Kite Route (see P-36-006847). The railroad tracks have been subject to ongoing routine maintenance, which includes periodic replacement of tracks and associated materials as necessary. Ties are concrete, which replaced wooden features (date unknown). The track is set in ballast, or crushed rock bed, likely a late twentieth century alteration.

Because of alterations to the railroad tracks and transformation of the setting over the past 100 years since the inception of the railroad, this segment does not retain requisite integrity to qualify for listing in the National or California registers.

*P3b. Resource Attributes: (List attributes and codes) AH7- Railroad Grade

*P4. Resources Present: ☐Building ■ Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #)
View to the southeast, Photo 1623 (cropped)

*P6. Date Constructed/Age and Sources:
■Historic ☐Prehistoric ☐Both
circa 1892

*P7. Owner and Address:
BNSF Railway Corporate Headquarters
2650 Lou Menk Drive
Fort Worth, TX 76131-2830

*P8. Recorded by: (Name, affiliation, and address)
Caprice D. (Kip) Harper
SWCA Environmental Consultants
625 Fair Oaks Avenue, Suite 190
South Pasadena, CA 91030

*P9. Date Recorded:
October 7, 2008

*P10. Survey Type: (Describe)
Intensive

*P11. Report Citation: (Cite survey report and other sources, or enter "none.")
Cultural Resources Technical Report *sbX* E Street Corridor BRT Project, Cities of San Bernardino and Loma Linda, San Bernardino County, California (SWCA Environmental Consultants 2008).
Archaeological Determination of Eligibility (OHP 2000), on file at the San Bernardino Archaeological Information Center (SBAIC), Redlands, CA.
Archaeological Site Record for P-36-006793 (McKenna 1992), on file at the SBAIC.
Archaeological Site Record for P-36-006793 (Lerch 1990), on file at the SBAIC.

*Attachments: ☐NONE ■Location Map ☐Sketch Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

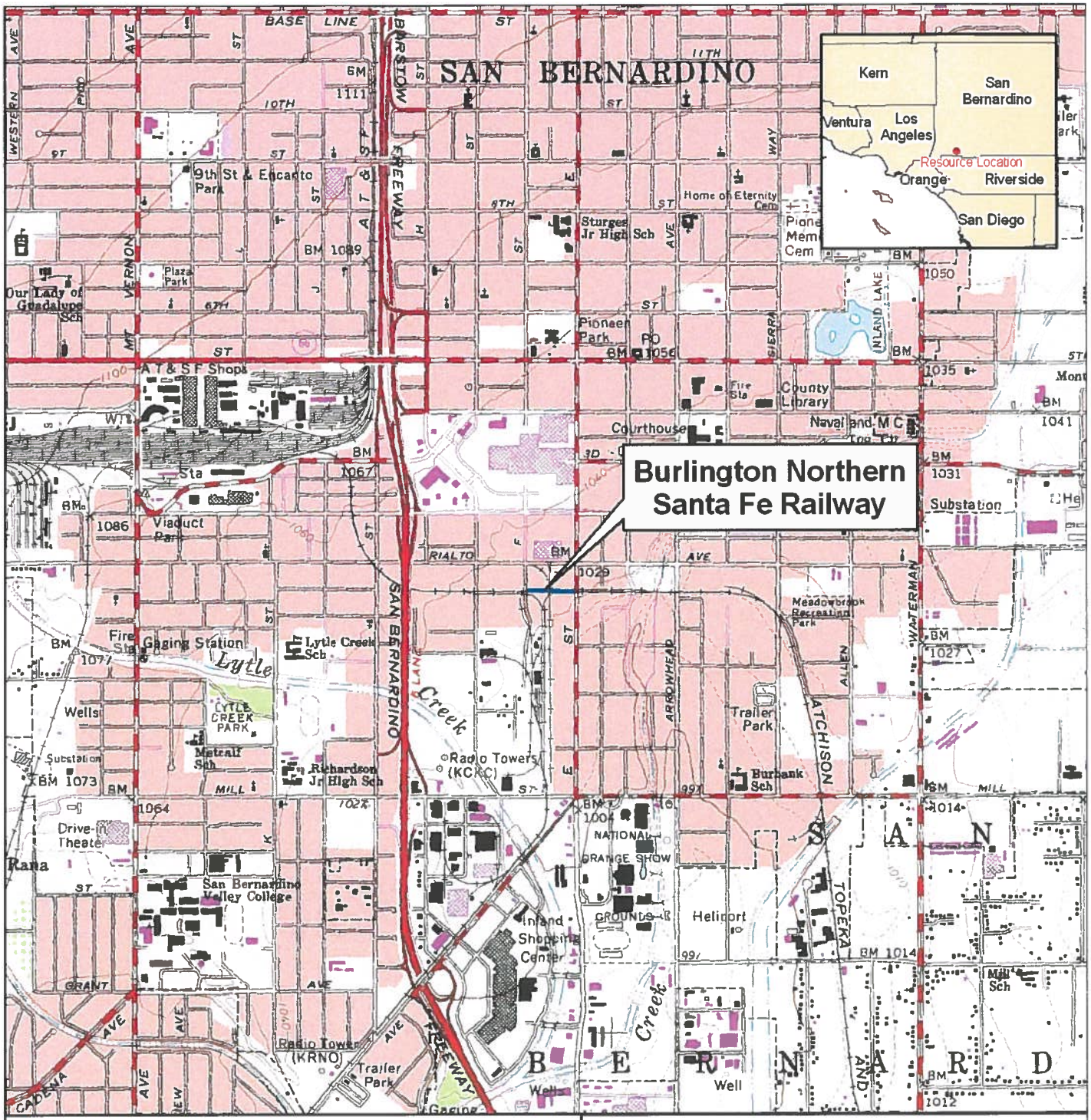
LOCATION MAP

Primary # P-36-~~006793~~ (update)
HRI# 5BR-6847H
Trinomial CA-SBR-~~6793H~~ (update)

*Resource Name or #: Burlington Northern Santa Fe Railway

*Map Name: San Bernardino South, CA

*Scale: 1:24,000 *Date of Map: 1967 (Photorevised 1980)



DPR 523J (1/95)

*Required information

8/00 update

Applied EarthWorks, Inc.

PRIMARY RECORD

Primary # P36-006847
HRI #
Trinomial CA-SBR-6847H—Supplement
NRHP Status Code

 Other Listings
Review Code **Reviewer** **Date**

P1. Temporary Number/Resource Name: Old Kite Route/Atchison, Topeka & Santa Fe Railway

P2. Location: **a. County** San Bernardino, CA. ☒ Not for publication ☐ Unrestricted
b. USGS 7.5' Quad Harrison Mountain CA. **Date** 1967 (Photorevised 1988)
T. 1 N, **R.** 3 E; SW 1/4 **of** SW 1/4 **of** **Sec.** 29 S.B.B.M.
c. Address: **City** **Zip**
d. Zone 11 , 479220 **mE/** 3770210 **mN.**
479550 3770020

e. Other Locational Data (e.g., parcel #, legal description, directions to resource, additional UTMs, etc., when appropriate): This area is a short segment of the Old Kite Railroad, located south of Patton State Hospital in the City of Highland. The now-abandoned railroad right-of-way is located to the north of Highland Avenue, east of the intersection of Highland Avenue and Victoria Avenue. This supplemental record reports one small segment of the Old Kite Railroad, which has been previously recorded at various points in San Bernardino County.

P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): The Old Kite Route was originally built in segments between 1880 and 1892. The exact date of construction of this particular segment of the route is unknown; however it appears on maps as early as 1898. Because of its association with Patton State Hospital, this segment of the Old Kite Route is listed on the *National Register of Historic Places* as part of the Patton State Hospital complex. The Patton Depot is adjacent to the southeast portion of the site.

Maps depict two railroad tracks within this segment of the Kite Route, with one track diverging into Patton State Hospital. The railroad tracks have been removed, and at present this segment of the site consists of a 200-ft wide cleared right-of-way, and two connected linear asphalt pavement strips extending west from the Patton Depot location. Artifacts noted adjacent to the railroad tracks include a single railroad spike and fragments of whiteware and clear glass.

P3b. Resource Attributes (List attributes and codes): HP 11—Engineering structure: Railroad line.

P4. Resources Present: ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of district

P5. Photograph or Drawing: (Photograph required for buildings, structures, and objects.) See Continuation Sheet next page.

P6. Date Constructed/Age and Source: ☐ Prehistoric ☒ Historic ☐ Both

P7. Owner and Address: San Manuel Band of Mission Indians

P8. Recorded by (Name, affiliation, address): M. Robinson, Applied EarthWorks, Inc. 3292 E. Florida Ave., Suite A, Hemet, CA 92544.

P9. Date Recorded: 27 January 2000

P10. Type of Survey: ☒ Intensive ☐ Reconnaissance ☐ Other

P11. Report Citation (Provide full citation or enter "none"): *Cultural Resources Survey for the San Manuel Casino Additional Parking Lot, San Bernardino County, California* by M. Robinson, February 2000.

Temporary Number/Resource Name: Old Kite Route/ Atchison, Topeka & Santa Fe Railway

P5. Photograph or Drawing: (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #)

View of asphalt strips remaining on the Kite Route right-of-way adjacent to the Patton Depot, looking southeast towards Highland Avenue. Patton Depot in background to right. Palm trees and vegetation in background to the left mark abandoned entrance road to Patton State Hospital (CA-SBR-6847H: Roll 1; Frame 10 [1/27/00]).

Attachments: ☐ None ☐ Archaeological Record ☒ Continuation Sheet ☐ Artifact Record ☐ Building, Structure, Object Record ☐ District Record ☒ Linear Resource Record ☐ Rock Art Record ☐ Milling Station Record ☒ Photograph Record ☒ Sketch Map ☒ Location Map Sheet

L1. Historic and/or Common Name: Old Kite Route/Atchison, Topeka & Santa Fe Railway

L2a. Portion Described: □ Entire Resource ☒ Segment □ Point Observation Designation:

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) The abandoned railway right-of-way crosses Highland Avenue in Highland, and proceeds northwest before crossing Victoria Avenue. This supplemental record reports on a total length of 1100 feet of the Old Kite Route. UTM information for the east and west ends of the right-of-way are presented on the Supplemental Primary Record.

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.) The railroad tracks have been removed in this segment of the right-of-way, and the ground surface plowed. However, two asphalt strips and a paved driveway leading into Patton State hospital remain. These asphalt strips and driveway were probably used for passenger and baggage loading and unloading. The driveway into the hospital is lined with palm trees and other landscaping vegetation, which has fallen into neglect. This driveway is depicted on maps as early as 1898. (See Continuation Sheet next page for additional information.)

L4. Dimensions: (In feet for historic features and meters for prehistoric features)

a. Top Width Approx. 45-67 ft — 15-22 m
b. Bottom width Same
c. Height or Depth Approx. 6 in.
d. Length of Segment 695 ft – 232m

L5. Associated Resources:
The Patton Depot is located about 75 feet to the southeast of these asphalt features.

L4e. Sketch of Cross-Section

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See Continuation Sheet

L7. Integrity Considerations: See Continuation Sheet

L8b. Description of Photo, Map or Drawing (View, scale, etc.) See Continuation Sheet

L9. Remarks: See Continuation Sheet

L10. Form Prepared by: (Name, affiliation, and address.)
M. C. Robinson, Applied EarthWorks, Inc., 3292 E. Florida Ave., Suite A, Hemet, CA 92544.

L11. Date: 01/27/2000

Temporary Number/Resource Name: Old Kite Route/ Atchison, Topeka & Santa Fe Railway

L3 Description (continued): The two asphalt strips (see dimensions below) are parallel to the railroad line location as depicted on various historical maps. The southernmost of the two asphalt strips extends for 415 ft west of the west edge of the paved depot surround, and terminates in a triangular-shaped end. This strip is 33 ft wide, and is separated by a gap of four feet from the northernmost strip. This northernmost strip extends for 695 ft west of the edge of the depot pavement, and varies in width from 8 to 30 ft. This feature terminates with an ovoid area of asphalt about 95 ft in diameter.

Historical maps indicate that two railroad tracks were present within this segment of the Old Kite Route. A second track, runs parallel to the main line on the north side. This track is depicted on the County Parcel map as beginning in the middle of Highland Avenue, and rejoining the main line near the area of the asphalt oval. A siding diverges from this track, and swings north, forming a loop siding into Patton State Hospital. Due to the difference in scale of the available historical and modern maps, the exact location of these tracks is not clear. But careful measuring suggest that the mainline track was situated at the southern edge of the two asphalt strips, while the second track was in the space between the two asphalt strips. The location of these tracks in relation to the asphalt oval is unclear; it seems likely that at least one track had to cross the oval, although no signs of this are present on the asphalt surface.

L6. Setting: This segment of the Old Kite Route is situated within an urbanized area of Highland. Immediately south of the right-of-way is the San Manuel Indian Casino parking lot. Adjacent to this segment to the north is Patton State Hospital. The right-of-way has been recently plowed; vegetation consists of palm trees and other landscaping which have fallen into a state of neglect, and weeds. Elevation ranges from 1292 to 1283 ft amsl. Slope is to the southeast.

L7. Integrity: This segment of right-of-way retains integrity of setting. However, neglect and removal of the railroad tracks themselves has impaired the integrity of this segment of the Old Kite Route.

L8b. Photo.

L9. Remarks: Patton Depot, which is adjacent to this segment of the Old Kite Route, is still present and in use for various nonrailroad-related business purposes.

Applied EarthWorks, Inc.

PHOTOGRAPH RECORD

Primary # P36-006847
HRI #
Trinomial CA-SBR-6847H—Supplement

Temporary Number/Resource Name: N/A
Project Name: San Manuel Highland Survey **Roll #** 1 **Photographer:** M. Robinson
Camera Format: 35 mm **Lens Size:** 3,5
Film Type and Speed: Kodak Gold 200 color print **Year:** 2000
Negatives Kept at: 3292 E. Florida Ave., Suite A, Hemet, CA 92544

Mo.	Day	Time	Exp./ Frame	Subject/Description	View Toward	Accession #
1	27	1330	2	Complete survey area overview.	W	
1	27	1330	4	Paved drive, now closed, into Patton State Hospital.	N	
1	27	1330	6	View from Highland Ave. up drive into Patton State Hospital.	N	
1	27	1400	10	Center of parcel; asphalt strips with railroad track space between.	E	
1	27	1400	17	Asphalt pad, scatter and rocks adjacent to Æ-HGL-2H, in background.	W	

Applied EarthWorks, Inc.

SITE MAP SHEET

Page 6 of 7

Temporary Number/Resource Name: CA-SBR-6847H

Map Name: CA-SBR-6847H Site Map **Scale:** 1" : 120 ft.

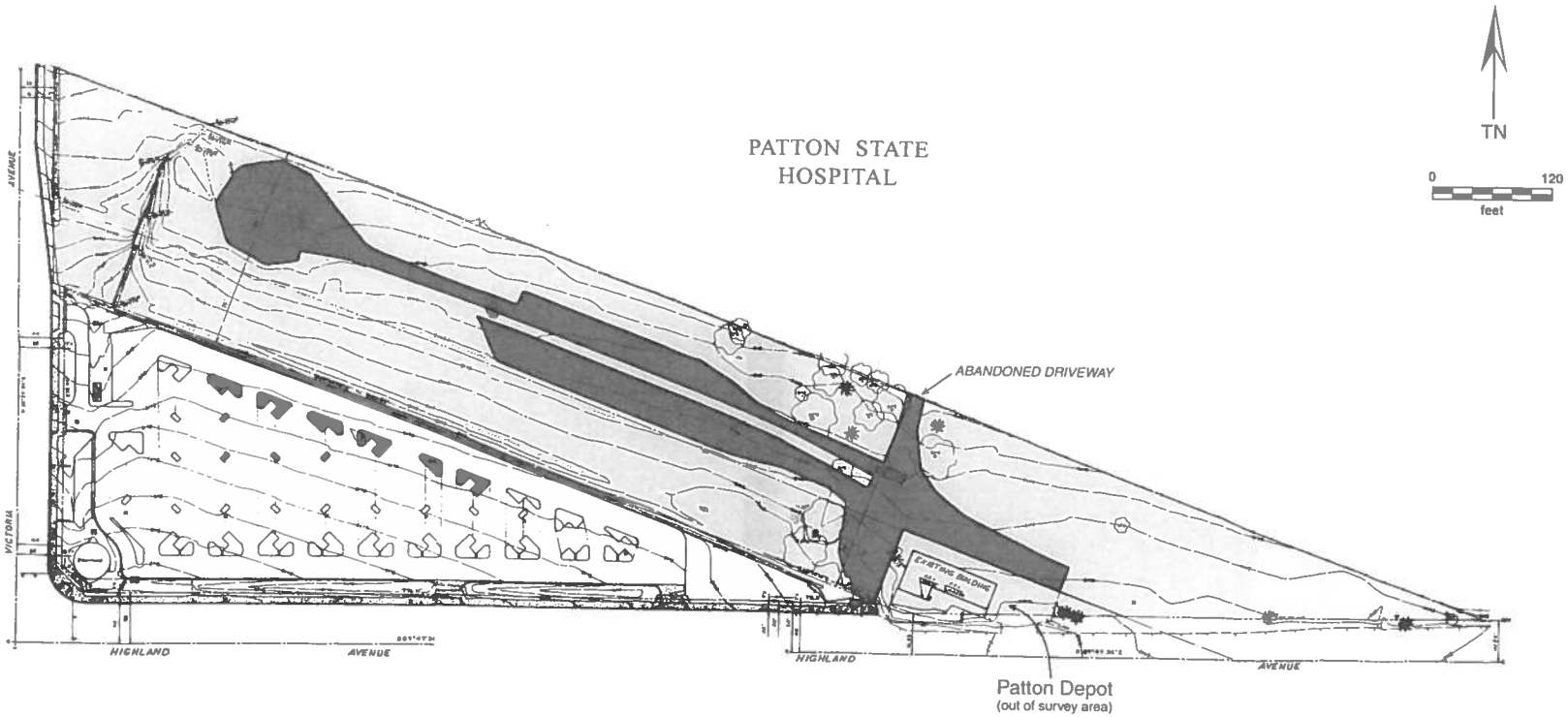
Primary #

Trinomial CA-SBR-6847H Supplement

Date: February 2000

R36.006847

SBR-6847H



LEGEND

Asphalt Strips

Kite Route R-O-W

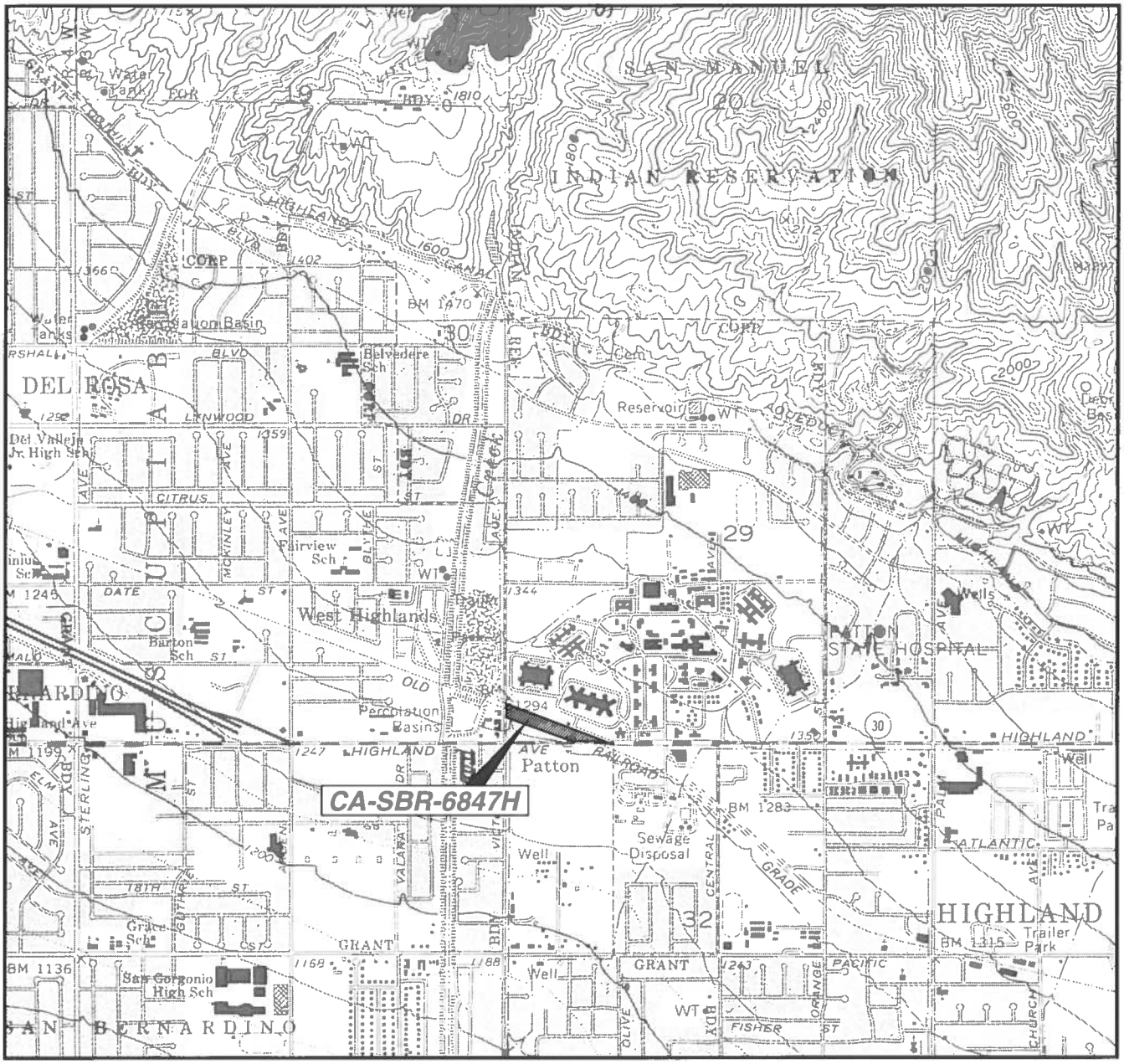
Applied EarthWorks, Inc.

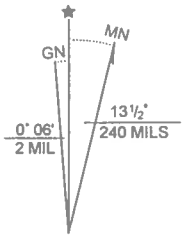
LOCATION MAP SHEET

Primary # P36-006847

Trinomial: CA-SBR-6847H
Supplement

Page 7 **of** 7
Temporary Number/Resource Name: CA-SBR-6847H
Map Name: CA-SBR-6847H Location Map **Scale:** 1:24,000 **Date:** February 2000





UTM GRID AND 1988 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

1 0 ½ 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

Harrison Mtn., CA 7.5' USGS Quad 1967 (1988)

update P36-006847

Applied EarthWorks, Inc.

PRIMARY RECORD

Primary # P36-006847
HRI #
Trinomial CA-SBR-6847H
SUPPLEMENT
NRHP Status Code

Other Listings | Review Code | Reviewer | Date

P1. Temporary Number/Resource Name: R-FEH/L #1

P2. Location: a. County San Bernardino, CA. ☒ Not for publication ☐ Unrestricted

b. USGS 7.5' Quad Redlands, CA. Date 1967, revised 1988

T. 1S, R. 2W;	NW 1/4 of W 1/2	SW 1/4 of NW 1/4	NW 1/4 of NW 1/4	Sec. 18;	S.B.B.M.
T. 1S, R. 3W	SE 1/4	SE 1/4	SE 1/4	18 12	

c. Address: City Zip

d. Zone 11, 487440 mE/ 3771720 mN.
484240 3772200

e. Other Locational Data (e.g., parcel #, legal description, directions to resource, additional UTMs, etc., when appropriate): CA-SBR-6847H, as defined in the Inland Feeder Project (IFP), Santa Ana River Crossing (SARC) Area of Direct Impact (ADI)/Area of Potential Effect (APE) between Stations 932+00 and 944, is located in the southern portion of the Santa Ana River Wash. The southern portion of the site recorded in the IFP SARC ADI/APE crosses the main drainage of the Santa Ana River between Stations 938+00 and 939+00. This portion of the site may be accessed from Cone Camp Road, north of the Santa Ana River.

From Highway 30 (N), take 5th Street exit and turn right; 5th Street then becomes Greenspot Road. Turn right on Cone Camp Road (dirt) and proceed to Water District Gate (locked). Proceed through gate to first culvert over flowing unnamed tributary to the Santa Ana River. Park. Walk along the east side of tributary in a generally southern direction until you reach the main drainage of the Santa Ana River. Proceed west until you see the wooden vertical railroad supports on the southern river crossing and the cement footing (dated 1938) on the northern crossing. The vertical supports and dated cement footing are part of CA-SBR-6847H.

P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): CA-SBR-6847H, originally recorded by Greenwood and Associates in 1990 at the City Creek Crossing further to the west and north as part of the Metropolitan Water District Inland Feeder Project, is described as a portion of the Old Kite Route, a popular late 19th and early 20th century railroad excursion route.

Within the IFP SARC ADI/APE, CA-SBR-6847H consists of the remains of several smaller bridge footings adjacent to small tributaries north of the Santa Ana River, and a lager more robust cement and milled lumber bridge footing and vertical milled lumber pilings that supported the main bridge over the Santa Ana River. The railroad rails have been removed; all that remains is the raised earthen railroad bed, a few railroad spikes, milled lumber footings and supports, and rusted metal nuts, bolts, and washers. The main cement footing at the northern crossing of the Santa Ana River has a date of 1938 printed into the cement. As depicted on the Redlands USGS topographic map, the site continues to the north and south outside the SARC ADI/APE. (See attached background research for CA-SBR-6847H conducted by Greenwood and Associates in 1997.)

P3b. Resource Attributes (List attributes and codes): AH7. Railroad Grade; HP18-19. Historic Train Bridge

P4. Resources Present: ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District ☐ Element of district

P5. Photograph or Drawing: (Photograph required for buildings, structures, and objects.) See Page 2 of 8.

P6. Date Constructed/Age and Source: ☐ Prehistoric ☒ Historic ☐ Both

P7. Owner and Address: San Bernardino County Flood Control District

2/19/98
LaRue

P36-006847

Applied EarthWorks, Inc.
PRIMARY RECORD

Primary #
HRI #
Trinomial CA-SBR-6847H
SUPPLEMENT
Date: 3/17/98

P8. Recorded by (Name, affiliation, address): M. Horne and C. Inoway, Applied EarthWorks, Inc. 3292 E. Florida Ave., Suite A, Hemet, CA 92544.

P9. Date Recorded: February 19, 1998.

P10. Type of Survey: ☒ Intensive ☐ Reconnaissance ☐ Other
Describe:

P11. Report Citation (Provide full citation or enter "none"): Background research is provided in:

Tang, B. Tom
1997 *Cultural Setting, CA-SBR-6847H.* Unpublished manuscript on file at Greenwood and Associates, Inc., Pacific Palisades, CA.

P36-00684

Applied EarthWorks, Inc.

ARCHAEOLOGICAL SITE RECORD

Primary #

Trinomial CA-SBR-6847H

Temporary Number/Resource Name: R-FEH/L#1

A1. Dimensions: a. Length Unknown (NW/SE) **x b. Width** 20 feet (NE/SW)

Method of Measurement: □ Paced ⊠ Taped □ Visual estimate □ Other:

Method of Determination (Check any that apply): □ Artifacts ⊠ Features □ Soil □ Vegetation □ Topography □ Cut bank □ Animal burrow □ Excavation □ Property boundary □ Other (explain):

Reliability of Determination: □ High ⊠ Medium □ Low Explain:
North of IFP Station 932, the railroad bed veers to the northwest outside of the ADI; south of Station 941, the railroad bed continues south for an unknown distance.

Limitations (Check any that apply): ⊠ Restricted access ⊠ Paved/built over □ Disturbances □ Site limits incompletely defined □ Other (Explain): Access is restricted to the ADI; site limits to the northwest/southeast are unknown. Additionally, south of the Santa Ana River, the railroad bed has been graded and is now used as a dirt access road.

A2. Depth: Unknown □ None □ Unknown Method of Determination:

A3. Human Remains: □ Present ⊠ Absent □ Possible □ Unknown (Explain):

A4. Features (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map): See Linear Feature Record, attached.

A5. Cultural Constituents (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features): See Linear Feature Record attached, Item L3.

A6. Were Specimens Collected? ⊠ No □ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

A7. Site Condition: □ Good □ Fair ⊠ Poor (Describe disturbances): See Linear Feature Record attached, Item L7.

A8. Nearest Water (Type, distance, and direction): The Santa Ana River, on site.

A9. Elevation: 1,575 to 1,560 ft amsl.

A10. Environmental Setting (Describe vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc., as appropriate): This portion of the Old Kite Route or Redlands Loop Railroad is located in the relatively flat, cobble and boulder-strewn, alluvial wash of the Santa Ana River.

A11. Historical Information (Note sources and provide full citations in Field A15 below): See Linear Feature Record attached, Item lL3. Also see attached historic context report by B. Tom Tang (1997)

P36-006847

Applied EarthWorks, Inc.
ARCHAEOLOGICAL SITE RECORD

Primary #
HRI #/
Trinomial CA-SBR-6847H

Temporary Number/Resource Name: R-FEH/L#1

A12. Age: ☐ Prehistoric ☐ Pre-Colonial (1500–1769) ☐ Spanish/Mexican (1769–1848) ☐ Early American (1848–1880) ☒ Turn of century (1880–1914) ☒ Early 20th century (1914–1945) ☐ Post WWII (1945+) ☐ Undetermined Factual or estimated dates of occupation (explain):

A13. **Interpretations** (Discuss scientific, interpretive, ethnic, and other values of site, if known):
Additional archival research may yield important information pertinent to the historical development of the railroad industry in southern California, and early railroad excursion routes.

A14. **Remarks:** None.

A15. **References** (Give full citations including the names and address of any persons interviewed, if possible):
background research is provided in: Cultural Setting, CA-SBR-6847H (B. Tom Tang 1997), attached.

A16. **Photographs** (List subjects, direction of view, and accession numbers or attach a Photograph Record):
SARC-1, frames 1-13, on file at Applied EarthWorks, 3292 east Florida Ave., Suite A, Hemet, CA 92544.

A17. **Form Prepared by:** M. Horne **Date:** 2/19/98

Affiliation and Address: Applied EarthWorks, Inc., 3292 E. Florida Ave., Suite A, Hemet, CA 92544

P36-006847

Applied EarthWorks, Inc.
LINEAR FEATURE RECORD

Primary #
HRI #
Trinomial CA-SBR-6847H

 Resource Name or #: (Assigned by recorder)

L1. Historic and/or Common Name: Kite-Shaped Track/Belt Line or Old Kite Route / The Redlands Loop

L2a. Portion Described: ☐ Entire Resource ☒ Segment ☐ Point Observation **Designation:** Santa Ana River Crossing

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map).
For locational information, see Items P2a through P2e on the attached Primary Record Form.

L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)
CA-SBR-6847H, originally recorded by Greenwood and Associates in 1990 at the City Creek Crossing further to the west and north as part of the Metropolitan Water District Inland Feeder Project, is described as a portion of the Old Kite Route or Redlands Loop, a popular late 19th and early 20th century railroad excursion route.

A small portion of the Kite-Shaped Track, between Highland Junction and Highgrove in Riverside County, was on the California Southern's Railway Company's (a subsidiary of the AT&SF) main line constructed between 1880 and 1885. The bulk of the trackage along the route became a part of the Santa Fe system as branch or feeder lines to the California Southern during subsequent years. The Redlands Loop was also constructed in segments by various Santa Fe subsidiaries over a period of several years. The southern portion of the Redlands Loop, from San Bernardino to Mentone via Redlands, was built in 1887-1888. The northern portion of the Redlands Loop, from Highland Junction to Mentone by way of Highland, was completed in 1892.

The decline of the Kite-Shaped Track began in the mid-1910s. Shortly after World War I, it was no longer offered as an organized excursion trip. By 1928, traffic on the Redlands Lop was cut down to one local train per day. Then in 1938, following a destructive flood in the Santa Ana River, all passenger trains were discontinued on the Redlands Loop; however, the railway was still used for freight transportation. In 1956, the AT&SF abandoned four miles of trackage between Highland Junction and Del Rosa to make way for the construction of a freeway overpass on the I-215. In 1967, two more miles of the Loop, between Del Rosa and Patton, were abandoned by AT&SF. In 1980, the AT&SF further reduced the Loop to Mentone. Finally, in 1986 Redlands became the end of the line for the Loop.

In the areas along the Redlands Loop to be impacted by the Inland Feeder Project, all features of railroad operations, including rails and ties, have been removed since 1980, leaving little more than the roadbed and scattered artifacts to remind today's visitors of the Kite-Shaped Track's past glory. Today, CA-SBR-6847H within the IFP SARC ADI/APE consists of the remains of several smaller bridge footings adjacent to small tributaries north of the Santa Ana River, and a lager more robust cement and milled lumber bridge footing and vertical milled lumber pilings that supported the main bridge over the Santa Ana River. The railroad rails have been removed; all that remains is the raised earthen railroad bed, a few railroad spikes, milled lumber footings and supports, and rusted metal nuts, bolts, and washers. The main cement footing at the northern crossing of the Santa Ana River has a date of 1938 printed into the cement. As depicted on the Redlands USGS topographic map, the site continues to the north and south outside the SARC ADI/APE. (See attached background research for CA-SBR-6847H conducted by Greenwood and Associates in 1997.)

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
a. Top Width: 20 feet **b. Bottom width:** 20 feet
c. Height or Depth **d. Length of Segment:** Within ADI/APE, approximately 700 feet
e. Sketch of Cross-Section: Not applicable.

L5. Associated Resources: Locus 4 of site CA-SBR-6063H, containing railroad ties and other wood fragments is likely related to CA-SBR-6847H.

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) This portion of the Old Kite Route or the Redlands Loop is located in the relatively flat, cobble and boulder-strewn, alluvial wash of the Santa Ana River.

