

CULTURAL RESOURCE STUDY FOR THE 119 SOUTH ARROWHEAD AVENUE PROJECT

CITY OF SAN BERNARDINO

APNs 136-014-10 and 136-051-54

Prepared for:


**City of San Bernardino
290 North D Street
San Bernardino, California 92401**

And:

**119 South Arrowhead, LLC
11777 San Vicente Boulevard, Suite 780
Los Angeles, California 90049**

Prepared by:

Brian F. Smith, Principal Investigator

Signature: 

**Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064**



October 13, 2022

Archaeological Database Information

Authors: Jillian L.H. Conroy and Brian F. Smith

Consulting Firm: Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064

Report Date: October 13, 2022

Report Title: Cultural Resource Study for the 119 South Arrowhead Avenue Project, City of San Bernardino (APNs 136-014-10 and 136-051-54)

Submitted to: City of San Bernardino
290 North D Street
San Bernardino, California 92401

Prepared for: 119 South Arrowhead, LLC
11777 San Vicenta Boulevard, Suite 780
Los Angeles, California 90049

USGS Quadrangle: *San Bernardino South, California*

Study Area: APNs 136-014-10 and 136-051-54

Key Words: Cultural resource survey; archaeological testing program; City of San Bernardino; historic features and deposits; Site 119-Temp-1; no significant resources; monitoring recommended.

Table of Contents

<u>Section</u>	<u>Page</u>
1.0 MANAGEMENT SUMMARY/ABSTRACT	1.0-1
2.0 INTRODUCTION	2.0-1
3.0 SETTING	3.0-1
3.1 Natural Setting	3.0-1
3.2 Cultural Setting	3.0-1
3.2.1 Prehistoric Period.....	3.0-1
3.2.2 Historic Period.....	3.0-4
3.2.3 General History of the City of San Bernardino	3.0-7
3.2.4 History of the Project Area	3.0-11
3.3 Results of the Archaeological Records Search	3.0-32
3.4 Applicable Regulations.....	3.0-33
3.4.1 California Environmental Quality Act.....	3.0-34
4.0 RESEARCH DESIGN	4.0-1
4.1 Research Questions and Data Needs.....	4.0-1
5.0 ARCHAEOLOGICAL TESTING PROGRAM	5.0-1
5.1 Field Methodology.....	5.0-1
5.1.1 Subsurface Testing.....	5.0-1
5.2 Laboratory Analysis.....	5.0-6
5.2.1 Artifact Sorting and Analysis.....	5.0-7
5.2.2 Artifact Functional Categories	5.0-7
5.3 Archival Research.....	5.0-9
5.4 Recordation and Curation	5.0-9
6.0 REPORT OF FINDINGS	6.0-1
6.1 Results of the Field Survey	6.0-1
6.2 Results of the Test Trenching	6.0-5
6.3 Archaeological Results	6.0-14
6.43 Summary	6.0-18
7.0 DISCUSSION	7.0-1
7.1 Recommendations.....	7.0-1
8.0 BIBLIOGRAPHY	8.0-1

Appendices

- Appendix A – Qualifications of Key Personnel
- Appendix B – Site Record Form*
- Appendix C – Archaeological Records Search Results*
- Appendix D – NAHC Sacred Lands File Search Results*
- Appendix E – Artifact Catalog
- Appendix F – Archaeological Test Plan for the 119 South Arrowhead Avenue Project (*Prepared by Brian F. Smith and Associates, Inc. 2022*)
- Appendix G – Confidential Maps*

**Deleted for public review and bound separately in the Confidential Appendix*

List of Figures

<u>Figure</u>	<u>Page</u>
Figure 1.0–1 General Location Map	1.0–2
Figure 1.0–2 Project Location Map	1.0–3
Figure 1.0–3 Conceptual Site Plan.....	1.0–4
Figure 3.2–1 1887 Lithograph Map	3.0–10
Figure 3.2–2 Project Location Shown on the 1887 Lithograph Map	3.0–12
Figure 3.2–3 1894 Sanborn Map	3.0–14
Figure 3.2–4 Historic USGS Maps	3.0–15
Figure 3.2–5 1906 Sanborn Map	3.0–18
Figure 3.2–6 1930 Aerial Photograph.....	3.0–20
Figure 3.2–7 1938 Aerial Photograph.....	3.0–21
Figure 3.2–8 1950 Sanborn Map	3.0–22
Figure 3.2–9 1951 Sanborn Map	3.0–23
Figure 3.2–10 1953 Aerial Photograph.....	3.0–24
Figure 3.2–11 1956 Sanborn Map	3.0–26
Figure 3.2–12 1958 Sanborn Map	3.0–27
Figure 3.2–13 1959 Sanborn Map	3.0–28
Figure 3.2–14 1959 Aerial Photograph.....	3.0–29
Figure 3.2–15 1968 Aerial Photograph.....	3.0–30
Figure 3.2–16 1990 Aerial Photograph.....	3.0–31
Figure 5.1–1 Trench Locations With 1894 Sanborn Map Structures	5.0–2
Figure 5.1–2 Trench Locations With 1906 Sanborn Map Structures	5.0–3
Figure 5.1–3 Trench Locations With 1950 Sanborn Map Structures	5.0–4
Figure 5.1–4 Trench Locations Shown on a Current Aerial Photograph	5.0–5

List of Figures (continued)

<u>Figure</u>	<u>Page</u>
Figure 6.2–1 Archaeological Investigation Map*	6.0–6
Figure 6.2–2 Cultural Resource Location Map*	6.0–10

**Deleted for public review and bound separately in the Confidential Appendix*

List of Plates

<u>Plate</u>	<u>Page</u>
Plate 2.0–1 Aerial overview of the 119 South Arrowhead Avenue Project	2.0–1
Plate 3.2–1 Engraving depicting the Mormon settlement in the San Bernardino Valley	3.0–8
Plate 3.2–2 Amasa Lyman	3.0–8
Plate 3.2–3 Charles Rich	3.0–8
Plate 3.2–4 1925 view of Third Street in San Bernardino, facing F Street	3.0–11
Plate 3.2–5 J.J. Hanford	3.0–13
Plate 3.2–6 View of the Hanford Foundry Company building from the intersection of Arrowhead Avenue and the railroad tracks, facing northeast	3.0–16
Plate 3.2–7 Demolition of the Hanford Foundry Company facility from the intersection of Arrowhead and Rialto avenues, facing southeast	3.0–17
Plate 6.1–1 Overview of the subject property, facing west from the center of the parcel	6.0–2
Plate 6.1–2 Overview of the subject property, facing east from the center of the parcel	6.0–2
Plate 6.1–3 Overview of the subject property, facing west along the southern property boundary	6.0–3
Plate 6.1–4 Overview of the subject property from the southwest property corner, facing northeast	6.0–3
Plate 6.1–5 From left to right: amber glass, clear-glazed ceramic rim fragment, and “Flow Blue” ceramic fragment	6.0–4
Plate 6.2–1 East wall profile of Trench 7, zero to five feet, facing southeast	6.0–8
Plate 6.2–2 West wall profile of Trench 10, zero to five feet, facing northeast	6.0–8
Plate 6.2–3 Overview of Feature A in Trench 5, facing west	6.0–11
Plate 6.2–4 Overview of Feature B in Trench 6, facing east	6.0–12
Plate 6.2–5 Overview of Feature C in Trench 6, facing east	6.0–12
Plate 6.2–6 Overview of Feature D in Trench 7, facing west	6.0–14

List of Tables

<u>Table</u>	<u>Page</u>
Plate 3.3–1 Archaeological Sites Located Within One-Half Mile of the 119 South Arrowhead Avenue Project.....	3.0–32
Plate 6.2–1 Preliminary Trench Excavation Results.....	6.0–7
Plate 6.3–1 Cultural Materials Recovered From Feature D.....	6.0–15
Plate 6.3–2 Functional Categories Represented by Cultural Materials From Feature D.....	6.0–15
Plate 6.3–3 Temporally Diagnostic Items Recovered From Feature D.....	6.0–16
Plate 6.3–4 Temporally and Geographically Diagnostic Ceramic Kitchen Items Recovered From Feature D	6.0–18
Plate 6.4–1 Cultural Materials Recovered From the 119 South Arrowhead Avenue Project	6.0–19

1.0 MANAGEMENT SUMMARY/ABSTRACT

Brian F. Smith and Associates, Inc. (BFSA) was retained by 119 South Arrowhead, LLC to provide historical and archaeological consulting services for the 119 South Arrowhead Avenue Project. The 10.34-acre project is identified as Assessor's Parcel Numbers (APNs) 136-041-10 and 136-051-54 (Blocks 101, 102, 103, and 104 of the J.W. Waters Addition), located in Ward 1 of the city of San Bernardino, California (Figure 1.0–1). The property is situated within the unsectioned Rancho San Bernardino Land Grant (Township 1 South, Range 4 West [projected]) on the 7.5-minute USGS *San Bernardino South, California* Quadrangle (Figure 1.0–2). The property is bounded by South Arrowhead Avenue to the west, West Rialto Avenue to the north, South Sierra Way to the east, and the California Regional Rail “A” to the south. The project includes the development of three warehouses with associated parking and infrastructure (Figure 1.0–3).

In March 2022, BFSA conducted a cultural resources survey of the subject property to study the potential for cultural resources within the development plan. The initial survey included a records search and field inspection. Once the survey and records data indicated the property has contained a variety of structures and related uses since the late 1800s, it became evident that the property retained the potential for significant buried historic resources. Subsequently, an Archaeological Test Plan (ATP) was prepared to investigate the potential for significant buried cultural deposits or features within the property (Conroy and Smith 2022; see Appendix F). The ATP was reviewed and approved by the City of San Bernardino. With the approval of the City, the ATP was implemented to search for historic or prehistoric deposits or features. The following report provides the results of the survey and testing phases of the cultural resource study.

Historically, this property has seen mixed uses from the 1880s through the 1980s, including a foundry, a fruit packing house, a fertilizer company, residential occupation, and a possible stagecoach operation. The development of the project area suggests that deposits from the early residential phase may remain intact. The Area of Potential Effect (APE) is currently vacant and has been utilized as a parking lot since 2013. Because the ground surface is covered with gravel or fill soil, assessment of the potential for historic or prehistoric deposits within the project required the excavation of archaeological test trenches. The ATP recommended mechanical trenching at 10 to 16 locations selected as the most likely to intersect with historic features based upon historic lithograph and Sanborn map information.

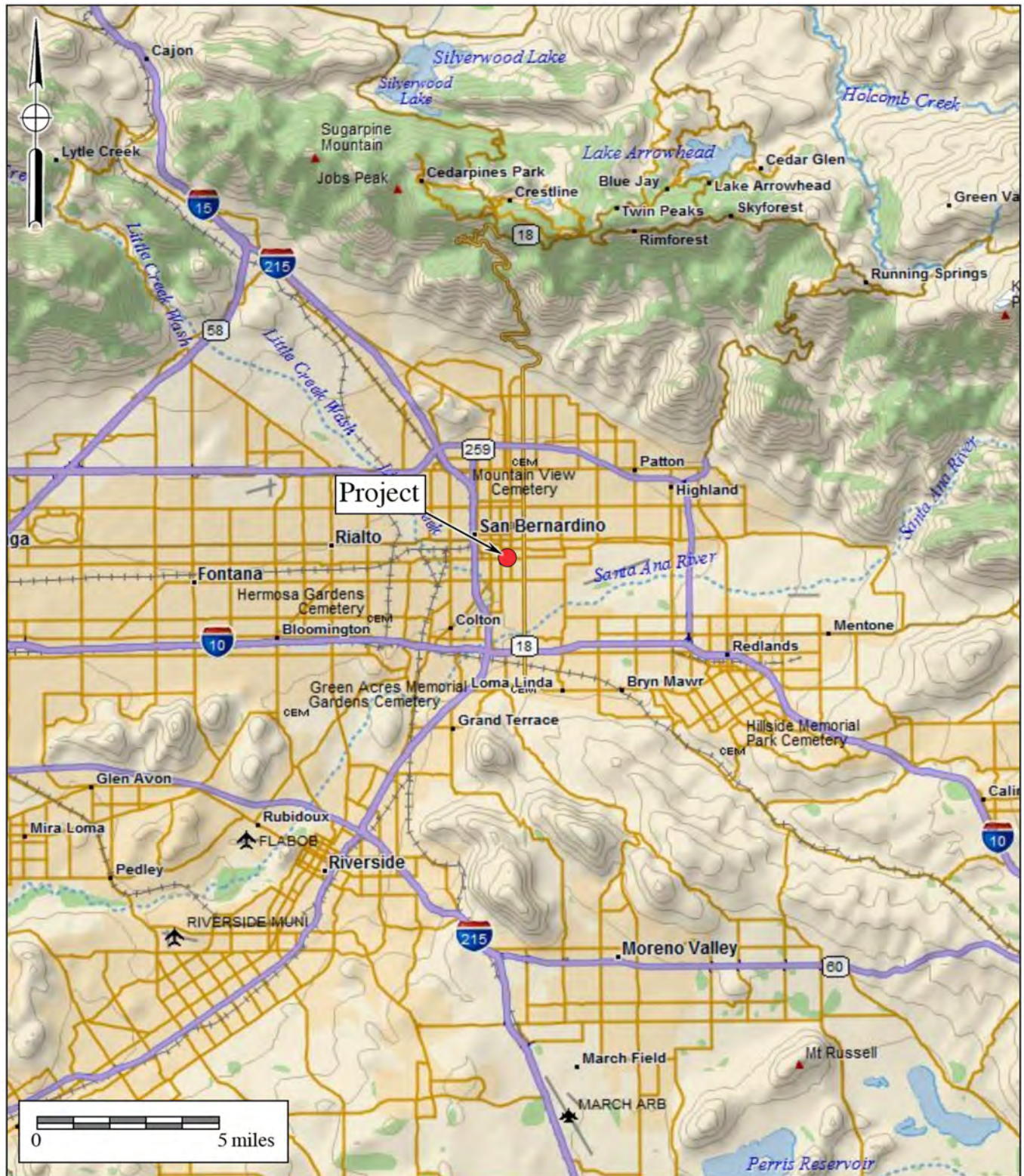


Figure 1.0-1
General Location Map

The 119 South Arrowhead Avenue Project

DeLorme (1:250,000)



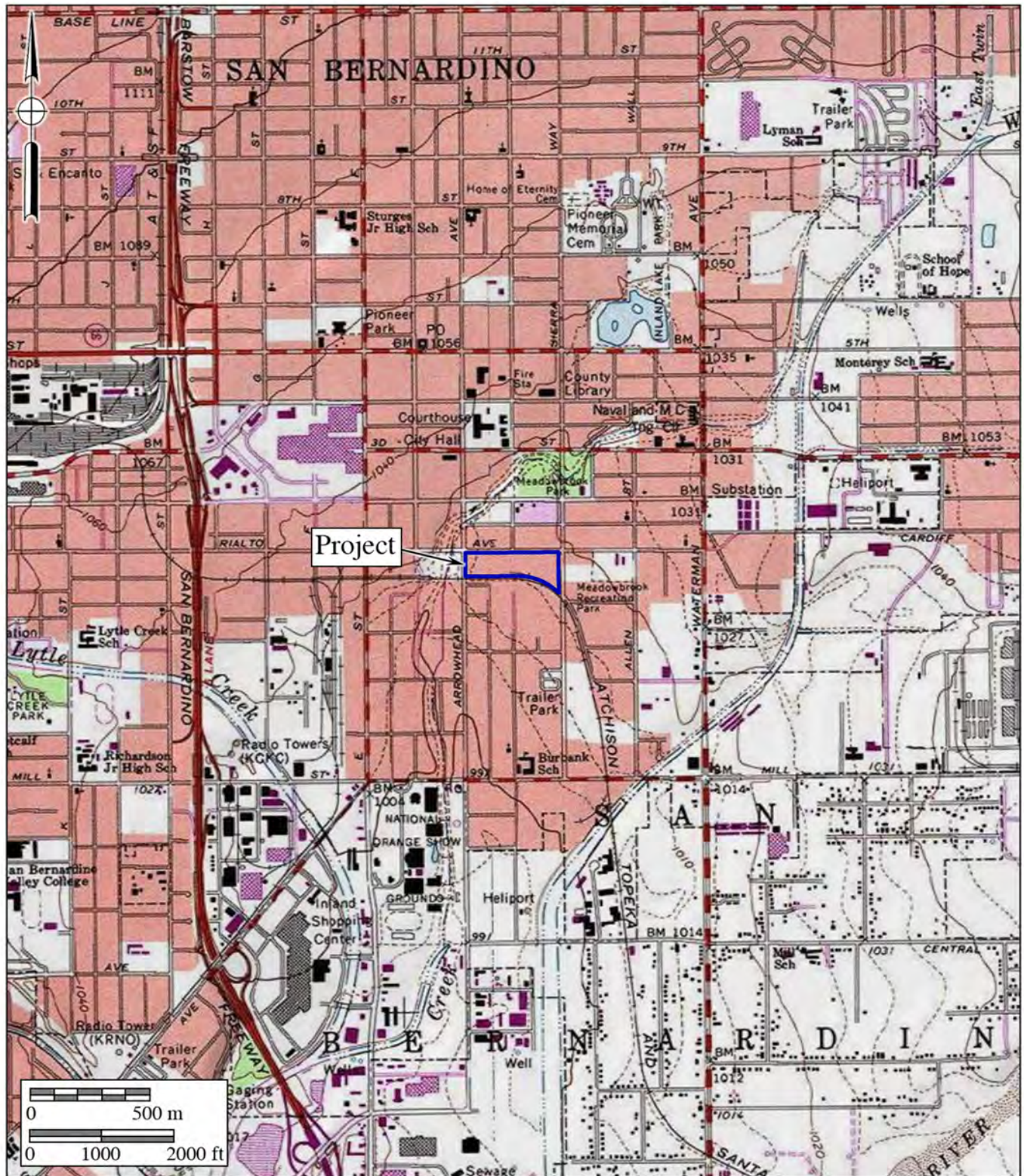
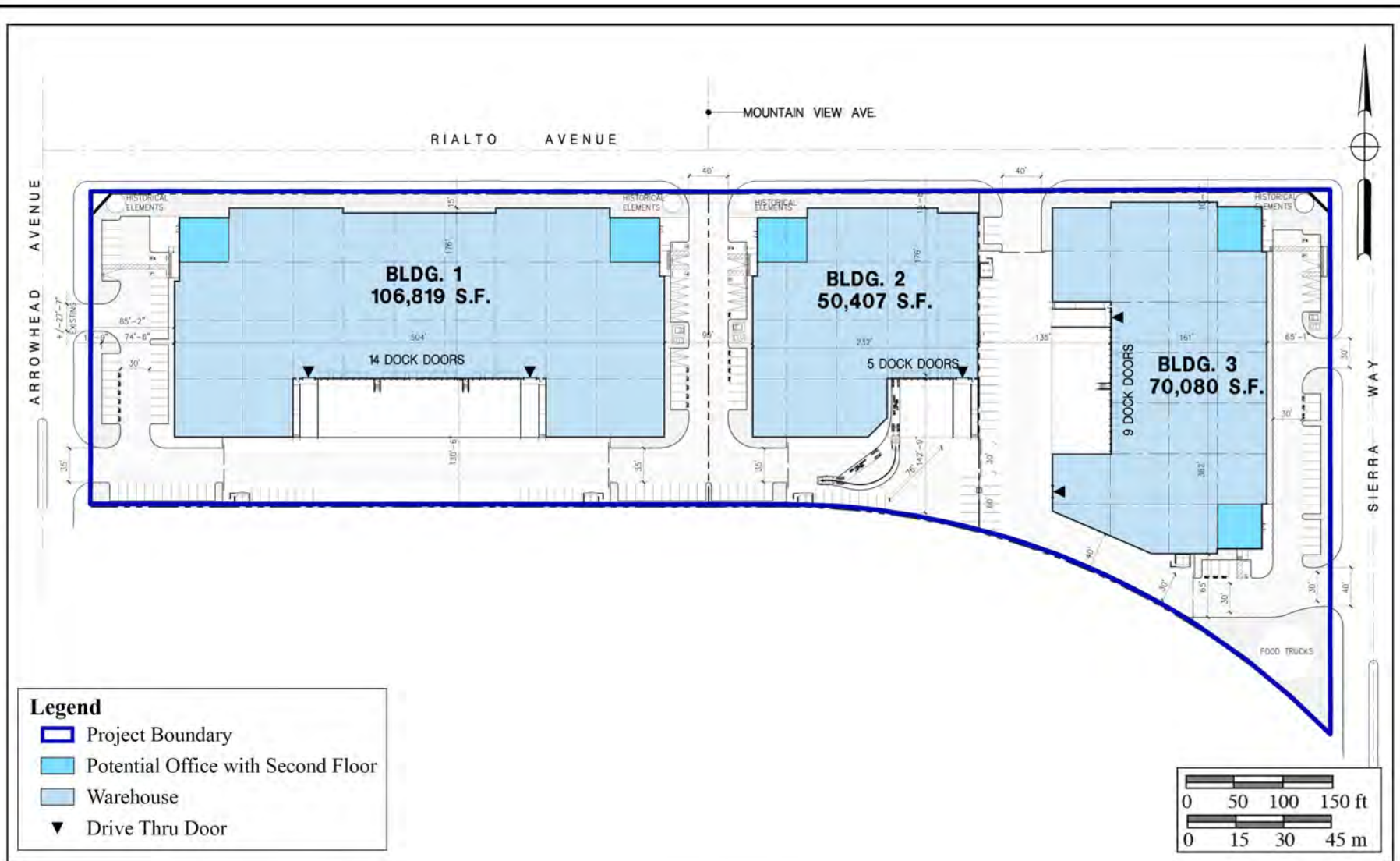


Figure 1.0-2
Project Location Map

The 119 South Arrowhead Avenue Project

USGS San Bernardino South Quadrangle (7.5-minute series)





This report will present the results of the testing program, which was designed to determine if any significant cultural resources exist on the property that would be impacted by the construction of this project. Thirteen test trenches were excavated as part of the testing program. One historic collapsed wall, one historic structure footer, one historic concrete pad, one historic refuse deposit, and non-contextual historic artifacts were discovered during the testing program. All features were identified in the western portion of the property, recorded, and determined to lack any further research potential. No features or defined deposits were exposed by trenches in the eastern half of the property. Although no significant deposits or features were encountered during the excavation of the test trenches, historic artifacts and, in some cases, features, were discovered in 12 of the 13 trenches, which reflects the long period of historic use of the property. Based upon the results of the survey, records searches, and testing at the subject property, extensive evidence of the historic occupation of this location was documented; however, none of the results demonstrate that the deposits or features were significant as defined by the California Environmental Quality Act (CEQA). While no historically significant elements of the historic site were exposed, the potential exists that historically important historic features or deposits exist that could contribute to the history of the city of San Bernardino. Furthermore, while no evidence of Native American use of this location prehistorically was encountered, the potential to discover such prehistoric deposits is recognized due to the proximity of the property to water drainages. Therefore, the recommendation is made that archaeological monitoring be required as a condition of development approval. The monitoring program should include a plan to facilitate the identification, recordation, evaluation, and, if needed, mitigation of impacts to any features or deposits encountered. A proposed Mitigation Monitoring and Reporting Program (MMRP) is discussed in Section 7.0 of this report.