P36-006847

L7. Integrity Considerations:
The portion of CA-SBR-6847H that is located within the IFP SARC ADI/APE has been totally dismantled, all that remains is the raised earthen railroad bed, a few railroad spikes, milled lumber footings and supports, and rusted metal nuts, bolts, and washers. Therefore, this portion of CA-SBR-6847H is not considered to retain sufficient integrity to be significant.

L8b. Description of Photo, Map or Drawing (View, scale, etc.) N/A

L9. Remarks: See attached History of the Kite-Shaped Track (B. Tom Tang (1997).

L10. Form Prepared by: Name, affiliation, and address.)
Melinda C. Horne
Applied EarthWorks, Inc.
3292 East Florida Ave.
Suite A
Hemet, CA 92544

L11. Date: 2/19/98

P36-006847

Applied EarthWorks, Inc.

SITE MAP SHEET

Page 7 **of** 8

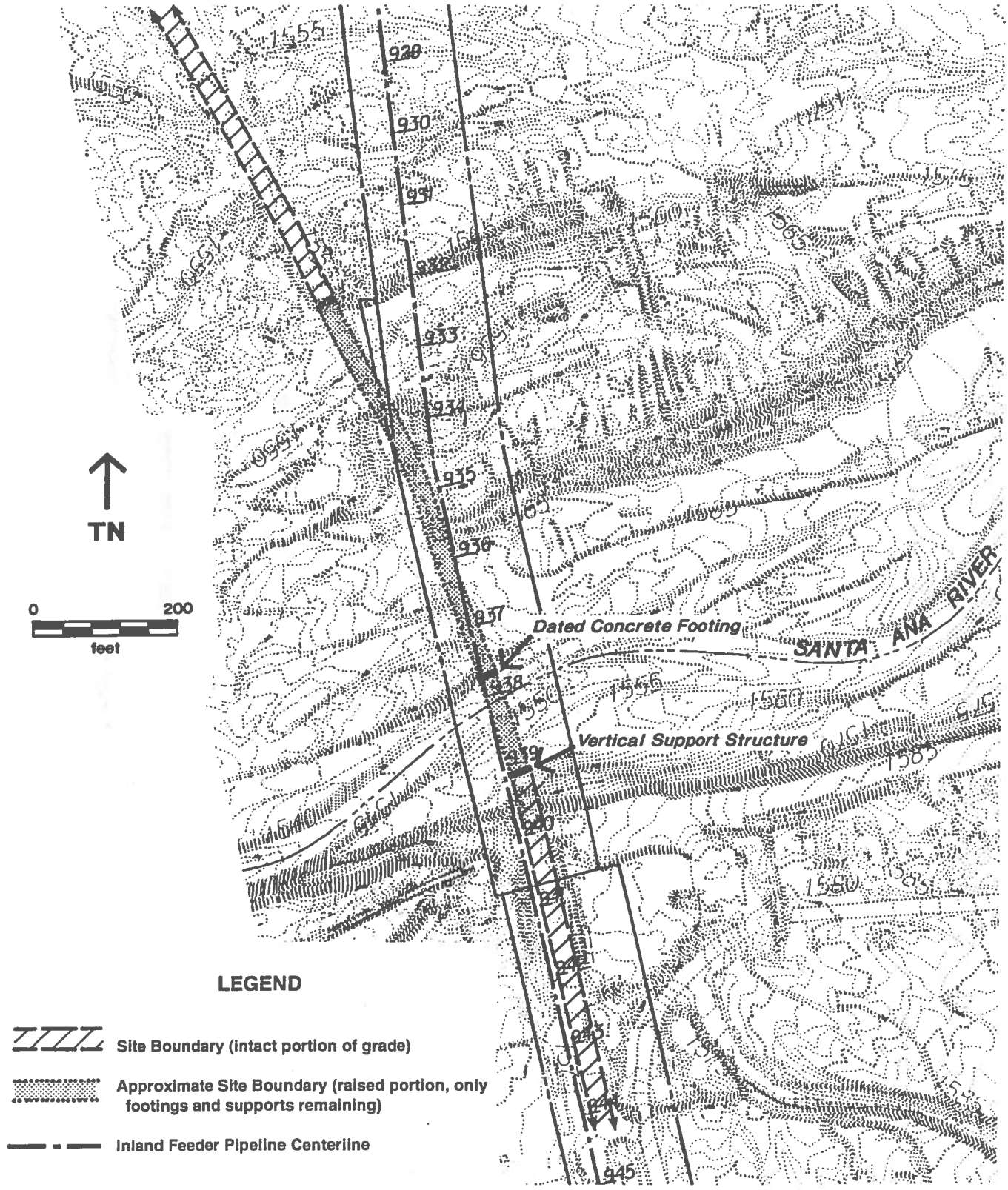
Primary #

HRI #/Trinomial CA-SBR-6847H

Temporary Number/Resource Name: R-FEH/L #1

Map Name CA-SBR-6847H Site Map **Scale:**

Date: 3/17/98



P36-006847

Applied EarthWorks, Inc.

LOCATION MAP SHEET

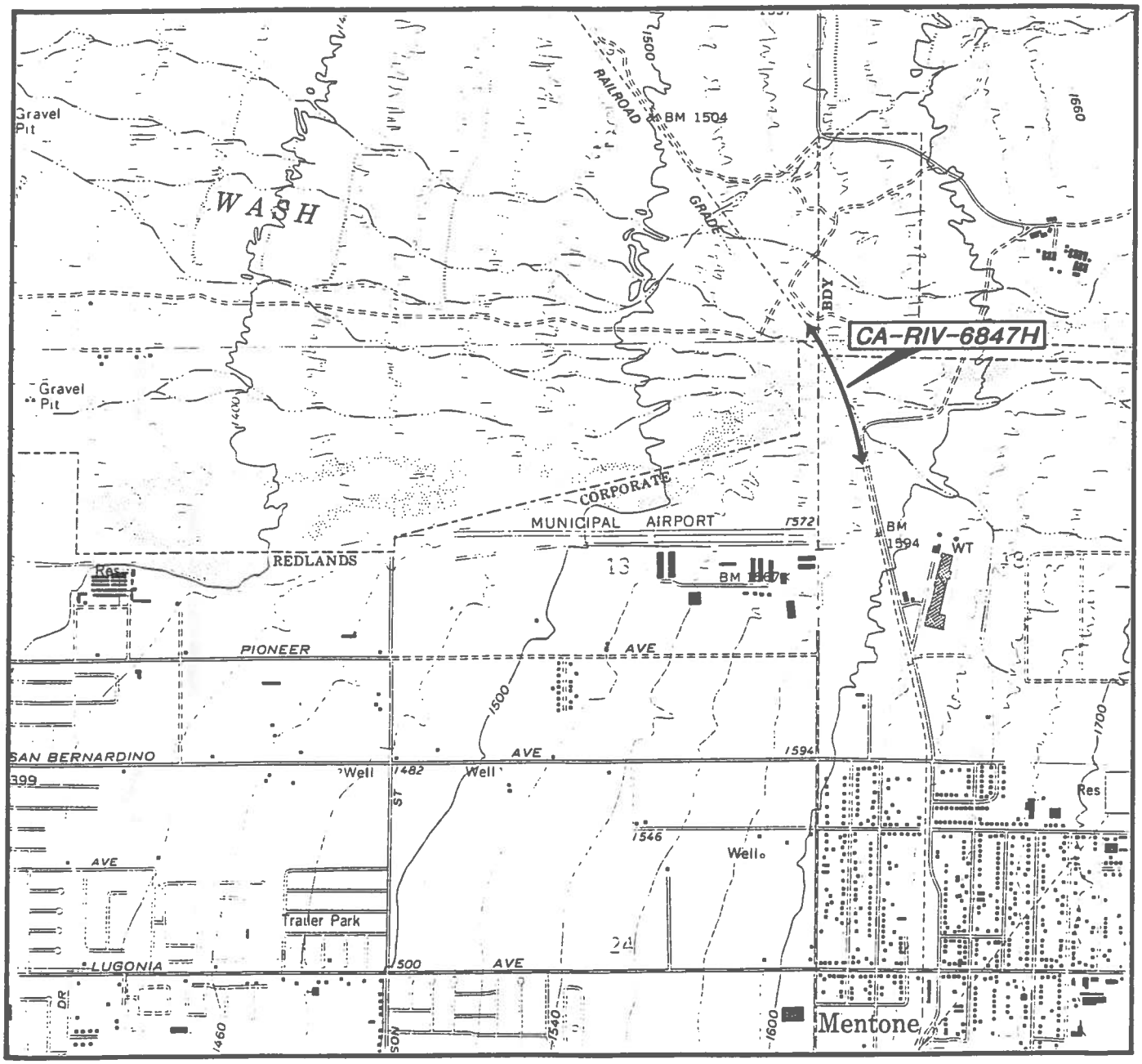
Primary #

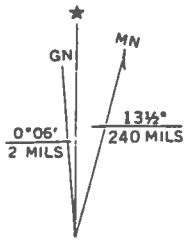
HRI #/Trinomial CA-SBR-6847H

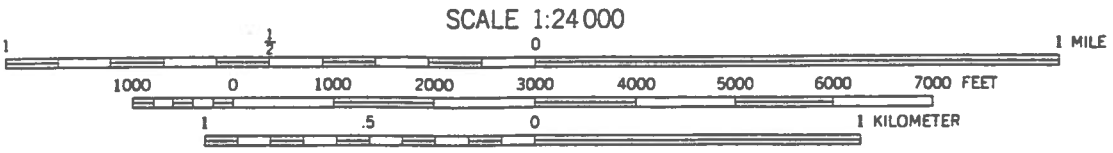
Page 8 **of** 8

Temporary Number/Resource Name: R-FEH/L #1

Map Name CA-SBR-6847H Location Map **Scale:** **Date:** 3/17/98







Redlands, CA 7.5′ USGS Quad 1967 (1988)

Cite as: Ms. on file, Greenwood and Associates, Pacific Palisades, CA.

P36-006847

Date: April 12, 1997
From: B. Tom Tang
To: Jim Schmidt
Re: Cultural Setting, CA-SBR-6847H

Site CA-SBR-6847H is a part of the remains of the old Atchison, Topeka & Santa Fe Railroad (AT&SF) line between Highland Junction and the community of Mentone (Fig. 1), which has been gradually abandoned and removed since the 1950s. Once forming a complete circle connecting San Bernardino, Highland, Mentone and Redlands, this line was officially designated by the AT&SF as the Highland Division around the turn of the century (USGS 1901; Garret 1996:107) and as the Redlands District in later years (Gustafson and Serpico 1992:65), but better known as the Redlands Loop among local residents and railroad enthusiasts. It comprised the eastern portion of the AT&SF's famous Kite-Shaped Track, so named because of its resemblance to a racetrack with only one turn and its stretches converging to a point (AT&SF n.d.; Moore 1973a), which traversed the leading citrus-producing regions in the Los Angeles Basin and the Inland Empire, and linked a string of "showcase towns" in southern California's citrus belt (Figs. 2 and 3). During the heyday of the steel rails, the 166-mile Kite-Shaped Track was an important element not only in the economic development but also in the social and cultural life of southern California.

Construction of the Kite-Shaped Track, 1880-1892

The birth of the Kite-Shaped Track was a direct result of the AT&SF's aggressive expansion into California in the 1880s, under the flamboyant leadership of William Barstow Strong, president of the company from 1881 to 1889. Prior to the arrival of the AT&SF, railroad transportation in California was held under the monopolized control of the Southern Pacific Railroad Company (SP), dubbed "the octopus" by its opponents, and its infamous Big Four, Collis P. Huntington, Leland Stanford, Charles Crocker, and Mark Hopkins.

In 1884, the Big Four's monopoly suffered the first crack when Strong maneuvered Huntington into selling the SP line between Mojave and Needles to the Atlantic and Pacific Railroad (A&P), a Santa Fe subsidiary, and allowing the AT&SF access to the San Francisco Bay area over SP tracks (Bryant 1974:92). In the meantime, the AT&SF actively sought for its own seaport on the California Coast. In this effort, the AT&SF found a ready ally in the City of San Diego, which had been bypassed by the SP.

Back in 1880, the AT&SF and prominent citizens of San Diego joined forces to organize the California Southern Railroad Company for the purpose of building a railroad from San Diego to San Bernardino (Serpico 1988:18). The next year, a second company, the California Southern Extension Railroad Company, was incorporated to extend the line to the expected junction with the Mojave-Needles line at Waterman (present-day Barstow), which was later absorbed into the California Southern in 1882 (*ibid.*:19). The San Diego-San Bernardino line was completed in 1883 after overcoming the SP's resistance (Bryant 1974:98-99). Two years later, the California Southern, now a subsidiary of the AT&SF, completed its connection with the A&P at Waterman, thus making the AT&SF an independent transcontinental railroad system (*ibid.*:100-101; Serpico 1988:21-22).

A small portion of the Kite-Shaped Track, between Highland Junction and Highgrove in Riverside County (Fig. 2), was on the California Southern's main line constructed between 1880 and 1885. The

bulk of the trackage along the route became a part of the Santa Fe system as branch or feeder lines to the California Southern during the subsequent years. This was achieved through the purchase of a small independent railroad and the operations of several "dummy corporations," since the charter of the California Southern did not permit the construction of branch lines (Dike and Kistler 1963:34).

The first of these branch lines was built by the independent Los Angeles & San Gabriel Valley Railroad (LA&SGV). Chartered in 1883, the LA&SGV started construction from Los Angeles towards Pasadena in 1885, and by 1887 drove its tracks to a point called Mud Springs, near today's San Dimas (Gustafson and Serpico 1992:77). In 1886, the AT&SF created the San Bernardino & Los Angeles Railway Company in order to build westward from San Bernardino to connect with the LA&SGV (Duke and Kistler 1963:34). In 1887, after the AT&SF acquired the LA&SGV, the two short lines joined at Mud Springs (Bryant 1974:102-103; Serpico 1988:23), giving the AT&SF its own access to the port of Los Angeles.

At the same time, a second Santa Fe line between San Bernardino and Los Angeles was also in the making. In 1885, the Santa Fe interests organized the Riverside, Santa Ana & Los Angeles Railway Company, and began to lay rails from Highgrove to Los Angeles by way of Riverside and Santa Ana (Seidman 1930:13). This line was in operation by 1888 (Gustafson and Serpico 1992:113), thereby completing the larger loop on the Kite-Shaped Track.

The Redlands Loop, like the larger loop between San Bernardino and Los Angeles, was also constructed in segments by various Santa Fe subsidiaries over a period of several years. The southern portion of the Redlands Loop, from San Bernardino to Mentone via Redlands, was built in 1887-1888 by the San Bernardino Valley Railway Company (Serpico 1988:144; Gustafson and Serpico 1992:65). This was carried out at the request of the booming town of Redlands, whose residents contributed $42,750 towards the purchase of the right-of-way and the depot site (Lawrence 1989:24; Duke 1995:23). The northern portion of the of Redlands Loop, from Highland Junction to Mentone by way of Highland, was completed by the San Bernardino & Eastern Railway Company in 1892 (Gustafson and Serpico 1992:65), after residents in the Highland area raised $10,000 for a similar contribution (Ingersoll 1904:606).

The famous Kite-Shaped Track, in summary, came into being gradually over more than a decade and under the charters of several different railroad enterprises. Between 1889 and 1892, the AT&SF consolidated all of its subsidiaries involved in the Kite-Shaped Track, along with several others, into the Southern California Railway Company (Serpico 1988:144). However, the construction of the Kite-Shaped Track did not end with the completion of the Redlands Loop in 1892. As late as 1910, the AT&SF created yet another "dummy corporation," the Fullerton & Richfield Railway Company, to build a cutoff between Fullerton and Atwood (in present-day Placentia), so as to shorten the route by some twelve miles (Gustafson and Serpico 1992:113). By this time, the golden age of the Kite-Shaped Track was already drawing to a close.

Golden Years of "Kite-Lining," 1892-1910s

When the ST&SF first expanded into southern California, the company's interest was focused primarily on the rich "freight bonanza" in the region's agricultural heartland. However, as soon as the Kite-Shaped Tract was opened for business in 1892, the AT&SF immediately realized its value as a tourist vehicle, not only to promote its passenger services but also to promote the sale of its land

holdings, for each tourist from the east was regarded as a potential land buyer (Moore 1973b).

Even before the completion of the Redlands Loop, the AT&SF had already launched an extensive advertising campaign for the Kite-Shaped Track, sometimes also referred to as the Belt Line during a brief period in early 1892 (*Citrograph* 1892; Duke 1991:8). On January 17, 1892, the AT&SF inaugurated the Kite-Shaped Track excursion--or "kite-lining" for short (Garret 1996:107)--with the catchy marketing motto "No Scene Twice Seen" (Gustafson and Serpico 1992:65). The excursion gained instant popularity. In its second week of operation, the *Los Angeles Herald* proclaimed that "a trip on the Kite-Shaped railroad is becoming the rage" (Duke 1991:8).

Between the 1890s and the 1910s, the Kite-Shaped Track excursion ranked among the leading tourist attractions in southern California, for local residents as well as travellers from the eastern United States, which gave the route nationwide fame and propped such cities along the route as Pasadena, Redlands, and Riverside into favored winter resorts for the rich and famous. As railroad historian Donald Duke explains:

> Not only did the excursion provide a need unfilled in the history of tourism of Southern California, but it also presented life as it was being lived at the time. The trip proved to be a Southern California image builder, in that it showed the products, resources, life-style, and the wonderful climate of the area. The people who created this ride believed that those who took the excursion would have piquant memories of what they had experienced and, thereby, cause them to move to Southern California. It worked, as they came by the thousands to what was believed to be the cornucopia of the American West. (Duke 1991:8)

Also contributing to the tourist rush on the Kite-Shaped Track was a rate war between the ST&SF and the SP in the 1880s. Following the AT&SF's initial penetration of the SP territory, cutthroat competition between the two railroad giants forced the price of a passenger ticket from the Mid-West to Southern California, which would have cost more than $100 in 1885, down to $25 by February, 1886, and then to just one dollar for a short time in March, 1886 (Ingersoll 1904:267). For a time, it seemed "cheaper to travel than to stay home" (*ibid.*). This drastic reduction in the price of railroad passenger tickets was an important factor in the southern California land boom of the 1880s and the early 1890s.

The Kite-Shaped Track excursion, as originally designed, was an inexpensive--costing $3.65 in 1892, which was reduced to $2.05 around 1900 (Donovan and Horton 1943:16; Duke 1991:8)--one-day trip starting and ending at Los Angeles (Fig. 4), taking the tourists through "a blending of the distinctive features and scenic effects of the different valleys forming a composite pictures, the memory of which will long be cherished" (*Citrograph* 1892). Nonetheless, the tourists were allowed--and in fact encouraged--unlimited stopover privilege at any station along the route within 30 days (ST&SF n.d.; Duke 1991:11).

At the eastern end of the excursion, the tourists stopped for two hours in Redlands--four hours on Sundays--to visit the celebrated Canyon Crest Park by tallyhos, carriages, or electric cars, and two more hours in Riverside--except on Sundays--for a tour of Mount Rubidoux, the Mission Inn, and the city's tree-lined boulevards (Donovan and Horton 1943:17; Duke 1991:9-11). During the peak season of the excursion, approximately 100 tourists would visit Canyon Crest Park--popularly known as Smiley Heights--each day (Hinckley 1951:98), while the annual number of visitors between 1900 and

1930 was estimated at 10,000-15,000 (Burgess 1984:34).

On weekdays, the excursion took the form of an "observation parlor car" attached to the rear of the various local passenger trains (Duke 1991:11-12). On weekends and during the summer, the AT&SF would dispatch a special train for the excursion to accommodate the crowd (*ibid.*:11). In addition to the scenery, these excursion trains sometimes provided musical entertainment, such as barbershop quartets (Garret 1996:107). In March, 1899, the Redlands *Citrograph* announced that "so popular have the Santa Fe Kite-Shaped excursion become that the train will be run twice a week--Tuesday and Saturday--instead of but once a week as heretofore" (*Citrograph* 1899). By 1900, the AT&SF sometimes dispatched two excursion trains from Los Angeles on the same day, which went in opposite directions, in order to meet the popular demand (Donovan and Horton 1943:16).

Aside from the excursion trains, the Kite-Shaped Track also supported a large number of regular trains. On the Redlands Loop alone, there were four trains running each way every day at its height (Duke 1991:12).

In 1909, apparently with full confidence in the future of the Kite-Shaped Track, the AT&SF unveiled its grant and elegant new depot in Redlands. By this time, however, southern California was already well into the automobile age, and cars were rapidly replacing trains as the prevailing mode of travel.

Decline of the Kite-Shaped Track and Demise of the Redlands Loop, 1920s-1980s

Around the turn of the century, the ST&SF and the SP became the nation's first railroad giants to be confronted with a new competitor: the alliance between automobiles and improved highways. And it was a competition that the railroads were ultimately doomed to lose.

The decline of the Kite-Shaped Track was almost as dramatic and abrupt as its rise. The popularity of the excursion began to dwindle in the mid-1910s (Moore 1973b). Shortly after World War I, it was no longer offered as an organized trip (Duke 1991:12). This was followed by a series of other reductions in the AT&SF's service on the Kite-Shaped Track. By 1928, traffic on the Redlands Loop was cut down to one local train per day (*ibid.*). In the 1920s, tourists could still take a one-day excursion on the Kite-Shaped Track on regular passenger trains. By 1935, AT&SF passenger service between Los Angeles and San Bernardino was reduced to one east-bound train a day in a evening, and one west-bound train in the morning after an early morning run around the Redlands Loop (*ibid.*). Obviously, this schedule would not accommodate the Kite-Shaped Track excursion as originally designed. Then in 1938, following a destructive flood in the Santa Ana River, all passenger trains were discontinued on the Redlands Loop (Hinckley 1985:3; Duke 1991:12).

during the first half of the twentieth century, like the rest of the railroad industry in the U. S., the AT&SF depended increasingly on freight transportation for its revenue. On the Redlands Loop, the "golden fruits" became more than ever the lifeline for the AT&SF, which shipped 25,000 to 40,000 cars of citrus fruits annually from the San Bernardino Valley during the 1920s (Brown and Boyd 1922:98). But with the advent of more and better trucks in the mid-twentieth century, the railroad industry was losing ground in the battle of freight as well. Between 1929 and 1960, the railroads' share of inter-city freight declined from 74.9 percent to 44.1 percent nationwide (Bryant 1974:360). As railroad historian Keith L. Bryant observes, "the loss of freight to trucks, barges and pipelines paralleled, although not as precipitously, the loss of passengers to private automobiles, buses and

airplanes" (*ibid.*).

It was, therefore, altogether fitting that the demise of the Redlands Loop came as the result of a highway project. In 1956, the AT&SF abandoned four miles of trackage between Highland Junction and Del Rosa (Fig. 1) to make way for the construction of a freeway overpass on the I-215 (*Sun* 1956a). On October 13, 1956, the last passenger train, loaded with camera-wielding railroad fans, made its round on the Loop (*Sun* 1956b), shortly before the Loop--and thereby the Kite-Shaped Track--was forever broken.

For the Redlands Loop, this was the beginning of the end. In 1967, two more miles of the Loop, between Del Rosa and Patton, were abandoned by the AT&SF (Lawrence 1989:27). Then in 1980, citing minimal business and expensive repairing costs, the AT&SF reduced the broken Loop further to Mentone (*Sun* 1980). Finally, in 1986 Redlands became the end of line for the Loop (*Sun* 1986).

Also abandoned--and in most cases demolished--during the course of the century were all of the depots along the Redlands Loop, which had often been the pride and focal point of activities for the communities they served. By the 1960s, only three depots--aside from San Bernardino--were still active on the Loop: Redlands, Mentone, and East Highlands (Buie 1967a; 1967b). The Redlands and East Highlands depots were closed in 1970, while the Mentone depot continued in a freight-only capacity until 1977 (*Daily Facts* 1971; Gustafson and Serpico 1991:65).

In the areas along the Redlands Loop to be impacted by the Inland Feeder Project, all features of railroad operations, including rails and ties, have been removed since 1980, leaving little more than the roadbed and scattered artifacts to remind today's visitors of the Kite-Shaped Track's past glory. However, with the help of local historical accounts, early maps and photographs, and archival sources, one can still gain an insight into railroad facilities that once occupied various locations in these areas during the golden age of the Kite-Shaped Track.

Railroad Facilities in the Inland Feeder Project Area

City Creek Trestle

Sources consulted for this study have yielded no information about this trestle. Since trestle construction on the AT&SF usually followed a standard plan, the company's brief record on each trestle as a rule only indicated the type of trestle and the year of construction, and did not include any specific data (Lozano, personal communications 1991). Furthermore, after a particular section of trackage was abandoned, the AT&SF would often discard the records pertaining to it (*ibid.*). Therefore, although a large portion of the AT&SF's historical archives is now curated at the Kansas State Historical Society, it is not very likely that these records would contain significant information regarding the City Creek trestle (Letourneau, personal communications 1997).

(Jim: As a footnote, Elizabeth Kiel of Highland says that she has an old photo of the trestle, and she has been trying to find it in her collection for the last two weeks or so. If it ever turns up, this photo will probably be the best documentation we can get on this thing.)

Aplin Station

P36-006847

The Aplin station (Fig. 1) was located near--and established primarily to serve--the Aplin family's ranch in Section 12, T1S R3W. The patriarch of the family, Captain Alfred Marcy Aplin (1837-1918), migrated to California in 1875 and became one of the early homesteaders in what is now East Highlands (Ingersoll 1904:709-710; Brown and Boyd 1922:1096-1097). In 1880, he bought 80 acres of railroad land in the vicinity of the future Aplin station, and started his "ranch" that was dedicated mostly to citrus fruits (Brown and Boyd 1922:1096). Today, Alfred Aplin is best remembered as a local pioneer in the fruit evaporation business (Ingersoll 1904:709-710; Garret 1996:6-7).

The Aplin station was established in 1892, with the completion of the San Bernardino & Eastern Railway, and discontinued in 1916, after Alfred Aplin moved to East Hollywood (Brown and Boyd 1922:1097; Gustafson and Serpico 1992:68). It was a siding and a flagstop, with no depot or any other structure ever constructed at the site in association with railroad operations (Gustafson and Serpico 1992:68; Garret 1996:6; Beattie, personal communications 1997). The exact location of the Aplin station was at 1.9 miles from the East Highlands depot, near the center of Section 12, T1S R3W (USGS 1901 [Fig. 5]; Gustafson and Serpico 1992:68). Local historian Arda Haenszel (personal communications 1997) further identifies that the Aplin station was located near where present-day Cone Camp Road makes a right-angle turn to the east (Fig. 6).

Browns Station

Like Aplin, Browns (Fig. 1) also served as a siding and a flagstop, with no depot or other structures (Gustafson and Serpico 1992:68; Beattie, personal communications 1997). It was established in 1906, and discontinued in 1949 (Gustafson and Serpico 1992:68). The name of the station was adopted in honor of Frank E. Brown, co-founder of Redlands, who had developed some agricultural land in the vicinity (Garret 1996:29).

The Browns station was located in the southeastern corner of Section 12, T1S R3W, 0.6 miles from Aplin and approximately one-eighth of a mile north of the Santa Ana River wash (USGS 1943 [Fig. 7]; Renie 1957:40 [Fig. 6]; Gustafson and Serpico 1992:68; Garret 1996:29). In 1985, the remains of the Browns siding was recorded as an archaeological site (CA-SBR-5509H), but mistakenly identified as Aplin (Resnick 1985).

Mentone Station

In contrast to Aplin and Browns, Mentone was a major station on the Redlands Loop, and the last one to be abandoned by the AT&SF. Between 1892 and 1978, three different buildings constituted the Mentone station during different periods, surrounded by a number of other prominent business establishments in the community.

Named after a famed French rivera resort, the small community of Mentone was founded in 1886 by the Pacific Land Improvement Company, a subsidiary of the AT&SF, while other sources credit H. L. Drew's Mentone Company for the creation of the town (Garret 1996:123). The first permanent passenger depot at Mentone, a frame structure measuring 14'x26', 12'x16' and 14'x26', was built in 1892 in the popular Queen Anne style, featuring a picturesque candle snuffer roof and gingerbread trims (Gustafson and Serpico 1992:65, 68; Figs. 8 and 9). It was located on the eastern side of the railroad tracks, just to the south of present-day Mentone Boulevard (USGS 1901 [Fig. 5]; Bristow, personal communications 1997). Around 1939, this elaborate depot was demolished (Gustafson and

Serpico 1992:68; Bristow, personal communications 1997). On its site was erected the Elephant Orchards' large packing house that still stands today, although no longer serving its original function (USGS 1943 [Fig. 7]; *Sun* 1981; Bristow, personal communications 1997).

In 1940, a second depot was built at the Mentone station (Gustafson and Serpico 1992:68). This was a rather unpretentious stucco building (Fig. 10), measuring only 12'x24', located across the tracks from the site of the first depot (Gustafson and Serpico 1992:68, 70; Bristow, personal communications 1997). It was in this modest structure that the Mention station survived as the last active depot on the Redlands Loop until 1977. After the depot was finally closed in that year, the structure was demolished in 1978 (Gustafson and Serpico 1992:68).

The third building at the Mentone station was a freight house, which was unique in the fact that it was located nearly a mile from the main depot (*ibid.*:70). Measuring 16'x30', this simple frame structure (Fig. 11) was constructed in 1898 and served its purpose for more than 70 years, until the AT&SF demolished it in 1972 (*ibid.*:68).

On the northern side of Mentone Boulevard, across from the Elephant Orchards packing house, is the site of the Mentone Milling Association (Figs. 12 and 13), another important commercial establishment in the history of the community (Bristow, personal communications 1997). It was founded in 1925 by Colonel Junnius Pierce to produce feed for poultry, cattle, and house pets, and remained in operation until the 1950s (Stoebe 1996:5). At present, all buildings of the Mentone Milling Association have been demolished, but a loading dock still stands between the railroad bed and Opal Avenue (Bristow, personal communications 1997).

P36-006847

References

AT&SF (The Atchison, Topeka and Santa Fe Railway Company)
n.d. *Kite-Shaped Track* (promotional brochure). Reprint by the Moore Historical Foundation, Redlands, 1984.

Brown, John, Jr., and James Boyd
1922 *History of San Bernardino and Riverside Counties.* The Lewis Publishing Company, Chicago.

Bryant, Keith L., Jr.
1974 *History of the Atchison, Topeka and Santa Fe Railway.* University of Nebraska Press, Lincoln and London.

Buie, Earl
1967a "Rail 'Deepo' Is Vanishing." June 7, p. B1.
1967b "Too Many Lost Dogs." June 8, pp. B1 and B6.

Burgess, Larry
1984 Annotations to Edith Parker Hinckley: *Two Girls and a Kite, or Adventures around the Kite Shaped Track.* Moore Historical Foundation, Redlands.

Citrograph (Redlands)
1892 "The Southern California Railway's Kite-Shaped Track." March 26, p. 18.
1899 "City and County." March 4, p. 7.

Daily Facts, Redlands
1971 "Mentone Now Santa Fe Headquarters." January 11, p. 3.

Donovan, Frank P., Jr., and Philip Horton
1943 "The Old Kite Route." In *Westways* (Los Angeles), September 1943, pp. 16-17.

Duke, Donald
1991 "Kite-Shaped Track Excursion." In *The Branding Iron* (Los Angeles), Summer 1991, pp. 8-12.
1995 *Santa Fe, the Railroad Gateway to the American West.* Golden West Books, San Marino.

Duke, Donald, and Stan Kistler
1963 *Santa Fe...Steel Rails Through California.* Golden West Books, San Marino.

Garret, Lewis
1996 *San Bernardino County Place Names.* Limited printing by the author. On file, California Room, Norman F. Feldheym Central Library, 555 West Sixth Street, San Bernardino.

Gustafson, Lee, and Philip Serpico
1992 *Santa Fe Coast Lines Depots, Los Angeles Division.* Omni Publications, Palmdale.

P36-006847

Hinckley, Edith Barrett Parker

1951 *On the Bank of the Zanja: The Story of Redlands.* The Sauders Press, Claremont, California.

1984 *Two Girls and a Kite, or Adventures around the Kite Shaped Track.* Moore Historical Foundation, Redlands.

Hinckley, Horace Parker

1985 The Railroads and Trolleys of Redlands. Paper given to the Forum Club of Redlands, January 27, 1985. On file, Heritage Room, A.K. Smiley Public Library, 125 West Vine Street, Redlands.

Ingersoll, L. A.

1904 *Ingersoll's Century Annals of San Bernardino County, 1769-1904.* L. A. Ingersoll, Los Angeles.

Lawrence, Elrond G.

1989 "The Loop: Santa Fe's Redlands Subdivision." In *Pacific Rail News* (Glendale), April 1989, pp. 24-31.

Moore, Frank

1973a "With a Grain of Salt" (daily column). In *Redlands Daily Facts*, August 29, 1973, p. B8.

1973b "With a Grain of Salt." In *Redlands Daily Facts*, August 30, 1973, p. I4.

Renie, Jack J.

1957 *Renie Atlas of Riverside and San Bernardino Counties and Cities of Boulder City, Lake Mead, Hoover Dam and Las Vegas, Nevada.* Renie Map Service, Los Angeles.

Resnick, B.

1985 Archaeological site record, CA-SBR-5509H. On file, Archaeological Information Center, San Bernardino County Museum, 2024 Orange Tree Lane, Redlands.

Seidman, Laah

1930 The History of the Santa Fe Railway in California. M. A. thesis, Department of History, University of Southern California, Los Angeles.

Serpico, Philip C.

1988 *Santa Fe Route to the Pacific.* Omni Publications, Palmdale.

Stoebe, Martha G.

1996 Mentone, California: A History. Manuscripts on file, Mentone Branch Library, San Bernardino County Libraries, 1870 Mentone Boulevard, Mentone.

Sun, San Bernardino

1956a "ICC Permits Santa Fe to Abandon Loop Line." April 18.

1956b "Last Excursion Trip Taken on Kite Line." October 14.

1980 "Santa Fe Wants to Abandon More of Loop Line." September 16, p. B4.

1981 "'No Scene Twice Seen' Rail Route Finally Loses Its Tracks." October 11, pp. A1 and A4.

P36-006847

1986 "Notice." July 30, p. D3.

USGS (United States Geological Survey, U. S. Department of the Interior)
1901 Map: Redlands, California (15', 1:62,500), surveyed in 1898-1899. On file, Map Collection, Tomás Rivera Library, University of California, Riverside.
1943 Map: Redlands and Vicinity, California (1:31,680), surveyed in 1939. On file, Map Collection, Tomás Rivera Library, University of California, Riverside.

Personal Communications

Beattie, Kay Long-time resident and local historian, Highland.

Bristow, Barbara Long-time resident of Mentone; formerly owner and manager of the Mentone Milling Association.

Haenszel, Arda Long-time resident and local historian, Redlands.

Kiel, Elizabeth Long-time resident of Highland.

Letourneau, David Public relations officer and archival specialist, Burlington North and Santa Fe Railway Company.

Lozano, Don Bridges and Buildings Division, Burlington North and Santa Fe Railway Company.

1063228 ABoE-36-15-002-00 update 10/11

PRIMARY RECORD

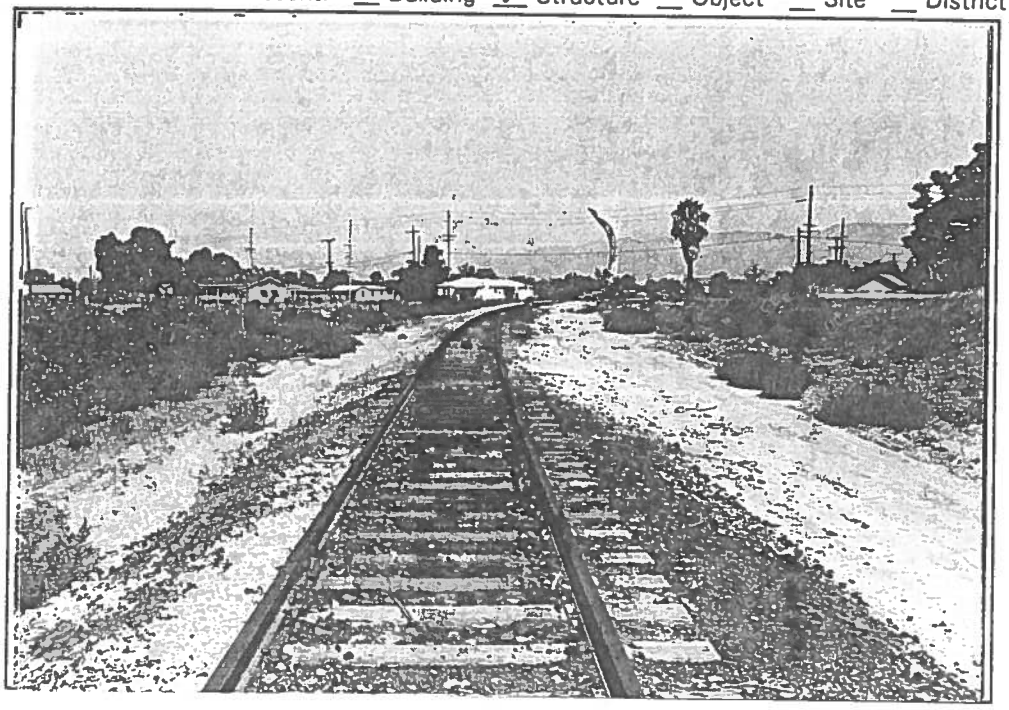
Primary #_____
HRI #_____
Trinomial ~~CA-SBr-6103H~~ SBR-6847H
NRHP Status Code 6Y
Other Listings_____
Page 1 of 10 Review Code_____ Reviewer_____ Date_____

P1. Resource Identifier: Highlands Division ("Redlands Loop") of the AT&SF Railway
P2. Location: a: County San Bernardino
b. Address: Ennis Street
City San Bernardino Zip 92408
c. UTM: USGS Quad San Bernardino South 7.5' 1967, pr. 1980; Zone 11, 474120 mE/ 3770840 mN
d. Other Locational Data: (UTM is intersection of RR with project centerline)
APN: 136-482-15 (San Bernardino County)
Twp. 1 S; Rng. 4 W: SE ¼, SE ¼, SE ¼ of Sec. 15 (projected), SBBM
San Bernardino Rancho

P3. Description:

The Highlands Division of the AT&SF RR is a remnant of a much larger, 252-km (157-mi) rail line which ran between 1892 and 1938 from San Bernardino, through Redlands and Highland, with the larger portion of the route passing through Pasadena, Los Angeles, Orange, and Riverside. The segment from San Bernardino to Redlands ran between 1888 and 1892 as an independent rail line. This segment of the track is a small piece of the Redlands Loop of the Kite-Shaped track which was operated by a division of the Atchison, Topeka and Santa Fe Railway. The 48 km (30 mi) Loop was the smaller portion of the Kite route, and extended from the San Bernardino railroad depot in a large, irregular circle with stops in the communities of Redlands and Highland, and pauses at Rialto and E streets, in San Bernardino, Victoria Station, Drew, Gladysta, Mentone, Aplin, East Highlands, Molino, Patton, West Highlands, Del Rosa, Valencia Station, Arrowhead, and Highland Junction.

P4. Resources Present: __ Building ✓ Structure __ Object __ Site __ District __ Element of District



P6. Date Constructed/Age:
__ Prehist. ✓ Hist. __ Both
1888 (F)

P7. Owner and Address:
Metropolitan Transportation Authority (Metrolink)
800 West Seventh Street
Los Angeles, CA 90017

P8. Recorded by:
Francesca Smith
Myra L. Frank & Assoc, Inc.
811 W Seventh St, Ste 800
Los Angeles, CA 90017

P9. Date Recorded:
12 April 1995

P10. Type of Survey:
Intensive Survey—NHPA Section 106 compliance

P11. Report Citation (Provide full citation or enter "none"):
Historic Resource Evaluation Report, Orange Show Road Extension, City of San Bernardino, California, by Francesca Smith, July 1995

Attachments: _NONE ✓Location Map ✓Continuation Sheet _Building/Structure/Object Record ✓Linear Resource Record __Archaeological Record __District Record __Milling Station Record __Rock Art Record __Artifact Record __Photograph Record __Other (list)

CONTINUATION SHEET

Primary #_____
HRI #_____
Trinomial CA-SBr-~~6103H~~ 10847 H

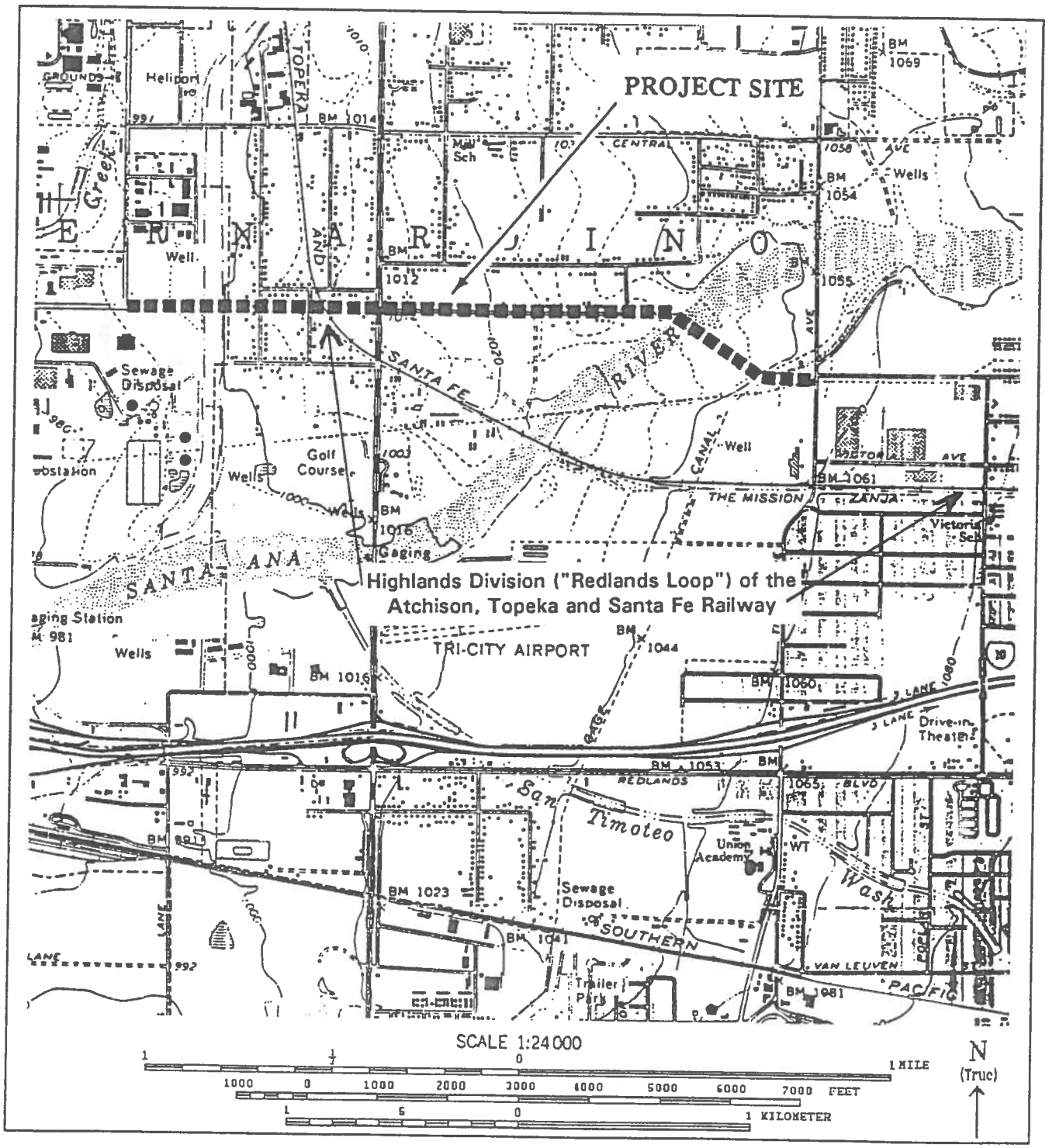
Resource Identifier: Highlands Division ("Redlands Loop") of the AT&SF Railway

P5. Photograph of Cross-Buck RR Crossing Sign at Ennis Street
View east, 14 September 1994

MAP SHEET

Primary #_____
HRI #_____
Trinomial CA-SBr-~~6103H~~ 6847H

Resource Identifier: Highlands Division ("Redlands Loop") of the AT&SF Railway
Map Name: USGS San Bernardino South **Scale:** 1:24000 **Date:** 1967, photorevised 1980



LINEAR RESOURCE RECORD

Primary #_____
HRI #_____
Trinomial CA-SBr-~~6103H~~ 6847H

L1. **Resource Identifier:** Highlands Division ("Redlands Loop") of the AT&SF Railway

L2. **Historic Name:** Southern California Railway Highlands Division

L3. **Common Name:** Redlands Loop of the Kite-Shaped Track

L4. **Detailed Record of:** __ Entire Resource ✓ Segment (Describe entire resource on Primary Record before recording a segment in detail)

L5. **Length:** 152 m (500 ft) Method of Determination: Scaled from APE Map
L6. **Width:** 15 m (50 ft) Method of Determination: ROW width on assessor's parcel map
L7. **Depth/Height:** surface Method of Determination: field observation

L8. **Features:** (Describe construction details, dimensions, and artifacts found with each feature. Provide plans/sections as appropriate)

The railroad track consists of standard gauge 34-kg (75-lb) steel rails, with broad T bases and narrow webs, set on wooden ties spaced 50 cm (21 in) apart. The rails are connected end-to-end with hardware and cables. The track is connected to the ties with metal cross plates spiked into the ties. Some of the ties are marked with date nails which have the number "36" (for 1936) embossed on their heads. At the crossing of the track with Ennis Street, the crossing is marked by cross-buck signs, one of which appears to date to ca. 1925, when the area was first subdivided.

L9. **Natural Setting:** (Describe natural features, landscape characteristics, slope, etc. as appropriate)

The segment of track recorded here features flat topography with a slight embankment adjacent to the northeast edge of the ROW. Vegetation consists of scattered ruderal weeds and grasses.

L10. **Historical Information:**

See: Continuation Sheet.

L11. **Resource Attributes** (List attributes and codes) HP11, Railroad Grade

L12. **Significance: Theme** Railroad transportation **Area** San Bernardino Valley
Period of Significance 1888-1950 **Property Type** Railroad Grade **Applicable Criteria** N/A
(Discuss importance of resource within a historical context as defined by theme, period of significance, and geographic scope when appropriate)

See: Continuation Sheet

L13. **Resource Integrity:**

See: Continuation Sheet

L14. **Associated Resources:**

L15. **References:**

See: Continuation Sheet

L16. **Form Prepared By:** Francesca Smith **Date:** 12 April 1995
Affiliation/Address: Myra L. Frank & Assoc, Inc., 811 W Seventh St, Ste 800, Los Angeles, CA 90017

CONTINUATION SHEET

Primary #_____
HRI #_____
Trinomial CA-SBr~~6103H~~ 6847 H

Resource Identifier: Highlands Division ("Redlands Loop") of the AT&SF Railway

L10. Historical Information:

The origin of the Highlands Division of the AT&SF Railway was in 1888, as a line of the Southern California Railway, a division of AT&SF. The Southern California Railway was formed in 1880 as the California Southern Railway for the purpose of building a railroad from National City (San Diego) to connect with the AT&SF railroad in the Mojave Desert. The AT&SF Railway provided technical and financial assistance to the California Southern Railway to accomplish this endeavor, and ultimately purchased the California Southern in 1884. After the purchase, the former California Southern was operated as a subsidiary of the AT&SF Railway, and was renamed the Southern California Railway.

In 1886, negotiations began for the rights-of-way between San Bernardino and Redlands. A reference two years later indicated that "...a line, built from [discarded] materials...was completed from San Bernardino to Redlands..." in February of 1888. The route was financed by local investors who formed corporations (out of necessity) to serve the community's freight and passenger requirements. The original investment of $42,750.00 for the San Bernardino-Redlands line was eventually absorbed into the Highlands Division of Santa Fe. Santa Fe's directors did not consider the developing area important to their general plan, so acquisition and construction was left to local initiative. Over the next four years, the rights-of-way from Redlands back to San Bernardino across the northern part of the valley were surveyed and purchased to form the balance of the Southern California Railway Highlands Division, also known as the "Redlands Loop" of the Kite-Shaped Track. Ultimately, the length of the Highlands Division was approximately 48 km (30 mi).

The Kite-Shaped Track was a 252-km (157-mi), figure-eight-patterned rail line which traversed the greater Los Angeles countryside starting in 1892 (see Map on Page 6 of 10). A trip over the entire Kite Route took about 10 hours to complete. The Kite-Shaped Track was an excursion route as well as a freight line designed specifically to serve the large numbers of citrus packing houses. The midpoint of the line was at San Bernardino, and the two disproportionate loops of the figure-eight reached Orange and Los Angeles (the larger, western loop) and Redlands (the smaller loop). The rationale for the figure eight was to make the excursion more interesting— "No scene twice seen" was one of many advertising slogans—but the route more likely was carefully planned to include each of the important citrus packing houses in the region.

The provenance of the "kite" name is widely assumed to be a reference to its shape as a loose string with a kite attached. In fact, the name was taken from the English horse racing course configuration known as the Doncaster, or "kite" course, identified as having intersecting straight aways "...converging to a point". The classic Doncaster course was a figure eight, and is thus the origin of the train route's curious name. The Kite-Shaped Track operated in its full configuration across four counties, for nearly 50 years, ending regular service in 1938. The first excursion on the full line, which originally was called the "Belt-Line Trip," was made on January 17, 1892. Soon after, the *Los Angeles Herald* coined the name "Kite-Shaped [R]ailroad" for the day-long trip. The Kite-Shaped Track traversed most of the region's citrus belt, the rapidly expanding inland agricultural area devoted to the commercial cultivation of lemons and oranges. Citrus fruit was harvested from the individual orchards, boxed at the local packing houses (located at or near the rail lines), picked up and shipped the short distance to the San Bernardino precooling plant. At the plant, as many as 28 cars could be iced for usually four, and up to eight hours each, after which they were prepared to make the long journeys by rail to individual market areas across the nation.

CONTINUATION SHEET

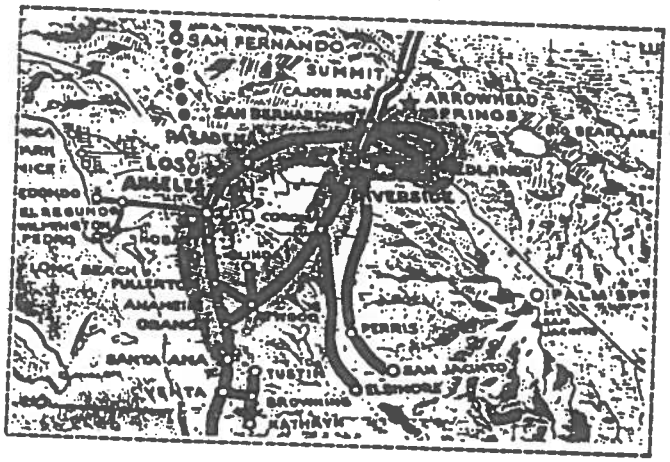
Primary #_____
HRI #_____
Trinomial CA-SBr-~~6103H~~ 6847H

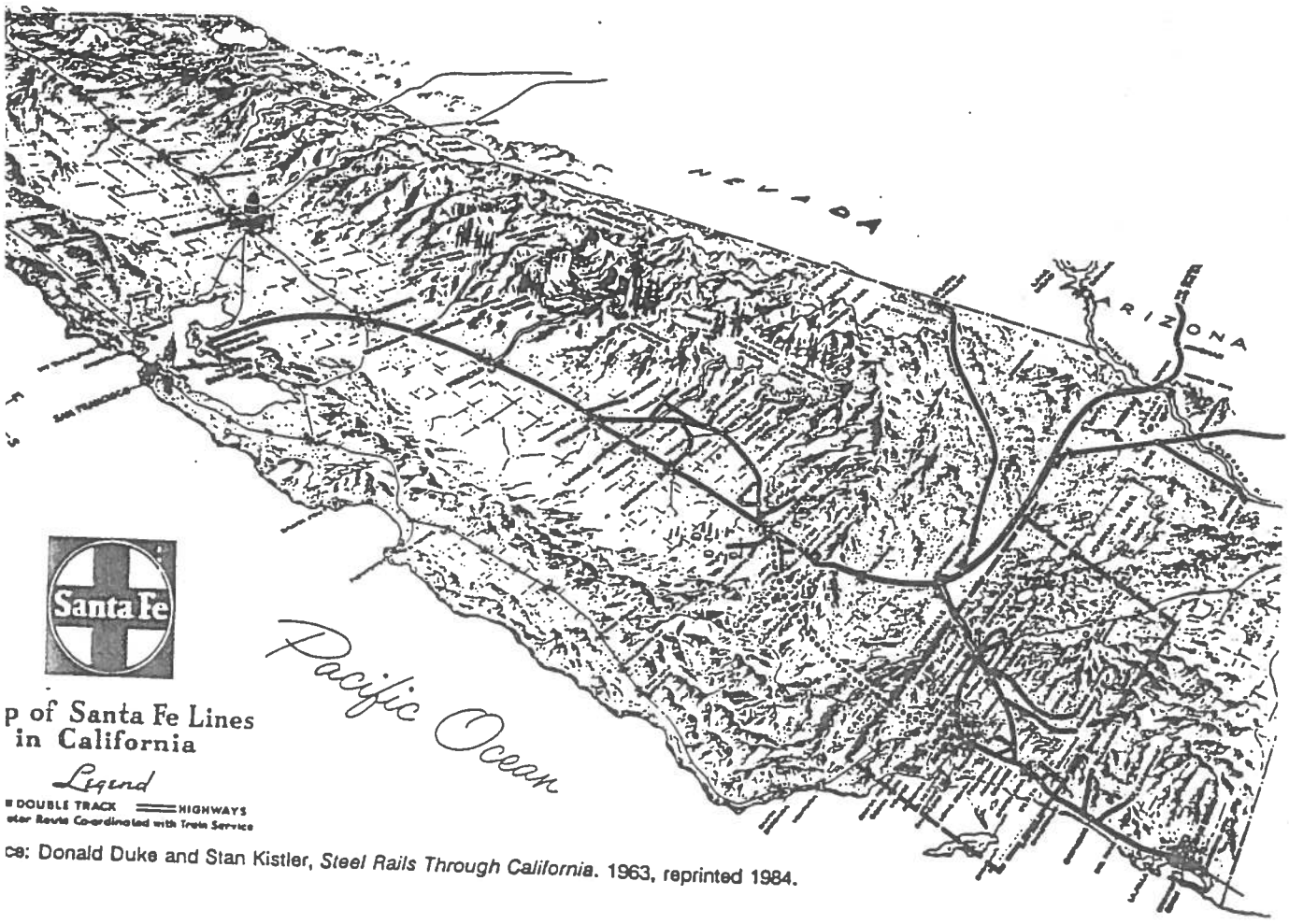
Resource Identifier: Highlands Division ("Redlands Loop") of the AT&SF Railway

10. Historical Information (con't):

Map excerpted from Duke and Kistler (1963) with inset showing relationship of the Redlands Loop to the rest of the Kite-Shaped Track.

DETAIL





Source: Donald Duke and Stan Kistler, *Steel Rails Through California*. 1963, reprinted 1984.

ATION SHEET

Primary #
HRI #
Trinomial CA-SBr-~~6103H~~ 6847H

ar: Highlands Division ("Redlands Loop") of the AT&SF Railway

l Information (cont.):

the Redlands Loop was only 48 km in length, there were sixteen stops along the complete Loop. main San Bernardino depot to Redlands, the sequence of stations were as follows:

he first stop was at Rialto and E streets, in San Bernardino;
ollowed by Victoria Station, near the present Victoria Farms south of the east end of the APE;
he next station was Drew (named for an original financier, H. L. Drew), located in the vicinity of resent-day I-10 just west of California Street;
lose to Nevada Street, the fourth station was Gladysta;
ext the Redlands Depot, a classically inspired colonnaded single story building. The station was rected in 1909, with a parallel switch track to accommodate the elaborate private rail cars of the inter colony.

popularity waned with the introduction and increasing use of the private automobile and the truck. ere cars replacing trains for commuting and pleasure, but the railroads were directly competing with rucking companies. Trucks had many advantages over the railroads; providing flexibility in direct site access, and could ship partial loads efficiently. To reflect this trend, railroad crossings ved to accommodate safe motor vehicle passage. Within the APE, the crossing of the Redlands nnis Road was constructed during the 1920s, when the area was subdivided. The tracks in the furbished in 1936. Two years later, a March deluge was responsible for washing out a trestle at na River crossing south of the APE and regularly scheduled passenger service on the Loop was l.

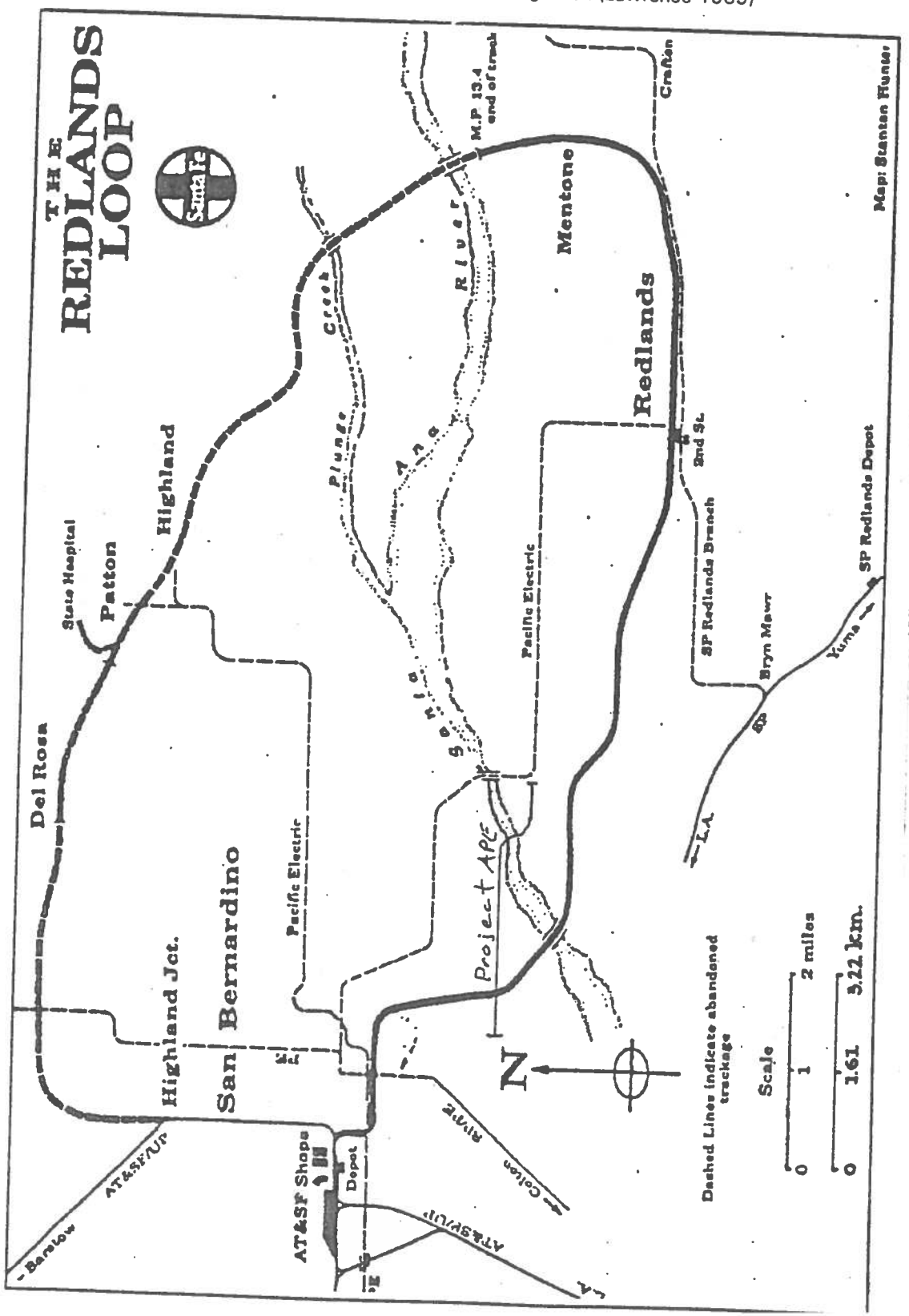
final passenger train made the Loop circuit, and within the next decade, Santa Fe shuttered all s to passenger service. Most of Los Angeles part of the Kite was absorbed into the still active e of the remaining railroads. In 1956, the Redlands Loop section of track between Highland Del Rosa was demolished. The track between Del Rosa and Patton was abandoned in 1967, and ecting Patton and Mentone was demolished in late 1980. The former Loop rail line between a point north of Mentone was proposed for abandonment in 1986, and to date, is still pending. ginal 48 km (30 mi) length, the Loop line presently consists of 21.42 km (13.31 mi), with an contiguous 580.3 m (1,904 ft) north of Mentone, immediately south of the Santa Ana River (see 8 of 10). In 1993, the remaining track from San Bernardino to Redlands was sold to Metrolink, ommuter rail; however, Santa Fe reserved freight rights to the line.

CONTINUATION SHEET

Primary #_____
HRI #_____
Trinomial CA-SBr-~~6103H~~ 6847H

Resource Identifier: Highlands Division ("Redlands Loop") of the AT&SF Railway

L10. **Historical Information (con't):** Map showing remaining track (Lawrence 1989)



CONTINUATION SHEET

Primary #_____
HRI #_____
Trinomial CA-SBr-~~6103H~~ 6847/H

Resource Identifier: Highlands Division ("Redlands Loop") of the AT&SF Railway

L12. Significance:

The segment of the Highlands Division of the AT&SF Railway within the APE does not appear to be eligible for inclusion in the National Register of Historic Places or the California Register of Historical Resources. Although this railroad line played an influential role in the development of Redlands and surrounding communities (Criterion A), it is not directly associated with the lives of persons significant in our past (Criterion B), nor does it embody distinctive characteristics of construction (Criterion C) or have the potential to yield information important to history (Criterion D). Thus, while the original configuration of the Redlands Loop may have been significant, the segment within the project APE does not embody a significant resource in and of itself.

L13. Resource Integrity:

Of the seven aspects of integrity, only the location of the railroad tracks within the APE has been maintained. The other elements, design, setting, materials, workmanship, feeling and association with the original 1888 track have been irrevocably lost. One of the most important aspect of the Redlands Loop of the Kite-Shaped Track, the fact that it was a continuous irregular circle, is irreplaceably gone. Less than half of the Loop remains, that being the portion from San Bernardino to Redlands and Mentone.

L15. References:

[Atchison, Topeka and] Santa Fe Railway Company. Public Notice regarding abandonment of line between Redlands and Mentone. *The Sun* 30 July 1986.

Armitage, Merle. *Operations Santa Fe.* (New York: Duell, Sloan & Pierce) 1948.

Beattie, George. "Beattie Scraps." Unpublished writings on file in California Room at Norman Feldheym Library, San Bernardino.

Berkman, Pamela, ed. *The History of the Atchison, Topeka & Santa Fe.* (Greenwich, Connecticut: Brompton Books) 1988.

Bradley, Glenn Danforth. *The Story of the Santa Fe.* (Boston: Gorham Press) 1920.

Brown, Dee. *Hear That Lonesome Whistle Blow.* (New York; Holt, Rinehart & Winston) 1977.

Bryant, Keith L. Jr. *The History of the Atchison, Topeka & Santa Fe Railway.* New York: MacMillan Publishing Co, 1974.

---. "City and County." *Citrograph* (3 May, 1890) 7.

---. "City and County." *Citrograph* (31 May, 1890) 7.

---. "City and County." *Citrograph* (13 September, 1890) 9.

---. "City and County." *Citrograph* (15 November, 1890) 9.

Dodge, Richard V., and R. P. Middlebrook, "The California Southern Railroad: A Rail Drama of the Southwest," *Railway and Locomotive Historical Society Bulletin* No. 80 (May 1950).

Donaldson, Stephen E. and William A. Meyers. *Rails Through Orange Groves: A Centennial Look at the Railroads of Orange County, California.* (Glendale: Trans-Anglo Books) Volumes I and II, 1989.

CONTINUATION SHEET

Primary #_____
HRI #_____
Trinomial CA-SBr-~~6103H~~ 6847H

Resource Identifier: Highlands Division ("Redlands Loop") of the AT&SF Railway

L15. References (con't):

Donovan, Frank P. Jr. and Phillip Horton. "The Old Kite Route." *Westways* (July 1943) 16-17.

Duke, Donald. "Kite Shaped Track Extension." *L. A. Westerners Branding Iron* 184 (Summer 1991).

Duke, Donald and Stan Kistler. *Santa Fe... Steel Rails Through California.* (San Marino: Golden West Books) 1963.

Hein, Erwin. ed. *History of Redlands (1888-1968) and Prospect Park (1878-1968): Celebrating the Eightieth Anniversary of the City of Redlands, California, and The Acquisition of Prospect Park.* (Redlands: Citrograph Printing Company/Redlands Daily Facts) 1968.

---. "ICC Permits Santa Fe To Abandon Loop Line: Way Cleared For 16th Street Overpass Over Freeway." *The Sun* 18 April 1956.

Lawrence, Elrond G. "The Loop: Santa Fe's Redlands Subdivision." *Pacific Rail News* (April 1989) 24-31.

Lockabey, V. Almon. "Railroad News—Last Excursion Trip Taken on Kite Line." *The Sun* 14 October 1956.

___. "Los Angeles Division Important Link In Marketing California Products: And San Bernardino Occupies Strategic Position In the Operation of the Division." *The Santa Fe Magazine* (January 1934) 13-21.

Lyman, Edward L. "Outmaneuvering The Octopus: Atchison, Topeka & Santa Fe." *California History* (June 1988) 95-107.

Marshall, James. *Santa Fe: The Railroad That Built An Empire.* (New York: Random House) 1945.

Moore, Frank. "With A Grain of Salt." *Redlands Daily Facts* 29 August 1973a.

Moore, Frank. "With A Grain of Salt." *Redlands Daily Facts* 30 August 1973b.

Parker, Edith Hinckley. *Two Girls and a Kite or Adventures Around the Kite-Shaped Track.* (Redlands: Moore Historical Foundation) 1984.

Roddick, Jan. "'No Scene Twice Seen' Rail Route Finally Loses Its Tracks." *The Sun* 11 October 1981.

Santa Fe Railway Company. *Kite Shaped Track: No Scene Twice Seen.* promotional pamphlet (Los Angeles: Lang Press) no date.

---. "Santa Fe Wants To Abandon More of 'Loop Line'." *The Sun* 16 September 1980.

Seidman, Laah. "The History of The Santa Fe Railway In California." dissertation, University of Southern California, 1930.

Sunset Land and Immigration Bureau. *An Illustrated Guide...To the Most Favored Section of...California: Sunny Skies and Southern Vistas.* (no city: no publisher) c.1893.

Swett, Ira L. *Tractions of the Orange Empire.* Interurbans Special No. 41. Los Angeles: Interurbans Magazine, 1967.