2.0 INTRODUCTION

The ATP for the 119 South Arrowhead Avenue Project was required by the City of San Bernardino in conformance with Section 21083.2 of the California Public Resources Code and CEQA, and was prepared in accordance with City of San Bernardino environmental compliance. The proposed project consists of the development of the entire 10.34-acre property bounded by South Arrowhead Avenue to the west, West Rialto Avenue to the north, South Sierra Way to the east, and the California Regional Rail “A” to the south. Currently, the property is vacant (Plate 2.0–1).



Plate 2.0–1: Aerial overview of the current development at 119 South Arrowhead Avenue.

BFSa conducted an archaeological survey for the 119 South Arrowhead Avenue Project on February 14, 2022, during which historic artifacts were identified on the surface of the property. Historical background studies indicate the property has been in use since the late 1800s for the Hanford Foundry, the C.P. Barrows Fruit Packing House, the T.A. Blakeley’s Fertilizer works, residential occupation, the construction of an artisan well, and possibly earlier for a stagecoach operation. By the 1960s, all residential structures had been replaced by commercial structures and parking lots and between 1988 and 1990, the entire project was cleared of all structures. Most recently, the property has been used as a gravel parking lot.

The ATP addressed the City’s requirements related to development projects in the San Bernardino area. To implement the evaluation process outlined in the ATP, archaeologists used backhoe trenches and controlled excavations to determine if cultural resources were present within the project. The testing was conducted prior to site grading in order to facilitate the

identification of significant archaeological deposits, and if such significant deposits or features were identified, to outline measures needed to achieve the mitigation of impacts. The historic features that were identified were evaluated for significance in accordance with CEQA and City of San Bernardino guidelines. Based upon the testing results, the existing MMRP for the project will be applied during the grading program to identify and evaluate any deposits that may be discovered and to fully evaluate the features identified as a result of the testing program.

3.0 SETTING

The project setting includes both physical and biological contexts of the proposed project, as well as the cultural setting of prehistoric and historic human activities in the general area.

3.1 Natural Setting

The 119 South Arrowhead Avenue Project is located in the Peninsular Ranges Geologic Province of southern California. The range, which lies in a northwest to southeast trend through the county, extends some 1,000 miles from the Raymond-Malibu Fault Zone in western Los Angeles County to the southern tip of Baja California. The subject property lies within the broad, fault-bounded alluvial valley of the Santa Ana River channel between the San Bernardino Mountains to the north and the San Timoteo Badlands to the south (Morton and Miller 2006). The project is just east of Warm Creek, a tributary to the Santa Ana River. Stratigraphically, the project overlies late Holocene-aged, young axial channel deposits (Morton and Miller 2006). These sedimentary deposits are characterized as fine to coarse-grained sands and pebbly sands that coarsen eastward (Wirths 2022). Active wash deposits of unconsolidated sand and gravel characterize the path of Warm Creek (Morton and Miller 2006). Soils within the project consist of Grangeville fine sandy loam, warm MAAT, MLRA 19 and Tujunga gravelly loamy sand, 0 to 9 percent slopes (NRCS 2019). Elevations within the project range from approximately 1,008 to 1,012 feet above mean sea level.

3.2 Cultural Setting

3.2.1 Prehistoric Period

Paleo Indian, Archaic Period Milling Stone Horizon, and the Late Prehistoric Shoshonean groups are the three general cultural periods represented in San Bernardino County. The following discussion of the cultural history of San Bernardino County references the San Dieguito Complex, Encinitas Tradition, Milling Stone Horizon, La Jolla Complex, Pauma Complex, and San Luis Rey Complex, since these culture sequences have been used to describe archaeological manifestations in the region. The Late Prehistoric component in San Bernardino County was represented by the Cahuilla, Serrano, and potentially the Vanyume Indians.

Absolute chronological information, where possible, will be incorporated into this discussion to examine the effectiveness of continuing to use these terms interchangeably. Reference will be made to the geological framework that divides the culture chronology of the area into four segments: late Pleistocene (20,000 to 10,000 years before the present [YBP]), early Holocene (10,000 to 6,650 YBP), middle Holocene (6,650 to 3,350 YBP), and late Holocene (3,350 to 200 YBP).

Paleo Indian Period (Late Pleistocene: 11,500 to circa 9,000 YBP)

The Paleo Indian Period is associated with the terminus of the late Pleistocene (12,000 to

10,000 YBP). The environment during the late Pleistocene was cool and moist, which allowed for glaciation in the mountains and the formation of deep, pluvial lakes in the deserts and basin lands (Moratto 1984). However, by the terminus of the late Pleistocene, the climate became warmer, which caused the glaciers to melt, sea levels to rise, greater coastal erosion, large lakes to recede and evaporate, extinction of Pleistocene megafauna, and major vegetation changes (Moratto 1984; Martin 1967, 1973; Fagan 1991). The coastal shoreline at 10,000 YBP, depending upon the particular area of the coast, was near the 30-meter isobath, or two to six kilometers further west than its present location (Masters 1983).

Paleo Indians were likely attracted to multiple habitat types, including mountains, marshlands, estuaries, and lakeshores. These people likely subsisted using a more generalized hunting, gathering, and collecting adaptation while utilizing a variety of resources including birds, mollusks, and both large and small mammals (Erlandson and Colten 1991; Moratto 1984; Moss and Erlandson 1995).

Archaic Period (Early and Middle Holocene: circa 9,000 to 1,300 YBP)

Archaeological data indicates that between 9,000 and 8,000 YBP, a widespread complex was established in the southern California region, primarily along the coast (Warren and True 1961). This complex is locally known as the La Jolla Complex (Rogers 1939; Moriarty 1966), which is regionally associated with the Encinitas Tradition (Warren 1968) and shares cultural components with the widespread Milling Stone Horizon (Wallace 1955). The coastal expression of this complex appeared in southern California coastal areas and focused upon coastal resources and the development of deeply stratified shell middens that were primarily located around bays and lagoons. The older sites associated with this expression are located at Topanga Canyon, Newport Bay, Agua Hedionda Lagoon, and some of the Channel Islands. Radiocarbon dates from sites attributed to this complex span a period of over 7,000 years in this region, beginning over 9,000 YBP.

The rising sea level during the early Holocene created rocky shorelines and bays along the coast by flooding valley floors and eroding the coastline (Curry 1965; Inman 1983). Shorelines were primarily rocky with small littoral cells, as sediments were deposited at bay edges but rarely discharged into the ocean (Reddy 2000). These bays eventually evolved into lagoons and estuaries, which provided a rich habitat for mollusks and fish. The warming trend and rising sea levels generally continued until the late Holocene (4,000 to 3,500 YBP).

At the beginning of the late Holocene, sea levels stabilized, rocky shores declined, lagoons filled with sediment, and sandy beaches became established (Gallegos 1985; Inman 1983; Masters 1994; Miller 1966; Warren and Pavesic 1963). Many former lagoons became saltwater marshes surrounded by coastal sage scrub by the late Holocene (Gallegos 2002). The sedimentation of the lagoons was significant in that it had profound effects upon the types of resources available to prehistoric peoples. Habitat was lost for certain large mollusks, namely *Chione* and *Argopecten*, but habitat was gained for other small mollusks, particularly *Donax*

(Gallegos 1985; Reddy 2000). The changing lagoon habitats resulted in the decline of larger shellfish, loss of drinking water, and loss of Torrey Pine nuts, causing a major depopulation of the coast as people shifted inland to reliable freshwater sources and intensified their exploitation of terrestrial small game and plants, including acorns (originally proposed by Rogers 1929; Gallegos 2002).

The Archaic Period in southern California is associated with several different cultures, complexes, traditions, periods, and horizons, including San Dieguito, La Jolla, Encinitas, Milling Stone, Pauma, and Intermediate.

Late Prehistoric Period (Late Holocene: 1,300 YBP to 1790)

Around approximately 1,350 YBP, a Shoshonean-speaking group from the Great Basin region moved into San Bernardino County, marking the transition to the Late Prehistoric Period. This period has been characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period, with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive, yet effective, technological innovations. Technological developments during this period included the introduction of the bow and arrow between A.D. 400 and 600 and the introduction of ceramics. Atlatl darts were replaced by smaller arrow darts, including the Cottonwood series points. Other hallmarks of the Late Prehistoric Period include extensive trade networks as far reaching as the Colorado River Basin and cremation of the dead.

Protohistoric Period (Late Holocene: 1790 to Present)

Prior to the arrival of the Spanish missionaries, the San Bernardino area was inhabited by the Cahuilla, Serrano, and potentially the Vanyume Indians. The territory of the Vanyume was covered by small and relatively sparse populations focused primarily along the Mojave River, north of the Serrano and southeast of the Kawaiisu. It is believed that the southwestern extent of their territory went as far as Cajon Pass and portions of Hesperia. Bean and Smith (1978) noted that it was uncertain if the Vanyume spoke a dialect of Serrano or a separate Takic-based language. However, King and Blackburn (1978) suggest that the Vanyume and other Kitanemuk speakers once occupied most of Antelope Valley. In contrast to the Serrano, the Vanyume maintained friendly social relations with the Mohave and Chemehuevi to the east and northeast (Kroeber 1976). As with the majority of California native populations, Vanyume populations were decimated around the 1820s by placement in Spanish missions and *asistencias*. It is believed that by 1900, the Vanyume had become extinct (Bean and Smith 1978). However, given the settlement patterns reported for the Vanyume, it is more probable that the population was dispersed rather than completely wiped out.

At the time of Spanish contact in the sixteenth century, the Cahuilla occupied territory that included the San Bernardino Mountains, Orocopia Mountain, and the Chocolate Mountains to the west, Salton Sea and Borrego Springs to the south, Palomar Mountain and Lake Mathews

to the west, and the Santa Ana River to the north. The Cahuilla are a Takic-speaking people closely related to their Gabrielino and Luiseño neighbors, although relations with the Gabrielino were more intense than with the Luiseño. They differ from the Luiseño and Gabrielino in that their religion is more similar to the Mohave tribes of the eastern deserts than the Chingichngish cult of the Luiseño and Gabrielino. The following is a summary of ethnographic data regarding this group (Bean 1978; Kroeber 1976).

Cahuilla villages were typically permanent and located on low terraces within canyons in proximity to water sources. These locations proved to be rich in food resources and afforded protection from prevailing winds. Villages had areas that were publicly owned as well as areas that were privately owned by clans, families, or individuals. Each village was associated with a particular lineage and series of sacred sites that included unique petroglyphs and pictographs. Villages were occupied throughout the year; however, during a several-week period in the fall, most of the village members relocated to mountain oak groves to take part in acorn harvesting (Bean 1978; Kroeber 1976).

The Serrano and Vanyume, however, were primarily hunters and gatherers. Individual family dwellings were likely circular, domed structures. Vegetal staples varied with locality; acorns and piñon nuts were found in the foothills, and mesquite, yucca roots, cacti fruits, and piñon nuts were found in or near the desert regions. Diets were supplemented with other roots, bulbs, shoots, and seeds (Heizer 1978). Deer, mountain sheep, antelopes, rabbits, and other small rodents were among the principal food packages. Various game birds, especially quail, were also hunted. Bows and arrows were used for large game, while smaller game and birds were killed with curved throwing sticks, traps, and snares. Occasionally, game was hunted communally, often during mourning ceremonies (Benedict 1924; Drucker 1937; Heizer 1978). In general, manufactured goods included baskets, some pottery, rabbit-skin blankets, awls, arrow straighteners, sinew-backed bows, arrows, fire drills, stone pipes, musical instruments (rattles, rasps, whistles, bull-roarers, and flutes), feathered costumes, mats, bags, storage pouches, and nets (Heizer 1978). Food acquisition and processing required the manufacture of additional items such as knives, stone or bone scrapers, pottery trays and bowls, bone or horn spoons, and stirrers. Mortars, made of either stone or wood, and metates were also manufactured (Strong 1971; Drucker 1937; Benedict 1924).

Much like the Vanyume, the Serrano suffered large population decreases during the early 1800s. While the missionaries are credited with developing the first stable water supply in the area by diverting water from Mill Creek into a zanja that terminated at the Asistencia de Mission San Gabriel on Barton Road, the task was completed through labor provided by the Serrano. The zanja, known as the Mill Creek Zanja, is located in Redlands, California. It has been listed on the National Register of Historic Places since 1976.

3.2.2 Historic Period

Traditionally, the history of the state of California has been divided into three general

periods: the Spanish Period (1769 to 1821), the Mexican Period (1822 to 1846), and the American Period (1848 to present) (Caughey 1970). The American Period is often further subdivided into additional phases: the nineteenth century (1848 to 1900), the early twentieth century (1900 to 1950), and the Modern Period (1950 to present). From an archaeological standpoint, all of these phases can be referred to together as the Ethnohistoric Period. This provides a valuable tool for archaeologists, as ethnohistory is directly concerned with the study of indigenous or non-Western peoples from a combined historical/anthropological viewpoint, which employs written documents, oral narrative, material culture, and ethnographic data for analysis.

European exploration along the California coast began in 1542 with the landing of Juan Rodriguez Cabrillo and his men at San Diego Bay. Sixty years after the Cabrillo expeditions, an expedition under Sebastian Viscaíno made an extensive and thorough exploration of the Pacific coast. Although the voyage did not extend beyond the northern limits of the Cabrillo track, Viscaíno had the most lasting effect upon the nomenclature of the coast. Many of his place names have survived, whereas practically every one of the names assigned by Cabrillo have faded from use. For instance, Cabrillo named the first (now) United States port he stopped at “San Miguel”; 60 years later, Viscaíno changed it to “San Diego” (Rolle 1969). The early European voyages observed Native Americans living in villages along the coast but did not make any substantial, long-lasting impact. At the time of contact, the Luiseño population was estimated to have ranged from 4,000 to as many as 10,000 individuals (Bean and Shippek 1978; Kroeber 1976).

The historic background of the project area began with the Spanish colonization of Alta California. The first Spanish colonizing expedition reached southern California in 1769 with the intention of converting and civilizing the indigenous populations, as well as expanding the knowledge of and access to new resources in the region (Brigandi 1998). As a result, by the late eighteenth century, a large portion of southern California was overseen by Mission San Luis Rey (San Diego County), Mission San Juan Capistrano (Orange County), and Mission San Gabriel (Los Angeles County), who began colonizing the region and surrounding areas (Chapman 1921).

Native Californians may have first coalesced with Europeans around 1769 when the first Spanish mission was established in San Diego. In 1771, Friar Francisco Graces first searched the California desert for potential mission sites. Interactions between local tribes and Franciscan priests occurred by 1774 when Juan Bautista De Anza made an exploration of Alta California.

Serrano contact with Europeans may have occurred as early as 1771 or 1772, but it was not until approximately 1819 that the Spanish directly influenced the culture. The Spanish established *asistencias* in San Bernardino, Pala, and Santa Ysabel. Between the founding of the *asistencia* and secularization in 1834, most of the Serranos in the San Bernardino Mountains were removed to the nearby missions (Beattie and Beattie 1951:366) while the Cahuilla maintained a high level of autonomy from Spain (Bean 1978).

Each mission gained power through the support of a large, subjugated Native American workforce. As the missions grew, livestock holdings increased and became increasingly vulnerable to theft. In order to protect their interests, the southern California missions began to expand inland to try and provide additional security (Beattie and Beattie 1939; Caughey 1970). In order to meet their needs, the Spaniards embarked upon a formal expedition in 1806 to find potential locations within what is now the San Bernardino Valley. As a result, by 1810, Father Francisco Dumetz of Mission San Gabriel had succeeded in establishing a religious site, or capilla, at a Cahuilla rancheria called Guachama (Beattie and Beattie 1939). San Bernardino Valley received its name from this site, which was dedicated to San Bernardino de Siena by Father Dumetz. The Guachama rancheria was located in present-day Bryn Mawr in San Bernardino County.

These early colonization efforts were followed by the establishment of estancias at Puente (circa 1816) and San Bernardino (circa 1819) near Guachama (Beattie and Beattie 1939). These efforts were soon mirrored by the Spaniards from Mission San Luis Rey, who in turn established a presence in what is now Lake Elsinore, Temecula, and Murrieta (Chapman 1921). The indigenous groups who occupied these lands were recruited by missionaries, converted, and put to work in the missions (Pourade 1961). Throughout this period, the Native American populations were decimated by introduced diseases, a drastic shift in diet resulting in poor nutrition, and social conflicts due to the introduction of an entirely new social order (Cook 1976).

Mexico achieved independence from Spain in 1822 and became a federal republic in 1824. As a result, both Baja and Alta California became classified as territories (Rolle 1969). Shortly thereafter, the Mexican Republic sought to grant large tracts of private land to its citizens to begin to encourage immigration to California and to establish its presence in the region. Part of the establishment of power and control included the desecularization of the missions circa 1832. These same missions were also located on some of the most fertile land in California and, as a result, were considered highly valuable. The resulting land grants, known as “ranchos,” covered expansive portions of California and by 1846, more than 600 land grants had been issued by the Mexican government. Rancho Jurupa was the first rancho to be established and was issued to Juan Bandini in 1838. Although Bandini primarily resided in San Diego, Rancho Jurupa was located in what is now Riverside County (Pourade 1963). A review of Riverside County place names quickly illustrates that many of the ranchos in Riverside County lent their names to present-day locations, including Jurupa, El Rincon, La Sierra, El Sobrante de San Jacinto, La Laguna (Lake Elsinore), Santa Rosa, Temecula, Pauba, San Jacinto Nuevo y Potrero, and San Jacinto Viejo (Gunther 1984). As was typical of many ranchos, these were all located in the valley environments within western Riverside County.

The treatment of Native Americans grew worse during the Rancho Period. Most of the Native Americans were forced off of their land or put to work on the now privately-owned ranchos, most often as slave labor. In light of the brutal ranchos, the degree to which Native

Americans had become dependent upon the mission system is evident when, in 1838, a group of Native Americans from Mission San Luis Rey petitioned government officials in San Diego to relieve suffering at the hands of the rancheros:

We have suffered incalculable losses, for some of which we are in part to be blamed for because many of us have abandoned the Mission ... We plead and beseech you ... to grant us a Rev. Father for this place. We have been accustomed to the Rev. Fathers and to their manner of managing the duties. We labored under their intelligent directions, and we were obedient to the Fathers according to the regulations, because we considered it as good for us. (Brigandi 1998:21)

Native American culture had been disrupted to the point where they could no longer rely upon prehistoric subsistence and social patterns. Not only does this illustrate how dependent the Native Americans had become upon the missionaries, but it also indicates a marked contrast in the way the Spanish treated the Native Americans as compared to the Mexican and United States ranchers. Spanish colonialism (missions) is based upon utilizing human resources while integrating them into their society. The ranchers, both Mexican and American, did not accept Native Americans into their social order and used them specifically for the extraction of labor, resources, and profit. Rather than being incorporated, they were either subjugated or exterminated (Cook 1976).

By 1846, tensions between the United States and Mexico had escalated to the point of war (Rolle 1969). In order to reach a peaceful agreement, the Treaty of Guadalupe Hidalgo was put into effect in 1848, which resulted in the annexation of California to the United States. Once California opened to the United States, waves of settlers moved searching for gold mines, business opportunities, political opportunities, religious freedom, and adventure (Rolle 1969; Caughey 1970). By 1850, California had become a state and was eventually divided into 27 separate counties. While a much larger population was now settling in California, this was primarily in the central valley, San Francisco, and the Gold Rush region of the Sierra Nevada mountain range (Rolle 1969; Caughey 1970). During this time, southern California grew at a much slower pace than northern California and was still dominated by the cattle industry that was established during the earlier rancho period.

3.2.3 General History of the City of San Bernardino

In 1851, 500 Mormons purchased the western portion of the San Bernardino Rancho from the Lugo family, erecting an over 50-building settlement (Fort San Bernardino) near the present-day location of the San Bernardino County Courthouse (Plate 3.2–1). The following year, the leaders of the Mormon colony, Amasa Lyman and Charles Rich (Plates 3.2–2 and 3.2–3), founded the new settlement (what would become the city of San Bernardino).

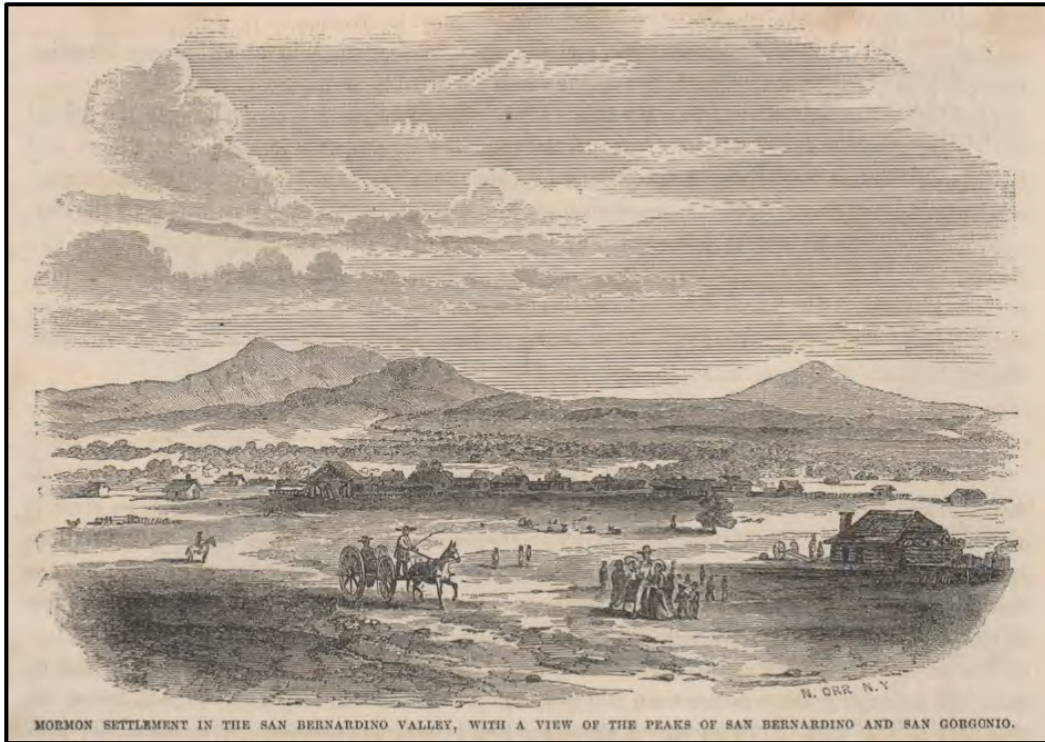


Plate 3.2-1: Engraving depicting the Mormon settlement in the San Bernardino Valley.
Engraved by N. Orr of New York.
(Image courtesy of the Bancroft Library at the University of California at Berkeley)



Plate 3.2-2: Amasa Lyman.
(Photograph courtesy of City of San Bernardino 2005)

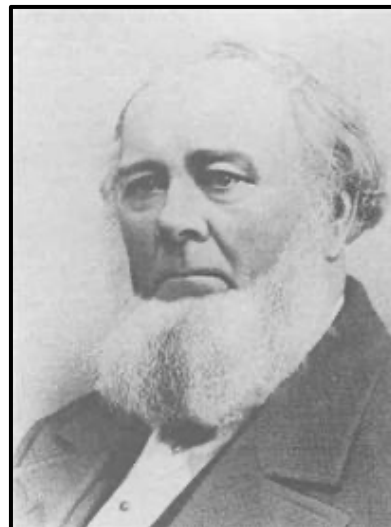


Plate 3.2-3: Charles Rich.
(Photograph courtesy of City of San Bernardino 2005)

Henry G. Sherwood surveyed the one-square-mile town site in 1853, which at that time consisted of a grid of wide streets in eight one-acre blocks. The city of San Bernardino was incorporated the following year, and in 1855, San Bernardino County was split from San Diego and Los Angeles counties (City of San Bernardino 2005). The settlement that the Mormons created within the rancho was short-lived, however, as in 1857, Brigham Young recalled all Mormons in San Bernardino back to Utah. Approximately 1,400 Mormons returned to Utah, while the remaining 45 percent stayed in San Bernardino, choosing “to forsake the church rather than leave their homes” (Lyman 1989).