P36-006847

ARCHAEOLOGICAL SITE SURVEY RECORD
(McKenna et al., Whittier, CA)

PERMANENT TRINOMIAL: CA-SBR-6847-H

TEMPORARY SITE NO.: _____

AGENCY DESIGNATION: _____

(Current Conditions Addendum)

USGS Fontana

CA-SBR-6847H: CA-SBR-6847H was reported by Romani et al. (1990a) as the alignment of the historic "Old Kite" railroad route (initially recorded in the East Highlands area). This route includes bridges and road grades (Romani 1990b). Within the proposed project area, a small portion of this alignment crosses the A.P.E. right-of-way at Day Creek and 8th Street (Rancho Cucamonga). The alignment is currently active as a portion of the Santa Fe route.

The Old Kite rail system is a locally recognized feature in San Bernardino, but not listed on any registered property listings. In this case, the Old Kite will be treated as an eligible property and avoidance of impacts has been designed into the construction phase for the Cajon Pipeline. Avoidance will occur by a proposed smooth bore excavation beneath the rail road alignment, thereby avoiding any direct or indirect impacts and permitting the continued use of the line. Plans for the boring will be submitted to the Bureau of Land Management and the Office of Historic Preservation for review and approval of adequacy for avoidance of impacts. Since no impacts are expected, determination of eligibility for this resource has been deferred.

P36-006847
Update

ARCHAEOLOGICAL SITE RECORD

PAGE: 1 **OF** 6 **PERMANENT TRINOMIAL:** CA-SBR-6847H
DATE OF ORIGINAL RECORD: N/A **TEMPORARY NUMBER:** R-FEH #9
DATE OF THIS FORM: 12/19/90 **AGENCY DESIGNATION:**
1. **COUNTY:** San Bernardino
2. **USGS QUAD:** Redlands 7.5' 1967 **REVISED:** 1988
3. **UTM COORDINATES: ZONE** 11 487485 m Easting; 3771420 m Northing
4. **TOWNSHIP** 1S **RANGE** 2W, SW 1/4, SE 1/4, SW 1/4, NW 1/4, of Section 18 **BASE MER.** SBM
5. **MAP COORDINATES:** 184 **mm S** 440 **mm E**
6. **ELEVATION:** 1590 ft.

7. **LOCATION:** From Interstate 10 in Redlands, take the Orange Street exit north for 1 mile, turn right on San Bernardino Avenue for 2.7 miles, turn left on Opal Avenue and go 0.5 mile. Bridge is west of Opal on "Old Railroad Grade" and east of the southeast corner of the Municipal Airport.

8. **PREHISTORIC** **HISTORIC** X **PROTOHISTORIC**

9. **SITE DESCRIPTION:** Historical structure. Concrete footings/foundations for railroad bridge on railroad grade. Bridge connected the "Old Railroad Grade" within the southern portion of the Santa Ana wash. Benchmark in southeast corner of footing (X)

10. **AREA:** 10 m (length) x 10 m (width); m^2
Method: Tape.

11. **DEPTH:** unlikely **METHOD:** N/A

12. **FEATURES:** Three poured concrete footings for railroad bridge. The two outer footings are stepped with two anchor bolts on the lower step.

13. **ARTIFACTS:** Railroad spikes and volcanic ballast. Recently deposited trash (cinder blocks, wine and beer bottles).

14. **NON-ARTIFACTUAL CONSTITUENTS:** None observed.

15. **DATE OF ORIGINAL RECORD:** N/A **DATE OF THIS FORM:** 12/19/90

16. **RECORDED BY:** Gwendolyn Romani, Neal Kaptain, Genevieve Head, and Tricia Webb.

17. **AFFILIATION:** Greenwood and Associates, 725 Jacon Way,
725 Jacon Way, Pacific Palisades, CA 90272
(213) 454-3091

P36-006847

ARCHAEOLOGICAL SITE RECORD

PAGE:2 OF 6 PERMANENT TRINOMIAL: SBr-6847H
DATE OF ORIGINAL RECORD: N/A TEMPORARY NUMBER: R-FEH #9
DATE OF THIS FORM: 12/19/90 AGENCY DESIGNATION:

18. **HUMAN REMAINS:** None observed.

19. **SITE INTEGRITY:** Fair. Footings are intact, but railroad ties and tracks have been removed. Portions of intact and disturbed tracks continue to south.

20. **NEAREST WATER:** Santa Ana River

21. **VEGETATION COMMUNITY (SITE VICINITY):** Coastal sage scrub, Ruderal, and citrus orchard (to south).

22. **VEGETATION COMMUNITY (ON SITE):** Coastal Sage Scrub and Ruderal.

REFERENCES FOR ABOVE: N/A

23. **SITE SOIL:** Sandy loam with gravel - Alluvial/colluvial.

24. **SURROUNDING SOIL:** Same as 23

25. **GEOLOGY:** Alluvial.

26. **LANDFORM:** Minor drainage in Santa Ana Wash.

27. **SLOPE:** 0 28. **EXPOSURE:** Open

29. **LANDOWNERS(S), (TENANTS), ADDRESS:** Unknown.

30. **REMARKS:**

32. **REFERENCES:**

33. **NAME OF PROJECT:** Metropolitan Water District Inland Feeder Project Cultural Resource Investigation.

34. **TYPE OF INVESTIGATION:** Preliminary surface reconnaissance

35. **SITE ACCESSION NO.:** **CURATED AT:**

36. **PHOTOS:** Overviews, B & W prints. **TAKEN BY:** Gwen Romani

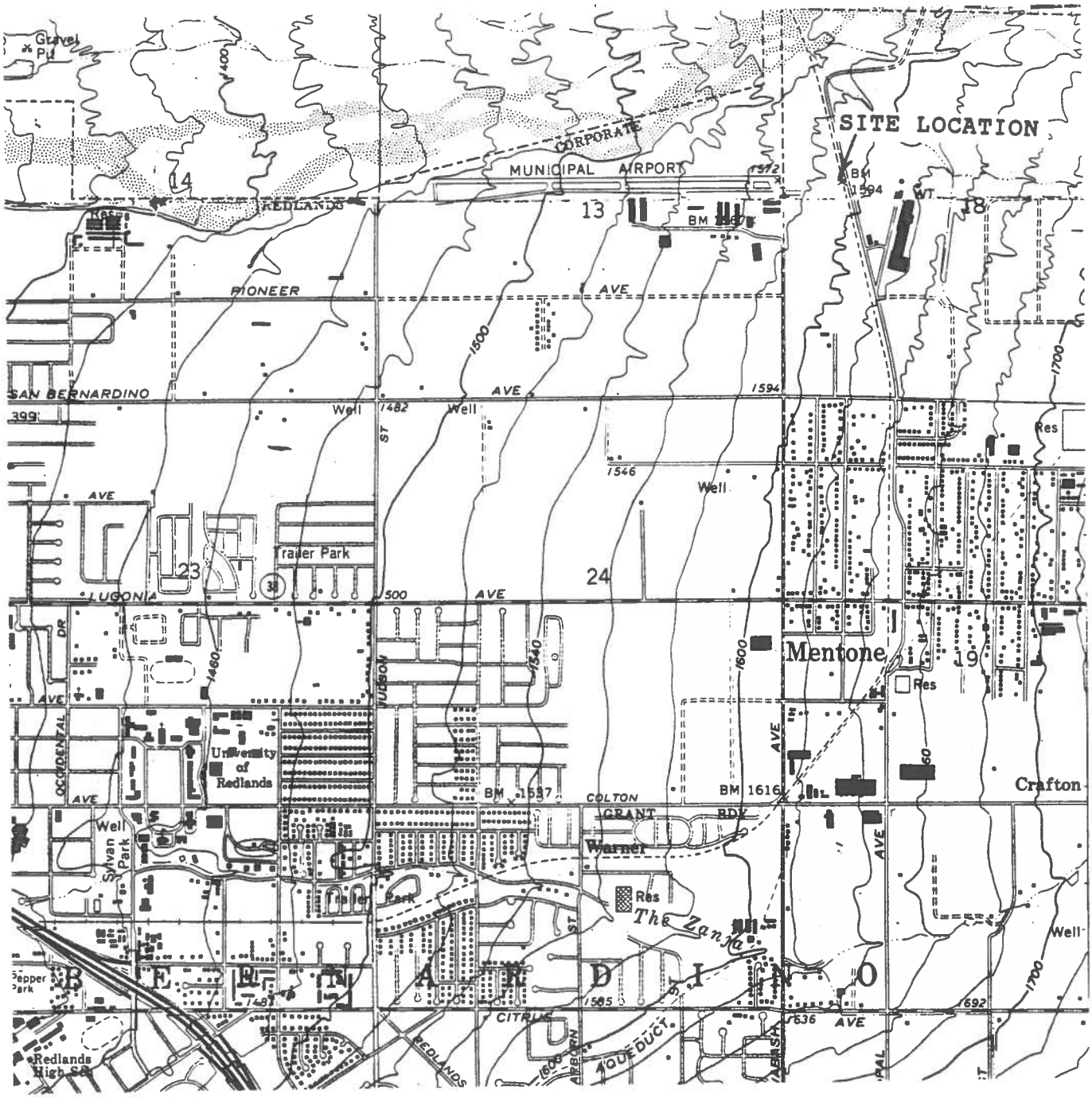
37. **PHOTO ACCESSION NO.** N/A **ON FILE AT:** Greenwood and Associates

P36-006847

ARCHAEOLOGICAL SITE LOCATION MAP

PAGE:3 OF 6
DATE OF ORIGINAL RECORD:
DATE OF THIS FORM: 12/19/90
U.S.G.S. 7.5' QUADRANGLE: Redlands

PERMANENT TRINOMIAL: SBr-6847H
TEMPORARY NUMBER: R-FEH #9
AGENCY DESIGNATION:



P36-006847

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

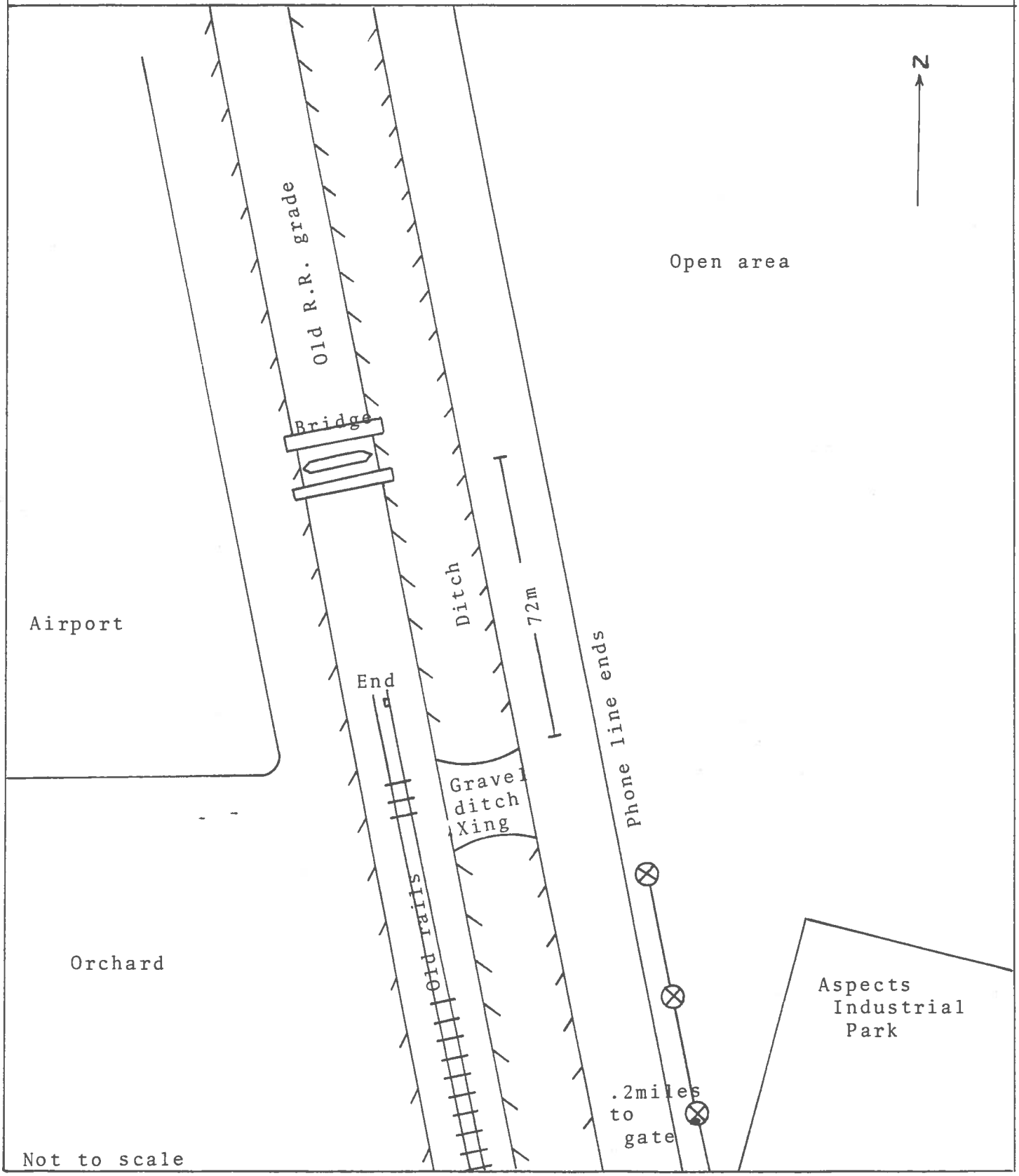
ARCHEOLOGICAL SITE MAP

Page 4 of 6 .

Permanent Trinomial: SBR-6847H / _____ (mo. / yr.)

Temporary Number: Redlands FEH -#9

Agency Designation: _____



DPR 422F (Rev. 8/82)

P36-006847

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

ARCHEOLOGICAL SITE MAP

Page 5 of 6 .

Permanent Trinomial: SBR-6847H / ____ (mo. / yr.)

Temporary Number: Redlands - FEH-#9

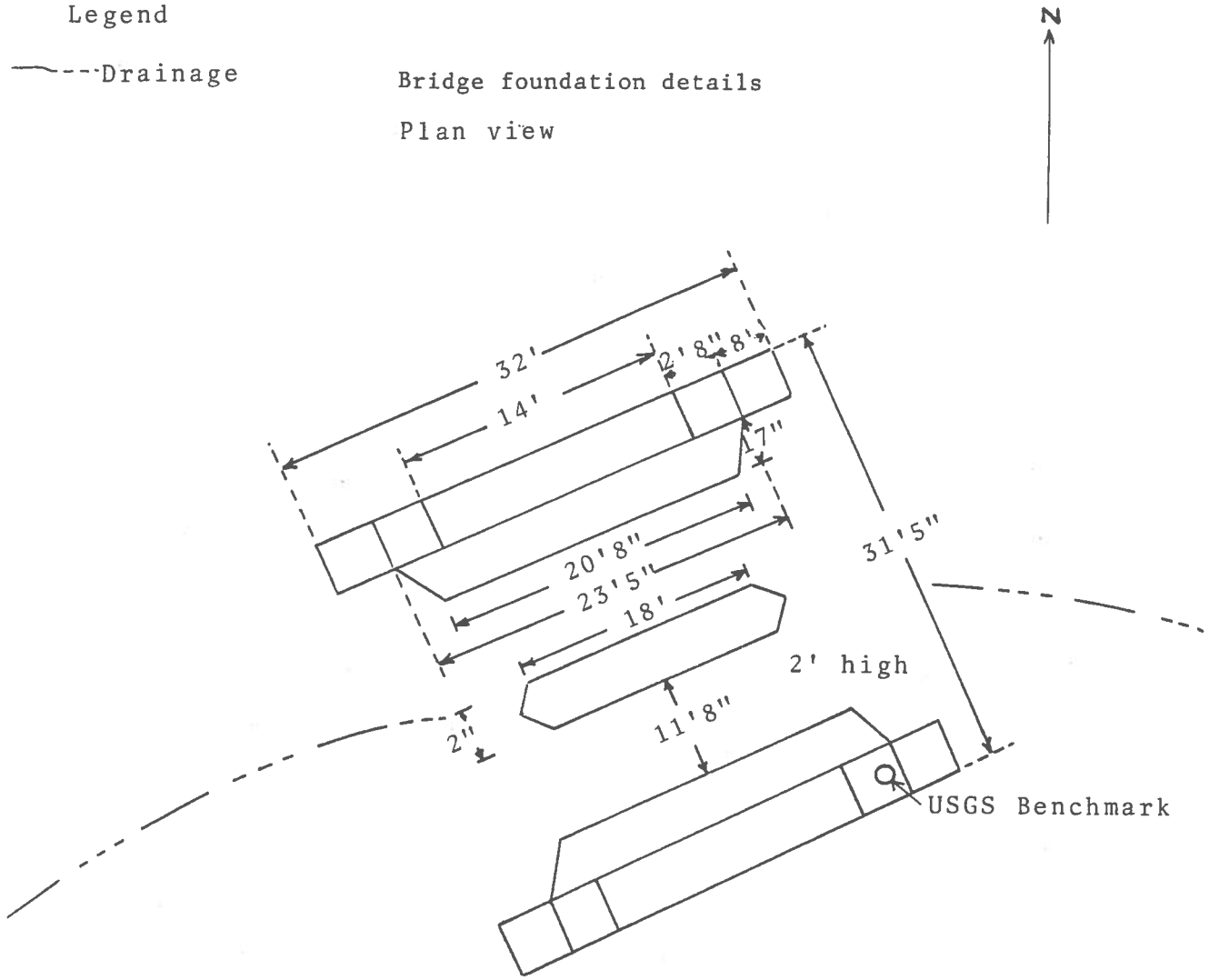
Agency Designation: ____

Legend

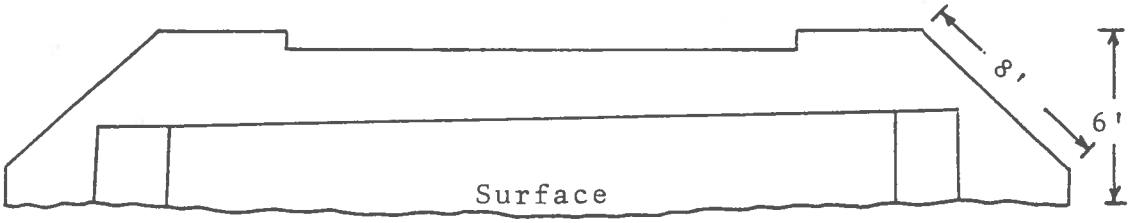
~~---Drainage

Bridge foundation details

Plan view



Profile of North Footing



Not to scale

DPR 422F (Rev. 8/82)

P36-006847

ARCHAEOLOGICAL SITE RECORD - CONTINUATION

PAGE: 6 OF 6 PERMANENT TRINOMIAL: SBR-6847H

DATE OF ORIGINAL RECORD: TEMPORARY NUMBER: R-FEH #9

DATE OF THIS FORM: 12/19/90 AGENCY DESIGNATION:

CONTINUATION

ITEM NO.

(9.) reads "1943; 1594'". Railroad tracks and ties have been removed. Portion of asphalt road bed on the southwest side of the footings and grade.

P36-006847

1063

ARCHAEOLOGICAL SITE RECORD

PAGE: 1 OF 5
DATE OF ORIGINAL RECORD: N/A
DATE OF THIS FORM: 12/05/90
PERMANENT TRINOMIAL: CA-SBR-6847H
TEMPORARY NUMBER: R-FEH/L #1
AGENCY DESIGNATION: PSBR-25H
PRIMARY #P36-006847

1. COUNTY: San Bernardino
2. USGS QUAD: Redlands 7.5' 1967 REVISED: 1988
3. UTM COORDINATES: ZONE 11 482400 m Easting; 3775785 m Northing
4. TOWNSHIP 1N RANGE 3W, NE 1/4, NE 1/4, SE 1/4, SE 1/4, of Section 33 BASE MER. SBM
5. MAP COORDINATES: 2 mm S 227 mm E
6. ELEVATION: 1340 ft.

7. LOCATION: From Interstate 10 in Redlands, take Orange Street exit north for 3 miles, it then becomes Boulder Avenue. Continue on Boulder for 1.4 miles to Base Line Street, turn right and proceed 0.2 mile. Site is 0.2 mile to north within City Creek.

8. PREHISTORIC HISTORIC X PROTOHISTORIC

9. SITE DESCRIPTION: Old Kite Route. Railroad bridges and road grade in City Creek Wash. Railroad grade does not exist beyond boundaries of wash.

10. AREA: 10 m (length) x 63 m (width); 630 m^2
Method: Tape and pace.

11. DEPTH: surface METHOD: N/A

12. FEATURES: Two sets of parallel standing, stepped concrete bridge walls, separated by approximately 43 meters of old railroad grade. Large cut-off anchor bars (two on upper portions and two on lower steps) exist within the concrete forms.

13. ARTIFACTS: Chunks of broken concrete forms, railroad ties, remnants of volcanic railroad ballast, and whiteware ceramic fragments.

14. NON-ARTIFACTUAL CONSTITUENTS: None observed.

15. DATE OF ORIGINAL RECORD: N/A DATE OF THIS FORM: 12/05/90

16. RECORDED BY: Gwendolyn Romani, Kathy VanderVeen, James Kenney, and Bruno Texier.

17. AFFILIATION: Greenwood and Associates, 725 Jacon Way,
725 Jacon Way, Pacific Palisades, CA 90272
(213) 454-3091

P36-006847

ARCHAEOLOGICAL SITE RECORD

PAGE:2 OF 5 PERMANENT TRINOMIAL: SBR-6847H
DATE OF ORIGINAL RECORD: N/A TEMPORARY NUMBER: R-FEH/L #1 and PSBR-25H
DATE OF THIS FORM: 12/05/90 AGENCY DESIGNATION:

18. **HUMAN REMAINS:** None observed.

19. **SITE INTEGRITY:** Fair. Bulk of concrete structural supports remain; railroad tracks dismantled. Railroad grade appears to exist only within City Creek Wash (between the levees).

20. **NEAREST WATER:** Site within City Creek Wash.

21. **VEGETATION COMMUNITY (SITE VICINITY):** Coastal sage scrub.

22. **VEGETATION COMMUNITY (ON SITE):** Same.

REFERENCES FOR ABOVE: N/A

23. **SITE SOIL:** Alluvial/Colluvial.

24. **SURROUNDING SOIL:** Same as 23

25. **GEOLOGY:** Metamorphic.

26. **LANDFORM:** Wash.

27. **SLOPE:** 0-1 degree to south 28. **EXPOSURE:** Open.

29. **LANDOWNERS(S), (TENANTS), ADDRESS:** Unknown.

30. **REMARKS:**

32. **REFERENCES:**

33. **NAME OF PROJECT:** Metropolitan Water District Inland Feeder Project Cultural Resource Investigation.

34. **TYPE OF INVESTIGATION:** Preliminary surface reconnaissance

35. **SITE ACCESSION NO.:** **CURATED AT:**

36. **PHOTOS:** Overviews, B & W prints. **TAKEN BY:** Gwen Romani

37. **PHOTO ACCESSION NO.** N/A **ON FILE AT:** Greenwood and Associates

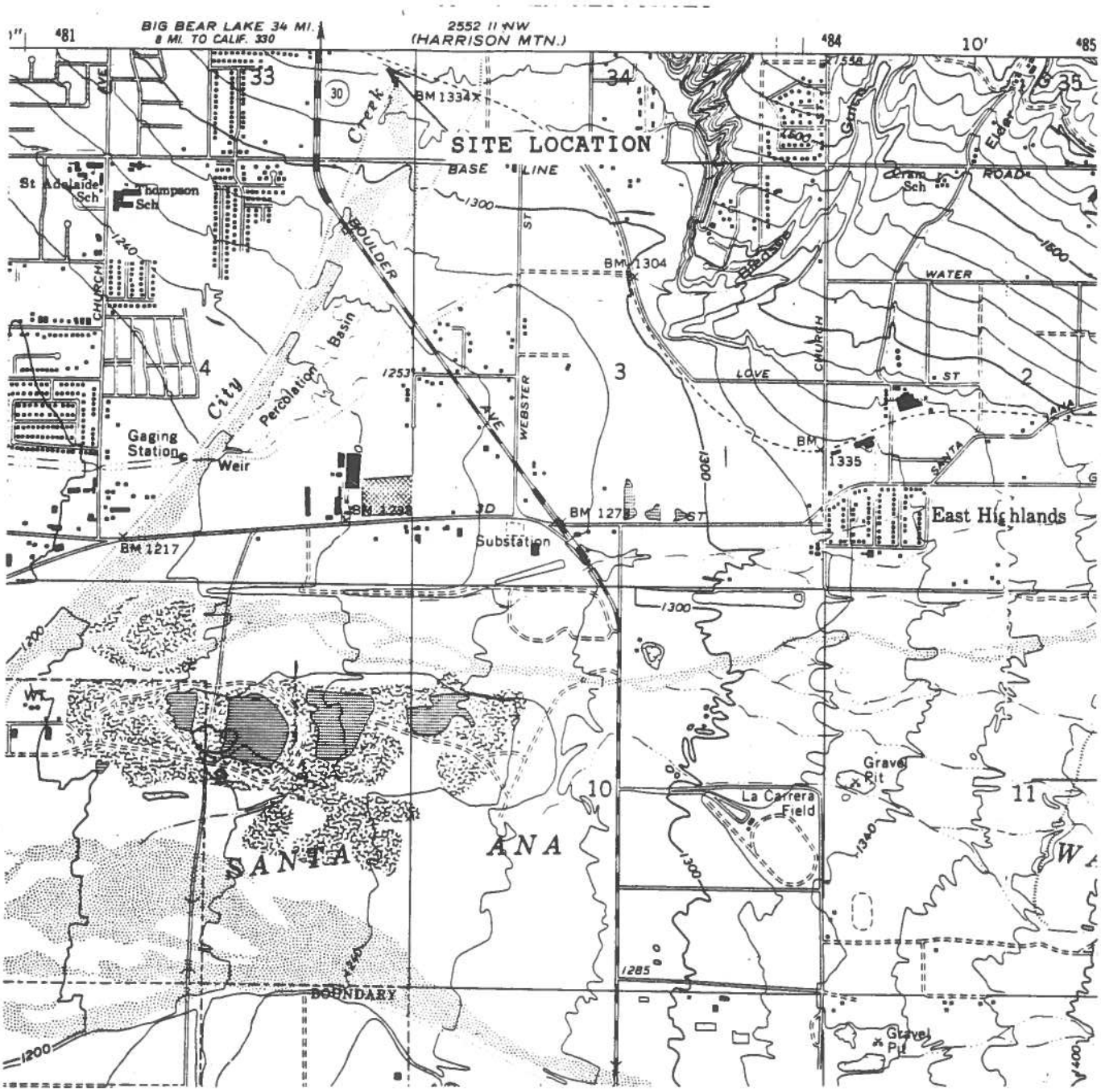
P36-006847

ARCHAEOLOGICAL SITE LOCATION MAP

PAGE:3 OF 5
DATE OF ORIGINAL RECORD:

DATE OF THIS FORM: 12/05/90
U.S.G.S. 7.5' QUADRANGLE: Redlands

PERMANENT TRINOMIAL: SBR-6847H
TEMPORARY NUMBER: R-FEH/L #1 and PSBR-25H
AGENCY DESIGNATION:



P36-006847

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

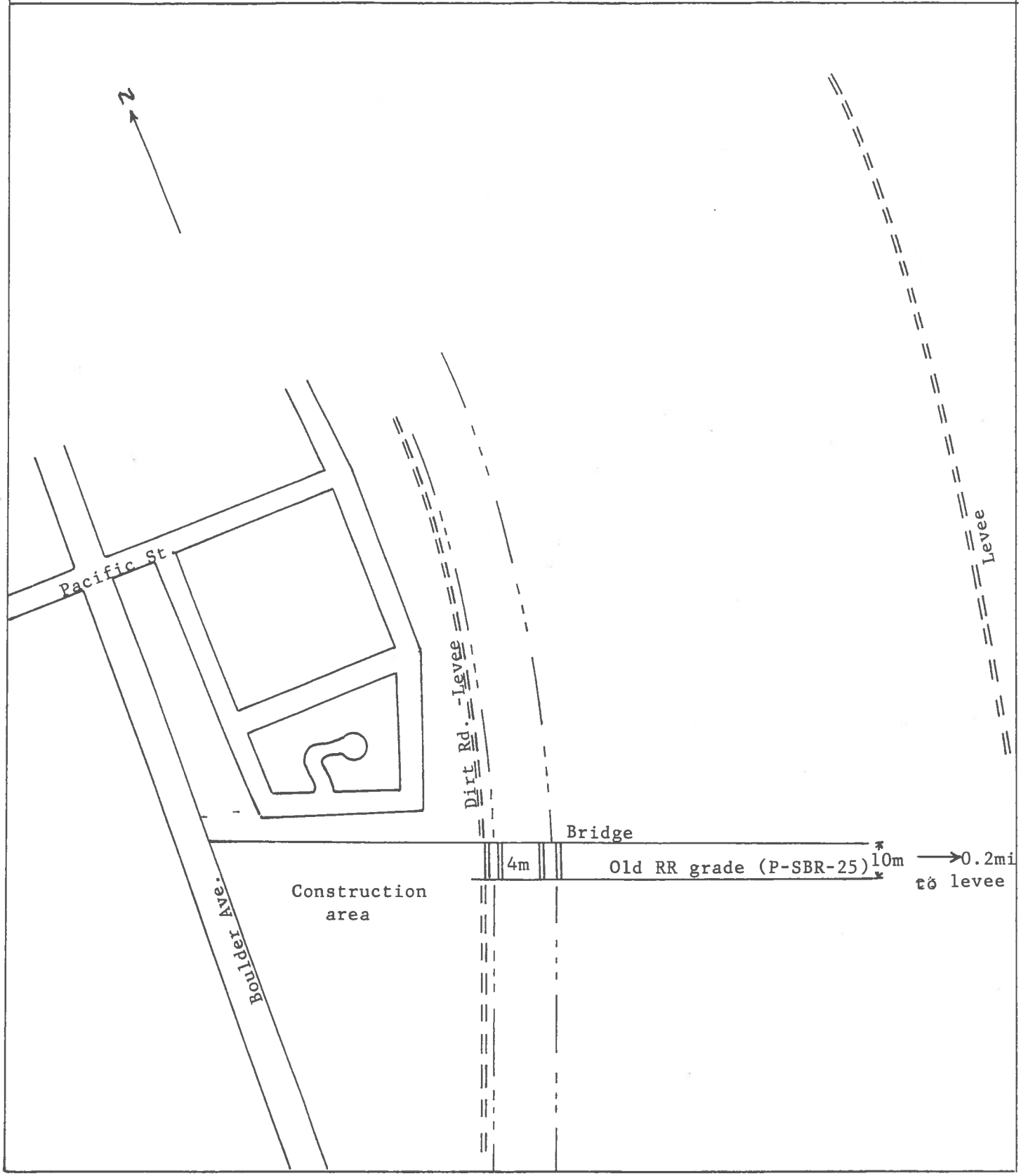
ARCHEOLOGICAL SITE MAP

Page 4 of 5 .

Permanent Trinomial: SBr-6847H / ____ (mo. / yr.)

Temporary Number: Redlands FEH / L-#1

Agency Designation: ____



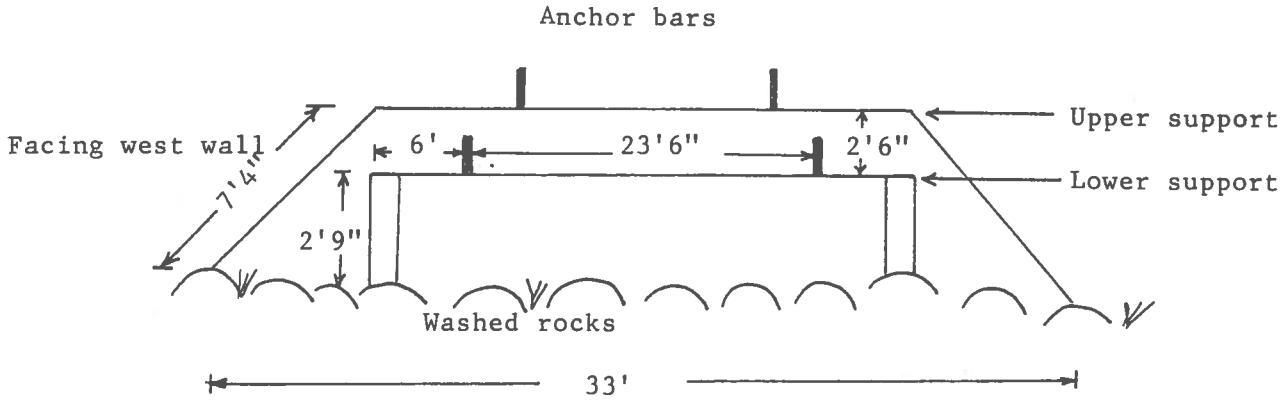
DPR 422F (Rev. 8/82)

P36-006847

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHEOLOGICAL SITE MAP

Permanent Trinomial: SBR-6847H / _____ (mo. / yr.)
Temporary Number: R-FEH/L-#1 (P-SBR-25)
Agency Designation: _____

Detail of bridge

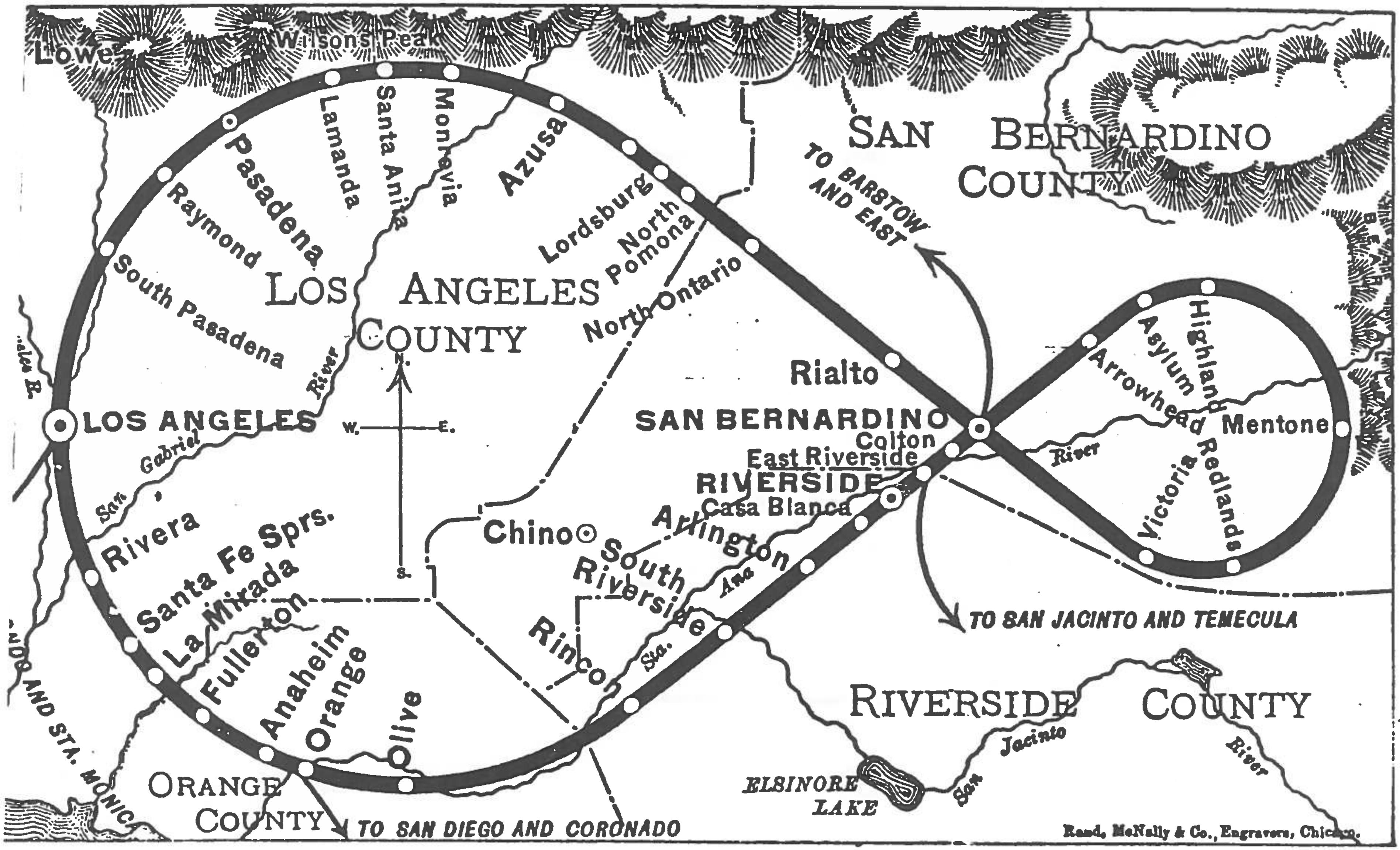


Not to scale

Important and far-reaching events followed each other swiftly when this new project began to get under way. Due to the efforts of W. P. McIntosh, Mentone attracted to itself many visitors of culture, as well as those seeking investment only, and by 1892 a beautiful and spacious tourist resort had become a reality. This was the first pretentious structure to be erected at a cost of some $20,000.00. In 1892, the new Santa Fe Depot, with Mrs. Tillie Shearer as the station agent, had been completed, and the now world famous Kite-Shaped Track with Mentone as the Eastern terminus became a reality.

While these social and economic activities were growing apace, the women of the community were not idle: - quietly and almost unnoticed, the ladies, under the leadership of Mrs. Walter C. Bacon, Mrs. G.S. Gay, Mrs. Fannie McClung, Mrs. Nora Rice, and others, in conjunction with the Congregational Building Society, had obtained sufficient funds to erect the beautiful church edifice that to this day supplies the spiritual needs of the community. The new church was dedicated July 2, 1892, with the Rev. Ed. R. Brainerd as the first pastor.

It is only natural that a region so situated that its soil, enriched for ages by alluvial deposits from the mountains, should render rich returns to investors. Available statistics reveal that in the early days, this section produced great quantities of hay, hams, bacon and lard. Then came peaches, grapes and wool. All these products found ready markets in Los Angeles and as far north as San Francisco. Gradually, however, the Mentone district found its real place in the commercial world by embarking in the orange industry. The pioneers in the orange industry were M. F. Crafts, after whom Crafton was named, who planted the first orange orchard as early as 1870; Mr. C. R. Paine was second, with an orchard planted in 1877; and Mr. W.P. McIntosh, third, with an orchard on what is now Mentone Boulevard, about 1888. With climatic second to none in California for the culture of oranges, it was



Southern California R. R. Famous "Kite Shaped Track."

ONTARIO
GUASTI
FONTANA
7.5' S.B. SOUTH
S.B. NORTH
HARRISON MT.
REDLANDS

SBR-6847H
~~PSBR-2S~~-H
SANTA FE RR - KITE ROUTE
P36-006847

28th, 1943

Westways

REG. U. S. PATENT OFFICE

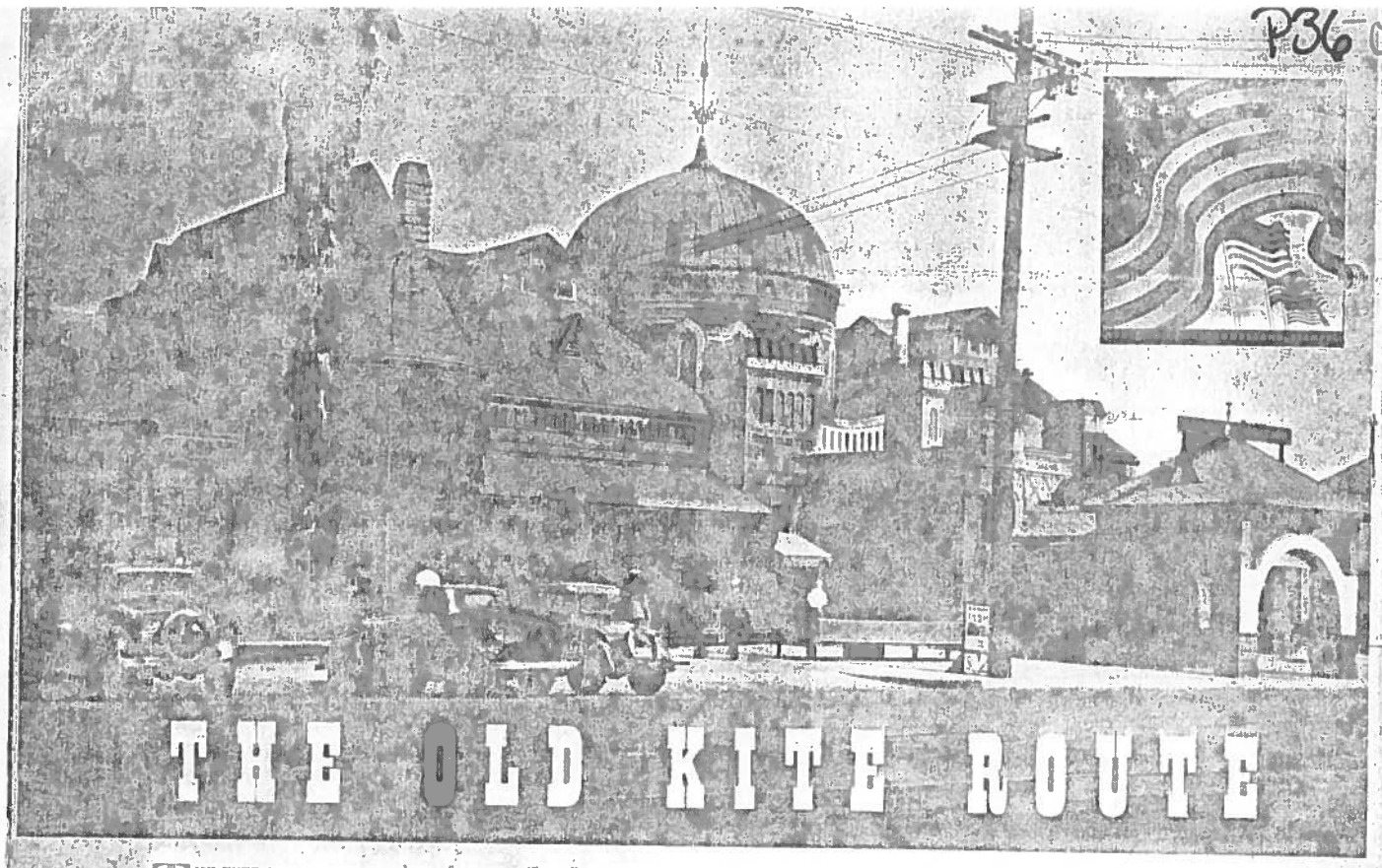
The Friend of touring motorists since 1900

VOLUME 35 NUMBER 7

CONTENTS FOR JULY, 1943

PHIL TOWNSEND HANNA . . . . . . Editor and Gen. Mgr.
STANDISH L. MITCHELL . . . . Business Manager
WILLIAM K. BAXTER . . . . Managing Editor
JESS INGRAHAM . . . . Advertising Manager
PATRICE MANAHAN . . . . Assistant to the Editors
DILLON LAURITZEN . . . . Art Director
DAVE PACKWOOD . . . . Staff Photographer

WESTWAYS is available to the general public as well as to members of the Club at the regular subscription price of $1.00 a year. OFFICE OF PUBLICATION: 9344 Wilshire Blvd., Beverly Hills, California. EDITORIAL AND EXECUTIVE OFFICES: 2601 S. Figueroa St., Los Angeles. Phone Richmond 3111.



THE OLD KITE ROUTE

THE EVER-INCREASING number of passengers on all Southland trains is reminiscent of those memorable yesterdays when everyone traveled by rail. Thanks to the rubber famine we now think of the Iron Horse when a trip beyond the limitations of our gasoline rations is contemplated. Yes, history is repeating itself, for willy-nilly we'll go by train for the duration, and chances are we'll find that it's not so hard to take, either. Especially as we reflect on the fun our parents got out of riding by rail, over the old Kite Route, for example, probably the most popular of all California excursions.

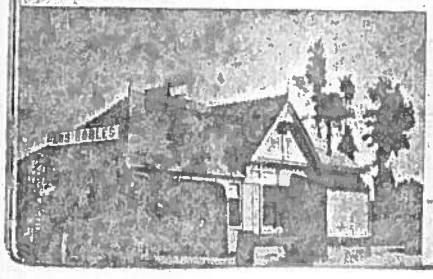
"No Scene Twice Seen on the Kite-Shaped Track" was the double-barreled description of the "Special Excursion" leaving the Santa Fe depot at 9:00 each morning. Should you miss the Special there was for a time another train 30 minutes later going the opposite direction, or counter-clockwise, around the "kite." No matter what excursion you took there was no retracing of even a mile of track or scenery.

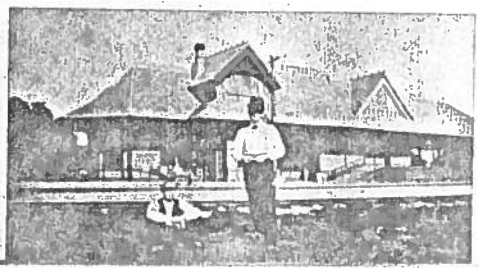
To a generation unaccustomed to four-lane highways and throbbing stratoliners, "goin' 'round the kite" quickly became a byword throughout Southern California. It was tops for Sunday entertainment, a kind of Catalina in its own right. As scenery goes it more than held its own and as railroading it was, and is (for the tracks are still intact) unique. One went from Los Angeles "through the heart of the famous Orange Belt" along the Foothill Route west to San Bernardino, thence around the Redlands loop (a short digression from the main "kite") back to "Berdoo," and finally returned to town via Riverside and the Valley Route. Here was a real loop-the-loop scenic thrill in the general shape of a kite. The principal loop, of course, was the Los Angeles-San Bernardino sector "goin' and comin'," like two halves of a somewhat squashed apple. Today, the all-Diesel *Super Chief* flashes over the Foothill rails whereas the steam-operated *Grand Canyon Limited* highballs along the Valley tracks. And the remainder, up Redlands way? Well, this has gone freight; yes, it has been many a year since the flanges of passenger trains screeched around this "lesser" loop.

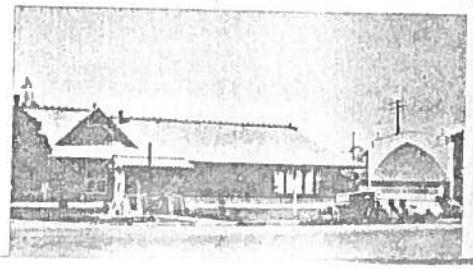
Finally, even as does the cloth-and-wood variety, this kite had its string—which brings us to the San Jacinto branch leaving the "big" loop at Highgrove just south of Colton. At best this secondary

• Los Angeles residents of pre-Union Station days will recall the old Santa Fe depot down near the river and First Street. It was from here that gay and carefree excursionists set out for a day of "going 'round the kite — where no scene was twice seen" and all for $2.05

Los Robles *Glendora* *San Dimas*

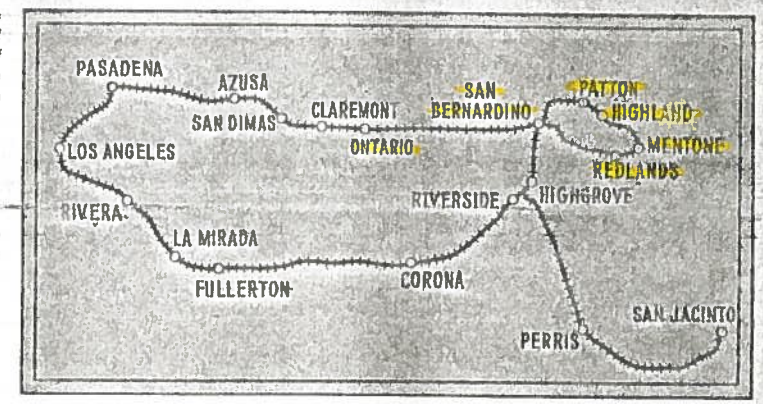






PBG006847

• An imaginative railroad publicity man must have been responsible for the "Old Kite" name for the excursion route. If you can make out the shape of a kite on the map you also have good imagination



line had only a local or two and today it still has but one scheduled run—a mixed train puffing leisurely along hauling a string of freight cars with a lone passenger coach tagging on behind. But our interest in this branch is purely academic for although an integral part of the kite it was never included in the Kite Route itinerary.

Now let us do a little regressing and imagine ourselves Kite-riding in celebration, let's say, of McKinley's election. Having paid the $2.05 Sunday-rate fare, we, with a hundred or so others, board the wooden coaches and find a nice red plush seat. Comfortable? Well, not quite like the rocking-chair on the veranda but much easier riding than those new horseless carriages. The conductor consults his big gold timepiece, yells a lusty "all aboard" and we're off. The first stop is Pasadena. Beyond the Rose City, then as now, are the towering mountains on our left. But all else is different, vastly different than today. We see only projected subdivisions in semi-arid desert land, nestled in almost endless orange groves.

PEANUTS and harmonizing took the place of dignity and propriety on yesteryear's excursions on the old Santa Fe

By *FRANK P. DONOVAN, JR.* and *PHILIP HORTON*

Dusty dirt roads with an occasional buggy or farm wagon give scant indication of the Southland to come. There are some jerry-built homes largely of eastern pattern, for Spanish-styled California architecture will be introduced later in stable, permanent dwellings.

A five-minute pause is made at San Bernardino, already quite a railroad town, while switches are lined for the Redlands loop. The train starts with a jerk and is soon rounding the circle as excursionists lean out of the coaches and wave or call to their friends in other cars of the special, easily visible on the inner side of the curve. Occasionally passengers, particularly young folk, sneak out on the open wooden platforms only to be summarily sent inside by trainmen. Yet it was worth the trouble, for holding onto the iron railing of a swaying car rounding a sharp curve held a tang and zest peculiar to kite-riding on the Santa Fe. That was part of the fun, along with eating peanuts and harmonizing on barbershop ballads. Dignity and propriety were not included in the itinerary, at least not on all-day Sabbath outings.

Now the brake shoes screech and the train rumbles along the tree-lined streets of Redlands for a two-hour layover. Tally-hos and carriages await excursionists for the "full McKinley drive to Smiley Heights, Canyon Crest Park and return." The fee? Tally-hos, 75 cents; carriages, $1.00 the round trip.

About 12:50 the well groomed horses are trotting back to the station and coachmen help their passengers onto the platform. It's now one o'clock—the locomotive gives a series of sharp whistles and excursionists scramble aboard the train. The special continues around the other half of the loop back to San Bernardino, thence south to Riverside, "center of the largest orange-growing district in the world." Here excursionists again disembark, some going to nearby restaurants, others promenading along the clean, shady streets, and not a few going for a 12-mile drive through town, to meet the train at Casa Blanca (even as a future meeting in a far-distant Casablanca will someday mark another era of railroad prosperity) or Arlington, "at the end of Magnolia Avenue."

Two hours later the Kite Route train chuffs out of Riverside with most of its passengers: some board at Casa Blanca and the remainder get on at Arlington. Then, windows open wide, the careening coaches rattle through Santa Ana Canyon as passengers bob their heads in and out of the windows or make for the back platform. If the train is late, or the day short, the conductor goes through the aisles lighting the pintsch lamps when dusk overtakes the excursion before "La Grande" (the name of the old Santa Fe station in Los Angeles) is reached. At Rivera, men get bags or valises from the racks and women put their reticules away as the lights of Los Angeles hover in the offing.

Here another provocative parallel writes the finis to our memory-trip, for these homeward-bound, tired-but-happy excursionists are entering at nightfall a city which, with its turn-of-the-century oil lamps, looked not unlike the dimmed-out Los Angeles of today. How much nearer to yesteryear's ways of living are the current habits of 1943's war-changed America!

North Pomona

Mentone

La Mirada

106 7451 36-021711

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 36-021711
HRI #
Trinomial
NRHP Status Code 6
Other Listings
Review Code Reviewer Date

 Resource Name or #: Highgrove Steam-Electric Generating Plant

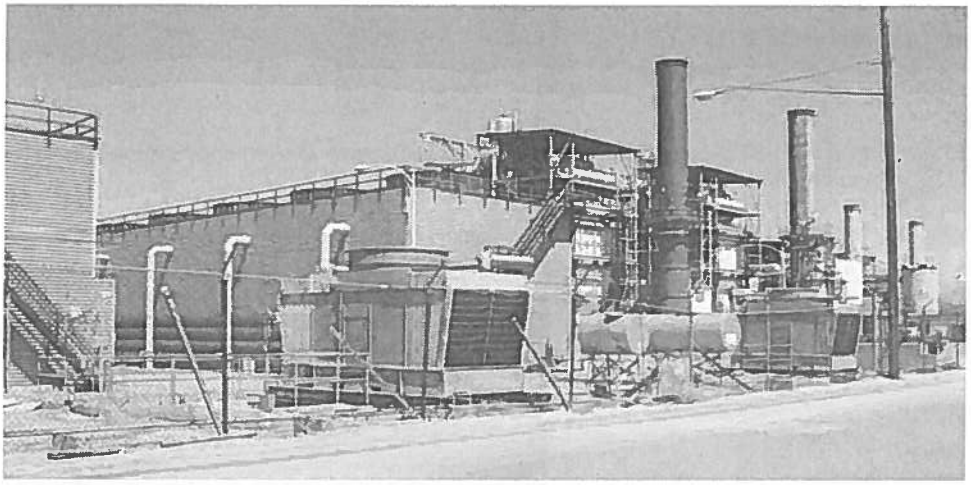
P1. Other Identifier: APE Map Reference #9
*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County: San Bernardino and (P2b and P2c or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quad: San Bernardino South Date: 1967 PR 1980 T 2S; R4W SE ¼ of Sec 6 ; S.B.B.M.
c. Address: 12700 Taylor Street City: Grand Terrace Zip: 92313
d. UTM: Zone: 11; mE/ mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) APNs: 1167-151-66; 1167-151-67 and 1167-151-40; located at the northwest corner of Taylor Street and Main Street

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This property was previously evaluated for the purposes of the California Environmental Quality Act (CEQA) in 2006 as part of documentation submitted to the California Energy Commission. However, that site record, which is attached and referenced extensively, has not yet been submitted to the San Bernardino Archaeological Information Center (SBAIC) or included in the State's Historic Resources Inventory. For these reasons and the fact that the property was not evaluated for the National Register of Historic Places (National Register), it is being evaluated again.

The subject property consists of three parcels that are developed with the Highgrove Generating Station (APN 1167-151-66) and Cage Park (APN 1167-151-67 and 1167-151-40). The Highgrove Generating Station, which is no longer operational and partially deconstructed, was a combination natural gas and fuel oil burning steam generation electrical power plant. The approximately 10-acre property includes four cooling towers, the power plant, the administration building, and related structures. Since the very thorough documentation of the property in 2006, only minor changes have occurred, including the removal of some parts of the structures (mostly interior features) and neglect of the landscaping. Therefore, the reader is referred to the 2006 site record for detailed descriptions of the facility and related buildings. (*see Continuation Sheet*)

*P3b. Resource Attributes: (List attributes and codes) HP9 Public utility building; HP31 Park
*P4. Resources Present: ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) View to the northwest, taken on July 14, 2009

*P6. Date Constructed/Age and Sources: ☒Historic ☐Prehistoric ☐Both
1951-1955

*P7. Owner and Address:
AES Highgrove
12700 Taylor Street
Grand Terrace, CA 92313

*P8. Recorded by: (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

*P9. Date Recorded:
July 2009 – April 2010

*P10. Survey Type: (Describe)
Intensive-level Section 106 compliance

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Historical Resource Evaluation Report, Interstate 215 HOV Lane Gap Closure Project in San Bernardino and Riverside Counties, February 2010.

*Attachments: ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☒Other (List): Site record for the Highgrove Generating Station prepared by JRP Historical Consulting, LLC in November 2006.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6

*Resource Name or # (Assigned by recorder) Highgrove Generating Station

B1. Historic Name: Highgrove Steam-Electric Generating Plant; Highgrove Power Plant
B2. Common Name: Highgrove Power Plant
B3. Original Use: Power plant **B4. Present Use:** Decommissioned
***B5. Architectural Style:** Industrial
***B6. Construction History:** (Construction date, alterations, and date of alterations)
1951 - Units 1 and 2
1953 – Unit 3
1955 – Unit 4
***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** _____ **Original Location:** _____
***B8. Related Features:** Subsidiary buildings and structures including ministration building
B9a. Architect: Fluor Corporation Limited, Los Angeles **b. Builder:** Fluor Corporation Limited, Los Angeles
***B10. Significance: Theme:** Steam electric generating plants **Area:** City of Grand Terrace
Period of Significance: 1951-1955 **Property Type:** Industrial **Applicable Criteria:** NA
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Highgrove Generating Plant does not appear to be eligible for listing in the National Register under any criteria, nor does it appear to qualify as a historical resource pursuant to the California Environmental Quality Act (CEQA).

Historic Context Summary (this information has been condensed from the detailed context in the attached 2006 site record prepared by Herbert and Brookshear). The earliest electric generating plants in California were steam plants. The first steam turbine-generator was built in 1884 by British designer Sir Charles Parsons. By the early 1900s, power plants began using steam turbines and within a short period the technology greatly improved. Steam power generators were an important part of California's power production until about 1920 when hydroelectric generating plants began to dominate. However, droughts, better technology, and new natural gas lines combined to create a resurgence of steam-electric generating plants in California, especially after 1941. After World War II, population and housing swelled as did business and industrial development. This created a new and larger demand for power. Since steam turbine power plants were cheaper and easier to build than hydroelectric plants, they became the generator of choice (Herbert and Brookshear 2006:11). Many new steam generation plants were built in California during this period, with 1950-1970 being the peak expansion of steam generating capacity for Pacific Gas and Electric (PG & E), Southern California Edison (SCE), and many others. As of 2006, "information from the California Energy Commission (CEC) states that there are currently 34 steam turbine power plants in California of a variety of ages and locations" (Herbert and Brookshear 2006:12). (*see Continuation Sheet*)

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

Herbert, Rand and Cheryl Brookshear
2006 Department of Parks and Recreation (DPR) 523A and 523B forms for the Highgrove Generating Station. Prepared by JRP Historical Consulting, LLC., November 14.

Klure, Laura L.
2005 *California Electric Power Company 1904-1964: A Powerful Corporate Family*. Published 2005, Riverside, CA.

The Fluor Corporation, Ltd.
n.d. *California Electric's Highgrove Steam Plant, Riverside, California.* Marketing brochure circa 1953 provided by Laura Klure.

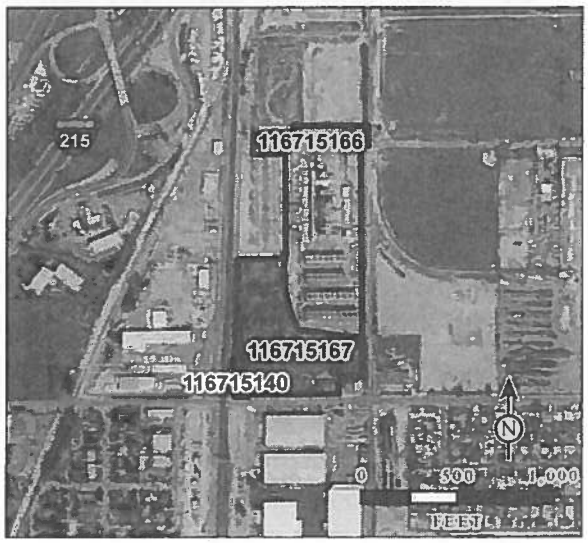
B13. Remarks:

***B14. Evaluator:** Casey Tibbet, M.A., LSA Associates, Inc., 1500 Iowa Avenue, Suite 200, Riverside, CA 92507

***Date of Evaluation:** July 2009 – April 2010

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

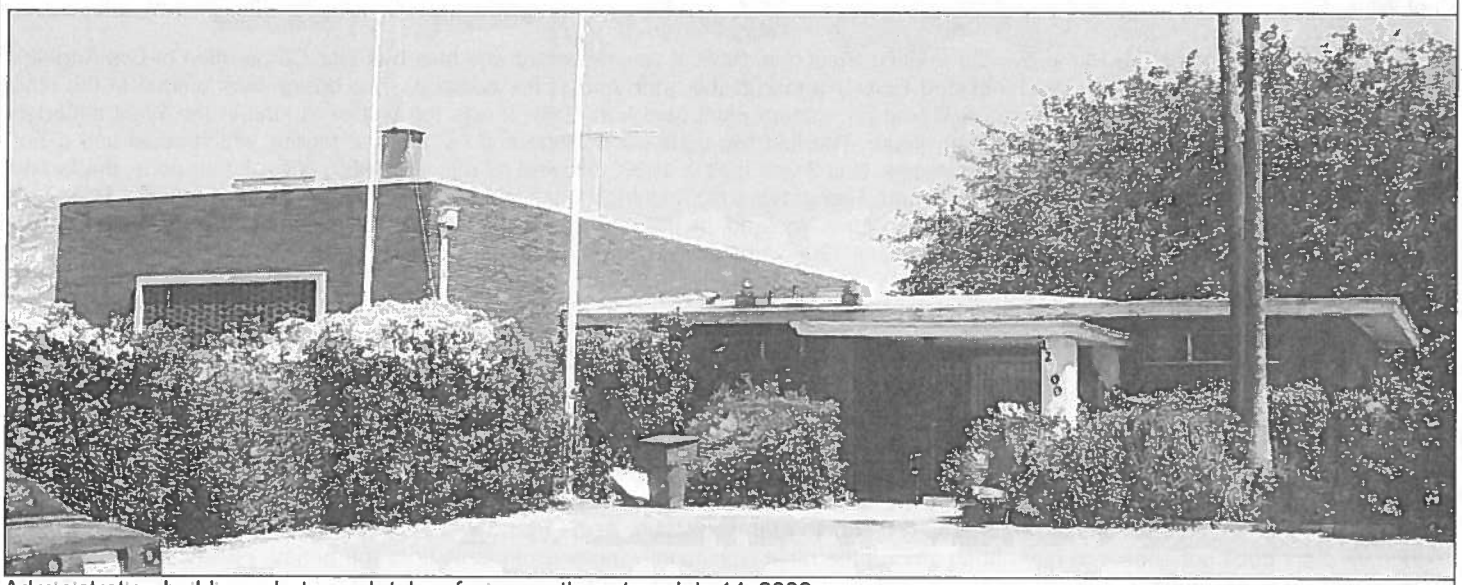
Primary # _____
HRI # _____
Trinomial _____

Page 3 of 4 *Resource Name or #: (Assigned by recorder) Highgrove Generating Station
*Recorded by LSA Associates, Inc. *Date: July 2009 – April 2010 X Continuation _____ Update

***P3a. Description:**

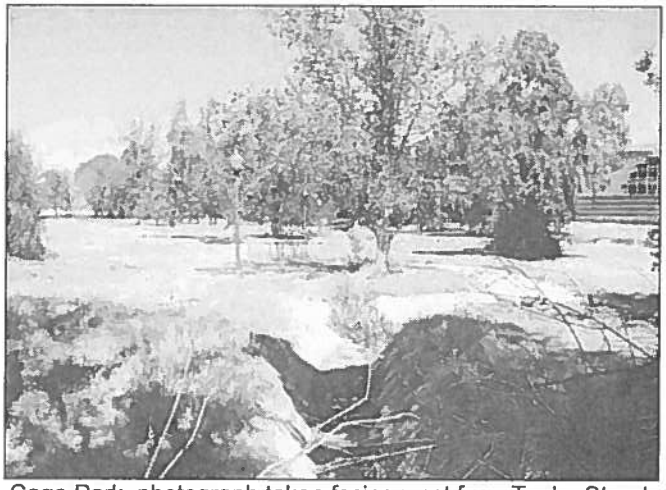
The approximately 7-acre L-shaped Cage Park is located adjacent to the south of the generating station, primarily along Main Street, and was originally developed for use by the plant's employees. It was named for California Electric Power Company (Calectric) President, Albert Cage and includes acorn style lights, a canal, and a small lake that was once stocked with fish. Currently, the watering system in the park has been shut off and the canal and lake are dry and the vegetation is dead or dying.

P5a. Photo or Drawing



Administration building, photograph taken facing northwest on July 14, 2009.

Cage Park, photograph taken facing north from Main Street on July 14, 2009.



Cage Park, photograph taken facing west from Taylor Street on July 14, 2009.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 4 *Resource Name or #: (Assigned by recorder) Highgrove Generating Station
*Recorded by LSA Associates, Inc. *Date: July 2009 – April 2010 X Continuation _____ Update

***B10. Significance:**

The Highgrove Generating Station was constructed by California Electric Power Company (Calectric). The company that would become Calectric originated in the southern Sierra Nevada in 1904. The company, then called the Nevada Power Mining and Milling Co., established several hydroelectricity plants which provided electricity to mining camps. In 1912, it built a transmission line to San Bernardino and over the next several years expanded into Mono, Inyo, Kern, and Riverside counties. By the 1950s it had tapped all the hydroelectric power in its service area and began a program of building steam generating power plants (Herbert and Brookshear 2006:13). The first plant was Highgrove (1951), followed by San Bernardino (1956), Norton Air Force Base (1957), Barstow (1959), Cool Water Steam Plant (1961), and a joint project in Yuma, Arizona (Herbert and Brookshear 2006:13). Calectric merged with SCE in January 1964.

Construction started on the Highgrove Generating Station in 1950. It was designed and built by Fluor Corporation of Los Angeles and was constructed in phases. Phase I included Units 1 and 2 at the north end of the complex. The design was unique at the time because it lacked an exterior shell and is considered an outdoor plant (ibid.). In 1951, it was the first of its kind in the West although others were under construction or in the design phase. The first two units went online in 1952 and the facility, which could use either natural gas or fuel oil, was operated by 25 employees. Unit 3 was built in 1953, followed by unit 4 in 1955. With all four units, the facility had 65 employees. When SCE and Calectric merged, Highgrove and Calectric's other plants were merged into the system. However, with deregulation, SCE was required to sell half of it plants. Instead, in 1996, SCE opted to sell all its gas and oil fueled plants, which included Highgrove. The plant remained operational until 1998 when it was decommissioned.

Evaluation. The Highgrove Generating Station does not appear to be eligible for listing in the National Register under any criteria. Under Criterion A, the plant does not appear to be significant in the context of the history of the California Electric Power Company, the history of steam generation of electricity, or the history of post-World War II (WWII) steam generation plants (Herbert and Brookshear 2006:14). Under Criterion B, the plant does not appear to be associated with the productive life of a historically significant person (Herbert and Brookshear 2006:15). Under Criterion C, while the company touted its facility as being new or innovative, it does not appear significant within the context of steam-electric power generation. According to a brochure published by The Fluor Corporation, Ltd., the plant was unique in that it was "the most completely outdoor plant on the West Coast" (The Fluor Corporation, Ltd., n.d.:3). However, the outdoor design, which eliminated the protective skin or roof covering, appears to have been a cost-saving approach to building plants in temperate climates, rather than a technological innovation. Aside from this cost-effective construction approach, the Highgrove plant does not appear to have been among the most significantly innovative plants from the period. Finally, under Criterion D, the plant does not appear likely to yield information important in prehistory or history. It "is well documented through company records and construction documents and does not appear to be a principal source of information" (Herbert and Brookshear 2006:15). For these reasons, which are discussed in more detail in the 2006 site record, the property does not appear eligible for listing in the National Register and is not a historical resource under CEQA.