The City of San Bernardino grew slowly throughout the 1860s and 1870s. The center of town boasted two churches, two hotels, several large businesses, a stagecoach that ran regularly between San Bernardino and Los Angeles, and mule-drawn freight wagons that arrived regularly from Salt Lake City, Utah, and other cities to the east. The stagecoach and freight wagon routes established San Bernardino as an early transportation and freight center, which was further cemented by the connection of southern California to the national railroad network in 1876 (City of San Bernardino 2005):

The arrival of the railroad provided better and faster access for the farmers to bring crops to market. Packing houses and warehouses were built along the railroad corridors. The railroads also provided access to the county for tourists and immigrants alike. With the completion of rail connections between the desert and Los Angeles in 1887 by the Santa Fe Railroad, San Bernardino soon developed into a railhead boomtown [Figure 3.2–1]. Commercial enterprises dominated the urban landscape, with emphases upon service and retail establishment, while industrial enterprises supported agricultural development.

The city’s development has been closely linked with that of the Santa Fe Railroad and its important railroad shops and yards. By 1900 more than 85 percent of the city’s population was directly employed by the railroad, despite increased industrial and agricultural development in the following decades. (City of San Bernardino 2005)

Population growth and 1880s tax revenue from the booming citrus industry prompted the official formation of Riverside County in 1893 out of portions of what was once San Bernardino and San Diego counties (Patterson 1971). Between 1900 and 1910, the population of the city of San Bernardino grew from 6,150 residents to 12,799 residents. By 1910, city hall, San Bernardino High School, and an opera house had been constructed. By 1930, the city’s population had reached approximately 50,000 residents.



(William W. Elliott [active ca. 1870 to ca. 1890], Lithographer; W.H. Syme & Co., Publisher)



A department store, the San Bernardino County Courthouse, the Heritage Building, the California Theater, the Ritz Theater, the Casa Ramona School, and San Bernardino College were all constructed in the latter half of the 1920s, reflecting an enormous population boom (Plate 3.2–4). This was bolstered by the construction of Route 66 through San Bernardino between 1926 and 1937 (City of San Bernardino 2005).

Prior to World War II, one-quarter of the city's residents were employed by the railroad. With the war came the development and expansion of the Army Airfield on the grounds of the San Bernardino Municipal Airport, "replacing the railroad as the city's leading economic contributor" (City of San Bernardino 2005). Following the war, the airfield became one of three maintenance facilities for jet engines. In 1948, the base was transferred to the United States Air Force and named the San Bernardino Air Force Base. The base was subsequently renamed the "Norton Air Force Base" in 1950 (City of San Bernardino 2005).

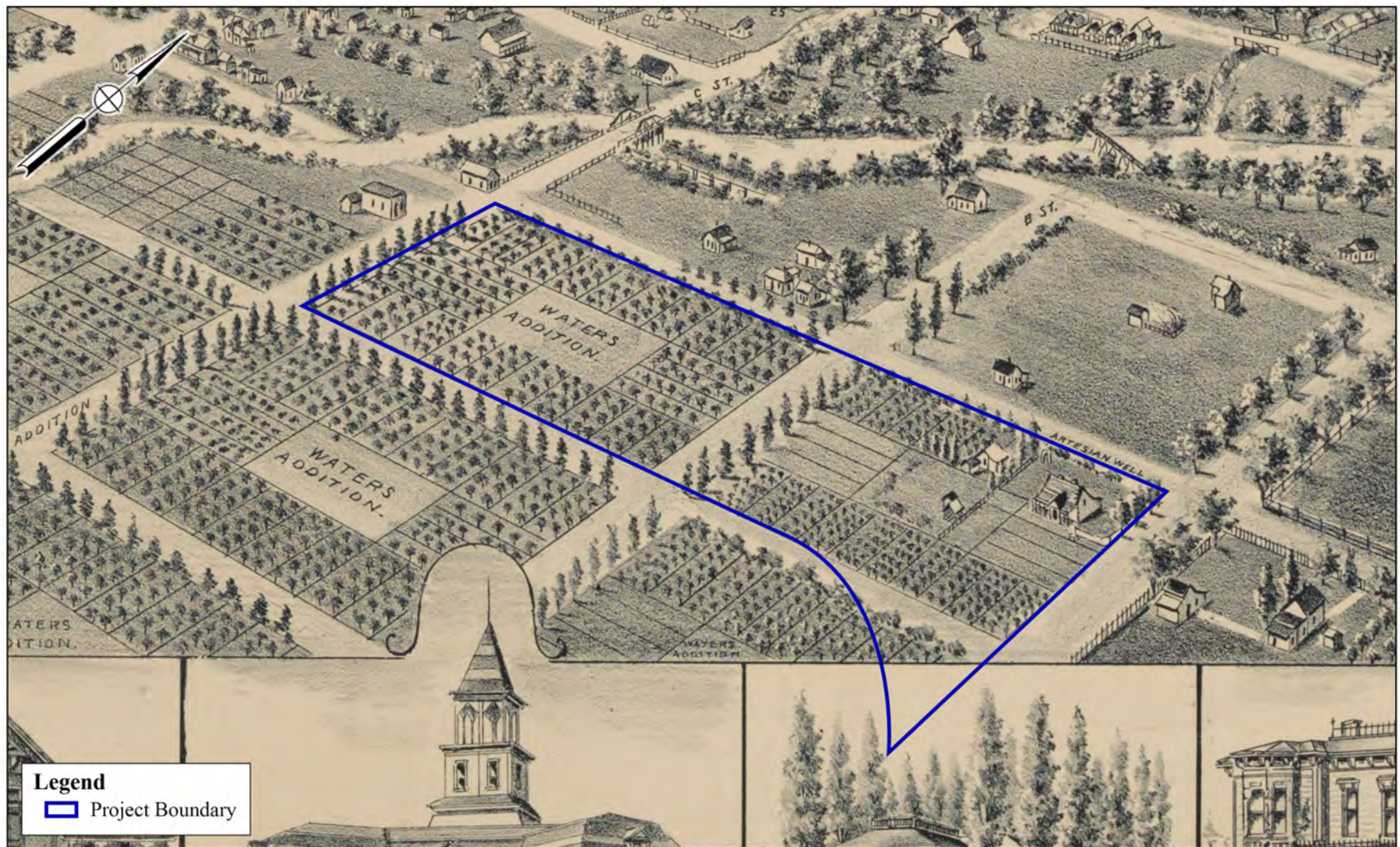


Plate 3.2–4: 1925 view of Third Street in San Bernardino, facing F Street. (Image courtesy of the City of San Bernardino 2005)

The city and surrounding areas continued to develop commercially through the 1940s and 1950s, effectively replacing agriculture in San Bernardino County. By the 1960s, the population of the city reached over 100,000 residents. Economic downturn would hit the city of San Bernardino in the 1990s, by 1991, the Santa Fe Railroad moved its offices out of the city, and in 1994, the Norton Air Force Base was closed (City of San Bernardino 2005).

3.2.4 History of the Project Area

The following background information includes the entire subject property, beginning with the earliest available map for the area. According the 1887 lithograph map, the project comprised two whole blocks within the Waters Addition on the south side of First Street and between A and C streets (Figure 3.2–2). At that time, the entirety of the western block (between B and C streets) and most of the eastern block (between A and B streets) were comprised of a fruit tree grove. Depicted within the central portion of the eastern block are a residence with an outbuilding and a privy and depicted within the eastern portion of the eastern block is a large residence with an arbor. An artesian well is also labeled southwest of the intersection of A and First streets; however, its location is not specifically depicted.



By 1894, a portion of the property was mapped by the Sanborn Fire Insurance Company, the index of which indicates that the subject property was designated as blocks 101, 102, 103, and 104 (west to east). While no coverage is available for Block 101, portions of the western half of Block 102 and the southern third of blocks 103 and 104 are depicted on the 1894 Sanborn Map (Figure 3.2–3). The residence that was depicted at the northeast corner of the property on the 1887 lithograph map is located within Block 104 and is labeled as the C.P. (Charles Parker) Barrows Fruit Packing House with fruit drying racks located around the structure and a railroad spur leading to the structure from First Avenue. Barrows operated the fruit packing house at this location from at least 1891 through 1894 (*The Weekly Courier* 1891).

The 1894 Sanborn Map indicates that the packing house was closed that year. The dwelling, privy, and outbuilding depicted on the 1887 lithograph map are located within the eastern half of Block 103, along with an additional outbuilding. What can be seen of Block 102 and the western half of Block 103 are vacant at this time, but they were likely still in use as a fruit grove. Finally, Boyd Avenue was created bisecting blocks 103 and 104 and the artesian well is no longer depicted. While no Sanborn map coverage is available for the western portion of the property until 1906, the 1896, 1898, and 1901 USGS *San Bernardino South* 15-minute scale maps depict one structure in the eastern portion of the project and one structure in the western portion (Figure 3.2–4). The eastern structure is likely the C.P. Barrows Fruit Packing House, as seen on the 1894 Sanborn Map (see Figure 3.2–3).

Archival research indicates that the western portion of the property (blocks 101 and 102) remained vacant until 1895, when it was purchased by John Joseph (J.J.) Hanford (Plate 3.2–5). Hanford purchased the property to construct a building for the Hanford Iron Works, which was established in 1892 (Brown and Boyd 1922:916):

When Hanford learned that the California Southern Railway was still looking for someone to start a foundry in San Bernardino to make their work, he immediately went there and secured the contract from G. W. Prescott, the master mechanic of the road. This was February, 1892, and was the inception of the “Hanford Iron Works.”

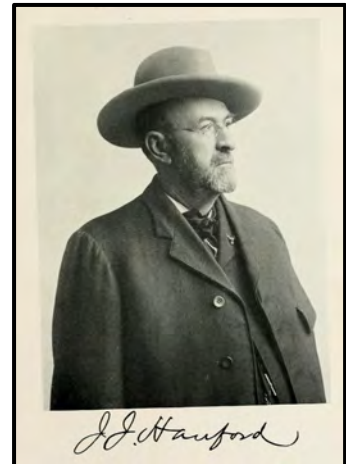


Plate 3.2–5: J.J. Hanford.
Photograph courtesy of
(Brown and Boyd 1922)

Like everything which Mr. Hanford was connected, it was an instant success, growing rapidly in every line. Early in 1893 Mr. Hanford bought his partner’s interest, and from that time until he passed on he was the sole owner and proprietor of the Hanford Iron Works. So rapidly did the volume of his business increase that it outgrew the quarters in which it was started, and Mr. Hanford erected the foundry on its present site in the spring of 1895. In 1904 he erected the machine and pattern shop in front of the foundry.

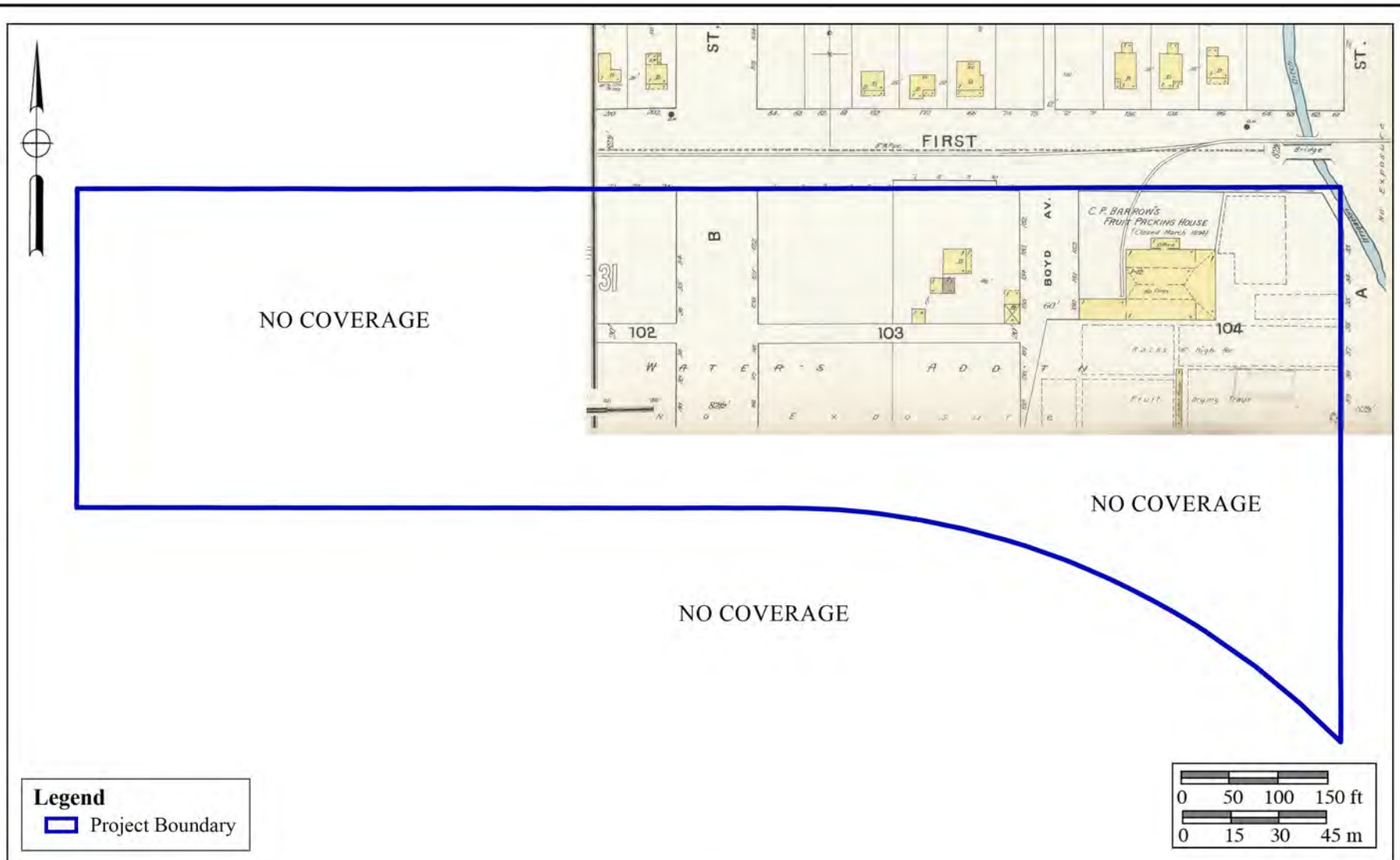
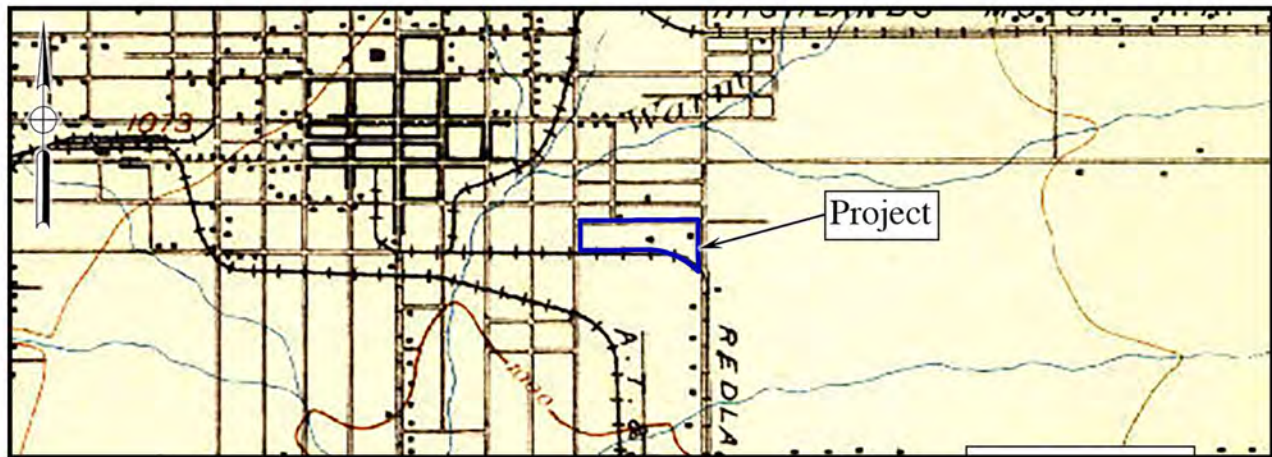
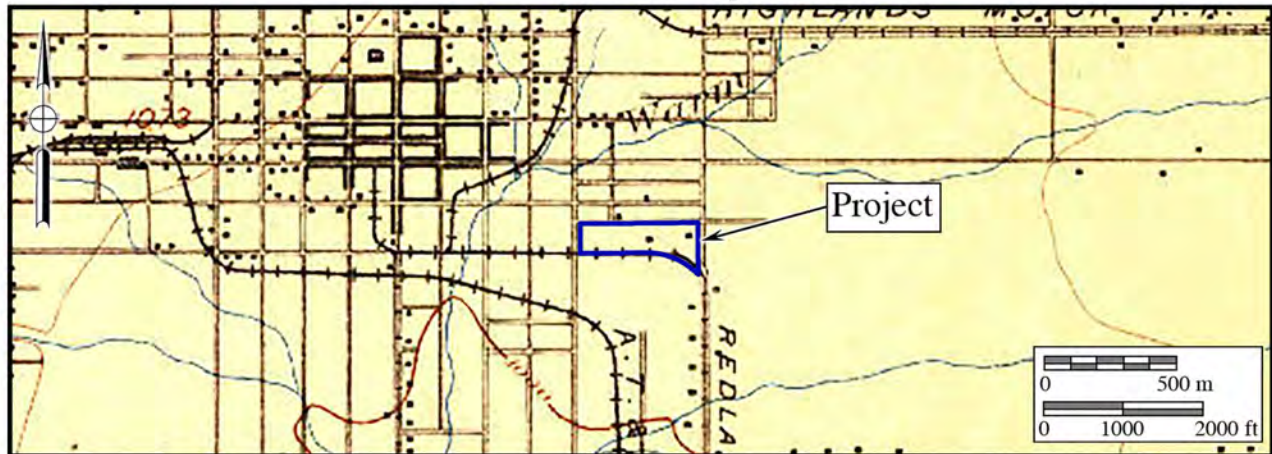


Figure 3.2-3
1894 Sanborn Map
 The 119 South Arrowhead Avenue Project

1896 USGS Map



1898 USGS Map



1901 USGS Map



Figure 3.2-4

Historic USGS Maps

The 119 South Arrowhead Avenue Project

USGS *San Bernardino* Quadrangle (15-minute series)



In 1910 the Hanford Iron Works secured a patent for driving a nail on a slat, and proceeded to build and manufacture an orange box making machine. This is, of course, a side issue with the Works, as the foundry has nearly all the time had all it could handle producing castings for the Santa Fe Railway company and other business it has secured, much of it coming from Arizona and Nevada.

After the passing of Mr. Hanford on November 12, 1917, the business was conducted by his widow, Joan E. Hanford, and his son, William J. Hanford.

The Hanford Iron Works enjoys the distinction of being the second oldest foundry making castings for the Santa Fe Railroad in point of years and continuous service. (Brown and Boyd 1922:917–918). By 1918, the Hanford Iron Works (Hanford Foundry Company) included



Plate 3.2–6: View of the Hanford Foundry Company building from the intersection of Arrowhead Avenue and the railroad tracks, facing northeast. (Photograph courtesy of the San Bernardino County Sun 1953)

both iron and brass foundries, manufacturing structural steel (“I” beams, angles, channel irons, steel column, etc.), railroad, mining, milling, and engine castings. The Hanford Foundry Company also continued to secure the contract with the Santa Fe Railroad for all of the cast iron work “in the district between Seligman, Arizona, and San Diego, and for all the branch lines” (*San Bernardino County Sun* 1918). In 1919, W.J. Hanford announced plans to expand the plant and add a dedicated steel department (*San Bernardino County Sun* 1919). The Hanford Foundry

Company continued to grow through the 1940s, employing over 200 people and securing contracts from the Southern Sierras Power Company (*San Bernardino County Sun* 1931) and the United States Navy (*San Bernardino County Sun* 1941). In 1953, the second story of the original Hanford Foundry Company building was removed due to safety issues (Plate 3.2–6).

By 1951, the Hanford Foundry Company employed over 400 people but by the late 1960s, they employed just under 300 people (*San Bernardino County Sun* 1968, 1989). In 1968, the Hanford Foundry Company was purchased by General Alloys Company of Boston, Massachusetts (*San Bernardino County Sun* 1968). Business did not improve, however, and in 1986, the Hanford Foundry Company shuttered its doors after filing for bankruptcy with just 30 employees left on its payroll. Two years later, demolition began to remove all structures associated with the historic Hanford Foundry Company (*San Bernardino County Sun* 1988) (Plate 3.2–7).