ATTACHMENT
106451

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z
Other Listings _____
Review Code _____ Reviewer _____ Date _____

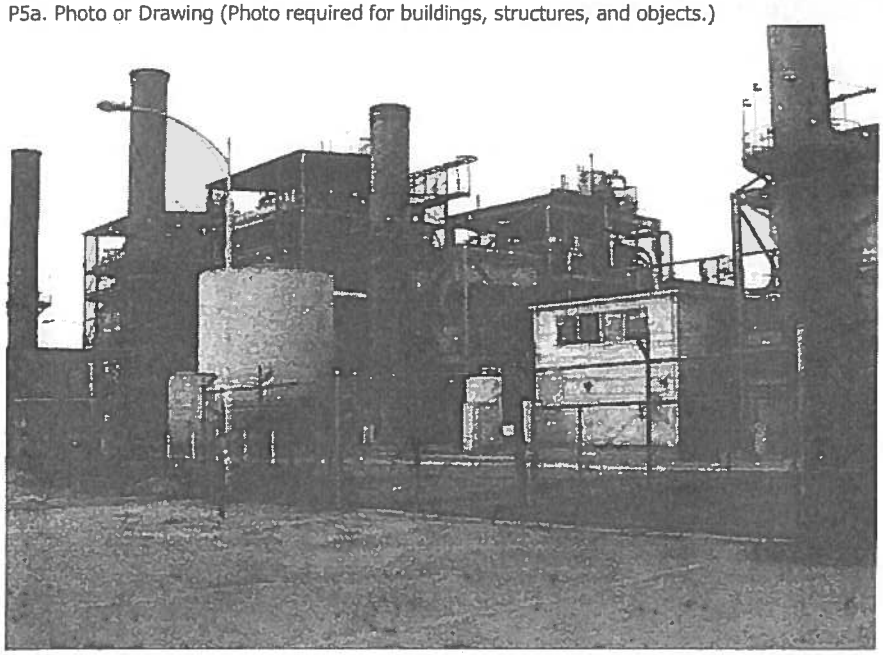
*Resource Name or # (Assigned by recorder) Highgrove Generating Station

P1. Other Identifier: Highgrove Generating Station
*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County San Bernardino
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quad San Bernardino South Date 1980 T2S; R 4W; SE ¼ of Sec 6; MD B.M.
c. Address 12700 Taylor St. City Grand Terrace Zip 92313
d. UTM: (give more than one for large and/or linear resources) Zone _____; _____ mE/ _____ mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Highgrove Generating Station is a combination natural gas and fuel oil burning steam generating electrical power plant located east of I-215 in Highgrove, in San Bernardino County on the north side of the San Bernardino and Riverside county line. The 35-acre complex contains four units each with a boiler, a generator and a cooling tower; subsidiary maintenance structures; and an administration building. Consistent with National Register guidelines and standard professional cultural resource management practices, this integrated industrial facility is treated as a single resource for the purpose of evaluating its potential historic significance. Each structure is described individually below, and the locations of the structures in relation to each other are shown on the attached **Sketch Map**. (See Continuation Sheet).

*P3b. Resource Attributes: (List attributes and codes) HP9 Public utility building
*P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession#) Photograph 1. Generating station, camera facing southwest, November 14, 2006.

*P6. Date Constructed/Age and Sources:
☒ Historic ☐ Prehistoric ☐ Both
1951-1955

*P7. Owner and Address:
AES Highgrove
12700 Taylor St.
Grand Terrace, CA 92313

*P8. Recorded by: (Name, affiliation, address)
Rand Herbert/ Cheryl Brookshear
JRP Historical Consulting, LLC
1490 Drew Ave, Suite 110,
Davis, CA 95618

*P9. Date Recorded: November 14, 2006

*P10. Survey Type: (Describe) Single Site

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") None
*Attachments: ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record
☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record
☐ Other (list) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____
HRI # _____

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) Highgrove Generating Station

B1. Historic Name: Highgrove Power Plant
B2. Common Name: Highgrove Power Plant
B3. Original Use: Power Plant B4. Present Use: Decommissioned
***B5. Architectural Style:** Industrial
***B6. Construction History:** (Construction date, alteration, and date of alterations) Units 1 and 2 1951, Unit 3 1953, and Unit 4 1955.

***B7. Moved?** ☒ No ☐ Yes ☐ Unknown **Date:** _____ **Original Location:** _____
***B8. Related Features:** Subsidiary buildings and structures including administration building.

B9. Architect: Fluor Corporation Limited, Los Angeles b. Builder: Fluor Corporation Limited, Los Angeles
***B10. Significance: Theme** n/a **Area** n/a
Period of Significance n/a **Property Type** n/a **Applicable Criteria** n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Highgrove Generating Station does not appear to be a historic resource for the purposes of CEQA. The power plant, built between 1951 and 1955, is not associated with events that have made a significant contribution to the history of the local area, region or state (Criterion A and 1). The property does not appear to have been associated with a person who made significant contributions to local, state or national history (Criterion B and 2). The building does not embody characteristics of a type, period, region or method of construction. It is not the work or a master and does not have high engineering value (Criterion C and 3). Rarely buildings can provide information about historical methods of construction (Criterion D and 4); however, information on this building is recorded elsewhere and it does not appear to be a primary source in this regard. This property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and does appear to be a historical resource for the purposes of CEQA. (See Continuation Sheet)

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:**

Williams, *Energy and the Making of Modern California;*
Termuehlen, *100 Years of Power Plant Development,*
Klure. *California Electric Power Company;* for additional citations see also footnotes in B10. Significance.

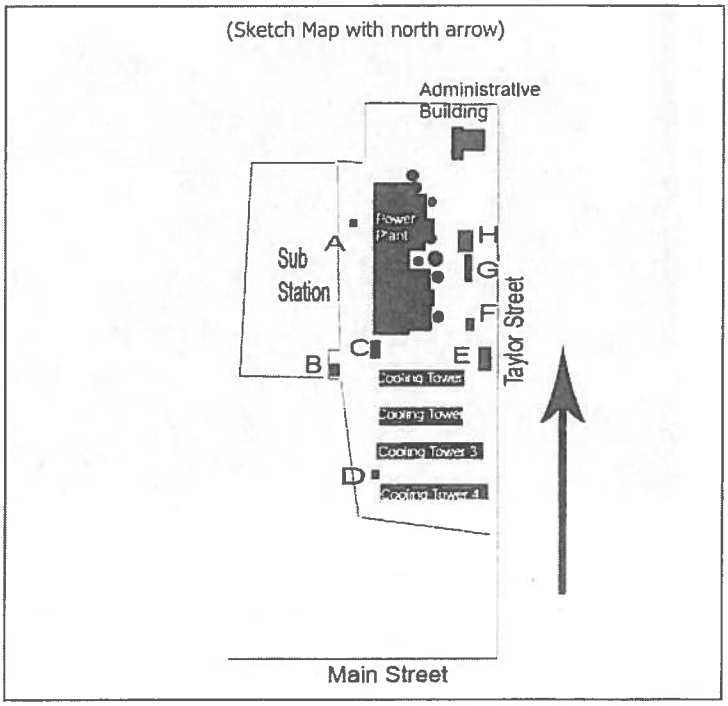
B13. Remarks:

***B14. Evaluator:** Rand Herbert/ Cheryl Brookshear

***Date of Evaluation:** November 2006

(This space reserved for official comments.)

(Sketch Map with north arrow)



***Required Information**

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

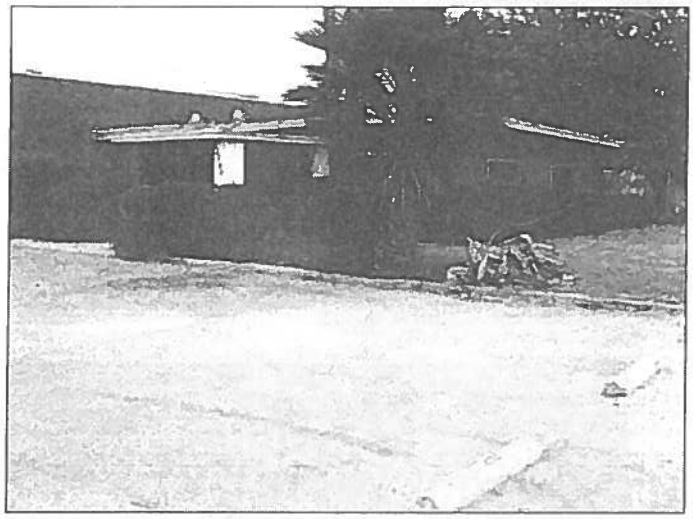
Primary # _____
HRI # _____
Trinomial _____

 *Resource Name or # (Assigned by recorder) Highgrove Generating Station
*Recorded by Rand Herbert/ Cheryl Brookshear *Date November 14, 2006 ☒ Continuation ☐ Update

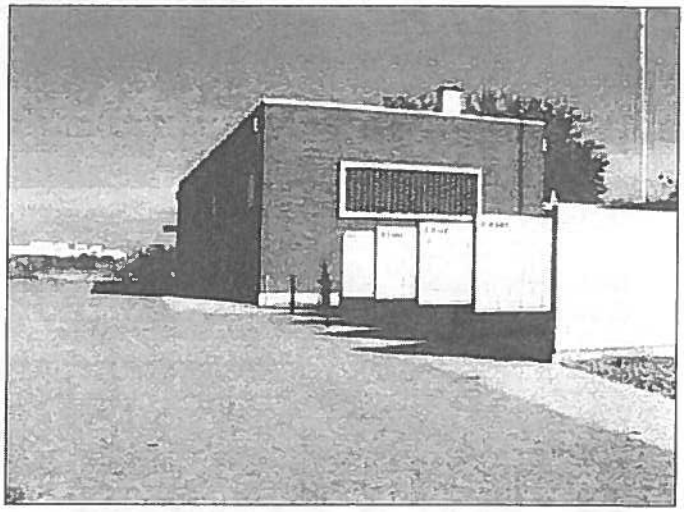
P3a. Description (continued):

Administration Building

The administration building consists of a single story square on the east and a 1 ½ story rectangle on the west. The entire building is clad in long thin bricks. The eastern portion has deep eaves and a low hip roof. Two large single-pane windows face east. An entrance porch supported by square brick columns faces south. High ribbon windows flank the entrance. **(Photograph 1)** The western portion has a flat roof. The west side has a large picture window, a double glass door and a single personnel door with an overhang. The south end has a decorative brick pattern. **(Photograph 2)**



Photograph 2. Administration Building, camera facing northwest



Photograph 3. Administration Building, camera facing north

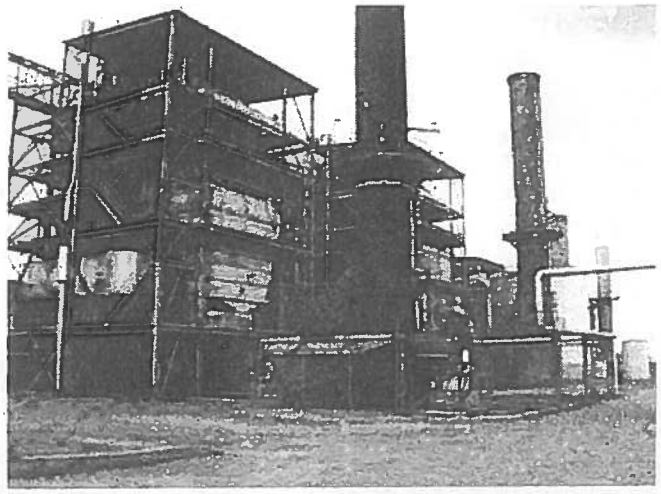
Main Plant

The main portion of the plant consists of four generating units. The units are in line, with the boiler and exhaust stacks to the east, and the turbines and generators to the west. The units were built and numbered beginning at the north end. A poured concrete deck connects the units and four metal mesh bridges connect the firing deck to the generator deck. Both decks are about 10 to 15 feet above grade. The boilers and stacks dominate the complex. The boilers are surrounded by an open steel beam superstructure with steel decks. The boilers are clad in insulation. Units 2 and 4 have added corrugated metal flue and stack coverings in some areas. Units 1 and 2 are approximately 35 feet tall and units 3 and 4 are about 45 feet. The stacks are west of the superstructure. Units 1 and 2 have stacks approximately 70 feet tall the stacks of Units 3 and 4 are approximately 116 feet tall. **(Photograph 1; Photograph 4)**

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

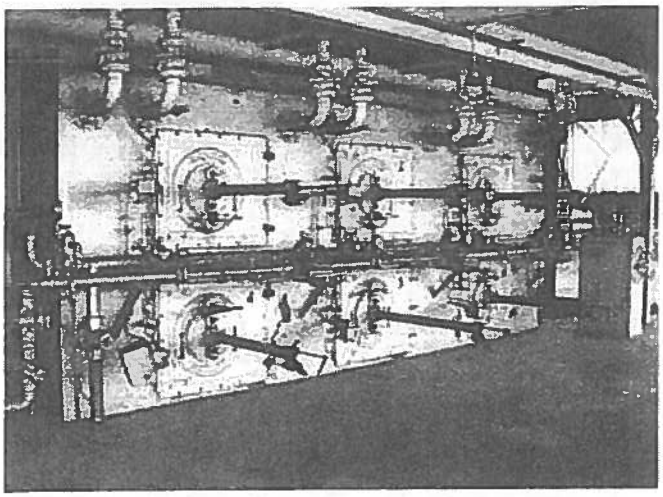
Primary # _____
HRI # _____
Trinomial _____

 *Resource Name or # (Assigned by recorder) Highgrove Generating Station
*Recorded by Rand Herbert/ Cheryl Brookshear *Date November 14, 2006 ☒ Continuation ☐ Update

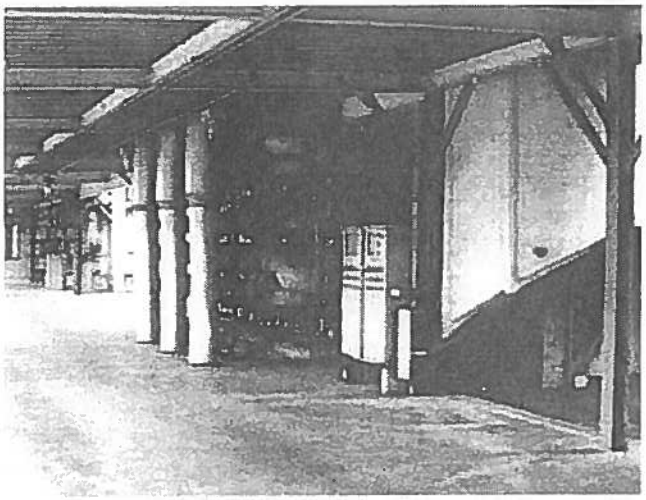


Photograph 4. Boilers, flues and stacks, camera facing northwest

Each boiler has six doors on the west side. (**Photograph 5**) Units 3 and 4 have an air circulator system of large curving ducts along the sides. Unit 3 has a mechanized feed system of pipes covering the boiler doors.



Photograph 5. Unit 1 boiler doors, camera facing southeast



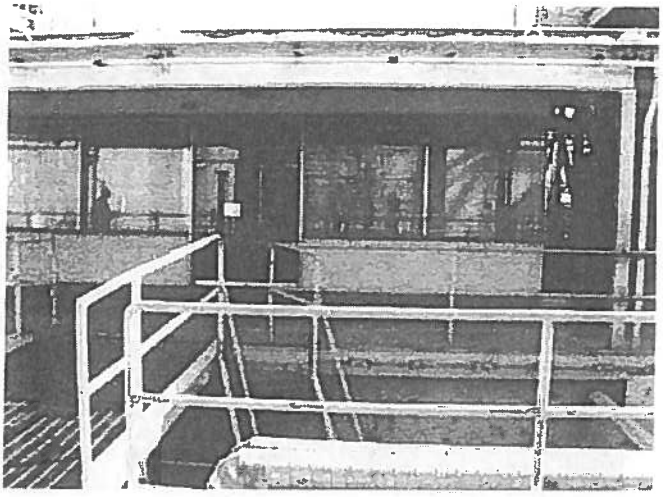
Photograph 6. Unit 3 boiler feeder, camera facing northeast

Two control buildings are located between the units. The first control building is located between Units 1 and 2; the second is located between Units 3 and 4. Both are two story rectangular buildings with flat roofs, constructed of poured concrete, and have glass-fronted control rooms on the west side. (**Photograph 7**) A double glass door leads from the firing deck to the control room. On the east side each has a double metal door at ground level. The control building between Units 1 and 2 has four three by four light windows on the second floor. The other control building between units 3 and 4 has two industrial steel sash windows of three by four lights; the center and top row of lights are operable. (**Photograph 8**)

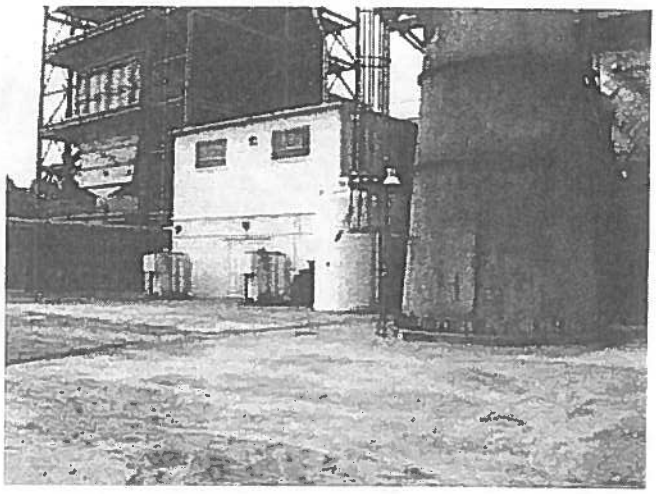
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

 *Resource Name or # (Assigned by recorder) Highgrove Generating Station
*Recorded by Rand Herbert/ Cheryl Brookshear *Date November 14, 2006 ☒ Continuation ☐ Update

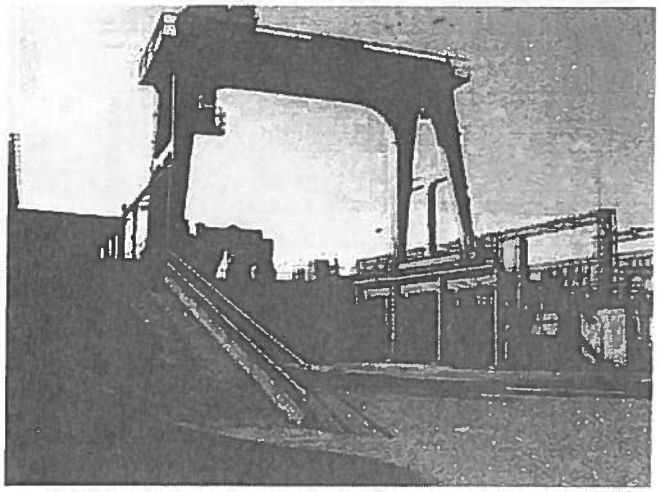


Photograph 7. Unit 1& 2 Control room, camera facing east

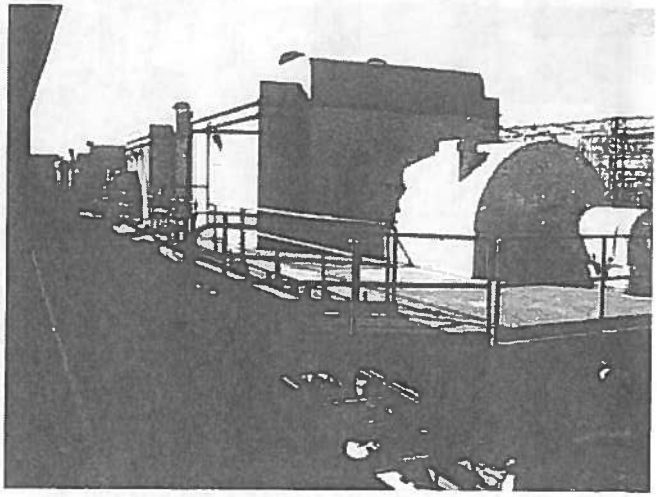


Photograph 8. Unit 3 & 4 Control room, camera facing west

Two water tanks are north of Unit 1, and two more are between Units 2 and 3. The generators sit across from their respective boilers on the generator deck above the turbines. A 45-ton overhead traveling crane runs on rails located on either side of the generator deck. (**Photograph 9**) The General Electric generators are sheathed in metal and have metal shelters over the northern half of them. (**Photograph 10**) The rectangular shelters have frieze bands and flat roofs that curve on the north and south edges, giving them a slight Moderne appearance.



Photograph 9. Traveling service crane, camera facing southwest



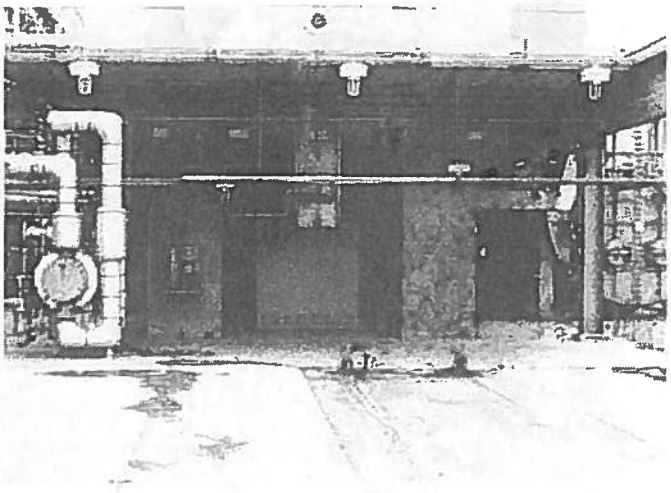
Photograph 10. Generator deck, camera facing southwest

Under each generator within the poured concrete foundations are the turbines. (**Photograph 11**) To the west of each turbine at ground level is a large horizontal tank with large pipe that heads underground. These are a part of the hydrogen cooling system for the turbines. (**Photograph 12**) A set of wires and pipes connect the generators with the transformers in the neighboring substation.

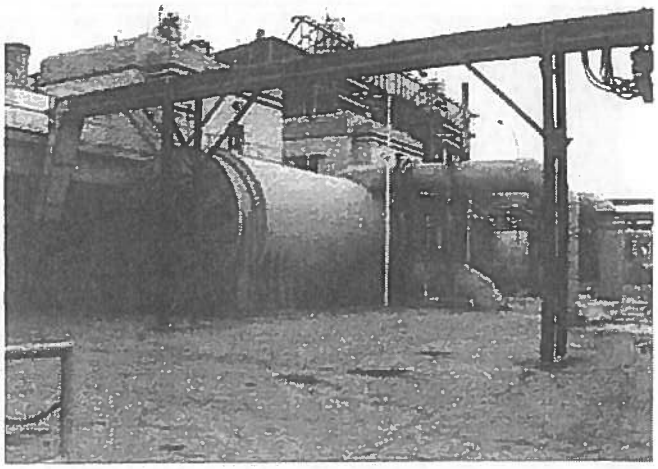
State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

 *Resource Name or # (Assigned by recorder) Highgrove Generating Station
*Recorded by Rand Herbert/ Cheryl Brookshear *Date November 14, 2006 ☒ Continuation ☐ Update



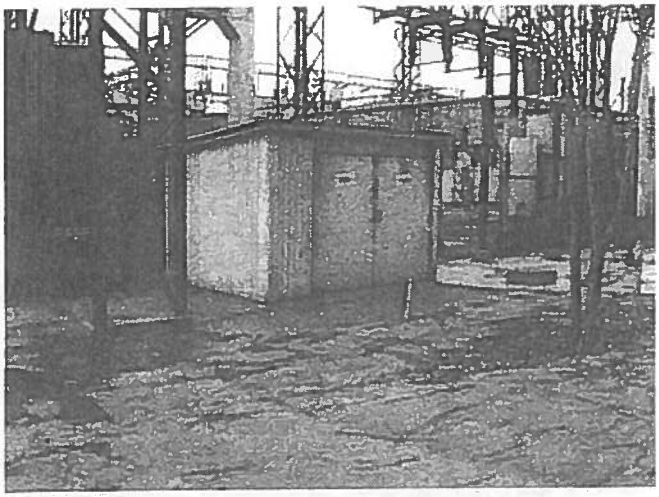
Photograph 11. Unit 1 turbine, camera facing north.



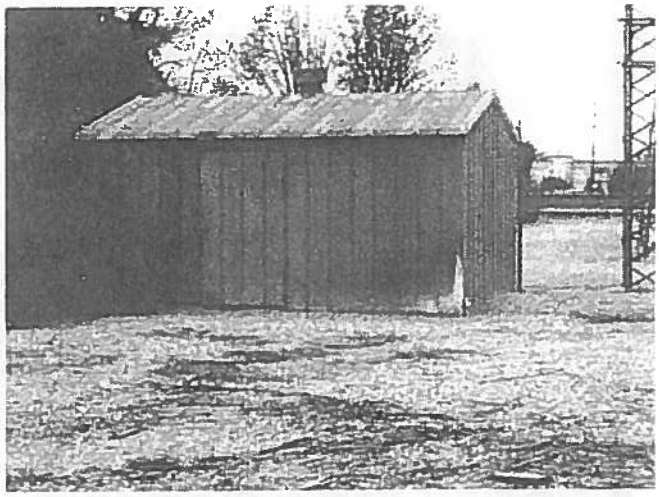
Photograph 12. Hydrogen cooling tank, camera facing southeast

Service Shed 1 (A)

The service shed is located between the turbines and the substation. It is a small rectangular building 6 feet by 10 feet with a shed roof. (**Photograph 13**) The building has a wood frame clad in corrugated fiberglass. It has a double door facing east.



Photograph 13. Service Shed 1, camera facing northwest.



Photograph 14. Service Shed 2, camera facing southwest.

Service Shed 2 (B)

This raised bead metal shed is located at the southeast corner of the substation. The shed is approximately 8 feet by 16 feet with a side gable roof. The edges of the eaves are curved and a circular vent is on the ridge. A large double, hinged door faces east. (**Photograph 14**)

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

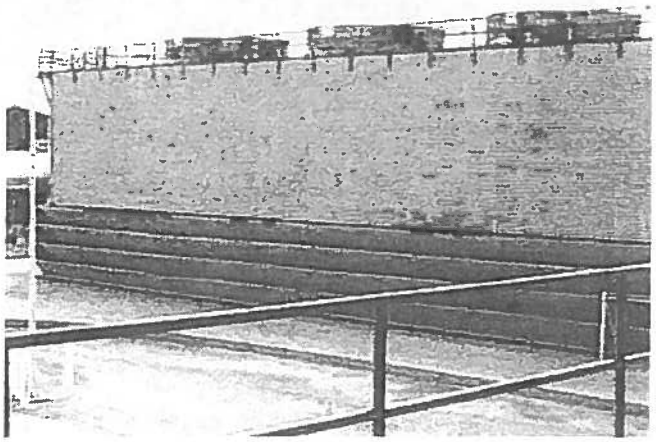
Hazardous Materials Building (C)

South of the main plant is a concrete block hazardous materials shed. (**Photograph 15**) The building has an enclosed room on the south side and two bays at grade level and a third excavated loading bay all under a traversite shed roof.

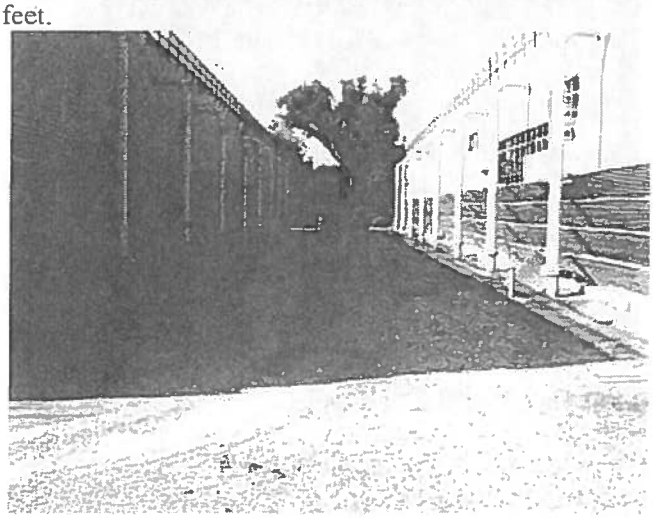
Photograph 15. Hazardous Materials Building, camera facing northwest.

Cooling Towers

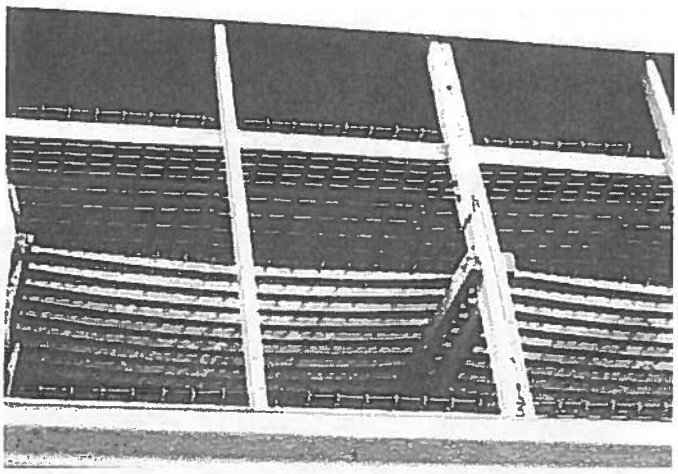
The cooling towers are large rectangular structures at the south end of the property. (**Photographs 16-18**) They run lengthwise east to west with Tower 1 at the north and Tower 4 at the south. The towers are spaced about 60 feet apart. Each tower has a concrete pit with Allis Chalmers condenser pumps at the west end. The poured concrete foundation creates a basin about five feet below grade. Redwood framing is placed on equally spaced concrete piers within the basin. Open metal grid work is supported by the redwood framing. The towers are clad with horizontal corrugated fiberglass siding. The upper edges of the bottom three courses of siding are tilted out, creating vents. Redwood stairs are on the exterior. Between Towers 1 and 2 and between 3 and 4 a series pipes exit the ground and enter the building high on the sides. Towers 1 and 2 are approximately 197 x 54 feet and Towers 3 and 4 are 262 x 54 feet.



Photograph 16. Cooling Tower 1, camera facing southeast.



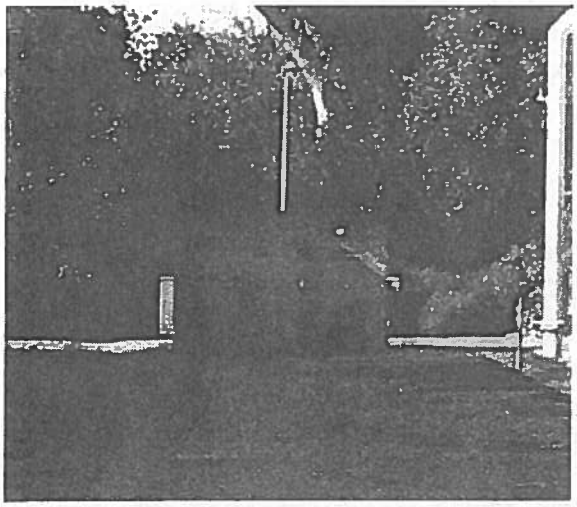
Photograph 17. Pipes entering Cooling Towers 1 and 2, camera facing west.



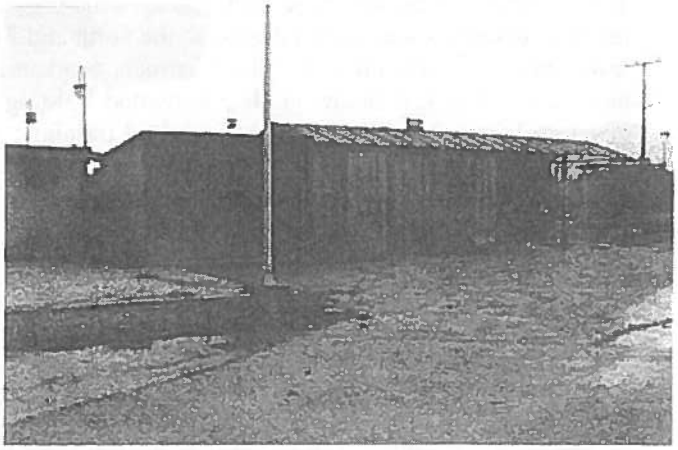
Photograph 18. Interior of Cooling Tower 3 showing metal gridwork. Camera facing north.

Cathodic Protection Rectifier (D)

This small, square concrete block building with shed roof is located between Cooling Towers 3 and 4. It has a metal door. (**Photograph 19**)



Photograph 19. Camera facing west.



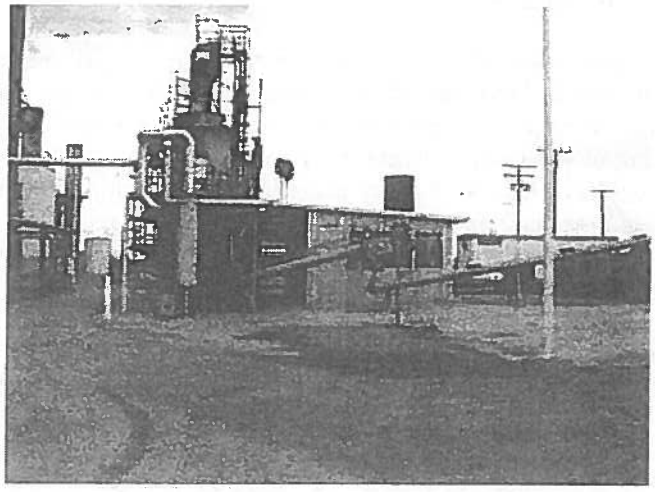
Photograph 20. Chemical Storage camera facing southeast.