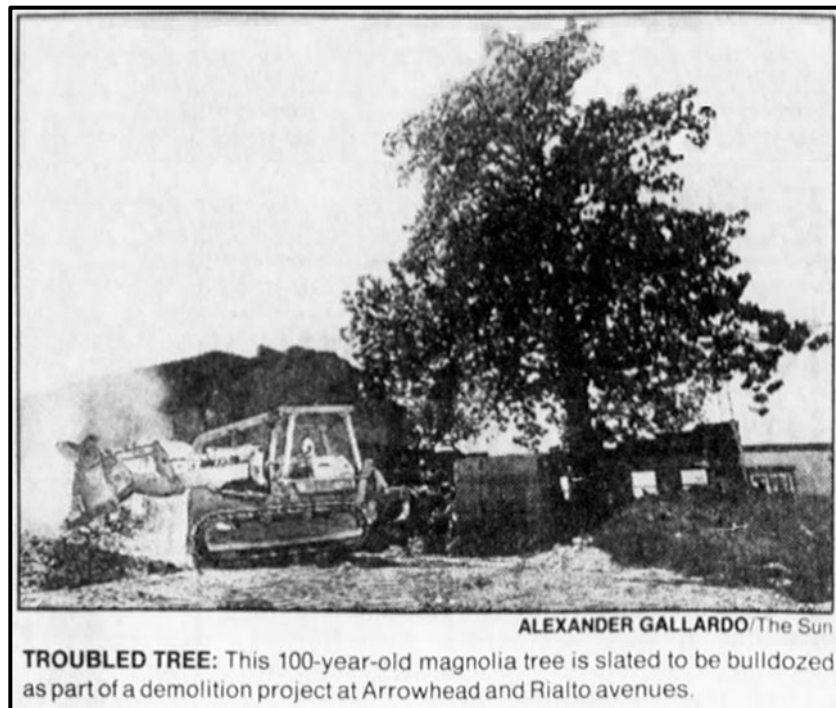


Plate 3.2–7: Demolition of the Hanford Foundry Company facility from the intersection of Arrowhead and Rialto avenues, facing southeast.
(*Photograph courtesy of the San Bernardino County Sun 1988*)

The 1906 Sanborn Map indicates that the C.P. Barrows Fruit Packing House structure was taken over by T.A. (Thomas A.) Blakeley's Fertilizer Works (Figure 3.2–5). T.A. Blakeley's Fertilizer Works added an office on Boyd Avenue, expanding an existing outbuilding on Block 103. Within the northeast portion of Block 102, one dwelling was constructed at 205 First Street and one dwelling with an outbuilding was constructed at 215 First Street. Within the northwest portion of Block 101, a dwelling with an outbuilding was constructed at 281 First Street. The southern half of Block 101 was purchased by J.J. Hanford, where he constructed one large residence in the northwest corner, a smaller residence in the northeast corner, five additional structures, and the Hanford Iron Works, which was comprised of a machine shop and foundry building with an earthen floor.

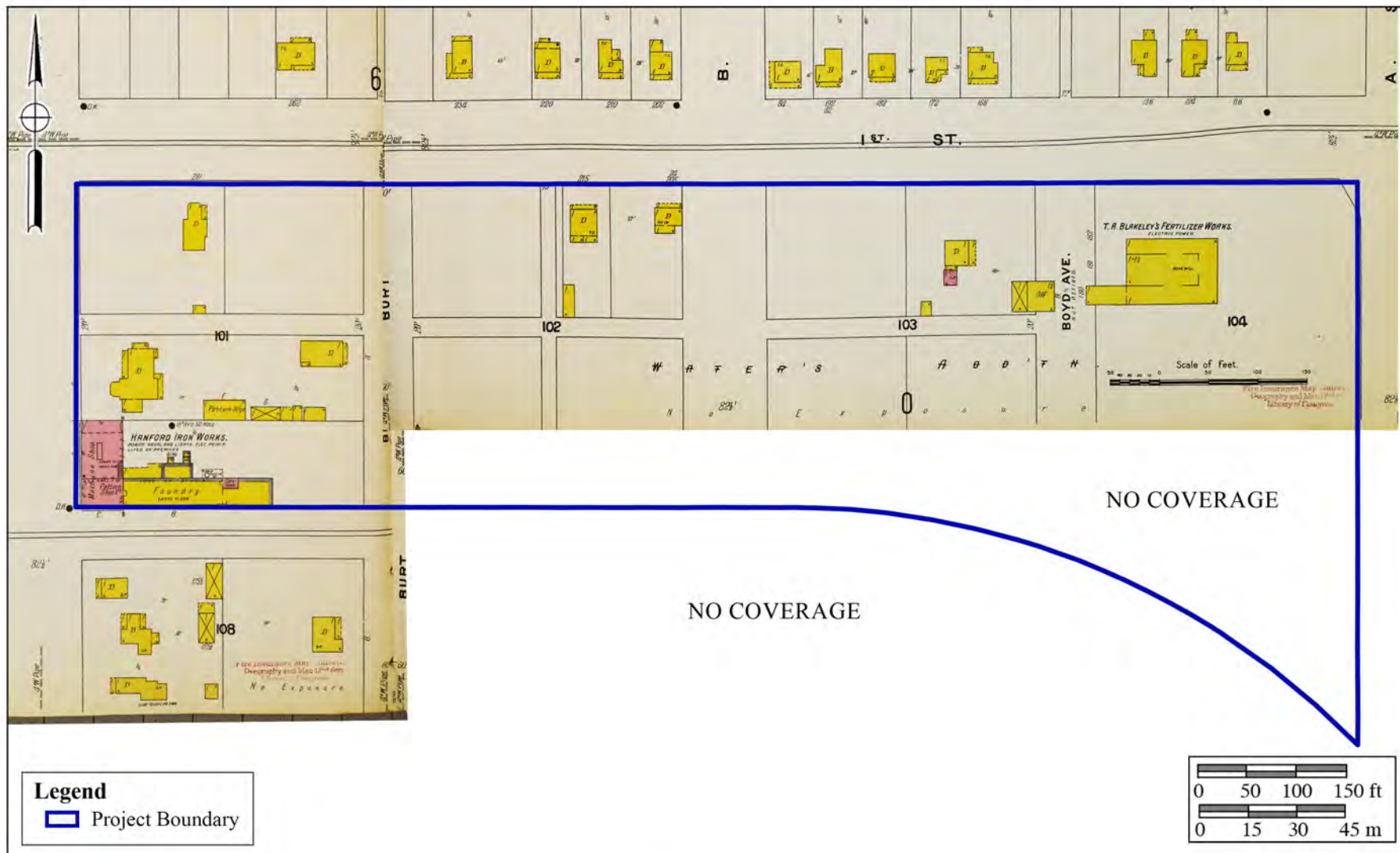


Figure 3.2-5
1906 Sanborn Map
 The 119 South Arrowhead Avenue Project

Archival research indicates that T.A. Blakeley's Fertilizer Works was established "in the old cannery on East First street" by 1901 (*San Bernardino County Sun* 1901). Residents of the area were unhappy with the presence of the plant, and in 1907, the city council gave "the Blakely fertilizer people 50 days to move their plant outside the city limits" (*San Bernardino County Sun* 1907). San Bernardino city directories between 1904 and 1906 indicate that T.A. Blakeley's Fertilizer Works was renamed the Woodbridge Chemical Works, although newspaper articles refer to the building as the Blakely Plant (Ancestry.com 2011).

In 1909, the name of the fertilizer company was changed to San Bernardino Fertilizer Works (*San Bernardino County Sun* 1909) and was still operating on the "southside of first between A and B" (Ancestry.com 2011). According to the city directories, after 1915, the fertilizer company was no longer in operation on Block 104. The directories also indicate that between 1912 and 1913, C Street was renamed South Arrowhead Avenue, and between 1919 and 1920, First Street was renamed Rialto Avenue (Ancestry.com 2011). The 1930 aerial photograph (Figure 3.2-6) depicts all of the structures seen on the 1906 Sanborn Map. Additionally, the Hanford Foundry Company had expanded by this time. By 1938, T.A. Blakeley's Fertilizer Works on Block 104 had been demolished. No changes are visible to blocks 101, 102, and 103 (Figure 3.2-7).

The 1950 Sanborn Map indicates that a residence located at 147 Rialto Avenue replaced T.A. Blakeley's Fertilizer Works on Block 104 (Figure 3.2-8). The office that was constructed on Boyd Avenue was removed, as was the dwelling that was situated to the west of it on Block 103. Two new dwellings had been constructed on Block 103 at 169 and 195 Rialto Avenue. Blocks 101 and 102 were combined, and the residences at 215 and 205 Rialto Avenue (First Avenue) were demolished. A new residence was constructed at 205 Rialto Avenue. The dwellings that were located on Block 101 had been removed for the expansion of the Hanford Foundry Company facility.

The 1951 Sanborn Map depicts a new Hanford Foundry Company office at the corner of South Arrowhead and Rialto avenues and the removal of the old office (Figure 3.2-9). The dwelling located at 205 Rialto Avenue was removed, and the residence located at 147 Rialto Avenue was converted to a church. The 1950 and 1951 expansions of the Hanford Foundry Company facility are clearly visible on the 1953 aerial photograph (Figure 3.2-10), which also indicates that the railroad spit located in the southern half of Block 104 was removed by this time and Boyd Avenue was formally punched through.

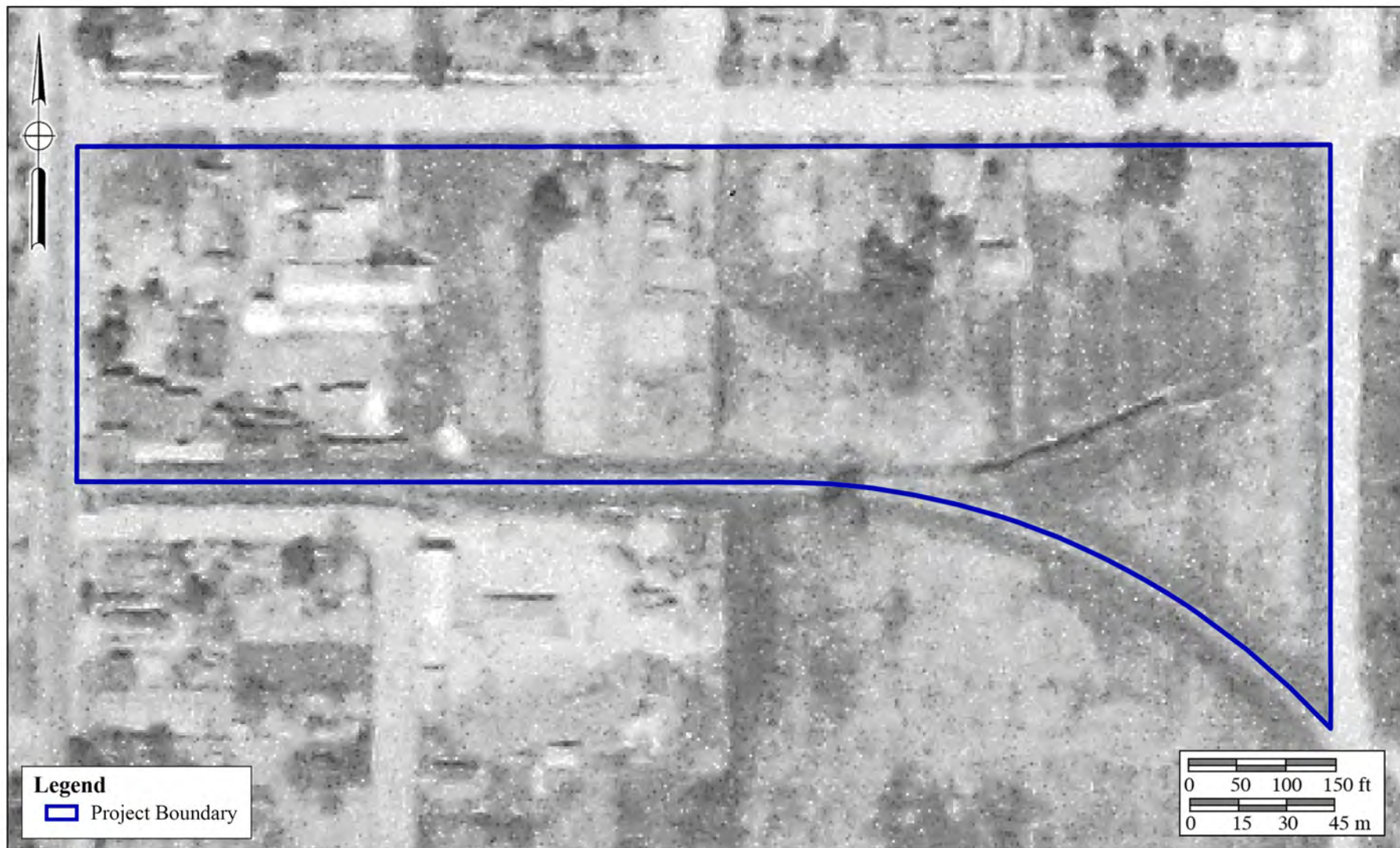


Figure 3.2-6
1930 Aerial Photograph
The 119 South Arrowhead Avenue Project



Figure 3.2-7
1938 Aerial Photograph
The 119 South Arrowhead Avenue Project

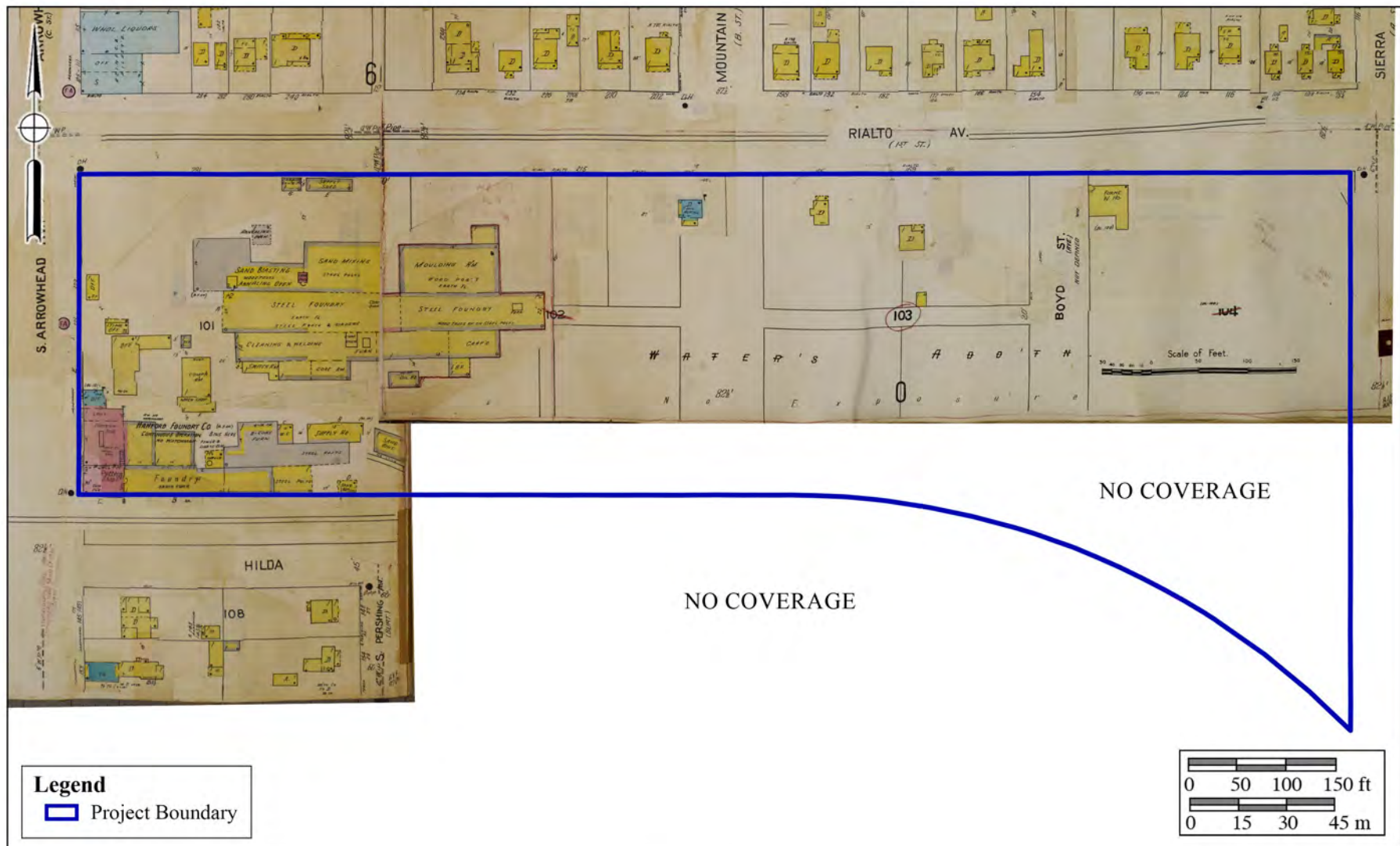


Figure 3.2–8
1950 Sanborn Map
 The 119 South Arrowhead Avenue Project

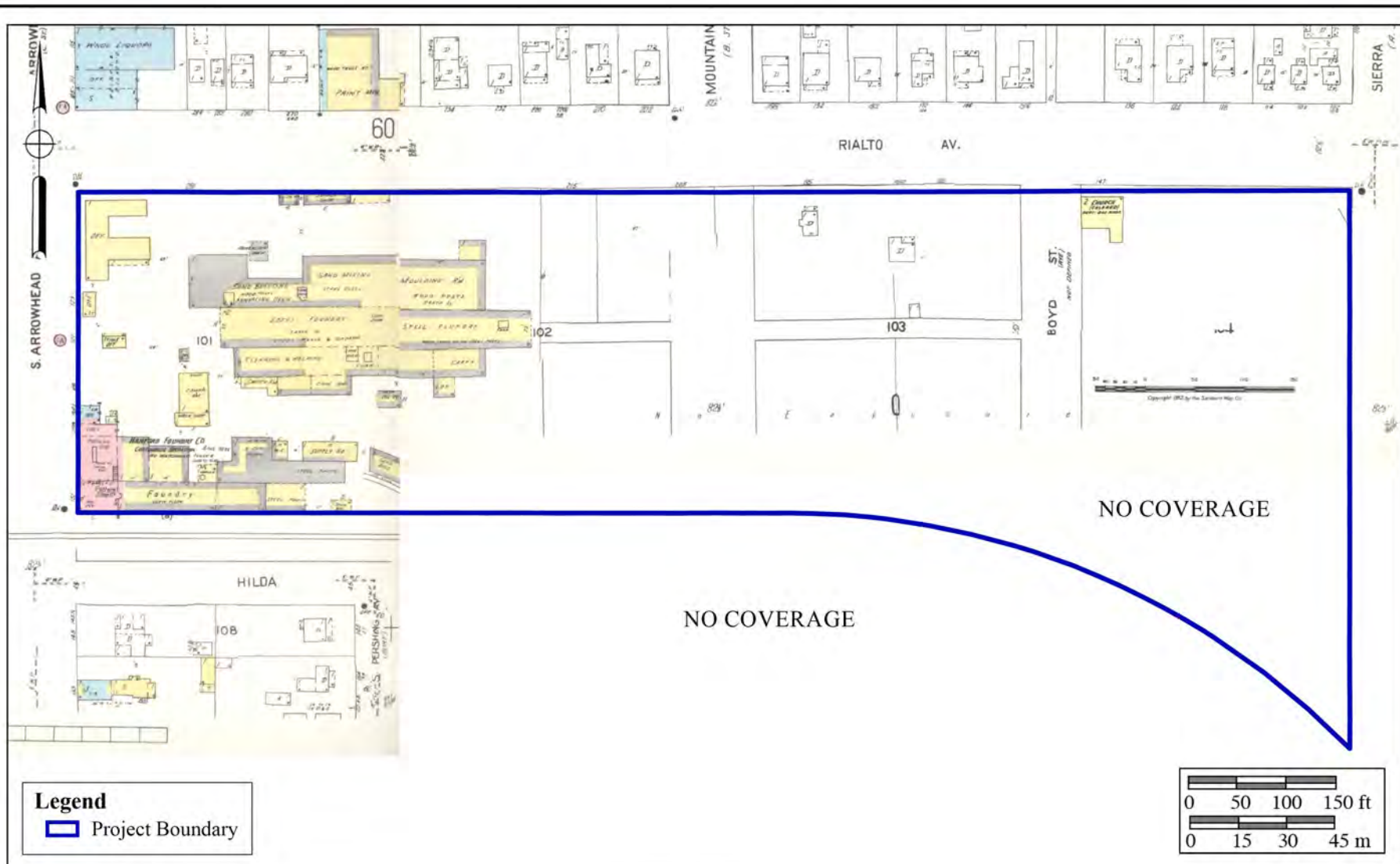


Figure 3.2–9
1951 Sanborn Map
 The 119 South Arrowhead Avenue Project

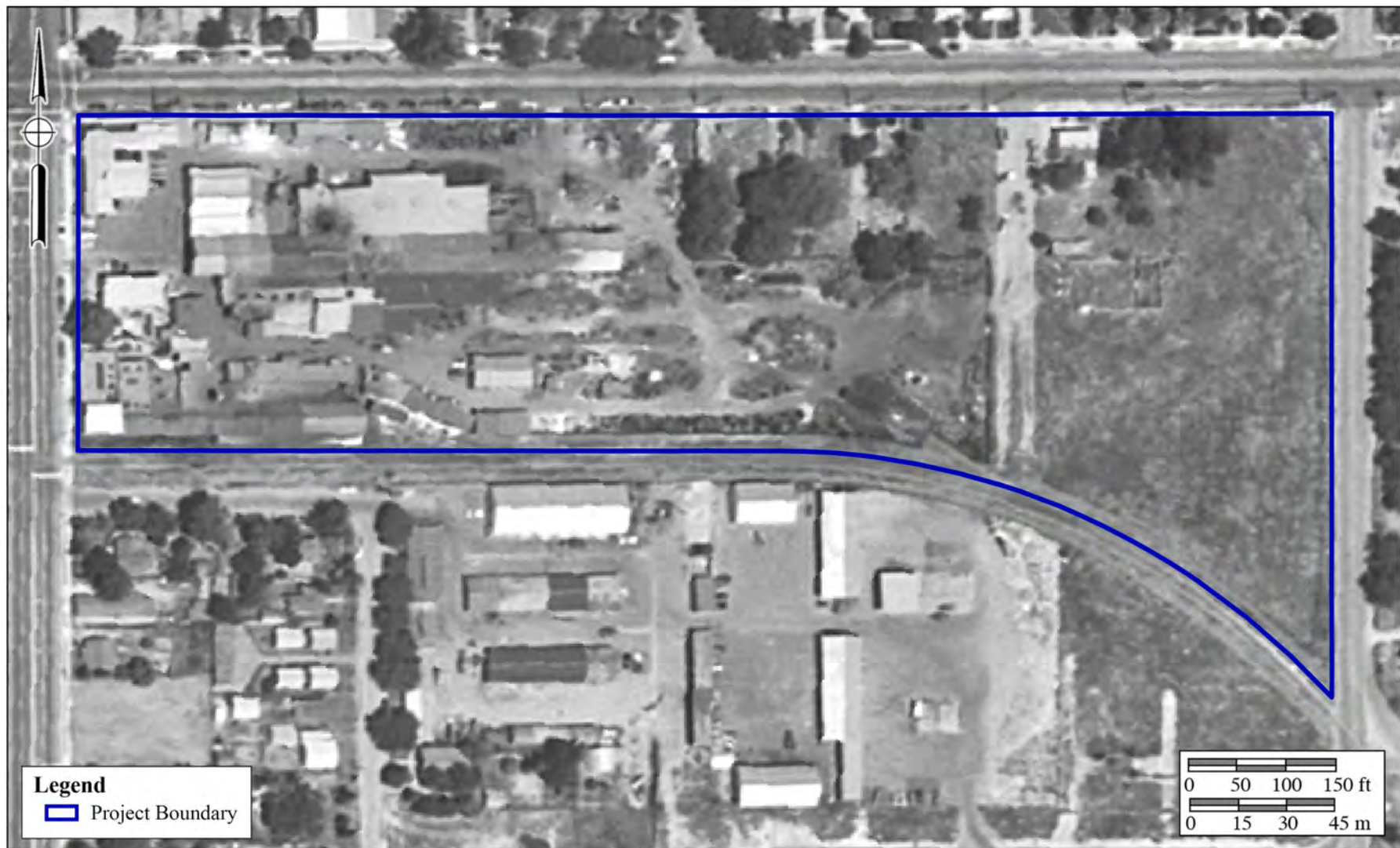


Figure 3.2–10
1953 Aerial Photograph
The 119 South Arrowhead Avenue Project

The 1956 Sanborn Map indicates that an office at 281 Rialto Avenue, a tool house at 205 Rialto Avenue, and a pattern shop building were added to the Hanford Foundry Company property (Figure 3.2–11). Another office was constructed at 195 Rialto Avenue and just east of the church, a news agency and a steel fabrication facility with an office were constructed at 131 and 115 Rialto Avenue, respectively. By 1958, the news agency was converted to a heater warehouse (Figure 3.2–12). The 1959 Sanborn Map indicates that the residence at 187 Rialto Avenue was removed between 1958 and 1959 (Figure 3.2–13). Also by 1959, the Hanford Foundry Company property had continued to expand eastward into Block 103 (Figure 3.2–14). By 1968, the remaining structure at 169 Rialto Avenue had been demolished for a parking lot and the steel fabricating facility had expanded southward (Figure 3.2–15). Few changes are visible on subsequent aerial photographs until 1988/1990, when the subject property was cleared of all structures (Figure 3.2–16).

Historically, the locations of the structures within the APE and on the surrounding parcels suggest that the trash pits and privy pits are likely located along the center spine of the block and in the vacant areas of the project visible on the lithograph and Sanborn maps. Based upon the map data, a high probability exists for trash pits and privies to be located within eastern half of the APE. Typically, within city boundaries in southern California, on-site trash disposal and outdoor privies were abandoned following city ordinances and the availability of water and sewer piping. This led to indoor sanitary plumbing (toilets), which used septic systems before the development of the city sewage system. The gradual transition to indoor toilets began in the 1890s.

The map data and historical research also indicate that there is a potential for the discovery of prehistoric cultural resources. The close proximity of Warm Creek to the project indicates that this property would have been attractive to prehistoric inhabitants. Further, the early development of the property and surrounding area has likely masked surface cultural resources, inhibiting the ability to discover such resources in recent cultural resources studies.

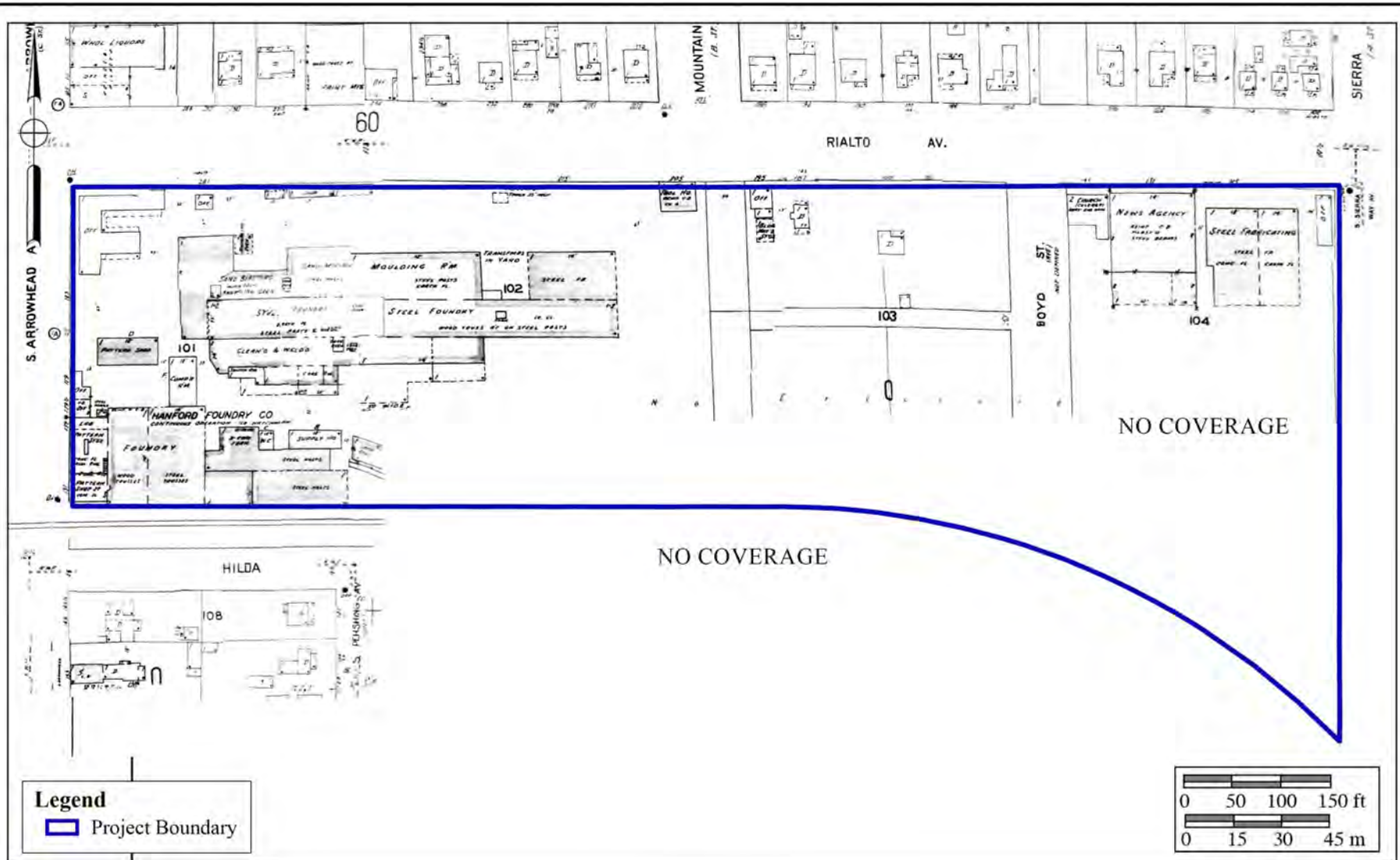


Figure 3.2-11
1956 Sanborn Map
 The 119 South Arrowhead Avenue Project

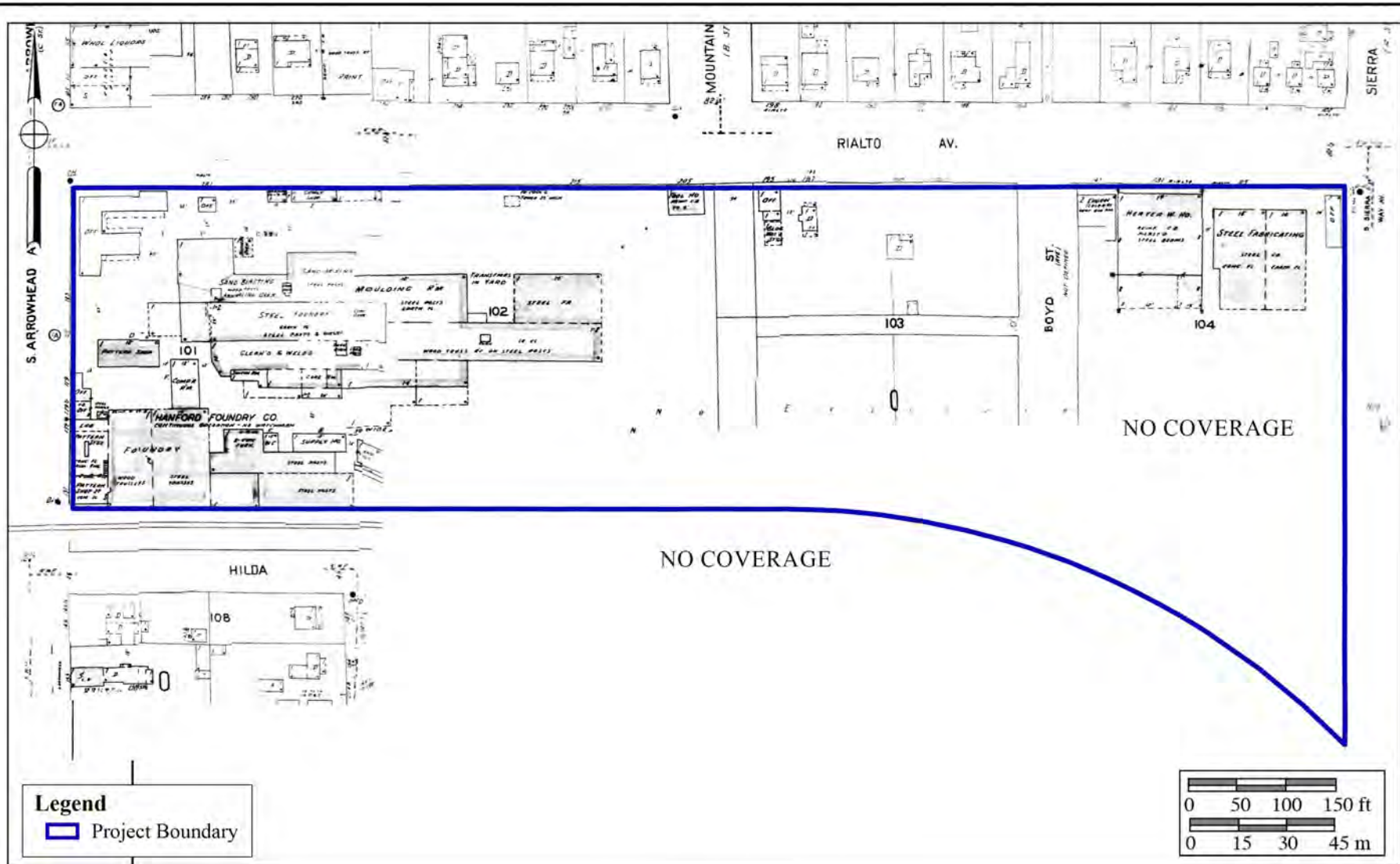


Figure 3.2-12
1958 Sanborn Map
 The 119 South Arrowhead Avenue Project

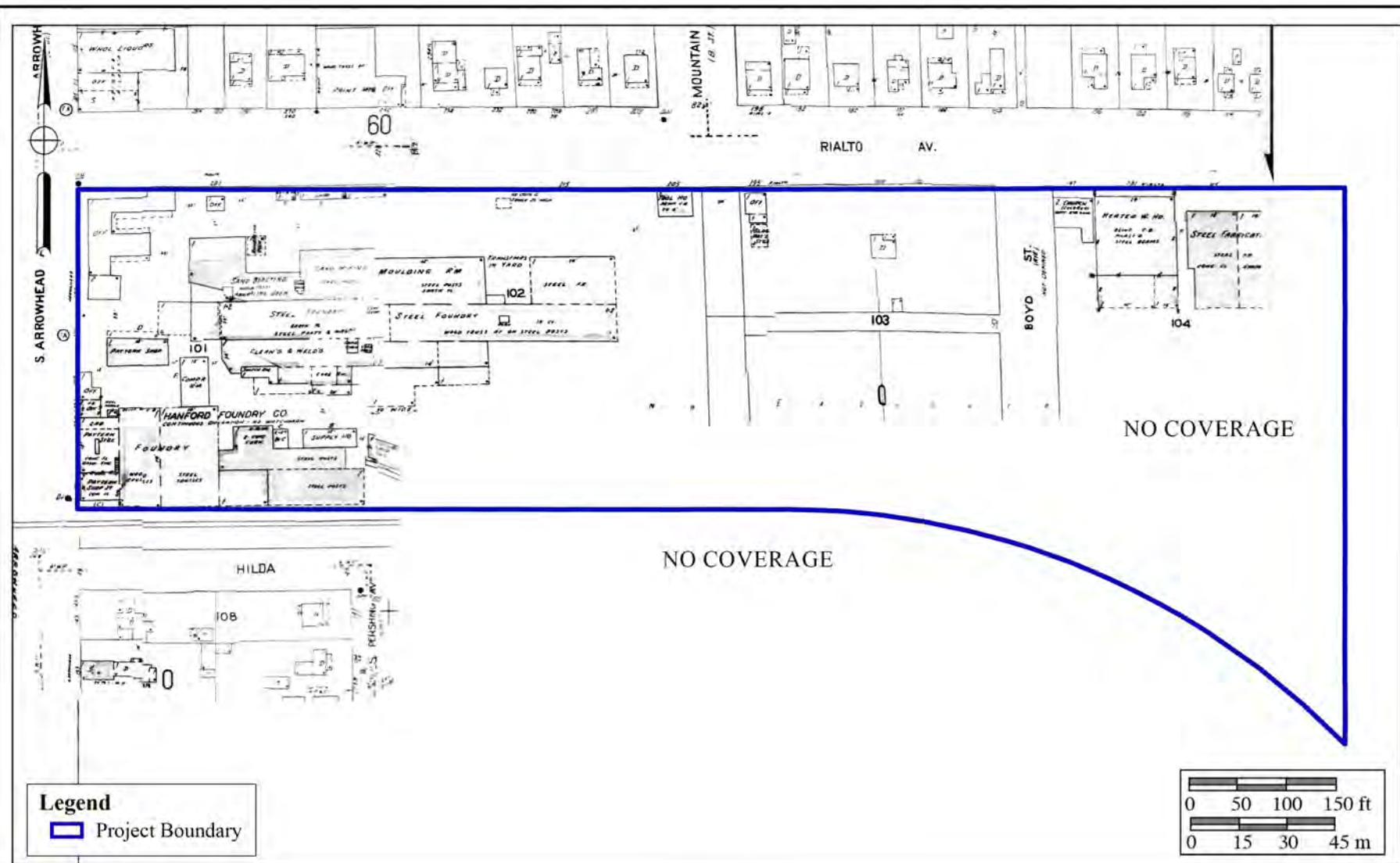


Figure 3.2-13
1959 Sanborn Map
 The 119 South Arrowhead Avenue Project

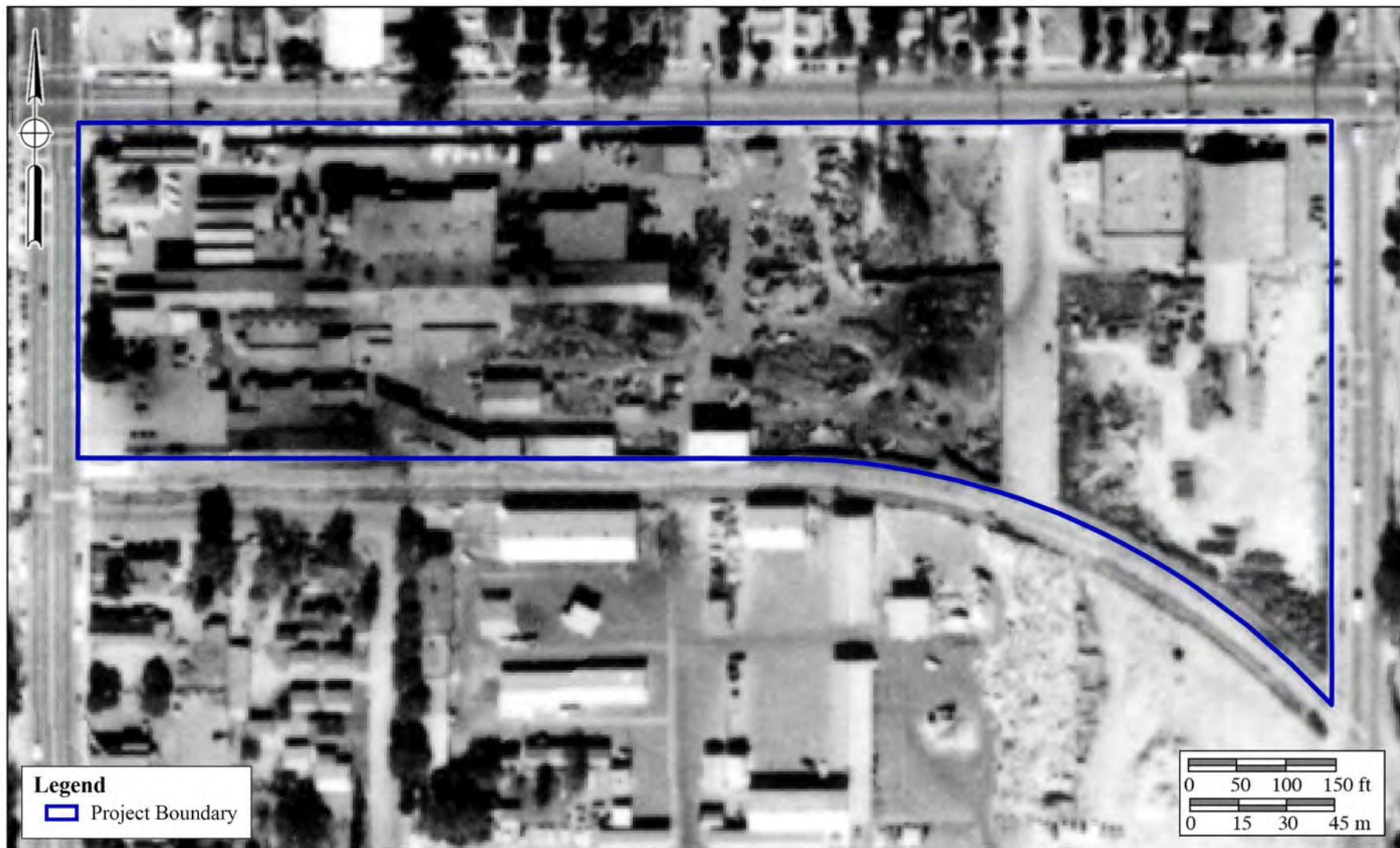


Figure 3.2-14
1959 Aerial Photograph
The 119 South Arrowhead Avenue Project

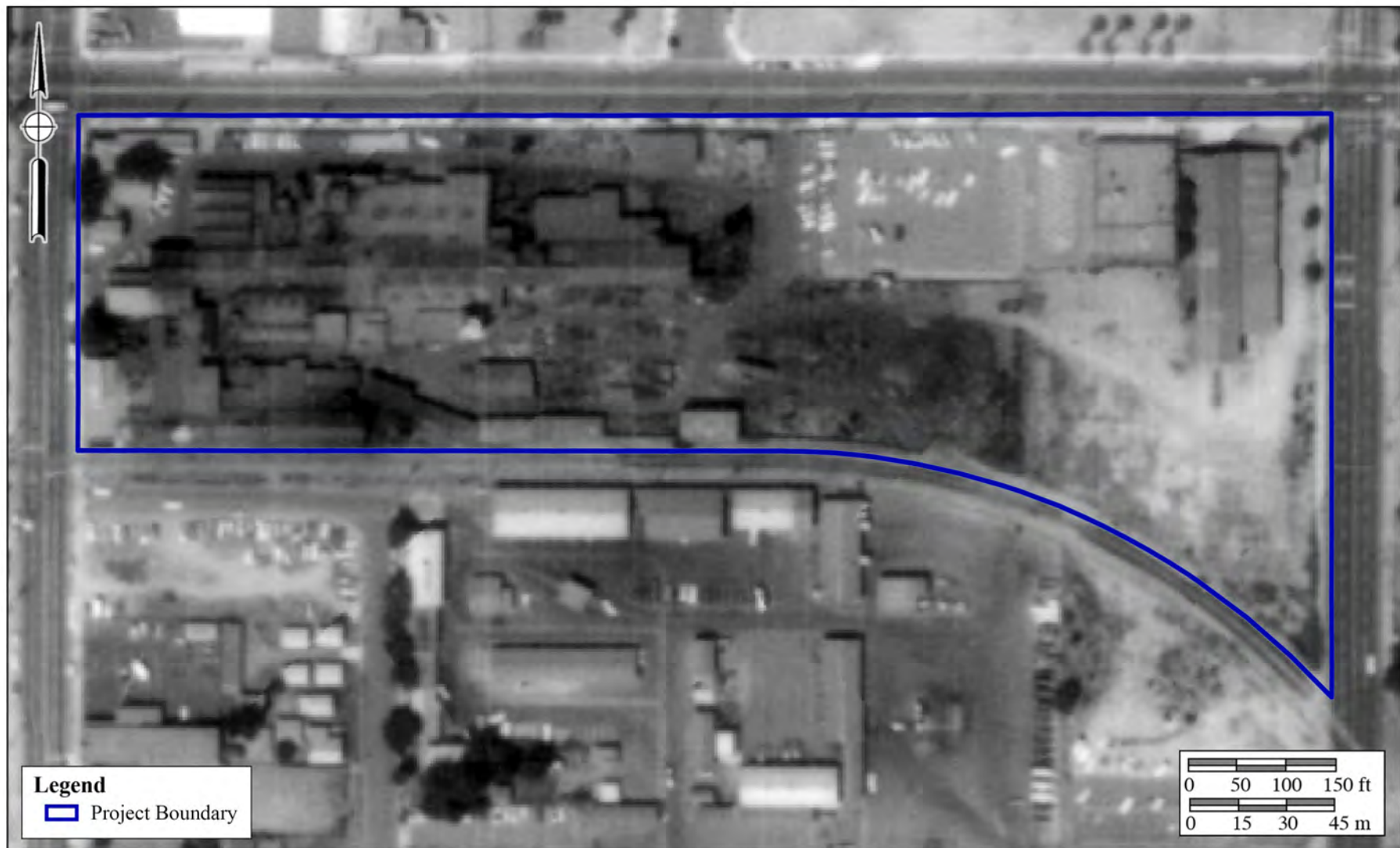


Figure 3.2-15
1968 Aerial Photograph
The 119 South Arrowhead Avenue Project



Figure 3.2–16
1990 Aerial Photograph
The 119 South Arrowhead Avenue Project

3.3 Results of the Archaeological Records Search

BFSa requested an archaeological records search for a one-half-mile radius around the project from the South Central Coastal Information Center at California State University, Fullerton. The records search indicated that a total of 36 cultural resources are located within one-half mile of the subject property, none of which are located within the project boundaries (Table 3.3–1). These resources are all historic and consist of three historic residences, a hotel, 11 commercial buildings, two industrial buildings, one railroad, three railroad grades, historic building remains, portions of San Bernardino Chinatown, historic military property, a former building location, two schools, a government building, two trash scatters, two public utilities buildings, an artifact, and an opera house.