Chemical Storage Building (E)

The chemical storage shed has a side-gable roof with curved eaves. The building is clad in raised bead metal sheeting. The enclosed portion has a sliding personnel door and a 12-light industrial metal sash window. The upper two courses of the window louver open. The south end is open on the west side, creating two bays. A third bay is created by a fiberglass extension with shed roof on the north side. (**Photograph 20**)

Char Processing (F)

The char processing unit is west of Unit 4 and attached to the plant by pipes. The char unit has two tanks and a smaller fuel tank. A conveyor removes material to a concrete bin to the west. The process is controlled in a shed-roofed building with metal sash holding plywood and sliding windows. One plywood door is located on the south side. (**Photograph 21**)

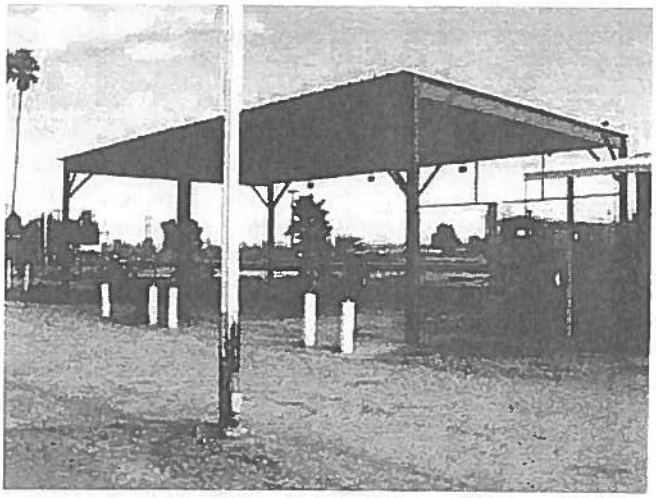


Photograph 21. Char Processing, camera facing north.

Mobile Building (G)

One mobile building is present on the site. It is a doublewide mobile home with a side-gable roof and vertical metal siding and horizontal bands at top and bottom. The building has two doors protected by shed roofs supported by metal pipes and reached by metal stairs. The building has one single-pane window. (**Photograph 22**)

Photograph 22. Mobile Unit, camera facing northeast.



Photograph 23. Vehicle shelter, camera facing northeast.

Vehicle Shelter (H)

The shelter has two bays under a corrugated metal roof supported by steel I-beams. (**Photograph 23**)

B10. Significance (continued):

General History of Steam Plants in California

Steam plants comprised the first generation of electric generating facilities in California. British designer Sir Charles Parsons built the first steam turbine-generator in 1884, and almost immediately others began making improvements upon his original concept. The earliest steam generating plants were little more than steam engines converted to drive a generator rather than a locomotive. By the beginning of the twentieth century, power plants with steam turbines began to replace the original steam engine power plants. Aegidius Elling of Norway is credited with creating the first applied method of injecting steam into the combustion chambers of a gas turbine engine in 1903-04. Within a relatively short time, the technology of engines capable of supplying power and electricity improved greatly. New and better methods and designs helped to spread electricity to a wide range of commercial buildings and residences.[1]

In the beginning stages of development of steam turbine power plants, the materials needed to withstand the high temperatures of modern turbines were not yet available. Technology and improvements for steam turbine engines continued to advance throughout the 1920s and 1930s, leading to a generation of more efficient turbine power plants in the 1950s. By this time, utilities retired or replaced many of the older steam-electric plant generating units following the construction of more modern units. While the technology of turbine power plants peaked in the 1950s, it appears to have remained relatively unchanged until the 1980s, despite the availability of newer technology that would allow an increase of pressure and heat for the systems.[2]

Steam power generation has been an important part of California's power production throughout the twentieth century, although the over-all importance of steam diminished considerably during the 1920-1940 era, when a large number of hydroelectric generating facilities came on line throughout the state. In 1920, hydroelectric power accounted for 69% of all electrical power generated in California. By 1930, that figure had risen to 76%; it rose again to 89% in 1940. Rapid construction of new thermal or steam-electric generating units, however, accounted for most of the new power capacity in the state after 1941. By 1950, hydroelectricity accounted for only 59% of the total, falling to 27% in 1960. Some new hydroelectric plants were built during the 1960s, chiefly associated with federal and state water projects, but by 1970, hydroelectric plants accounted for only 31% of all electricity generated in California.[3]

These statistics, however, mask the effort of both Pacific Gas & Electric Company (PG&E) and Southern California Edison (SCE), California's largest electrical utility providers, to build large-scale steam generation plants as early as the 1920s. James Williams, a historian of energy policies and practices in California, noted that the decision by PG&E and SCE to build steam plants may be attributed to several converging trends in the mid- to late-1920s. First, a persistent drought in California caused the major utilities to begin to question the reliability of systems relying so heavily upon hydroelectricity. This drought began in 1924 and continued, on and off, for a decade. At about the same time, new power plants on the East Coast (where steam had always played a more important role than in California) achieved far greater efficiencies than had previously been possible. Between 1900 and 1930, for example, the fuel efficiency of steam plants, measured in kilowatts

[1] Heinz Termuehlen, *100 Years of Power Plant Development: Focus on Steam and Gas Turbines as Prime Movers*, (New York: ASME Press, 2001), 11; Douglas Stephen Beck and David Gordon Wilson, *Gas Turbine Regenerators*, (New York: Chapman & Hall, 1996), 30; William A. Myers, *Iron Men and Copper Wires: A Centennial History of the Southern California Edison Company*, (Glendale, CA: Trans-Anglo Books, 1984), 8.
[2] Termuehlen, *100 Years of Power Plant Development*, 21-28.
[3] James C. Williams, *Energy and the Making of Modern California* (Akron, Ohio: University of Akron Press, 1997), 374.

per barrel of oil, increased more than nine-fold. In addition, new natural gas lines were completed that could bring new supplies to both northern and southern California in the late 1920s, tapping large reserves in the San Joaquin Valley. Natural gas has always played an important role in steam electric power generation in California.[4]

Steam generation plants also fit the "build and grow" philosophy based on Samuel Insull's example. In the "build and grow" plan, electric companies encouraged electrical use to establish a market, and thus justify the need to build new generating plants. The new plants used new more efficient technologies and had a smaller operating margin than the old plants. The company passed some of the savings along to customers, thereby encouraging more electrical use. California companies were able to keep the "build and grow" cycle active through the 1960s.[5]

The confluence of these various factors – a drought, new steam generator technologies, new supplies of natural gas, and the "build and grow" philosophy – induced PG&E, SCE, and other utilities to begin construction of large steam plants during the late 1920s and early 1930s. In 1929, the Great Western Power Company (which was absorbed by PG&E in 1930) built a large steam plant on San Francisco Bay, near the Hunters Point shipyard, fitted with two 55 MW generators.[6] PG&E built a steam plant in Oakland in 1928, called Station C. SCE had an even longer history of steam generation, having operated its large facility at Long Beach on Terminal Island throughout most of the 20th century. By World War II, the Long Beach plant was huge, with eleven units on line that had been constructed in stages beginning in 1911. In Southern California, the Los Angeles Department of Water and Power constructed a steam station at Seal Beach consisting of two units installed in 1925 and 1928. These steam plants proved to be both profitable and reliable for the various utilities. In 1930, the PG&E vice-president for engineering wrote, "under the circumstances which now prevail, it is natural to question the future of hydro in California."[7]

The post-World War II era was a time of rapid growth in Southern California. Population and housing swelled along with business and industrial development. Fueled by wartime defense industries, southern California grew rapidly, spreading out into agricultural areas and creating suburbs outside the original city limits of the communities around Los Angeles and San Diego. The need to generate power was imperative, and SCE, Los Angeles Department of Water and Power (LADWP), and San Diego Gas & Electric Company (SDG&E) expanded their systems along with PG&E and the rest of California's energy industry. Since most of the more favorable hydroelectric sites in California had already been developed, and the cost of steam generating facilities had been reduced by technological developments in design and abundant natural gas resources, steam plants became the more favorable option. Steam turbine power plants were cheaper and quicker to build than hydroelectric plants, so utilities companies moved away from hydroelectricity, establishing steam turbine power as the generator of choice. Such plants conserved water and kept costs down for the business and the consumer. The "momentum for steam had been established by war, by drought, and," wrote Williams, "by a positive history of increased thermal power plant development."[8]

Dozens of new steam generation plants were built throughout California, chiefly by PG&E and SCE, although LADWP, California Electric Power Company (see below), and SDG&E built a few as well. The plants relied upon proven technologies but were assembled quickly and inexpensively, relative to earlier plants. In a detailed article in 1950 in *Civil Engineering*, I. C. Steele, Chief Engineer for PG&E, summarized the design criteria that went into construction of four

---

[4] Williams, *Energy and the Making of Modern California*, 278.
[5] William Allan Myers, *Affairs of Power: Restructuring California's Electric Utility Industry 1968-1998* (University of California Riverside, Disertaion 1997) 58.
[6] This plant still exists, although it was fitted with new units in the early 1950s, at the same time that the Kern Power Plant was being constructed. Coleman, 298.
[7] "1928 Steam Plants Account for 45 Percent of New Generating Capacity," *Electrical West*, February 2, 1929, 80-81; R.W. Spencer, "Cooling Water For Steam Electric Stations in Tidewater, " *Transactions of the American Society of Civil Engineers* 126 (1961): 294, 300; Williams, *Energy and the Making of Modern California*, 279.
[8] Myers, *Iron Men and Copper Wires*, 200; James C. Williams, *Energy and the Making of Modern California*, 277-78, 282-83.

major steam plants the company had under construction at that time, at Moss Landing, Contra Costa, Kern, and Hunters Point in San Francisco. These plants had much in common with each other, he argued, and with other steam plants under construction in the state. The design criteria were the same in all cases: build the facility close to load centers to reduce transmission costs; be close to fuel supplies; be near a water supply; and be on a site where land was cheap and could support a good foundation. In another article in *Transactions of the ASCE*, Walter Dickey, an engineer from Bechtel, detailed the reasons for the boom in steam plant building postponements due to World War II, lack of economical hydroelectric sites and needed support of peak load periods. He compared steam generation plant with hydroelectric plants and found steam favorable. Virtually all of the plants in the 1950s and 1960s were designed to be expanded if market conditions warranted; most of them were.[9]

The decades between 1950 and 1970 were the peak expansion of steam generating capacity for both the SCE and the PG&E, as well as for smaller utility companies. During this period, SCE built a series of very similar steam plants in the Los Angeles Basin and in San Bernardino County. In 1952, the company began work on Redondo No. 2, which was adjacent to an earlier plant at Redondo Beach. In 1953, the Etiwanda plant went online, followed in 1955 by El Segundo, Alamitos in 1956, and Huntington Beach and Mandalay in 1958. By 1960, all SCE plants either had multiple units or had additional units in the planning stages. In 1950, PG&E operated 15 steam electric plants in California, and during the following decade added several new plants and expanded older ones. Chief among these were the Kern plant (1948-50), Contra Costa (1951-53), Moss Landing (1950-52), Morro Bay (1955), Hunters Point (addition 1958), Humboldt Bay (1956-58), and Pittsburg (1959-60). The Pittsburg plant was at the time of its construction the largest steam station in the west, with a capacity of over 1,300,000 kW in 1960. The LADWP system was much smaller than those of SCE and PG&E, consisting of five steam plants by 1962. In addition to its Seal Beach Plant (1925-28), and Harbor Plant on Los Angeles Harbor (1943) these included the Valley Plant (San Fernando Valley, 1954), Scattergood (1958), and Haynes (1961). SDG&E had three steam-electric power plants, Silver Gate (1943), Encina (1954), and South Bay (1960). By the late 1970s, there were more than 20 fossil fuel thermal plants in California, clustered around San Francisco Bay, Santa Monica Bay, and in San Diego County, along with a few interior plants in San Bernardino County and Riverside and Imperial Counties, as well as a few plants on the Central Coast.[10]

Most of the oil- or gas-fired steam plants currently in use in California were installed in the period from about 1950 through 1970. After 1970, the major utilities began to look for alternative energy sources, ranging from nuclear power to wind, geothermal, and other "green" energy sources, other than hydroelectric. Despite these efforts, however, fossil fuel steam generation remains the backbone of electrical generating capacity in California. Information from the California Energy Commission (CEC) states that there are currently 34 steam turbine power plants in California of a variety of ages and locations.[11]

---

[9] I. C. Steele, "Steam Power Gains on Hydro in California," *Civil Engineering* (January 1950): 17-21; Edgar J. Garbarini, "Design Saves Construction Dollars on Contra Costa Power Plant," *Civil Engineering* (May 1953): 31-33; Walter L. Dickey, "The Design of Two Steam Electric Plants," *ASCE Transactions* (1956): 253-273.

[10] Annual Reports of the Southern California Edison Company, various years. R.W. Spencer, "Cooling Water For Steam Electric Stations in Tidewater," *Transactions of the American Society of Civil Engineers* 126 (1961): 280-302; I. C. Steele, "Steam Power Gains on Hydro in California," 17-19; Dickey, "The Design of Two Steam Electric Plants," 253-255; *Southwest Builder and Contractor*, "Haynes Steam Plant Will Grow With Demand," *Southwest Builder and Contractor* (October 12, 1962): 24-27; Williams, *Energy and the Making of Modern California*, 257.

[11] The California Energy Commission retains figures on the fuel type for all electricity used in the state, even if the power is generated out of state. In 1999, natural gas-fired generators were responsible for 31% of all electricity used in the state, compared with 20% for hydroelectricity. Coal-fired steam plants, all of them out of state, accounted for 20% of the total. "Green" sources accounted for 12%. The percentage of in-state natural gas-fired steam electricity is much larger than 31%, since all of the coal and much of the hydroelectric power is generated out of state. See www.energy.ca.gov/electricity/system_power.

California Electric Power Company

The company that became California Electric Power Company had its origins in the southern Sierra Nevada. Organized as Nevada Power Mining and Milling Co. on December 31, 1904, the company planned to provide mines in the region with inexpensive electricity. Engineers sent to find a mine site had located a creek above Bishop, California in the Owens Valley and recognized it as an opportunity to generate hydroelectricity. The first line was completed eight months later supplying electricity to camps 125 miles away. Quickly the company developed four more plants along the creek. When mining began to decline the company searched for new markets in southern California. In 1912, it built a transmission line to San Bernardino. Over the next decades it purchased smaller companies in San Bernardino and Riverside counties and expanded into Mono, Inyo and Kern counties. The company also served three counties in Nevada. It was active in rural electrification and the development of Hoover Dam. By the 1950s the company had tapped all the hydropower sites in its service area.[12] As a result, the company began a program of building steam generating power plants. The first plant was Highgrove in 1951, followed by San Bernardino (1956), Norton Air Force Base (1957), Cool Water Steam Plant (1961), Barstow (1959) and a joint project in Yuma, Arizona.[13] California Electric Power Company merged with SCE on January 1, 1964. The complex merger retained many of California Electric's employees and the President of California Electric, Fred Oldendorf, became the Vice-President of the merged company.[14]

Highgrove Generating Station

Construction of Highgrove Generating Station began in 1950, as the first of California Electric Power Company's steam generation plants.[15] The plant was designed and built by Fluor Corporation of Los Angeles. The first phase of the plant consisted of Units 1 and 2 at the north end of the complex, each with a 30,000 kW General Electric generator and hydrogen cooled turbine. The design was distinctive at the time as it lacked an exterior shell and is considered an "outdoor" plant. In 1951, it was the first of such plants in the west although others were under construction or being designed. The first two units went into operation in 1952 and became the company's primary power source. The plant was operated by 25 employees and could use either fuel oil or natural gas. Even while the company was building the first two units, it had plans in development for Units 3 and 4. The generator for Unit 3 was delivered and placed on the generator deck in July of 1953.[16] The gantry crane at the north end was modified to lift the 94-ton generator and move it past the two generators already in place. It was larger than the previous two with the ability to generate 40,000 kW of power. The generator and its components were also the largest equipment expense for the company up until that point, costing $1,461,816.14.[17] Unit 4 was completed in 1955 and increased Highgrove's total generating capacity to 154,000 kW. The company director and former president A.B. West pointed out, "this Number Four Unit alone will have a generating capacity exceeding in kilowatt-hours the entire output of our existing eight hydro plants on Bishop Creek and in Mono Basin, and will represent more than our entire system load in 1931."[18] With all four units running the plant employed 65 people.[19] Similar and larger plants quickly followed Highgrove. When California Electric Power merged with SCE, Highgrove was merged into the system along with its other plants. Upon deregulation, SCE was required to sell one half of its plants. Instead, it decided to sell all of its gas and oil fueled generating plants valued at $700 million in 1996. They included the Etiwanda, Highgrove and San Bernardino plants. Together, these plants made up 20% of the power supplied to SCE consumers. Most of the

[12] "To Water Add Steam: Output Grows" *San Bernardino Daily Sun* (April 23, 1958).
[13] Laura L. Klure, *California Electric Power Company* (Riverside, CA: A to Z Printing, 2005) 76-77. "Calectric's Birth Came When Men Hunting for Gold Discovered Water," *San Bernardino Daily Sun* (April 23, 1958).
[14] "Official Midnight Merger Made by Edison-Calelectric" *San Bernardino Daily Sun* (January 1, 1964); http://www.sce.com/abntsce/history/historical+timeline1948-1978.html.
[15] "1st Unit of Calectric Steam Plant Nearing Completion," *Riverside Daily Press* (February 13, 1952) 9.
[16] "Calectric Begins Work on Third Unit at Highgrove" *San Bernardino Daily Sun* (July 22, 1953).
[17] Klure, *California Electric Power Company*, 74.
[18] Klure, *California Electric Power Company*, 75.
[19] "Highgrove Joins the Old and New" *Riverside Press* (May 25, 1959).

remaining power came from hydroelectric sources and the San Onofre nuclear plant. In order to meet the obligations to the 77 employees at these three plants, SCE and the buyer had to agree to operate the plant until 1998.[20] The plant has since been decommissioned and is now owned by AES.

Evaluation

The Highgrove Generation Station does not appear to be a historic resource for the purposes of CEQA. The generation station, built between 1951 and 1955, does not appear to be significant in the context of the history of California Electric Power Company, the history of steam generation of electricity or the history of post World War II steam generation plants. (Criterion A and 1)

As discussed above Highgrove was the first of several steam generating plants for California Electric Power Company. It was the first for the company, but part of a larger trend for all electric companies in California to build steam generation plants to keep up with growing demand from new development and higher customer usage. California Electric Power Company rapidly followed Highgrove's construction with the construction of plants at San Bernardino (1956), Norton Air Force Base (1957), Cool Water (1961) and Yuma. While Highgrove was being constructed, Southern California Edison was laying foundations for its Etiwanda plant and San Diego Gas &Electric was soliciting bids for its Encina plant.[21] Etiwanda was of the "outdoor" type, while SDG&E enclosed Encina for aesthetic reasons. The rapid construction of these plants, and similar plants by other companies, suggests that these plants were all being planned and designed at about the same time. The demand for these plants was a result of exhaustion of available hydroelectric sites at the same time that demand for electricity continued to grow. Highgrove being first for California Electric Power Company is more related to its specific requirements than any pioneering concept of steam generation plants of this era. Together, the plants supplied the majority of power for the California Electric Power Company, overshadowing the importance of any single plant. Each was important the community it served, providing power for the increasing demands of new technology and development in the area. Placed in the context of the time and other power plants and community services, Highgrove does not suggest any unique significance.

California Electric's employee magazine, and subsequent works on that company's history and on the history of SCE, have cited as the first "outdoor" generating plant in the west.[22] However, many plants of this type were built in southern California in the 1950s and 1960s, a number of which may have been in design at nearly the same time. Because of this, Highgrove could be seen as significant for being first in this trend (Criterion A or 1) or for its embodiment of this type (Criterion C and 3). However, before such a claim for significance can be made, the trend itself must be evaluated. An "outdoor" steam generation plant is one without a protective skin or roof structure. Most of the components, pipes, boilers and machinery are left exposed to the elements. Specific portions may be enclosed, such as control rooms or the shelters over half of each generator at Highgrove. Plants with this design are suitable for temperate climates like those in California, the south, and the southwest. However, the elimination of the protective structure did not alter the design or operation of the workings of the plants or change the engineering specifications to any extent. A review of engineering and building journals did not reveal any studies of the benefits of "outdoor" style plants. Advances in foundations, seismic stability, and transportation of parts and materials are frequently discussed; "outdoor" plants are mentioned as such without further comment. The lack of studies and articles on the subject suggest that it was not considered a significant change in the overall design of such plants. These plants cost less to build because they did not include exterior walls or enclosures for the equipment reducing initial construction cost and the expense of maintenance.[23] As a result, this design is an applied aesthetic, not a part of the overall requirement of the plant. In order to qualify as significant under Criterion C and 3, the

[20] Michael Diamond, "Edison to Sell Three Inland Empire Power Plants," *The Sun* (November 23, 1996).
[21] "Huge New Steam Electric Plant at Fontana," *Southwest Builder and Contractor* (November 9, 1951) 10; "Power Plants," *Southwest Builder and Contractor* (October 26, 1951) 20.
[22] Klure, *California Electric Power Company,* 74.
[23] Conversation with Joe Odahal, Engineering Manager, South Bay Power Plant, November 16, 2006.

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

structure's type, period and method of construction must be integrated with the building's overall plan. Highgrove's aesthetic "outdoor" plan is not significant under Criterion C and 3. The "outdoor" plan did not have any significant impact on plant operation, and it did not impact the development of electrical generation, distribution or use in the areas it was used. As a result, the "outdoor" type would not appear to have any significance under Criterion A and 1. It is interesting to observe that modern hydroelectric power plants, like PG&E's Belden Powerhouse on the Feather River, or the City of San Francisco's Moccasin Powerhouse, are of an outdoor type as well. Moccasin Powerhouse replaced an older, Mission Revival enclosed structure; the hydroelectric plants using the fall of the Feather River are a mixture of the two types (enclosed, like Caribou, and outdoor, like Belden).

Highgrove does not appear to be associated with the life of a historically significant person (Criterion B and 2), nor is it significant under Criterion D and 4, as a potential source of data on human history. This property is well-documented through company records and construction documents and does not appear to be a principal source of important information. The plant has had minor alterations, yet as a whole it retains integrity of location, design, setting, materials, workmanship, feeling and association.

1067451

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 36-021712
HRI #
Trinomial
NRHP Status Code 6
Other Listings
Review Code Reviewer Date

Page 1 of 3 Resource Name or #: Highgrove Substation

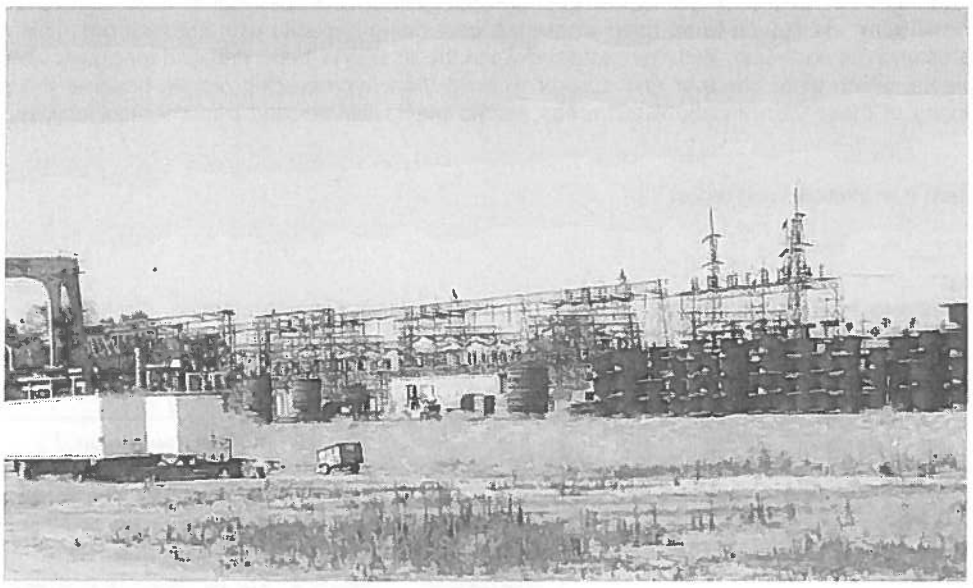
P1. Other Identifier: APE Map Reference #10
*P2. Location: ☐ Not for Publication ☒ Unrestricted *a. County: San Bernardino and (P2b and P2c or P2d. Attach a Location Map as necessary.)
*b. USGS 7.5' Quad: San Bernardino South Date: 1967 PR 1980 T 2S; R 4W; SE ¼ of Sec 6 ; S.B.B.M.
c. Address: 12700 Taylor Street City: Grand Terrace Zip: 92313
d. UTM: Zone: 11; _____mE/ _____mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) APN: 1167-151-64; located west of the Highgrove Generating Station and north of Cage Park

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
This property was previously evaluated for the purposes of the California Environmental Quality Act (CEQA) in 2006 as part of documentation submitted to the California Energy Commission. However, that site record, which is attached and referenced extensively, has not yet been submitted to the San Bernardino Archaeological Information Center (SBAIC) or included in the State's Historic Resources Inventory. For these reasons and the fact that the property was not evaluated for the National Register of Historic Places (National Register), it is being evaluated again.

"The substation has four Westinghouse transformers, each attached to one of the plant's generators. Metal frameworks with long cylindrical ceramic or glass insulators suspend transmission wires as they connect to smaller transformers spaced throughout the gravel-covered yard" (Herbert and Brookshear 2006:1).

*P3b. Resource Attributes: (List attributes and codes) HP9 Public utility
*P4. Resources Present: ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Substation, view to the southwest, photo taken on July 14, 2009

*P6. Date Constructed/Age and Sources: ☒Historic ☐Prehistoric ☐Both
1951-1955

*P7. Owner and Address:
Southern California Edison

*P8. Recorded by: (Name, affiliation, and address)
Casey Tibbet, M.A.
LSA Associates, Inc.
1500 Iowa Avenue, Suite 200
Riverside, CA 92507

*P9. Date Recorded:
July 2009 – April 2010

*P10. Survey Type: (Describe)
Intensive-level Section 106 compliance

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Historical Resource Evaluation Report, Interstate 215 HOV Lane Gap Closure Project in San Bernardino and Riverside Counties, February 2010.

*Attachments: ☐NONE ☐Location Map ☐Sketch Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☒ Other (List): Site record for the Highgrove Generating Station prepared by JRP Historical Consulting, LLC in November 2006.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary # _____
HRI# _____

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6

*Resource Name or # (Assigned by recorder) Highgrove Substation

B1. Historic Name: Highgrove Substation
B2. Common Name: Highgrove Substation
B3. Original Use: Substation **B4. Present Use:** Substation
***B5. Architectural Style:** Industrial
***B6. Construction History:** (Construction date, alterations, and date of alterations)
1951 – Units 1 and 2
1953 – Unit 3
1955 – Unit 4
***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** _____ **Original Location:** _____
***B8. Related Features:** Highgrove Generating Station

B9a. Architect: Fluor Corporation Limited, Los Angeles **b. Builder:** Fluor Corporation Limited, Los Angeles
***B10. Significance: Theme:** Power transmission **Area:** City of Grand Terrace
Period of Significance: 1951-1955 **Property Type:** Industrial **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Highgrove Substation does not appear to be eligible for listing in the National Register under any criteria.

Historic Context Summary (this information has been condensed from the detailed context in the attached 2006 site record prepared by Herbert and Brookshear). Transmission of power in California was an important factor in development. Terrain and scattered settlement made it difficult to get power from one place to another, especially since the first electrical systems popularized by Edison were direct current (DC) and had a limited transmission distance. In 1891, Almerian Decker introduced alternating current (AC) to California. Decker and his partners opened the San Antonio Light and Power Company in 1892 using Westinghouse technology. Westinghouse had long advocated AC, but Edison had asserted that AC was unsafe. In the mid-1890s, power plants built primarily in the Bay Area proved that power could be transmitted long distances. In 1901, Bay Counties Power Company, owned by Eugene de Sabla and John Martin, broke records for long distance transmission. During World War I, shortage of oil and an increasing demand for electricity led to the eventual integration of transmission lines among various companies. This allowed unused power from one source to be used where the generating capacity was not as large. This model was later adapted in neighboring states and the northeast. With the rapid growth in the post-WWII era, demand for power was even greater and steam turbine power plants, which were cheaper and quicker to build than hydroelectric plants, became the power generator of choice. Even though many of these were in populated areas, steam plants still needed transmission facilities. (*see Continuation Sheet*)

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

Herbert, Rand and Cheryl Brookshear
2006 Department of Parks and Recreation (DPR) 523A and 523B forms for the Highgrove Substation. Prepared by JRP Historical Consulting, LLC., November 14.

B13. Remarks:

(Sketch Map with north arrow required.)

***B14. Evaluator:** Casey Tibbet, M.A., LSA Associates, Inc., 1500 Iowa Avenue, Suite 200, Riverside, CA 92507

***Date of Evaluation:** July 2009 – April 2010

(This space reserved for official comments.)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 3 of 3 *Resource Name or #: (Assigned by recorder) Highgrove Substation
*Recorded by LSA Associates, Inc. *Date: July 2009 – April 2010 X Continuation _____ Update

***B10. Significance:**

The Highgrove Generating Station was constructed by California Electric Power Company (Calectric). The company that would become Calectric originated in the southern Sierra Nevada in 1904. The company, then called the Nevada Power Mining and Milling Co., established several hydroelectricity plants which provided electricity to mining camps. In 1912, it built a transmission line to San Bernardino and over the next several years expanded into Mono, Inyo, Kern, and Riverside counties. By the 1950s it had tapped all the hydroelectric power in its service area and began a program of building steam generating power plants (Herbert and Brookshear 2006:13). The first plant was Highgrove (1951), followed by San Bernardino (1956), Norton Air Force Base (1957), Barstow (1959), Cool Water Steam Plant (1961), and a joint project in Yuma, Arizona (Herbert and Brookshear 2006:13). Calectric merged with SCE in January 1964.

"Highgrove Substation was constructed in conjunction with the Highgrove Generating Station. The station needed facilities to increase the voltage to levels necessary for transmission" (Herbert and Brookshear 2006:4). Construction started on the Highgrove Generating Station in 1950. It was designed and built by Fluor Corporation of Los Angeles and was constructed in phases. Phase I included Units 1 and 2 at the north end of the complex. Each of these units was connected to a Westinghouse transformer in the substation. The first two units went online in 1952 and the facility, which could use either natural gas or fuel oil, was operated by 25 employees. Unit 3 was built in 1953, followed by unit 4 in 1955. These units were also connected to new Westinghouse transformers in the substation. By the time Unit 4 was completed, the total generating capacity was 154,000kW (ibid.). "This power was "stepped up" by its own transformer. The substations were built according to current practices" (ibid). When SCE and Calectric merged, Highgrove and Calectric's other plants were merged into the system. However, with deregulation, SCE was required to sell half of it plants. Instead, in 1996, SCE opted to sell all its gas and oil fueled plants, which included Highgrove. The plant remained operational until 1998 when it was decommissioned, but the substation remains in operation.

Evaluation. Under Criterion A, the plant does not appear to be significant in the context of the history of the California Electric Power Company, the history of electric transmission, or the history of post-World War II (WWII) electrical transmission (Herbert and Brookshear 2006:5). Under Criterion B, the substation does not appear to be associated with the productive life of a historically significant person (Herbert and Brookshear 2006:5). Under Criterion C, the substation "does not embody characteristics of a type or period of construction. It consists of standard substation components arranged in a typical fashion" (Herbert and Brookshear 2006:5). Finally, under Criterion D, the plant does not appear likely to yield information important in prehistory or history. It "is well documented through company records and construction documents and does not appear to be a principal source of information" (Herbert and Brookshear 2006:5). For these reasons as discussed in more detail in the 2006 site record, the property does not appear eligible for listing in the National Register and is not a historical resource under CEQA.

ATTACHMENT

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 36-021712
HRI #
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

*Resource Name or # (Assigned by recorder) Highgrove-Substation

P1. Other Identifier: Highgrove Substation

*P2. Location: ☐ Not for Publication ☒ Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*a. County San Bernardino

*b. USGS 7.5' Quad San Bernardino South Date 1980 T2S; R 4W; SE ¼ of Sec 6; ~~MD~~ B.M.

c. Address 12700 Taylor St. City Grand Terrace Zip 92313

d. UTM: (give more than one for large and/or linear resources) Zone ____; _____mE/ _____mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

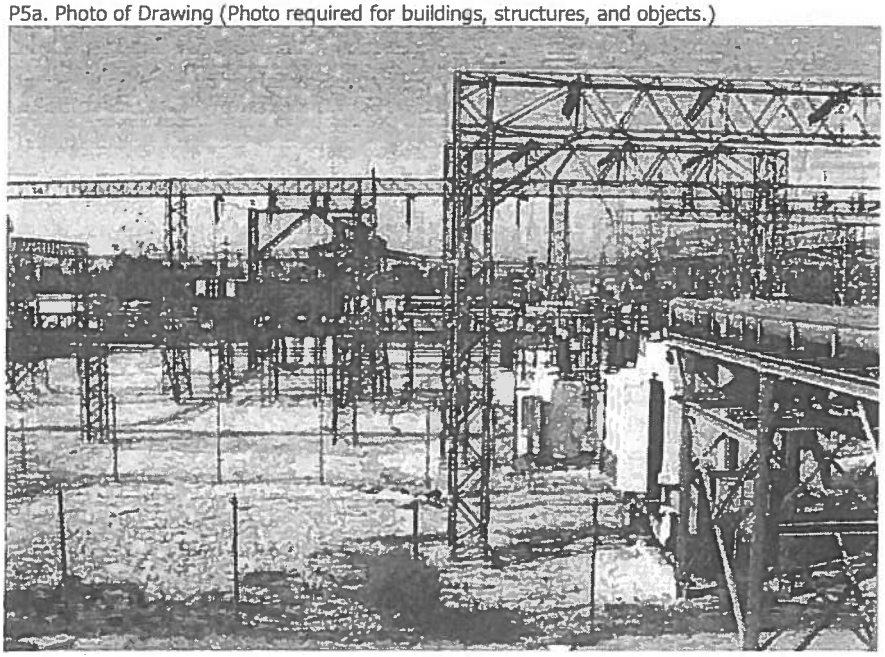
*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Highgrove Substation is connected to and serves the Highgrove Generating Station. Located west of the plant, the substation has four Westinghouse transformers, each attached to one of the plant's generators. Metal frameworks with long cylindrical ceramic or glass insulators suspend transmission wires as they connect to smaller transformers spaced throughout the gravel-covered yard.