Table 3.3–1

Archaeological Sites Located Within
One-Half Mile of the 119 South Arrowhead Avenue Project

Site(s)	Description
SBR-4186H, P-36-017670, P-36-033060, and P-36-033061	Historic residence
SBR-4191H	Historic hotel
SBR-4288H, SBR-7841H, P-36-020805, P-36-020806, P-36-020807, P-36-029348, P-36-030754, P-36-030757, P-36-030758, P-36-030759, and P-36-033066	Historic commercial building
P-36-030756 and P-36-033065	Historic industrial building
SBR-6101H	Historic railroad
SBR-6847H, SBR-10,820H, and P-36-029349	Historic railroad grade
SBR-7138H	Historic building remains
SBR-10,399H and SBR-10,400H	Historic portion of San Bernardino Chinatown
P-36-012916	Historic military property
P-36-013886	Former historic building location
P-36-017659	Historic Mormon school
P-36-033064	Historic elementary school
P-36-017733	Historic government building
SBR-13,310H and SBR-32,709H	Historic trash scatter
P-36-026798 and P-36-027694	Historic public utilities building
P-36-027089	Historic artifact
P-36-033063	Historic opera house

A total of 30 cultural resource studies have been conducted within one-half mile of the project, one of which (Roger 1998) intersects with the project boundaries. The Rogers (1998) study was a determination of eligibility for 50 buildings in the city of San Bernardino. The full records search has been provided in Appendix C.

In addition, BFSa reviewed the following historic sources:

- The National Register of Historic Places Index
- The Office of Historic Preservation (OHP), Archaeological Determinations of Eligibility
- The OHP, Built Environment Resources Directory
- Historic USGS maps
- Historic aerial photographs (1930, 1938, 1953, 1959, 1968, 1977, 1979, 1985, 1990, 1994, 2002, 2005, 2009, and 2013)

These sources did not indicate the presence of any archaeological resources within the project. Historic addresses are present in the surrounding area, reflecting the development of the city of San Bernardino beginning in the late 1800s. As was noted previously, the location of the development coincides with the Hanford Foundry that was constructed in 1892 and various residential and industrial structures; however, none of these were ever recorded as historic structures before they were demolished from the 1960s through 1989. Though information is scant, and neither the 1887 lithograph map nor any of the historic Sanborn maps clearly indicate it, newspaper articles also suggest that a stagecoach barn preceded the construction of the Hanford Foundry and remained standing until the entire property was razed between 1988 and 1989.

BFSa also requested a Sacred Lands File search from the Native American Heritage Commission (NAHC) to search for the presence of any recorded Native American sacred sites or locations of religious or ceremonial importance within one mile of the project. The NAHC returned positive results within the search radius and recommended contacting the San Manuel Band of Mission Indians for further information. All correspondence is provided in Appendix D.

3.4 Applicable Regulations

Resource importance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of the city of San Bernardino in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance. Specifically, the criteria outlined in CEQA, provide the guidance for making such a determination. The following sections detail the criteria that a resource must meet in order to be determined important.

3.4.1 California Environmental Quality Act

According to CEQA (§15064.5a), the term “historical resource” includes the following:

- 1) A resource listed in or determined to be eligible by the State Historical Resources Commission for listing in the California Register of Historical Resources (CRHR) (Public Resources Code SS5024.1, Title 14 CCR. Section 4850 et seq.).
- 2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey, meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- 3) Any object, building, structure, site, area, place, record, or manuscript, which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the CRHR (Public Resources Code SS5024.1, Title 14, Section 4852) including the following:
 - a) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - b) Is associated with the lives of persons important in our past;
 - c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - d) Has yielded, or may be likely to yield, information important in prehistory or history.
- 4) The fact that a resource is not listed in, or determined eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1[k] of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1[g] of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Section 5020.1(j) or 5024.1.

According to CEQA (§15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a

significant effect on the environment. CEQA defines a substantial adverse change as:

- 1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- 2) The significance of an historical resource is materially impaired when a project:
 - a) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in the CRHR; or
 - b) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or,
 - c) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of CEQA applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

- 1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).
- 2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, Section 15126.4 of the guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- 3) If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2(c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
- 4) If an archaeological resource is neither a unique archaeological nor historical

resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or Environmental Impact Report, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5(d) and (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) states:

(d) When an Initial Study identifies the existence of, or the probable likelihood of, Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the NAHC as provided in Public Resources Code SS5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the NAHC. Action implementing such an agreement is exempt from:

- 1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
- 2) The requirements of CEQA and the Coastal Act.

4.0 RESEARCH DESIGN

The questions outlined in the research design that was presented in the ATP included relevant topics that help facilitate a greater understanding of what the historic residents of the project area did and how they changed throughout time. Questions of how these residents related to the environment, how they arranged themselves in space, and how they made a living all contribute details to the story of the history of the development of San Bernardino. These studies not only contribute to reconstructions of local history, but also to broader research topics currently being pursued in the San Bernardino region and southern California in general. These questions help answer the larger anthropological questions about how people historically adapt to and organize themselves under different social, economic, and environmental conditions.

The testing program for the 119 South Arrowhead Avenue Project required a records search, historical research, test excavations (as outlined in Section 5.0), and the mapping of any features or artifacts, as well as the locations of subsurface archaeological tests. Primary objectives, such as the determination of the site boundary, depth of any archaeological deposit, stratigraphy, integrity, content, and spatial distribution of any subsurface artifacts and cultural ecofacts, were essential to the current testing phase of the program. Normally, a research orientation transcends these goals by expanding the meaning of information extracted from a site through the use of archaeological questions important in current scientific research; regional and temporal research issues should be taken into consideration when posing such questions. However, because the presence of buried cultural resources was uncertain, the research design for the current project was limited in scope.

The primary goal of the research design is to attempt to understand the way in which people have used the land and resources within the project area through time, as well as to aid in the determination of resource significance. As the main objective of the investigation was to identify the presence/absence and potential site significance of any cultural resources located within the designated impact areas, the goal of the research design was to investigate the role and importance of on-site cultural resources and to determine if further mitigation measures are warranted. The implementation of the ATP did result in the discovery of historic features, including a trash deposit, two concrete structure footers, and a collapsed brick wall, as well as a concentration of demolition debris and various historic artifacts throughout the trenches. All encountered historic resources appear to have been disturbed over the course of the twentieth century.

4.1 Research Questions and Data Needs

For the current project, the study area under investigation is the southwest portion of San Bernardino County. Given the area involved and the narrow focus of the testing program, the research design for this project was necessarily limited and general in nature. Since the main objective of the investigation was to identify the presence of and potential impacts to cultural

resources, the goal is not necessarily to answer wide-reaching theories regarding the development of early southern California, but to investigate the role and importance of the identified resources. Although testing-level investigations are limited in terms of the amount of information available, several specific research questions were developed that could be used to guide the initial investigations of any observed cultural resources.

Data Needs

At the preliminary testing level, the principal research objective is a generalized investigation of changing settlement patterns in both the prehistoric and historic periods within the study area. The overall goal is to understand settlement and resource procurement patterns of the project area occupants. Therefore, adequate information on site function, context, and chronology from an archaeological perspective is essential for the investigation. The fieldwork and archival research will be undertaken with these primary research goals in mind:

- 1) To identify cultural resources occurring within the project;
- 2) To determine, if possible, site type and function, context of the deposit, and chronological placement of each cultural resource identified;
- 3) To place each cultural resource identified within a regional perspective; and
- 4) To provide recommendations for the treatment of each of the cultural resources identified.

Prehistoric Research Questions:

- Can located cultural resources be situated with a specific time period, population, or individual?
- Do the types of located cultural resources allow a site activity/function to be determined from a preliminary investigation? What are the site activities? What is the site function? What resources were exploited?
- How do the located sites compare to others reported from different surveys conducted in the area?
- How do the located sites fit existing models of settlement and subsistence for valley environments of the region?

Historic Research Questions:

- If artifact deposits are identified, under what circumstances were the materials discarded, and can the deposition be attributed to residential or commercial site occupation?
- Do artifact deposits reflect specific information, such as gender, age, socioeconomic status, or ethnicity regarding the people who lived or worked in the area?
- In terms of potential archaeological deposits identified within the APE impact areas,

- can a distinction be made between domestic and commercial deposition?
- Can a distinction be made between any period of residential use of the property visible on lithograph and Sanborn maps between 1887 and the 1950s?
- If deposits are present, do they reflect economic change through time or are they representative of a single economic level of deposition?

Integrity

In order for a site to be considered significant, it must be established that enough of the deposit remains within the impact areas in order for it to retain integrity. This is particularly true where previous construction across the project may have had impacts to site integrity. According to the California Register of Historical Resources, “integrity” is defined as “the authenticity of an historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.”

As the ground surface of the property is presently exposed, the area should be investigated for any evidence of previous grading or ground disturbances that perhaps resulted in uneven ground surfaces compared to adjacent lots, evidence of the movement of soil, or vehicle activity. All subsurface excavations should be thoroughly investigated and their profiles and soil descriptions compared to ascertain the existing state of the stratigraphy of the site. Any observed disturbances should be weighed against the quality and quantity of data that was gathered during the proposed testing program. Therefore, the following research questions must be addressed with regards to site integrity.

Integrity-Based Research Questions:

- How have the property and any historic deposits or features been disturbed?
- Does this portion of the site retain adequate integrity to yield important information?
- Are observed disturbances superficial or have they impacted the deposit to a greater depth?
- How does the existing topography compare to adjacent properties in terms of cut or fill?
- Have any disturbances compromised the ability to analyze material culture contextually?

The research questions presented herein will be used to guide the accumulation of data at both the archival and archaeological levels, as well as the subsequent analysis of any recovered material. The results of the archival research, field investigation, and laboratory analysis will then be used to evaluate the significance of the identified deposits. The basic data requirements for the study of historic economic practices include site features and site assemblages, as well as archival information on the time and type of occupation, origin of deposits, household composition, ethnicity of occupants, technology, and land ownership.

Should cultural deposits be encountered, archaeological field investigations will focus upon the following information:

- Integrity of the deposit or feature is critically important when determining significance, particularly in urban settings when continued development has a significant impact on previously accumulated deposits.

Archaeological laboratory investigations focus upon the following information:

- Are Native American artifacts present that reflect prehistoric use of this location?
- The presence of discrete clusters of functionally related items may indicate a variety of different economic activities such as mercantile enterprises, bootlegging, and general household refuse.
- The presence and relative density of non-local items such as Chinese coins (wens), ceramics with Asian maker's marks, ethnic-specific ornamental items, and religious jewelry such as crosses may suggest different ethnic groups.
- The presence and relative density of personal items such as women's jewelry, combs, brushes, curlers, needles, thimbles, and garter clips, or men's work boots and cufflinks, may indicate gender.
- The presence and relative density of subsistence items such as different types of tins, bottles, shell, and bone remains may suggest economic status, food availability, or personal preference.
- The presence and relative density of personal items such as marbles, porcelain doll fragments, toy cars, cap guns, toy china fragments, and toy banks may indicate the presence of children.
- The types and quantities of food bone may reflect consumer trends and economic status.
- The presence and relative density of luxury items such as ornamental lamps, fine china, silverware, and perfume bottles may indicate economic status.

5.0 ARCHAEOLOGICAL TESTING PROGRAM

The testing program for the 119 South Arrowhead Project focused upon the completion of archaeological trenching within the project to search for buried archaeological features or deposits. The archaeological features, deposits, and artifacts discovered during testing are presented in the following report section. The archaeological deposits and features have been evaluated for significance in accordance with the City's guidelines and the Public Resources Code.

The scope of work for the testing program included excavating mechanical trenches located in areas where historical data suggests the greatest potential to encounter historic deposits. Hand-excavated test units were included in the ATP methodology as an option in the event that cultural deposits were identified. However, no features or deposits were discovered that retained sufficient research potential to require the application of archaeological test units. Artifacts recovered during the field investigations were returned to the consultant's laboratory for analysis. All collected artifacts were cleaned and cataloged, and all information included in the project's database. All artifacts collected from the project will be prepared for permanent curation at the Western Science Center (WSC) in Hemet, California.

The testing was conducted in conformance with City of San Bernardino Historical Resources Guidelines, Section 21083.2 of the California Public Resources Code, and CEQA. Statutory requirements of CEQA (Section 15064.5) were followed in evaluating the significance of each cultural resource. Specific definitions for archaeological resource type(s) used for the project are those established by the State Historic Preservation Office (SHPO 1995). All reporting follows the Office of Historic Preservation's Archaeological Resource Management Report Guidelines (OHP 1990).

5.1 Field Methodology

5.1.1 Subsurface Testing

The testing program was targeted to provide sufficient information to determine the presence or absence of subsurface deposits, assess site significance if resources are present, and evaluate potential impacts to those resources. The areas of high potential for subsurface deposits were defined based upon review of historic maps and the limits of the property. Geotechnical information regarding potential areas of hazardous soil characteristics was also used to define areas of historic deposits. Trench locations targeted to explore recorded physical structures or features that appear on the 1894, 1906, and 1950 Sanborn maps are illustrated on Figures 5.1-1, 5.1-2, and 5.1-3, also showing the evolving pattern of these historic structures. Thirteen trenches were excavated as part of the archaeological investigation. A trench location map is provided in Figure 5.1-4, which was employed to conduct the investigation of the block.



Figure 5.1–1
Trench Locations With 1894 Sanborn Map Structures
The 119 South Arrowhead Avenue Project

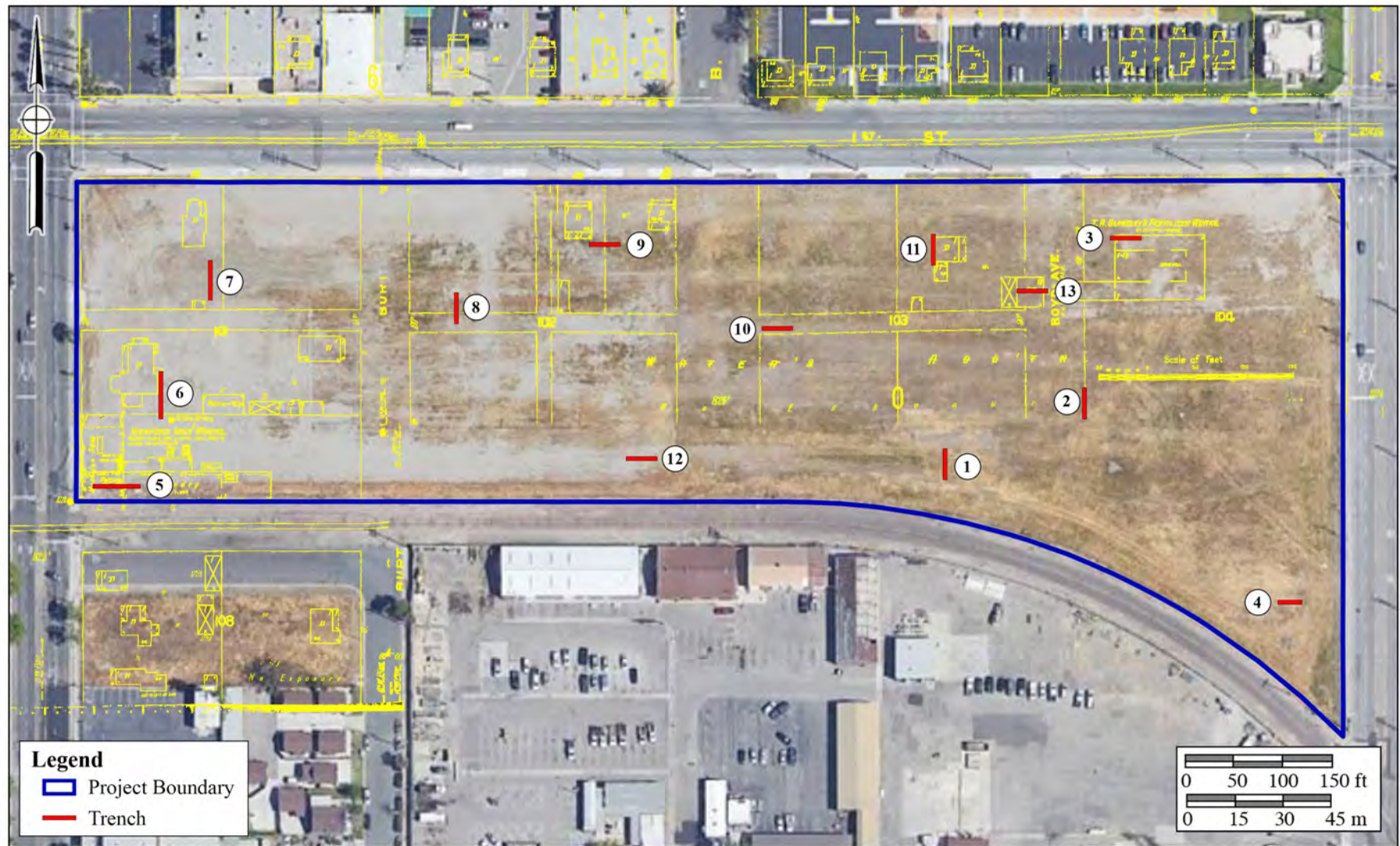


Figure 5.1-2
Trench Locations With 1906 Sanborn Map Structures
 The 119 South Arrowhead Avenue Project

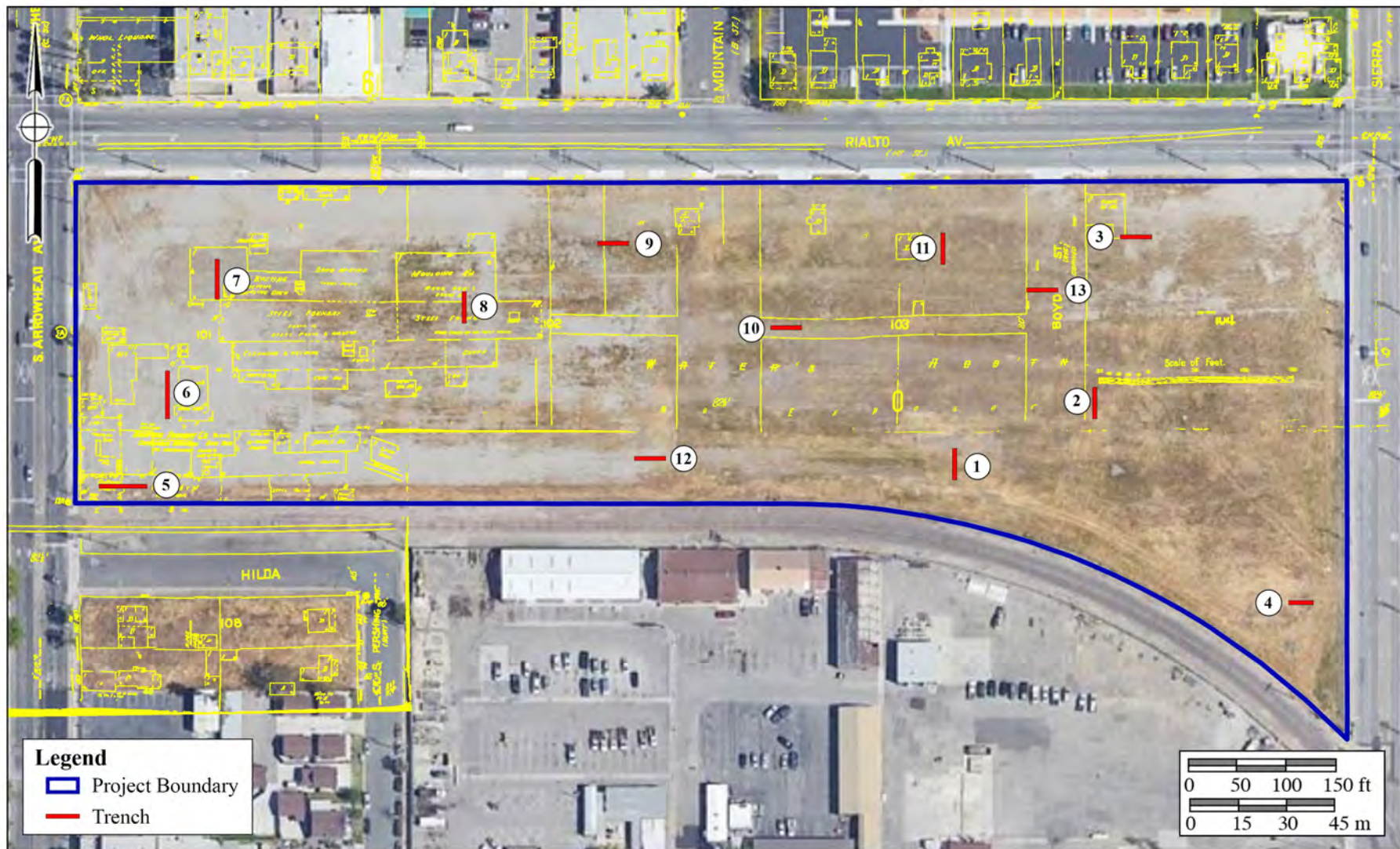


Figure 5.1-3
Trench Locations With 1950 Sanborn Map Structures
 The 119 South Arrowhead Avenue Project



Figure 5.1-4
Trench Locations Shown on a Current Aerial Photograph
The 119 South Arrowhead Avenue Project

The excavation of trenches across the property provided soil profiles necessary to evaluate the potential for buried cultural resources. For the archaeological testing component, the locations of the trenches correlate to the locations of the original structures identified on the lithograph and Sanborn maps. The data from archival research revealed potential locations for buried features or foundations associated with previous structures. Based upon the noted considerations, the testing protocol for historic deposits or foundations included the following procedures:

- Any surface artifacts exposed by earthwork or trenching were mapped, recorded, and collected. All mapping was accomplished using Global Positioning System (GPS) units and data applicable to the project base maps.
- The field investigation included the excavation of mechanical trenches at locations determined to have a high potential for historic deposits (see Figures 5.1–1 to 5.1–4). Mechanical trenching served to identify the composition of any subsurface archaeological deposits encountered. Excavation trenches measured approximately 60.0 centimeters (2.0 feet) wide and 7.0 (23.0 feet) to 15.0 (49.0 feet) meters long, and between 1.2 meters (4.0 feet) and 1.5 meters (5.0 feet) in depth (based upon extent of the deposit). Trench length and depth were dependent upon the area available for trenching, the archaeological materials encountered, and general safety concerns. Soil profiles and notes were completed for each excavated trench.
- Representative diagnostic artifacts were collected from mechanical excavation soil piles to characterize the sample. The quantity of soil sampled was dependent upon factors of artifact density, disturbance, cobbles and fill, and depth.
- All diagnostic cultural materials and a representative sample of nondiagnostic cultural materials recovered from historic deposits were returned to the BFSA laboratory for cleaning, cataloging, and analysis. Any artifacts that required special treatment for preservation were handled in a manner consistent with standard archaeological techniques. A sample of artifacts will be prepared for permanent curation according to the guidelines of the WSC.
- All information gathered from the fieldwork, laboratory analysis, and research have been incorporated into this technical report following City of San Bernardino guidelines and requirements.

5.2 Laboratory Analysis

Laboratory analysis of the collected material was initiated by taking an inventory of the collection. The collection was then subjected to wet screening to remove as much of the dirt as possible from the artifacts.

5.2.1 Artifact Sorting and Analysis

The sorting technique included the sorting, identification, and cataloging of all materials returned to the BFSa laboratory. Bulk items, such as fragments of concrete, slag, and nondescript glass and metal, were weighed and cataloged en masse, by material type, for each level. All remaining artifacts were separated by class and type, and identified to the most specific level possible.

5.2.2 Artifact Functional Categories

Although very few artifacts were recovered from the project, any artifacts from the property were prepared for cataloging according to standard laboratory practices. Items covered in dirt to the point of obscuring relevant characteristics were dry brushed or wiped with a damp cloth in order to enhance the artifact description. Each catalog entry was bagged in a two-millimeter-thick archival quality bag labeled with location and catalog number information. Information recorded about cataloged artifacts will include provenience and depth, material, quantity and/or weight, functional category, artifact type, and a brief description of the artifact(s), including any diagnostic information about manufacturing methods, brand or product marks, and manufacturers' marks. Artifacts sharing the same provenience, material, and color characteristics, but that are fragmentary, were assigned a single catalog number. Artifacts were classified by functional category for purposes of analysis (Van Wormer et al. 2005). These functional categories include:

- **Consumer Items** – This category includes all items containing products purchased and consumed on a regular basis. Artifact types included in this category consist of bottles, jars, bottle caps, can and jar lids, and tin cans.
- **Kitchen Items** – This category includes all items used for food preparation and serving. Artifact types included in this category consist of canning jars, ceramic kitchen and tableware, cooking items, flatware, glassware, and oven and stove parts.
- **Household Items** – This category includes all daily household maintenance items. Artifact classes and types in this category include batteries, household ceramics, household glassware, lamp and light fixture parts, medical items, and any other miscellaneous household items.
- **Food Items** – This category includes all items that confidently represent the remains from meals, including eggshells, domesticated fruit seeds/pits, and animal bone that exhibits butchering.

- **Personal Items** – This category includes items that would be associated with the individual rather than the household, and therefore not generally shared. Artifact classes and types include grooming and hygiene products, cosmetic/beauty products, clothing items, personal adornment items such as jewelry and hairpins, and personal possessions such as coins, eyeglasses, house keys, pocket tools, purses, smoking-related items, toys, and portable musical instruments.
- **Garment Items** – This category includes all items worn by an individual. Artifact classes and types in this category include buckles, buttons, rivets, collar stays, corset hardware, garter, bra, and suspender clasps, hooks and eyes, shoe parts, snaps, straight pins, and strap slides.
- **Automotive Items** – This category includes all items associated with automobiles, including car parts, oil cans, and tail lamps.
- **Furniture Items** – This category includes bed and other furniture frames and springs, cabinet hinges, drawer pulls, scroll trim, trunk parts, and upholstery tacks.
- **Hardware Items** – This category includes miscellaneous hardware not included in a specific group such as bailing wire, bolts and nuts, chain links, cotter pins, metal bands and strapping, rivets, screws, washers, and wire fencing.
- **Tools** – This category includes all hand tools. Artifact classes and types include artist tools, carpenter tools, gardener tools, jewelry tools, mason tools, mechanic tools, and other miscellaneous tools.
- **Livery Items** – This category includes horse and horse-drawn vehicle items. Artifact types and classes include bridle parts, buggy parts, harness parts, horseshoes and nails, saddle parts, and wagon parts.
- **Munitions** – This category includes all firearms and related items. Artifact types and classes include bullets, cartridges, musket balls, and shotgun parts.
- **Building Materials** – This category includes all materials used in the construction of a building or structure. Artifact types and classes include asphalt, plumbing, concrete, construction hardware and materials, window glass, door locks and parts, electrical hardware, nails and spikes, and plaster.

- **Machinery Items** – This category includes all materials associated with machine parts except for agricultural machinery or automobiles.
- **Indeterminate Items** – This category includes items too small and/or fragmentary to identify to artifact type.

5.3 Archival Research

Archival research was also conducted in order to supplement the information generated by the archaeological testing program. Historical research for this phase was primarily conducted at the BFSA reference library. These resources were then used to gather data regarding the history of the property, its place in the region, and general trends in land use history within the project area.

5.4 Recordation and Curation

The features identified as part of the testing program were recorded on the appropriate Department of Parks and Recreation (DPR) site record forms and will be submitted to the South Central Coastal Information Center at California State University, Fullerton. After cataloging, identification, and analysis, each cataloged entry was marked with the appropriate provenience and catalog information. As stated in the required mitigation measures, any archaeological assemblage or a sample of the collection recovered from the 119 South Arrowhead Avenue Project will be permanently curated at the WSC. All notes, photographs, and documents associated with the project will be housed at the office of BFSA in Poway, California.

6.0 REPORT OF FINDINGS

The cultural resources study of the project site consisted of an institutional records search, archival research, an intensive cultural resource survey of the entire 10.34-acre study area, a test trenching program, and the preparation of this technical report. This study was conducted in conformance with Section 21083.2 of the California Public Resources Code, and CEQA. Statutory requirements of CEQA (Section 15064.5) were followed for the identification and evaluation of resources. Specific definitions for archaeological resource type(s) used in this report are those established by the State Historic Preservation Office (SHPO 1995).

6.1 Results of the Field Survey

Principal Investigator Brian F. Smith conducted the archaeological survey for the project on February 14, 2022. The archaeological survey was an intensive reconnaissance consisting of a series of 10-meter survey transects across the project. Survey conditions were generally excellent and ground visibility was only affected by gravel on the ground surface on the west side of the property and sparse weed growth on the east side. The entirety of the property had been graded and cleared when the Hanford Foundry and other structures were demolished between 1988 and 1989. The property is currently characterized as a large vacant lot that slopes gently from southeast to northwest (Plates 6.1–1 to 6.1–4). A railroad spur parallels the southern boundary of the property, and a recently completed concrete culvert is located along the north side of the railroad tracks for the entire southern boundary of the property.

The survey of the property resulted in the identification of several historic artifacts on the ground surface, primarily on the eastern half of the property. The artifacts consist of potsherds of ironstone (some with the “Flow Blue” transfer-printed motif), glass (some solarized) from bottles and windows, and some unidentified metal fragments. Slag was also noted that is likely associated with the Hanford Foundry operation. A notable increase in artifacts was noted along the north side of the concrete culvert where dirt was apparently excavated when the culvert ditch was excavated for construction. The greater quantity of historic artifacts in the disturbed dirt from the culvert construction would appear to reflect the presence of buried historic materials in this area of the property.



Plate 6.1-1: Overview of the subject property, facing west from the center of the parcel. Note the gravel parking surface and painted parking lines.



Plate 6.1-2: Overview of the subject property, facing east from the center of the parcel.

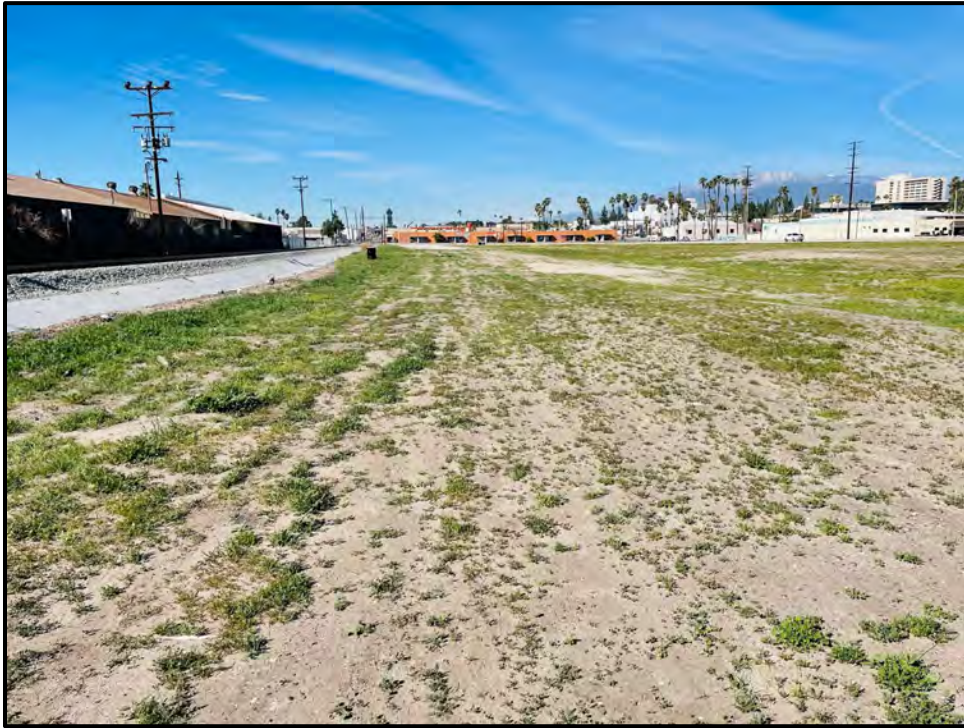


Plate 6.1-3: Overview of the subject property, facing west along the southern property boundary. The railroad tracks and drainage culvert are shown on the left.



Plate 6.1-4: Overview of the subject property from the southwest property corner, facing northeast. The cleared and graded surface of the property are visible.

The artifacts observed would appear to reflect a time period from the late nineteenth to early twentieth centuries. Solarized glass, as observed in the project, is the result of a desire for light aqua to colorless glass in the nineteenth century. In order to produce glass of this color, manganese was added to the glass mixture to create the colorless or light aqua color. However, as the glass was exposed to the sun over time, it turned a purple or amethyst color, resulting in solarized glass. While dating various items according to artifact type (*i.e.*, tableware, window, and bottle glass), solarized glass generally represents a time period between the mid-1870s and the early 1930s (Lockhart 2006).

The “Flow Blue” ceramic motif observed on some of the ceramic fragments is also associated with late nineteenth to early twentieth century manufacture. “Flow Blue” ceramics are decorated with a blue transfer-printed underglaze design that has been smudged or blurred (Plate 6.1–5). These ceramics originated in the late 1820s; however, the style was most popular in the late nineteenth to early twentieth centuries (Gaston 1983).



Plate 6.1–5: From left to right: amber glass, clear-glazed ceramic rim fragment, and “Flow Blue” ceramic fragment.

Because the surface of the property has been affected by previous demolition and grading when the Hanford Foundry facility and other structures were removed through the 1960s and 1980s, the spread of historic artifacts across the eastern side of the property did not provide any indications of historic deposits or features. Given the early date of the construction of the Hanford Foundry (1892) and the likely presence of other structures at this location prior to 1883, there is a strong potential for buried historic structures at this property, including cisterns, privies, footings and foundations, and historic trash deposits. Furthermore, given that a railroad

spur passes alongside the property, and the Hanford Foundry had contracts with the Santa Fe Railroad, there may be railroad features on the south side of the property.

Aside from historic artifacts, no prehistoric Native American artifacts were noted during the survey. The location of the property is not a good candidate for the presence of buried Native American sites or features.

6.2 Results of the Test Trenching

The ATP for the project was submitted in August 2022 (Conroy and Smith 2022) and approved by the City of San Bernardino (see Appendix F). As part of the ATP, background research was conducted for the property to evaluate its potential to contain historic resources. As stated in Section 3.2.4, the subject property has been historically utilized since at least 1887. The property was gradually developed through the 1960s with residential and commercial buildings including the Charles Parker Barrows Fruit Packing House, the Hanford Iron Works (Foundry), and the Thomas A. Blakeley's Fertilizer Works. By 1968, all residential structures located within the project were replaced by commercial buildings and between 1988 and 1990, the subject property was cleared of all structures.

The testing program was implemented between September 19 and 21, 2022, by Jillian Conroy, James Shrieve, Erik Johannsen, and Chay Morrissey. All trench locations were delineated in the field based upon the proposed test trench locations presented in the ATP. While DigAlert was contacted several times prior to the excavations in order to identify the locations of underground utilities, none of these utilities were marked on the property. As a result, utility lines were encountered within the trenches during testing, which impacted the depths and lengths of some of the trenches. No limitations were encountered on the surface of the project during testing.

Thirteen backhoe trenches were excavated throughout the property to search for potentially significant buried cultural resources (Figure 6.2–1). The trenches were positioned based upon the historic structure locations in order to determine the presence and extent of any subsurface cultural deposits within the project APE. The locations of the trenches are shown on Figures 5.1–1 to 5.1–4. Each trench was excavated to between 1.2 and 1.5 meters (4.0 to 5.0 feet) in depth and ranged in length from 7.0 to 15.0 meters (23.0 to 49.0 feet) (Table 6.2–1). Twelve of the 13 trenches were positive for cultural materials or features.

Soils encountered in the trenches in the western portion of the property generally consisted of deposits of light brown loose sand from zero to 30.0 centimeters (1.0 foot) and medium brown silt loam from 30.0 to 150.0 centimeters (1.0 to 5.0 feet). This soil stratigraphy was observed within Trenches 5 to 8. The remaining trenches, located in the central and eastern portions of the property, exhibited deposits of loose light brown sand from zero to 150.0 centimeters (5.0 feet). This soil stratigraphy was observed within Trenches 1 to 4, and 9 to 13. Plates 6.2–1 and 6.2–2 depict the differing soil stratigraphies observed.

Figure 6.2-1
Archaeological Investigation Map
(Deleted for Public Review; Bound Separately)

Table 6.2–1
Preliminary Trench Excavation Results

Trench	Length (m/ft.)	Maximum Depth (m/ft.)	Feature	Type	Historic Location	Historic Artifacts Encountered
1	10.0/33.0	1.5/5.0	-	-	-	Three bricks, one hardware fragment, one druggist jar
2	10.0/33.0	1.5/5.0			-	One brick, two hardware fragments, one nail, glass container fragments, two bottle fragments
3	10.0/33.0	1.2/4.0			181 Boyd Avenue / 147 C Street (Rialto Avenue)	One ceramic mug, three bottles (alcohol, druggist, and condiment), glass container fragments, window glass
4	7.0/23.0	1.2/4.0			-	One bottle fragment, one brick fragment
5	15.0/49.0	1.5/5.0	A	Collapsed brick wall	151 South Arrowhead Avenue (C Street)	Two ceramic tableware fragments, one railroad stake, one brick
6	15.0/49.0	1.5/5.0	B	Concrete slab	119 South Arrowhead Avenue (C Street)	Saw-cut faunal bone
			C	Concrete footer		
7	12.0/39.0	1.5/5.0	D	Large refuse deposit	281 First Street (Rialto Avenue)	Late nineteenth to early twentieth century household refuse (N=72)
8	10.0/33.0	1.5/5.0	-	-	-	One metal rasp (file)
9	10.0/33.0	1.5/5.0			215 C Street (Rialto Avenue)	-
10	10.0/33.0	1.5/5.0			195 C Street (Rialto Avenue)	Window glass, ceramic tableware fragment, faunal bone, electrical insulator
11	10.0/33.0	1.2/4.0			168 First Street (Rialto Avenue)	Container glass fragments, window glass, one druggist bottle, one ceramic tableware fragment, one brick, one set of pliers
12	10.0/33.0	1.5/5.0			147 First Street (Rialto Avenue)	Two bricks, one bolt, one metal hardware strap
13	11.0/36.0	1.2/4.0			180 Boyd Avenue	Container glass fragments, window glass, one ceramic tableware vessel



Plate 6.2–1: East wall profile of Trench 7, zero to five feet, facing southeast.



Plate 6.2–2: West wall profile of Trench 10, zero to five feet, facing northeast.

The archaeological observation of the controlled trenching documented that most of the trenches contained evidence of historic occupation of the subject property. While no features were encountered in the eastern portion of the property, artifacts were encountered in all trenches but Trench 9. These artifacts were recovered from the loose sand matrix, indicating that they were likely disturbed from their original location when the property was razed before 1990.

The four features (Features A, B, C, and D) located in the western portion of the property were all identified one foot below the ground surface within the medium brown silt loam of Trenches 5, 6, and 7 (see Figure 6.2-1). The western portion of the property displays a high level for the potential of historic deposits and features because the level of disturbance displayed at that portion of the site is limited to the first one foot below ground surface, whereas the eastern portion of the site displays disturbance throughout the entirety of the excavated trenches with limited artifact recovery.

Within the confines of most of the trenches, dispersed fragments of historic artifacts were encountered in disturbed soils with intermittent construction debris and infrastructure remains. Diagnostic artifacts and a representative sample of nondiagnostic artifacts were collected. The entire property appears to have been disturbed and affected by previous grading and construction activities associated with the Hanford Iron Works (Foundry). The recovered artifacts that were discovered within intact soils and the features identified were all located within the western portion of the property, within the ultimate confines of the Hanford Foundry when it was demolished between 1988 and 1989. The remaining artifacts located in the east portion of the property were identified within disturbed contexts, as indicated by the fill sand identified throughout those trenches

which was demolished. Therefore, the artifacts and features are being recorded as a single site, the Hanford Foundry Site (119-Temp-1; Figure 6.2-2). Further descriptions of the encountered features are provided below.

Feature A

Feature A (Plate 6.2-3) is a collapsed brick wall that was unidentified within Trench 5 in the southwest portion of the project. The feature was encountered approximately 1.0 foot (30.0 centimeters) below ground surface and extended for approximately 14.5 feet (east to west) within the trench. Feature A extends into the north and south walls of Trench 5 and approximately 10.0 inches (25.0 centimeters) deep. The 1906 Sanborn Map indicates that Feature A is located within the pattern and machine shop of Hanford Iron Works, which were constructed in 1904 (see Section 3.2.4). While none of the bricks associated with Feature A retain maker's marks, the location of the collapsed brick wall indicates that it is likely associated with the original Hanford Iron Works building, which was built in 1892 and demolished between 1988 and 1989.

Figure 6.2–2
Cultural Resource Location Map
(Deleted for Public Review; Bound Separately)



Plate 6.2–3: Overview of Feature A in Trench 5, facing west.

Further, while no artifacts were found in association with Feature A, one railroad stake, two porcelain bowl fragments, and one brick fragment were recovered from Trench 5. The ceramic fragments do not retain manufacturer information and the brick fragment retains a maker's mark that indicates that it was manufactured by Gladding, McBean and Co. between 1943 and 1962 (Mosier 2001). Given this date range and the level of disturbance that occurred in this area through the 1980s, including the demolition and reconstruction of the second floor of the pattern shop in the 1950s (see Section 3.2.4), these four items are not likely associated with the collapsed brick wall. Further, the recovered brick is a yellow fire brick, and the bricks that comprise the wall are red clay bricks.

Features B and C

Features B and C were both identified within Trench 6 in the western portion of the project. Feature B is a 1.0-foot-wide and 4.0-inch-thick concrete slab that was encountered approximately 17.0 inches (43.0 centimeters) below the ground surface (Plate 6.2–4). Feature C is a concrete and rebar footer that was encountered approximately 3.0 feet (91.0 centimeters) below the ground surface (Plate 6.2–5).



Plate 6.2-4: Overview of Feature B in Trench 6, facing east.



Plate 6.2-5: Overview of Feature C in Trench 6, facing east.

Both features are located in the vicinity of the historic location of a dwelling, as shown on the 1906 Sanborn Map, and could be associated with the foundation construction. The dwelling did not have an address in 1906, but was depicted within Lot E of Block 101. The dwelling was subsequently replaced by buildings associated with the expansion of the Hanford Iron Works. According to the 1950 Sanborn Map, Trench 6 does not appear to be located within or near the new structures and, as such, it is likely that features B and C are associated with the pre-1906 dwelling. By 1950, this portion of the property was assigned the 119 South Arrowhead Avenue address. Both Features B and C were likely impacted during the continual demolition and construction of structures within the project at the Hanford Iron Works throughout the twentieth century.

Artifacts recovered from Trench 6 include one saw-cut bone fragment of a medium-sized mammal (27.5 grams). It is unclear whether this bone fragment is associated with the features. It is more likely the result of the continued disturbance to the property that occurred throughout the twentieth century, as stated previously.

Feature D

Feature D is a large, disturbed refuse deposit that was identified within Trench 7, in the northwest portion of the project. The deposit was encountered approximately 1.0 foot below ground surface in the northern end of the trench. Artifacts were recovered from throughout the trench, with concentrations in the northern, central, and southern portions. Artifact analysis indicates that many of the artifacts refit together from throughout the trench, indicating that Feature D was disturbed when the property was razed prior to 1990. Staining in a parabolic shape in the west wall of the trench (Plate 6.2–6) indicates that this was likely the location of the deposit before it was disturbed. According to the 1906 Sanborn Map, Feature D is located directly behind the historic location of the dwelling at 281 First Street (Rialto Avenue).

Only those cultural materials that were disturbed during the trench excavation were recovered from Feature D. Additional artifacts associated with the feature were identified within the east and west walls of the trench. Preliminary analysis of the recovered artifacts from Feature D is presented in Section 6.3. Overall, the feature appears to represent household refuse disposal from a middle- to upper-class family in the late nineteenth to the early twentieth century.



Plate 6.2-6: Overview of Feature D in Trench 7, facing west.