*P3b. Resource Attributes: (List attributes and codes) HP9 Public utility

*P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo of Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Photograph 1. Substation, west, November 14, 2006.

*P6. Date Constructed/Age and Sources:
☒ Historic ☐ Prehistoric ☐ Both
1951-1955

*P7. Owner and Address:
Southern California Edison

*P8. Recorded by: (Name, affiliation, address)
Rand Herbert/ Cheryl Brookshear
JRP Historical Consulting, LLC
1490 Drew Ave, Suite 110,
Davis, CA 95618

*P9. Date Recorded: November 14, 2006

*P10. Survey Type: (Describe)
Single Site

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") None

*Attachments: ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (list) _____

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # _____
HRI # _____

*NRHP Status Code 6z

*Resource Name or # (Assigned by recorder) Highgrove Substation

B1. Historic Name: Highgrove Substation
B2. Common Name: Highgrove Substation
B3. Original Use: Substation B4. Present Use: Substation
*B5. Architectural Style: Industrial
*B6. Construction History: (Construction date, alteration, and date of alterations) Units 1 and 2 1951, Unit 3 1953, and Unit 4 1955.

*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date: _____ Original Location: _____
*B8. Related Features: Highgrove Generating Plant

B9. Architect: Fluor Corporation Limited, Los Angeles b. Builder: Fluor Corporation Limited, Los Angeles
*B10. Significance: Theme n/a Area n/a
Period of Significance n/a Property Type n/a Applicable Criteria n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Highgrove Substation does not appear to be a historic resource for the purposes of CEQA. The substation built between 1951 and 1955, is not associated with events that have made a significant contribution to the history of the local area, region or state (Criterion A and 1). The property does not appear to have been associated with a person who made significant contributions to local, state or national history (Criterion B and 2). The structure does not embody characteristics of a type, period, region or method of construction. It is not the work of a master and does not have high engineering value (Criterion C and 3). Rarely structures can provide information about historical methods of construction (Criterion D and 4); however, information on this structure is recorded elsewhere and it does not appear to be a primary source in this regard. This property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, and does appear to be a historical resource for the purposes of CEQA. (See Continuation Sheet)

B11. Additional Resource Attributes: (List attributes and codes)
*B12. References: See footnotes in B10. Significance.

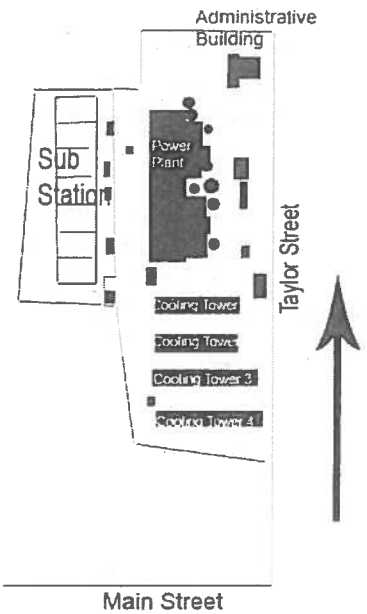
B13. Remarks:

*B14. Evaluator: Rand Herbert/ Cheryl Brookshear

*Date of Evaluation: November 2006

(This space reserved for official comments.)

(Sketch Map with north arrow



*Required Information

B10. Significance (continued):

General History of Electrical Transmission in California

California's rugged terrain and often scattered settlement made the transmission of power and important factor in development. Mining settlements and cities quickly used up all the available combustibles for steam power. Bringing in more from other sources was expensive and difficult. Mining communities discovered that nearby water sources could produce electricity that was easily transmitted to rugged isolated sites.[1] The problem was that first electrical systems popularized by Edison were direct current (DC) and had a limited transmission distance. Most mining communities could find a hydroelectric site within transmission distance, but cities and agricultural settlements often could not.

The nature of this problem and its solution led to the great electrical battle between Westinghouse, building systems around high voltage alternating current (AC), and Edison, building systems around DC electricity. Westinghouse acquired patents for transformers from other inventors and very important patents for poly-phase alternating current generators and motors from Tesla. The system his engineers devised used transformers to increase or "step up" the voltage. At this higher voltage, electricity could be transmitted longer distances with less loss. At the receiving end, another transformer would decrease or "step down" the voltage to a level suitable for use. Edison countered that the high voltages were unsafe and took the battle to the public with demonstrations of electrocutions. The two firms battled it out in public and academic press and contract bids for the Columbia Exposition in Chicago and engineering and equipment bids for the proposed plant at Niagara Falls. While in the east the battle raged over safety, in the west there was no question of suitability.

California was introduced to AC by former Brush Electric Company engineer Almerian Decker. Decker came to California in 1891 for his health and became involved in a southern California electrical project. Decker and his partners, Cyrus G. Baldwin and Henry Harbison Sinclair, opened the San Antonio Light and Power Company in 1892 using Westinghouse technology to transmit power over 14 miles to Panoma. Decker then went on to design Mill Creek, the first commercial American three-phase power plant.[2] In 1895, the Folsom power plant, designed by James Lighthipe of General Electric, supplied power to Sacramento 22 miles away. These projects were all completed before the eastern states recognized the value of long distance transmission demonstrated by the Niagara project.[3]

California electrical companies, especially Eugene J. de Sabla and John Martin's companies, continued to increase transmission voltages and distances. Bay Counties Power Company, owned by de Sabla and Martin, broke records in 1901 when they transmitted power generated in the Sierra-Nevada to San Francisco. Throughout the early 20th century California companies developed the hydropower resources of the mountains and transmitted the power across the state.

The shortage of oil and increasing demands for electricity during World War I challenged electrical companies to make more energy available without building more plants. The California State Railroad Commission and the Committee on Petroleum of the State Council on Defense suggested in 1917 that the companies integrate their transmission lines. These integrated lines would allow unused power from one source to be used where the generating capacity was not as large. This idea of interconnected generating pools was adapted in the northeast and neighboring states following the California model.[4]

The post-World War II era was a time of rapid growth in Southern California. Housing and populations swelled along with the business and industrial concerns. Fueled by wartime defense industries, southern California grew rapidly, spreading out into suburbs and into areas outside the original city limits of the communities around Los Angeles and San Diego. Steam

[1] James C. Williams, *Energy and the Making of Modern California* (Akron, Ohio: University of Akron Press, 1997) p.173.
[2] James C. Williams, *Energy and the Making of Modern California*, 175.
[3] James C. Williams, *Energy and the Making of Modern California*, 176-7.
[4] James C. Williams, *Energy and the Making of Modern California*, 245.

turbine power plants were cheaper and quicker to build than hydroelectric plants and utilities companies moved away from hydroelectricity, establishing steam turbine power as the generator of choice. Such plants conserved water and kept costs down for the business and the consumer.[5] The design criteria were the same in all cases: to build the facility close to load centers to reduce transmission costs; to be close to fuel supplies; to be near a water supply; and to be on a site where land was cheap and could support a good foundation. Despite being closer to population centers, steam plants still needed transmission facilities.[6]

California Electric Power Company

California Electric Power Company began in the southern Sierra Nevada range. Organized as Nevada Power Mining and Milling Co. on December 31, 1904, the company planned to provide mines in the region with inexpensive electricity. Engineers sent to find a mine site had located a creek above Bishop, California in the Owens Valley and recognized it as an opportunity to generate hydroelectricity. The first transmission line was completed 8 months later supplying electricity to camps 125 miles away. Quickly the company developed four more plants along the creek. When mining began to decline the company searched for new markets in southern California. In 1912, it built a transmission line to San Bernardino. Over the next decades it purchased smaller companies in San Bernardino and Riverside counties and expanded into Mono, Inyo and Kern counties. The company also served three counties in Nevada. It was active in rural electrification and the development of Hoover Dam. By the 1950s, the company had tapped all the hydropower sites in their service area.[7] As a result, the company began a program of building steam generating power plants. The first plant was Highgrove in 1951, followed by San Bernardino, Norton Air Force Base (1957), Cool Water Steam Plant (1961), Barstow (1959) and a joint project in Yuma, Arizona.[8] California Electric Power Company was merged with Southern California Edison on January 1, 1964. The complex merger retained many of California Electric's employees and the President of California Electric, Fred Oldendorf, became the Vice-President of the merged company.[9]

Highgrove Substation

Highgrove Substation was constructed in conjunction with Highgrove generating station. The station needed facilities to increase the voltage to levels necessary for transmission. Construction of Highgrove began in 1950 as the first of California Electric Power Company's steam generation plants. The plant and substation were designed and built by Fluor Corporation of Los Angeles. The first phase of the plant consisted of units 1 and 2 at the north end. Each of these units attached to a Westinghouse transformer in the substation. The first two units went into operation in 1952 and became the company's primary power source. Even while the first two units were being built plans were being made for units 3 and 4. The generator for Unit 3 was delivered and placed on the generator deck in July of 1953.[10] The generator and its components were also the largest equipment expense for the company up until that point, $1,461,816.14.[11] This unit was connected to a new Westinghouse transformer in the substation. Unit 4 was completed in 1955 and increased the total generating capacity to 154,000 kW. This power was "stepped up" by its own transformer. The substations were built according to current practices. When California Electric Power merged with Southern California Edison, Highgrove was merged into the system along with all the other transmission lines and substations. Upon deregulation the process of separating generation,

[5] Myers, *Iron Men and Copper Wires*, 200; James C. Williams, *Energy and the Making of Modern California*, 277-78, 282-83.
[6] James C. Williams, *Energy and the Making of Modern California,* 284, 374.
[7] "To Water Add Steam: Output Grows" *San Bernardino Daily Sun* (April 23, 1958)
[8] Laura L. Klure, *California Electric Power Company* (Riverside, CA: A to Z Printing, 2005) p. 76-77. "Calectric's Birth Came When Men Hunting for Gold Discovered Water," *San Bernardino Daily Sun* (April 23, 1958)
[9] "Official Midnight Merger Made by Edison-Calelectric" *San Bernardino Daily Sun* (January 1, 1964); http://www.sce.com/abntsce/history/historical+timeline1948-1978.html
[10] "Calectric Begins Work on Third Unit at Highgrove" *San Bernardino Daily Sun* (July 22, 1953).
[11] Klure, p. 74.

transmission and customer service began. Southern California Edison was required to sell one half of its plants and associated substations. Instead, in 1996, it decided to sell all of its gas and oil fueled generating plants, valued at $700 million. They included the Etiwanda, Highgrove and San Bernardino plants. In order to meet the obligations to the 77-employees at these three plants and substations, Southern California Edison and the buyer had to agree to operate them until 1998.[12] The plant has been decommissioned but the substation remains in operation.

Evaluation

The Highgrove Substation does not appear to be a historic resource for the purposes of CEQA. The substation built between 1951 and 1955 does not appear to be significant in the context of the history of California Electric Power Company, the history of electric transmission or the history of post World War II electrical transmission. (Criterion A and 1) Highgrove was the first of several steam generating plants for California Electric Power Company, but the transmission systems for these plants were no different than the systems for the earlier hydroelectric plants. As a part of the electrical transmission system following World War II it is a line serving the local community and connecting to the larger electrical grid established by interconnectivity. Highgrove Substation does not appear to be associated with the life of a historically significant person (Criterion B and 2). Highgrove Substation does not embody characteristics of a type or period of construction. (Criteria C and3). It consists of standard substation components arranged in a typical fashion. Nor is it significant under Criterion D and 4, as a potential source of data on human history. This property is well-documented through company records and construction documents and does not appear to be a principal source of important information.

[12] Michael Diamond, "Edison to Sell Three Inland Empire Power Plants," *The Sun* (November 23, 1996)

APPENDIX 2

PALEONTOLOGICAL RESOURCES RECORDS SEARCH RESULTS

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

tel 213-763-3466
nhm.org

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

8 August 2017

CRM Tech
1016 East Cooley Drive, Suite B
Colton, CA 92324

Attn: Nina Gallardo, Project Archaeologist

re: Paleontological resources for the proposed Taylor Street-Commerce Way Alignment Project, CRM TECH Contract No. 3241P, in the City of Grand Terrace, San Bernardino County, project area

Dear Nina:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Taylor Street-Commerce Way Alignment Project, CRM TECH Contract No. 3241P, in the City of Grand Terrace, San Bernardino County, project area as outlined on the portion of the San Bernardino South USGS topographic quadrangle map that you sent to me via e-mail on 25 July 2017. We do not have any vertebrate fossil localities that lie directly within the proposed project boundaries, but we do have localities somewhat nearby from sedimentary deposits such as probably occur subsurface in the proposed project area.

Surface deposits in the entire proposed project area are composed of older Quaternary Alluvium, derived predominately as alluvial fan deposits from Blue Mountain to the east. We do not have any vertebrate fossil localities from these deposits in the immediate vicinity, and they are unlikely to contain significant fossil vertebrate remains in the uppermost layers. Our closest fossil vertebrate locality from these older Quaternary deposits is LACM 7811, west-southwest of the proposed project area west of Mira Loma along Sumner Avenue north of Cloverdale Road, that produced a fossil specimen of whipsnake, *Masticophis*, at a depth of 9 to 11 feet below the surface. More southerly but still south-southwest of the proposed project area, between Corona and Norco, our locality LACM 1207 produced a fossil specimen of deer, *Odocoileus*.

Grading or shallow excavations in the uppermost layers of soil and older Quaternary alluvial fan deposits in the proposed project area are unlikely to encounter significant fossil vertebrate remains. Deeper excavations that extend down into older and perhaps finer-grained Quaternary sediments, however, may well encounter significant vertebrate fossils. Any substantial excavations below the uppermost layers, therefore, should be closely monitored to quickly and professionally collect any specimens without impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

2024 Orange Tree Lane, Redlands, CA 92374 | Phone: 909.798.8616 Fax: 909.307.0539
www.SBCounty.gov

SAN BERNARDINO COUNTY

San Bernardino County Museum
Division of Earth Sciences

Ian Gilbert
Curator of Earth Sciences

email:
igilbert@sbcm.sbcounty.org

5 September, 2017

CRM TECH
Attn: Nina Gallardo
1016 E. Cooley Drive
Colton, CA 92324

PALEONTOLOGY LITERATURE / RECORDS REVIEW, Taylor Street-Commerce Way Alignment Project (CRM TECH Contract No. 3241P)

Dear Ms. Gallardo,

The Division of Earth Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-named project in the city of Grand Terrace, San Bernardino County, California. The proposed alignment project is located north of Main Street and south of Commerce Way, east of the I-215 Freeway and west of Michigan Street, Sections 5 & 6, Township 2 South, Range 4 West, as shown on the United States Geological Survey (USGS) 7.5 minute San Bernardino South, California topographic quadrangle map (USGS, 1967 – Photorevised, 1980).

Previous geologic mapping by Morton and Miller (2006) indicates that the proposed project corridor traverses Quaternary alluvium including middle to early Pleistocene-aged very old alluvial fan deposits (= **$Qvof_3$**) and late to middle Pleistocene-aged old alluvial fan deposits (= **Qof_3**) (fig. 1). These older fan sediments have high potential to contain fossil resources, and so are assigned high paleontological sensitivity. Pleistocene alluvium elsewhere in San Bernardino County and the Inland Empire has repeatedly demonstrated to have high paleontological

sensitivity (Jefferson, 1991; Reynolds and Reynolds, 1991; Woodburne, 1991; Anderson and others, 2002; Scott and Cox, 2008; Springer et al., 2009, 2010; Scott, 2010). Fossils recovered from these Pleistocene-aged sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, sabre-toothed cats, large and small horses, large and small camels, and bison (Scott and Cox, 2008; Springer et al., 2009, 2010; Scott, 2010).

For this review, I conducted a search of the Regional Paleontological Locality Inventory (RPLI) at the SBCM and a literature search through the SBCM Earth Sciences library. The results of this search indicate that no recorded paleontological resource localities are present within the proposed project. Furthermore, no resource localities are recorded by the SBCM within one mile of the proposed project in any direction.

Recommendations

The results of the literature review and the check of the RPLI at the SBCM demonstrate that excavation in conjunction with development may have high potential to adversely impact significant nonrenewable paleontological resources present within the boundaries of the proposed project study area. A qualified vertebrate paleontologist must therefore be retained to develop a paleontological resource impact mitigations program (PRIMP) to mitigate impacts to such resources. This mitigation program must include curation of recovered resources (Scott et al., 2004) and be consistent with the provisions of the California Environmental Quality Act (Scott and Springer, 2003), as well as with regulations currently implemented by the County of San Bernardino and the proposed guidelines of the Society of Vertebrate Paleontology.

The county of San Bernardino (Development Code §82.20.030) requires that paleontological mitigation programs include, but not be limited to:

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

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

property in question are not present, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.

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

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

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

The county of San Bernardino (Development Code §82.20.040) defines a qualified vertebrate paleontologist as meeting the following criteria:

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

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

References

Anderson, R.S., M.J. Power, S.J. Smith, K.B. Springer and E. Scott, 2002. Paleoecology of a Middle Wisconsin deposit from southern California. Quaternary Research 58(3): 310-317.

Jefferson, G.T., 1991. A catalogue of late Quaternary vertebrates from California: Part Two, mammals. Natural History Museum of Los Angeles County Technical Reports, No. 7.

Morton, D.M., and Miller, F.K., (2006). Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California, with digital preparation by Cossette, P.M., and Bovard, K.R.: U.S. Geological Survey Open-File Report 2006-1217, scale 1:100,000, 199 p., http://pubs.usgs.gov/of/2006/1217.

Reynolds, S.F.B. and R.L. Reynolds, 1991. The Pleistocene beneath our feet: near-surface Pleistocene fossils in inland southern California basins, in Inland Southern California: the last 70 million years, M.O. Woodburne, S.F.B. Reynolds, and D.P. Whistler, eds. Redlands, San Bernardino County Museum Special Publication 38(3&4), p. 41-43.

Scott, E., 2010. Extinctions, scenarios, and assumptions: changes in latest Pleistocene large herbivore abundance and distribution in western North America. In E. Scott and G. McDonald (eds.), Faunal dynamics and extinction in the Quaternary: Papers honoring Ernest L. Lundelius, Jr. Quaternary International 217: 225-239.

Scott, E. and S.M. Cox, 2008. Late Pleistocene distributions of *Bison* (Mammalia; Artiodactyla) in the Mojave desert of southern California and Nevada. Geology and vertebrate paleontology of western and southern North America: contributions in honor of David P. Whistler. Edited by X. Wang and LG Barnes. Natural History Museum of Los Angeles County Science Series, 41, 359-382.

Scott, E. and K. Springer, 2003. CEQA and fossil preservation in southern California. The Environmental Monitor, Fall 2003, p. 4-10, 17.

Scott, E., K. Springer and J.C. Sagebiel, 2004. Vertebrate paleontology in the Mojave Desert: the continuing importance of “follow-through” in preserving paleontologic resources. In M.W. Allen and J. Reed (eds.) The human journey and ancient life in California’s deserts: Proceedings from the 2001 Millennium Conference. Ridgecrest: Maturango Museum Publication No. 15, p. 65-70.

Springer, K., E. Scott, J.C. Sagebiel, and L.K. Murray, 2009. The Diamond Valley Lake local fauna: late Pleistocene vertebrates from inland southern California. In L.B. Albright III (ed.),

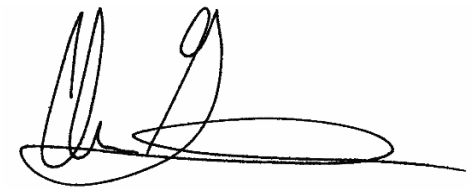
Papers on geology, vertebrate paleontology, and biostratigraphy in honor of Michael O. Woodburne. Museum of Northern Arizona Bulletin 65:217-235.

Springer, K., E. Scott, J.C. Sagebiel, and L.K. Murray, 2010. Late Pleistocene large mammal faunal dynamics from inland southern California: the Diamond Valley Lake local fauna. In E. Scott and G. McDonald (eds.), Faunal dynamics and extinction in the Quaternary: Papers honoring Ernest L. Lundelius, Jr. Quaternary International 217: 256-265.

Woodburne, M.O., 1991. The Cajon Valley, in Inland Southern California: the last 70 million years, M.O. Woodburne, S.F.B. Reynolds, and D.P. Whistler, eds. Redlands, San Bernardino County Museum Special Publication 38(3&4), p. 41-43.

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

Sincerely,



Ian Gilbert, Curator of Earth Sciences
Division of Earth Sciences
San Bernardino County Museum

Figures (CONFIDENTIAL)

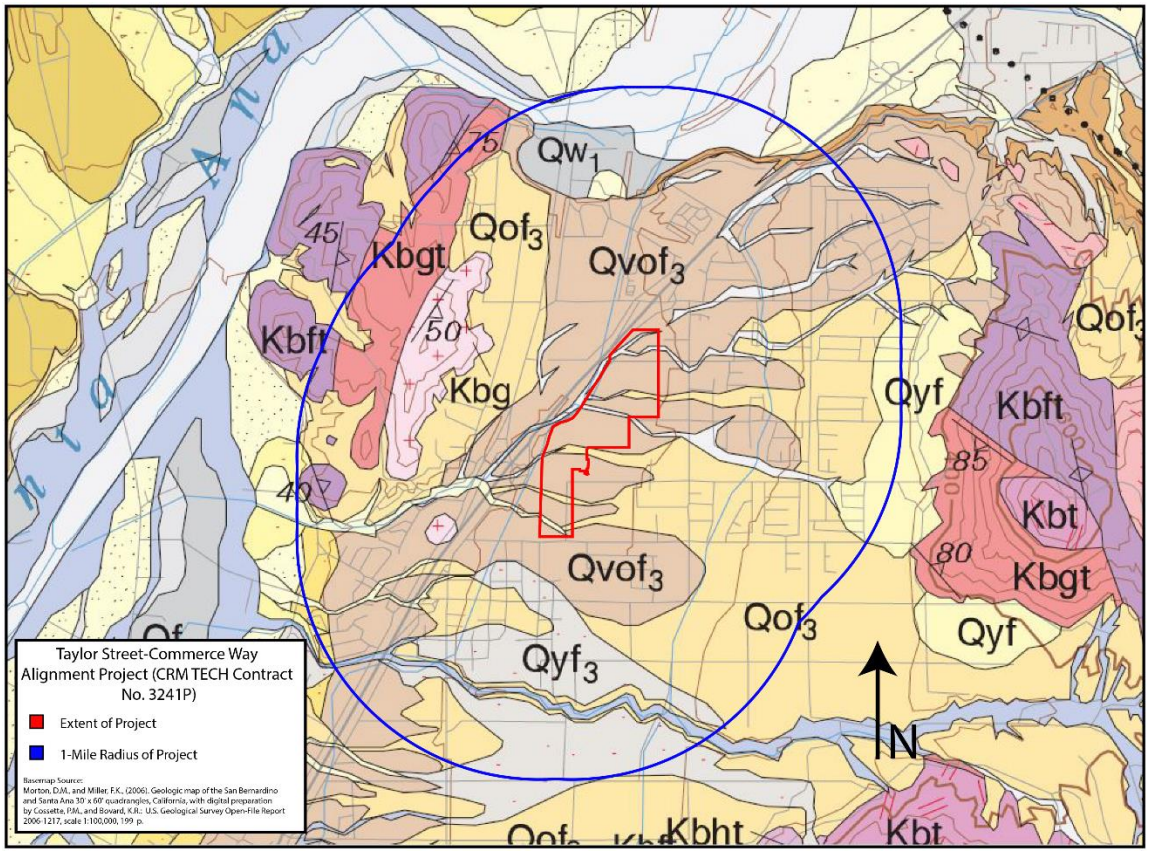


Figure 1.

ATTACHMENT C

2019 RECORDS SEARCH

April 30, 2019

Kari Cano
Kimley-Horn
3880 Lemon Street, Suite 420
Riverside, California 92501

Subject: Cultural Resources Records Search for the Gateway Specific Plan Project, Grand Terrace, San Bernardino County, California (BCR Consulting Project KIM1906)

Dear Kari:

BCR Consulting LLC (BCR Consulting) was retained by Kimley-Horn to complete a cultural resources records search for the Gateway Specific Plan Project located in the City of Grand Terrace, San Bernardino County, California. The project site is located in a non-sectioned portion of Township 2 South, Range 4 West, San Bernardino Baseline and Meridian. It is depicted on the United States Geological Survey (USGS) *San Bernardino South, California* (1980) 7.5-minute topographic quadrangle (Figure 1). The purpose of this study was to identify prehistoric or historic-period resources within one mile of the project site.

Cultural Resources Records Search

BCR Consulting Historian Ynez Barber, B.A. conducted the cultural resources records search at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton and at the Eastern Information Center (EIC) at the University of California, Riverside. The records search included a review of all recorded historic-period and prehistoric archaeological sites, as well as built environment resources within one mile of the project site. The research also reviewed known cultural resource reports completed in the vicinity. The research revealed that 55 cultural resource studies have taken place resulting in 84 cultural resources recorded within one mile of the project site. Of the previous studies, one has assessed the project site resulting in four cultural resources identified within its boundaries. The resources identified within the project site boundaries include a segment of the historic-period Riverside Canal (designated P-36-7169 and P-33-4495), a segment of Union Pacific Railroad (P-36-6101), the historic-period Highgrove Power Plant (P-36-21711), and the historic-period Highgrove Substation (P-36-26221). A review of historic aerial photos from www.historicaerials.com indicated that elements of each of these resources were in place in 2012. In addition to the previously-identified resources, nine historic-period buildings (i.e. over 45 years old) remained on the northern portion of the project site until at least 2012. It is not known if any of these resources is extant. The records search results are summarized in Table A.

Table A. Records Search Results (One-Mile Radius)

USGS Quad	Cultural Resources	Cultural Resource Reports
San Bernardino South, Calif. (1980)	P-36-314: Prehistoric Lithics and Bedrock Milling P-36-792: Prehistoric Village Site P-36-1577: Prehistoric Lithics and Bedrock Milling P-36-1509: Prehistoric Bedrock Milling P-36-6101: Union Pacific Railroad* P-36-6102: Historic-Period Structure P-36-6874: Historic-Period Refuse P-36-7168: Historic-Period Gage Canal P-36-7169: Historic-Period Riverside Canal* P-36-9814: Prehistoric Lithics/Historic-Period Refuse P-36-12875: Historic-Period Residence P-36-12876: Historic-Period Residence P-36-19816: Prehistoric Bedrock Milling/Rock Shelter P-36-20414: Historic-Period Building P-36-21705-21708: Historic-Period Buildings P-36-21709: Historic-Per. Grand Terrace Underpass Bridge P-36-21710: Historic-Period Building P-36-21711: Historic-Period Highgrove Power Plant* P-36-25454: Historic-Period Building P-36-26050: Historic-Period Transmission Line P-36-26221: Historic-Period Highgrove Substation* P-36-26886: Historic-Period Building P-36-29029: Prehistoric Bedrock Milling (Roquet Ranch Site) P-36-29030: Prehist. Cairn/Rock Feat. (Roquet Ranch Site) P-36-29034: Prehistoric Petroglyphs (Roquet Ranch Site) P-36-29035: Prehist. Rock Shelter/Cave (Roquet Ranch Site) P-36-29037: Prehistoric Petroglyphs (Roquet Ranch Site) P-36-29381: Historic-Period Engineering Structure P-36-31826: Historic-Period Building P-36-60234: Prehistoric Isolated Mano P-36-60238: Prehistoric Isolated Mano P-33-1984: Unspecified Historic-Period Site P-33-4495: Historic-Period Riverside Canal* P-33-4768: Historic-Period Water Conveyance System P-33-6923, 6924, 6927-6935, 6937-6939, 6942-6946, 6948-6965: Historic-Period Buildings P-33-8752: Prehistoric/Historic Period Archaeological Site P-33-9529: Historic-Period Archaeological Site P-33-16644: Historic-Period Archaeological Site P-33-16650: Historic-Period Railroad Alignment P-33-24727: Historic-Period Building	SB-145, 249, 482, 503, 541, 610, 711, 712, 713, 714, 814, 848, 1345, 2887, 3920, 4201, 4202, 4360, 5251, 5253, 5257, 5603, 5930, 6084, 6124, 7260**, 7946 RI-1045,1046, 1698, 3605, 3633, 3851, 4225, 4230, 4379, 4391, 4430, 4813, 5056, 5233, 5238, 5747, 5748, 6840, 6961, 7173, 7355, 8093, 8526, 8771, 8943, 9414, 9795, 10124

*Within project site. **Previously surveyed a portion of the project site.

Summary and Recommendations

As noted above, current research has not revealed the status of the resources and potential resources located within the project site boundaries. Therefore, unless city records indicate

that these resources have been demolished, or appropriately identified and evaluated pursuant to requirements of the California Environmental Quality Act (CEQA) within the last five years, they should be subject to an updated cultural resources assessment. The assessment should be completed under the supervision of a cultural resource professional that meets the U.S. Secretary of the Interior Professional Qualification Standards for Archaeology and for Architectural History.

If human remains are encountered during activities associated with the proposed project, 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.

Please contact me by phone at 909/525-7078 or e-mail at david.brunzell@yahoo.com with any questions or comments.

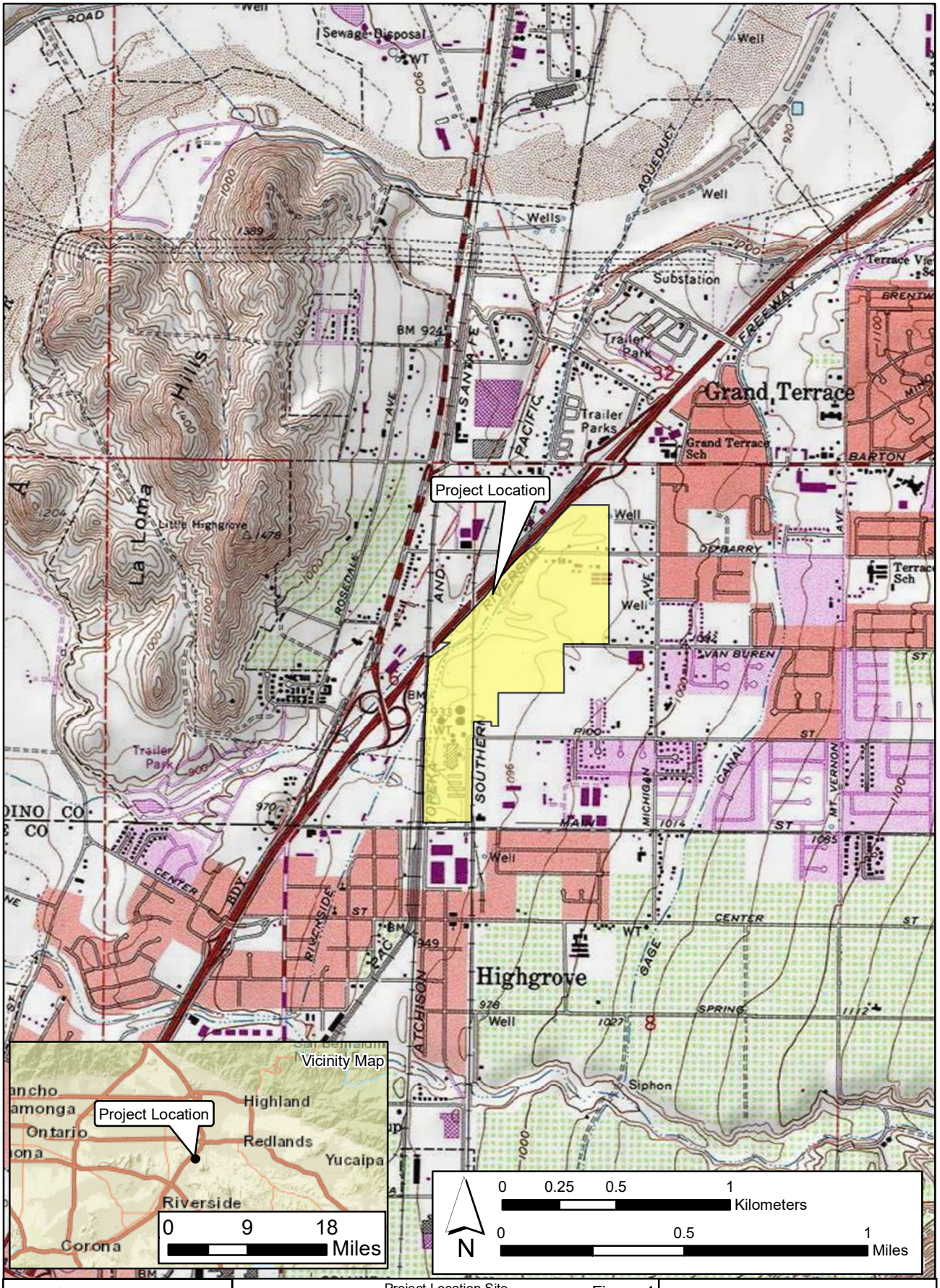
Sincerely,

David Brunzell, M.A./RPA
Principal Investigator/Archaeologist

Attachments: References, Map

References

United States Geological Survey
1980 *San Bernardino South, California.* 7.5 Minute Topographic Quadrangle.



BCRCONSULTING LLC

Project Location Site
Gateway Specific Plan Project

Figure 1

Kimley-Horn

Reference: ESRI; USGS Quad: San Bernardino South (1980), California