6.3 Archaeological Results

For the 119 South Arrowhead Avenue Project assemblage, analysis was conducted for the purpose of developing functional artifact patterns or profiles, such as those established by South (1977). Cultural materials were encountered within trenches 1 to 8 and 10 to 13. However, those items that were identified outside of Trench 7 (Feature D) were all identified within disturbed soil contexts and primarily represent demolition debris, hardware, and building materials (metal fragments and brick), with a smaller quantity of nondiagnostic consumer, household, and kitchen items. These items (N=43) were not included in the following analysis, as they appear to represent secondary refuse disposal that occurred when the Hanford Foundry was demolished between 1988 and 1989.

The subsequent analysis of Feature D resulted in the identification of an estimated minimum number of individual artifacts and bulk weights of nondiagnostic or unidentifiable materials. For the current study, all artifactual material was cleaned and identifiable items were cataloged according to material, type, product, functional category, technology, origin, size, pattern, identifying marks, manufacturer, and date, when possible. The resulting information was used to provide relevant data for functional artifact patterning, consumption patterns of bottled products, and ceramic economic scaling. As stated previously, the initial laboratory analysis of the recovered materials from Feature D likely represent household refuse disposal by a middle- to upper-class family in the late to early twentieth centuries.

A total of 72 identifiable cultural materials were recovered from Feature D (Table 6.3–1). Of the identifiable items recovered, most are glass (N=53; 73.61 percent), metal (N=3; 4.17 percent), and ceramic (N=16; 22.22 percent). Additional cultural materials recovered include faunal bone (3.3 grams), nondiagnostic container and window glass fragments (360.4 grams), and nondiagnostic ceramic tableware fragments (7.7 grams).

Table 6.3–1
Cultural Materials Recovered From Feature D

Material Type	Quantity	Percent
Ceramic	16	22.22
Glass	53	73.61
Metal	3	4.17
Bulk Items (in grams)		
Faunal bone	3.3	-
Glass	360.4	
Ceramic	7.7	
Total*	72	100.00

**Total does not include grams*

All 72 artifacts were also identifiable to various functional categories (Table 6.3–2). Most of the diagnostic items recovered from Feature D were classified as kitchen items (N=33; 45.83 percent), household items (N=26; 36.11 percent), consumer items (N=8; 11.11 percent), personal items (N=3; 4.17 percent), and transportation items and building materials (N=1; 1.39 percent, each). Additional functional categories represented by the cultural materials recovered include food items (domesticated animal bone), nondiagnostic building materials (window glass fragments), nondiagnostic consumer items (glass container fragments), and nondiagnostic kitchen items (ceramic tableware fragments).

Table 6.3–2
Functional Categories Represented
by Cultural Materials Recovered From Feature D

Functional Category	Quantity	Percent
Building materials	1	1.39
Consumer items	8	11.11
Household items	26	36.11
Kitchen items	33	45.83

Functional Category	Quantity	Percent
Personal items	3	4.17
Transportation items	1	1.39
Bulk Items (in grams)		
Food items	3.3	-
Building materials	238.7	
Consumer items	121.7	
Kitchen items	7.7	
Total*	72	100.00

*Total does not include grams

In order to more accurately date the assemblage recovered from Feature D, only those items representing expendable consumer products, household products, and medicines were used in assigning a date range to the artifact scatter. Expendable products such as these are useful for dating an assemblage because they represent items that are only used for a brief period of time and are then discarded. Although some recycling behaviors did occur historically, when several items are taken together as a group, a greater level of confidence can be achieved when examining date ranges and period of occupation. Upon review of the 23 temporally diagnostic items, the artifacts appear to represent a period between the late 1800s and the early 1900s (Table 6.3–3). Because manufactured containers were commonly reused for a number of years, the earliest dates for occupation being based strictly upon manufacturing dates of containers is not necessarily accurate.

Table 6.3–3
Temporally Diagnostic Items Recovered From Feature D

Date Range	Artifact	Manufacturer / Company	Quantity	Cat. No(s).	
1870-1910	Alcohol bottle (beer)	-	1	60	
1870-1919	Druggist bottle		Olean Glass Co.	4	80-83
1880-1913		1		77	
1880-1919		-		6	68, 69, 71, 72, 74, 75
				1	76
				1	78
	1		79		
1890-1919	Cosmetic jar		1	64	
1895-1919	Cosmetic bottle (Camelline lotion)	Wakelee & Co.	1	63	
1896-1910	Druggist bottle	Obear-Nester Glass Co.	2	70, 73	

Date Range	Artifact	Manufacturer / Company	Quantity	Cat. No(s).
1905-1959		-	1	58
1907-1911	Druggist bottle (Headache remedy [Bromo-Seltzer])	Maryland Glass Corp / Emerson Drug Co.	1	62
1910-1919	Druggist bottle	Illinois Glass Co.	1	85
1910-1929	Druggist bottle (Laxative [Baby Brand Castoria])	Illinois Glass Co. / Baby's Own Laboratories	1	87
Total			23	

Of the 23 temporally diagnostic items recovered, 20 were manufactured in the blown-into-mold (BIM) style. For those items that retain their bases, one exhibits a post-bottom mold and 15 exhibit cup-bottom molds, which indicate manufacture in the BIM style between 1840 and 1910 and 1880 and 1919, respectively. Ten of the BIM bottles exhibit tooled finishes, indicating manufacture between 1870 and 1919. One of the temporally diagnostic items was manufactured on a semi-automatic bottling machine in the press-and-blow style. Press-and-blow bottles and jars were most commonly made between 1890 and 1919. This excludes dairy bottles, which continued to use this manufacture style until approximately 1950. Two of the temporally diagnostic bottles were manufactured on automated bottling machines, indicating manufacture after 1905. Both exhibit Owen's suction scars, which indicate manufacture prior to 1959 (Lindsey 2022). Ten of the bottles also retain manufacturer and/or company information, which in some cases further narrowed the manufacture date range of the items (see Table 6.3–3).

The manufacture date ranges of the temporally diagnostic items indicate that the earliest potential manufacture date of the items is 1870 to 1910, and the latest potential manufacture date is 1910 to 1959. In an attempt to narrow the date range for all items collected from Feature D, the mean and standard deviation of the earliest and latest manufacture date ranges were calculated. Statistically, the temporally diagnostic items recovered from Feature D indicate that the deposit represents a time period between 1885 (± 13 years) and 1919 (± 10 years).

In order to shed light on the socio-economic standing of the contributors to the deposit, a general analysis of the recovered ceramic kitchen items was conducted for Feature D. All ceramic kitchen items recovered are classified as tableware items, which are items used in the serving and eating of food and drink. Of the 16 tableware items recovered from Feature D, five are made of porcelain, 10 are made of stoneware, and one is made of earthenware pastes.

Motifs exhibited on the ceramic items include clear glazes, molded rims, gold gilding, and polychrome floral motifs. All of these motifs are typical of items manufactured in the United States and Europe. Five of the motifs are diagnostic to the "Flow Blue" motif. "Flow Blue" ceramics are decorated with a blue transfer-printed underglaze design that has been smudged or blurred. These ceramics originated in the late 1820s; however, the style was most

popular in the late nineteenth to early twentieth centuries in the United States and England (Gaston 1983) (Table 6.3–4).

Table 6.3–4
Temporally and Geographically Diagnostic
Ceramic Kitchen Items Recovered From Feature D

Date Range	Artifact	Company Name or Diagnostic Motif	Country of Origin	Quantity	Cat. No(s).
1825-1950	Plate	“Flow Blue” motif	United States / Europe	3	111, 113, 114
1865-Present	Saucer	Wood and Son	England	1	105
1900-1914	Teacup	Bawo & Dotter / Elite	France	1	103

Six of the ceramic items retain complete or partial backstamps; however, only two were identifiable to a specific company: Bawo & Dotter in Limoges, France between 1900 and 1914 and Wood and Son in Burslem, England after 1865 (Kovel and Kovel 1986). The remaining ceramics with backstamps were not identifiable to a specific country but did indicate that the items were manufactured in the United States or Europe (see Table 6.3–4).

Kitchen items are often reused over long periods of time and, as a result, they are not useful in determining definitive date ranges of deposits. However, they can be used to determine possible immigration patterns and the minimum date of deposition. The minimum date of deposition of the ceramic items is 1825. However, the date range overlap of the ceramic items is 1900 to 1914. This indicates that the kitchen and other items associated with Feature D were likely acquired sometime after 1900. In terms of immigration patterns, the kitchen items recovered from the Feature D deposit appear to represent people of European (French and English) and/or Anglo-American origin. In terms of socio-economic standing of the contributors to the deposit, the high frequency of highly decorated porcelain and stoneware items indicates that they were likely middle to upper class in social standing.

6.4 Summary

A total of 115 identifiable cultural materials were recovered from the test excavations conducted at the 119 South Arrowhead Avenue Project. Of these items, 43 were recovered throughout trenches 1 to 6 and 8 to 13 and 72 were recovered from Trench 7, Feature D (Table 6.4–1). The artifacts recovered from outside Trench 7 were identified within highly disturbed contexts that resulted from the demolition and clearing of all structures on the property between 1988 and 1990. As a result, the artifact analysis did not include the items located outside of Trench 7.

Table 6.4-1**Cultural Materials Recovered From the 119 South Arrowhead Avenue Project**

Cultural Material	Location		Total	Percent
	All Other Trenches	Trench 7 / Feature D		
Brick	12	-	12	10.43
Ceramic	7	16	23	20.00
Glass	15	53	68	59.13
Metal	9	3	12	10.43
Bulk Items (in grams)				
Faunal bone	33.4	3.3	36.7	-
Glass	319.0	360.4	679.4	
Ceramic	-	7.7	7.7	
Total*	43	72	115	100.00†
Percent	37.39	62.61	100.00†	

*Totals does not include grams

†Rounded totals may not equal 100.000 percent

The items recovered from Trench 7 were identified as a partially disturbed historic refuse deposit. The artifact analysis resulted in the determination that the refuse deposit is associated with early development of the subject property, prior to the expansion of the Hanford Foundry into the northern and eastern portions of the project. While further research will be conducted for Feature D once it has been excavated or collected in its entirety during the next phase of work from the project, this analysis concludes that Feature D represents domestic refuse disposal of a middle- to upper-class family between 1885 (± 13 years) and 1919 (± 10 years). Preliminary archival research indicates that the feature is likely associated with the structure that was historically located at 281 First Street by 1906. This feature was likely disturbed when the Hanford Foundry was expanded northward on the property in the 1930s. The house was ultimately demolished between 1938 and 1950, according to aerial photographs and Sanborn maps.

Overall, all recovered artifacts and features identified from the project were disturbed prior to the excavations conducted by BFSA. In the western portion of the project, where portions of intact soil were encountered, the first 1.0 foot (30.0 centimeters) was impacted by the clearing of the property between 1988 and 1990. The disturbance to this portion of the property could also be the result of the expansion of the Hanford Foundry in the 1930s. No intact deposits or features were encountered on the eastern portion of the property. The overall perspective of the archaeological testing is that the demolition of the Hanford Foundry and leveling of the property prior to the early 1990s has affected the historic features that were encountered during

the test trench excavations. No significant features or deposits were identified due to the level of past disturbance. The potential exists that other features or deposits with minimal disturbance may exist within the project; however, the level of this potential cannot be calculated given the small sample of the archaeological trenches.

7.0 DISCUSSION

The test trenching for the 119 South Arrowhead Avenue Project was conducted in conformance with City of San Bernardino Historical Resources Guidelines, Section 21083.2 of the California Public Resources Code, and CEQA. The archaeological testing program for the 119 South Arrowhead Avenue Project resulted in the identification of one collapsed brick wall (Feature A), one concrete pad (Feature B), one concrete and rebar footer (Feature C), and one historic refuse deposit (Feature D). All four features were identified in the western portion of the property and are associated with the structures shown on the 1906 Sanborn Map. The test trenching conducted by BFSa indicates that intact areas associated with the early development of the block are present within the western portion of the property, approximately one foot below the ground surface. The eastern portion of the property is characterized as highly disturbed and only contains limited historic items associated with the demolition of the Hanford Foundry between 1988 and 1989. Given the level of disturbance of the entire property, and following the preliminary analysis, Site 119-Temp-1 has been evaluated as not significant according to CEQA criteria. The features have been registered as a historic site with the South Central Coastal Information Center at California State University, Fullerton.

Based upon an overall lack of research potential resulting from demolition disturbance and the information gathered by the testing program, the project was evaluated as lacking any documented potentially significant cultural features or deposits. Based upon the very limited identification of partially intact historic deposits (limited to the western end of the property) at the project and the limited research potential represented by the identified features, the planned development of the property will not impact any known significant cultural resources.

7.1 Recommendations

The development for the 119 South Arrowhead Avenue Project will not constitute a source of significant impacts to cultural resources. Items recovered during the testing program are common domestic trash discards and disturbed features associated with structures, and were evaluated as not significant cultural resources due to the level of disturbance evident at the site. However, results of the archaeological testing and significance evaluation indicate that the potential to discover additional historic deposits on the property is high, and some of those features may not have been affected by past demolition and, therefore, could contain significant historical data. Therefore, it is recommended that a MMRP be part of the approved project's requirements to identify and evaluate any deposits that may be discovered during the development process. Archaeological monitoring during all future excavations should be required. This includes the continued documentation of the identified features and recovery of artifacts associated with the features. As part of the MMRP, it is recommended that an Archaeological Monitoring Plan be prepared to outline the procedures and protocols to be followed should discoveries be made during grading and excavations. Until the initiation of the

grading and shoring program, no additional archaeological investigations are proposed. Artifacts collected as a result of the testing program shall be included in a curation program with any other artifacts recovered during the mitigation monitoring program.

8.0 **BIBLIOGRAPHY**

Ancestry.com

- 2011 *U.S., City Directories, 1822-1995* (database online). Provo, UT, USA: Ancestry.com Operations, Inc.

Bean, Lowell John

- 1978 Cahuilla. In *California*, edited by R.F. Heizer, pp. 575–587. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Bean, Lowell John and Charles R. Smith

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

Bean, Lowell John and Florence C. Shipek

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

Beattie, George W. and Helen P. Beattie

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

Benedict, Ruth Fulton

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

Brigandi, Phil

- 1998 *Temecula: At the Crossroads of History*. Heritage Media Corporation, Encinitas, California.

Brown, John Jr. and James Boyd

- 1922 *History of San Bernardino and Riverside Counties*. The Lewis Publishing Company, Chicago, Illinois.

Caughey, John W.

- 1970 *California: A Remarkable State's Life History*. 3rd ed. Prentice-Hall, Englewood Cliffs, New Jersey.

Chapman, Charles E.

- 1921 *A History of California: The Spanish Period*. The Macmillan Company, New York.

City of San Bernardino

- 2005 San Bernardino General Plan. Electronic document, <http://www.ci.san-bernardino.ca.us/pdf/DevSvcs/General%20Plan%20Document.pdf>, accessed January 5, 2022.

Cook, Sherburne F.

- 1976 *The Conflict Between the California Indian and White Civilization*. University of California Press, Berkeley and Los Angeles, California.

Conroy, Jillian L.H. and Brian F. Smith

- 2022 Archaeological Test Plan for the 119 South Arrowhead Avenue Project, City of San Bernardino (APNs 136-014-10 and 136-051-54). Brian F. Smith and Associates, Inc. Unpublished report on file at the City of San Bernardino, San Bernardino, California.

Curry, Joseph R.

- 1965 Late Quaternary History: Continental Shelves of the United States. *Quaternary of the United States*, edited by H.E. Wright Jr. and D.G. Frey, pp. 723–735. Princeton University Press, New Jersey.

Drucker, Philip

- 1937 Culture Element Distributions: V. Southern California. *Anthropological Records* 1(1):1–52. University of California, Berkeley.

Erlandson, John M. and Roger H. Colten (editors)

- 1991 An Archaeological Context for Archaeological Sites on the California Coast. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by J.M. Erlandson and R.H. Colten. Perspectives in California Archaeology, Volume 1, Institute of Archaeology, University of California, Los Angeles.

Fagan, Brian M.

- 1991 *Ancient North America: The Archaeology of a Continent*. Thames and Hudson, London.

Gallegos, Dennis

- 1985 Batiquitos Lagoon Revisited. In *Cultural Resource Management Casual Papers* 2(1). Department of Anthropology, San Diego State University.
- 2002 Southern California in Transition: Late Holocene Occupation of Southern San Diego County. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry Jones. Cotsen Institute of Archaeology, University of California, Los Angeles.

Gaston, Mary Frank

- 1983 *The Collector's Encyclopedia of Flow Blue China*. Collector Books, Paducah,

Kentucky.

Gunther, Jane Davies

- 1984 *Riverside County, California, Place Names: Their Origins and Their Stories*. Rubidoux Printing, Riverside, California.

Heizer, Robert F.

- 1978 Trade and Trails. In *California*, edited by Robert F. Heizer, pp. 690–693. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Inman, Douglas L.

- 1983 Application of Coastal Dynamics to the Reconstruction of Paleocoastlines in the Vicinity of La Jolla, California. *Quaternary Coastlines and Marine Archaeology*, edited by Patricia M. Masters and N.C. Flemming, pp. 1–49. Academic Press, Inc., Orlando, Florida.

King, Chester DeWitt and Thomas C. Blackburn

- 1978 Tataviam. In *California*, edited by Robert F. Heizer. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Kovel, Ralph and Terry Kovel

- 1986 *Kovels' New Dictionary of Marks: Pottery & Porcelain, 1850 to the present*. Reprinted. Random House Reference, New York, New York. Originally published in 1985, Random House, Inc., New York, New York.

Kroeber, Alfred L.

- 1976 *Handbook of the Indians of California*. Reprinted. Dover Editions, Dover Publications, Inc., New York. Originally published 1925, Bulletin No. 78, U.S. Government Printing Office, Washington, D.C.

Lindsey, Bill

- 2022 Historic Glass Bottle Identification & Information Website. Electronic document, <http://www.sha.org/bottle/>, accessed October 4, 2022.

Lyman, Edward Leo

- 1989 The Rise and Decline of Mormon San Bernardino. *Brigham Young University Studies* 29(4):43–63. Brigham Young University, Provo, Utah.

Martin, Paul S.

- 1967 Prehistoric Overkill. In *Pleistocene Extinctions: The Search for a Cause*, edited by Paul S. Martin and H.E. Wright. Yale University Press, New Haven, Connecticut.

1973 The Discovery of America. *Science* 179(4077):969–974.

Masters, Patricia M.

1983 Detection and Assessment of Prehistoric Artifact Sites off the Coast of Southern California. In *Quaternary Coastlines and Marine Archaeology: Towards the Prehistory of Land Bridges and Continental Shelves*, edited by Patricia M. Masters and Nicholas C. Fleming, pp. 189–213. Academic Press, London.

1994 *Archaeological Investigations at Five Sites on the Lower San Luis Rey River, San Diego County, California*, edited by Michael Moratto, pp. A1-A19. INFOTEC Research, Inc., Fresno, California and Gallegos and Associates, Pacific Palisades, California.

Miller, Jaquelin Neva

1966 *The Present and Past Molluscan Faunas and Environments of Four Southern California Coastal Lagoons*. Master's Thesis, Scripps Institution of Oceanography, University of California at San Diego.

Moratto, Michael J.

1984 *California Archaeology*. Academic Press, New York.

Moriarty, James R., III

1966 Culture Phase Divisions Suggested by Topological Change Coordinated with Stratigraphically Controlled Radiocarbon Dating in San Diego. *Anthropological Journal of Canada* 4(4):20–30.

Morton, D.M. and F.K. Miller

2006 Geologic Map of the San Bernardino and Santa Ana 30' x 60' Quadrangles, California, v. 1.0. U.S. Geological Survey Open-File Report 2006-1217.

Mosier, Dan

2001 California Bricks. Electronic document, <https://calbricks.netfirms.com/index/html>, accessed October 4, 2022.

Moss, Madonna L. and Jon M. Erlandson

1995 Reflections on North American Pacific Coast Prehistory. *Journal of World Prehistory* 9(1):1–46.

Natural Resources Conservation Service (NRCS)

2019 Web Soil Survey. Electronic document, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>, accessed January 5, 2022.

Office of Historic Preservation (OHP)

1990 *Archaeological Resource Management Reports: Recommended Contents and Format*.

Department of Parks and Recreation, Sacramento, California.

Patterson, Tom

- 1971 *A Colony for California: Riverside's First Hundred Years*. Press-Enterprise, Riverside, California.

Pourade, Richard F.

- 1961 *Time of the Bells*. The History of San Diego Volume 2. Union-Tribune Publishing Company, San Diego, California.
- 1963 The Silver Dons. In *The History of San Diego* (Volume 3). Union-Tribune Publishing Company, San Diego, California.

Reddy, Seetha

- 2000 Settling the Highlands: Late Holocene Highland Adaptations on Camp Pendleton, San Diego County California. Prepared for the Army Corps of Engineers by ASM Affiliates. Manuscript on file at South Coastal Information Center at San Diego State University, San Diego, California.

Rogers, Malcolm

- 1929 Archaeological Field Work in North America During 1928, California. *American Anthropologist* 31(2):340–341.
- 1939 Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Desert Areas. In *San Diego Museum Papers* (No. 3 – 1989 printing). San Diego Museum of Man, San Diego, California.

Rolle, Andrew F.

- 1969 *California: A History*. 2nd ed. Thomas Y. Crowell Company, New York.

San Bernardino County Sun

- 1901 Don't Like, The Oder. 22 December:1. San Bernardino, California.
- 1907 The City Council last night. 20 August:1. San Bernardino, California.
- 1909 Notice. 30 April:8. San Bernardino, California.
- 1918 Hanford Iron Works—One of the City's Big Industrial Enterprises. 24 February:35. San Bernardino, California.
- 1919 Hanford Iron Works Reorganized; Reveal Plans for Expansion. 1 June:1. San Bernardino, California.
- 1931 First Business of Boulder Dam's Golden Stream Reaches City to Aid Many Firms.

- 20 March:13. San Bernardino, California.
- 1941 Plant Runs on 24-Hour Bases; 200 Employed. 12 October:14. San Bernardino, California.
- 1953 Hanford Foundry Company Removal Job. San Bernardino, California.
- 1968 Agreement for the sale of Hanford Foundry Co. 19 November:3. San Bernardino, California.
- 1988 100-year-old S.B. tree may be bulldozed. 29 March:1. San Bernardino, California.
- 1989 Century-old magnolia rolls to a new home. 23 April:1. San Bernardino, California.
- South, Stanley
- 1977 *Method and Theory in Historical Archaeology*. Academic Press, New York.
- State Historic Preservation Office (SHPO)
- 1995 *Instructions for Recording Historical Resources*. Office of Historic Preservation, Sacramento.
- Strong, William Duncan
- 1971 Aboriginal Society in Southern California. Reprint of 1929 *Publications in American Archaeology and Ethnology* No. 26, University of California, Berkeley.
- The Weekly Courier*
- 1891 C.P. Barrows Fruit Co. 28 November:3. San Bernardino, California.
- Van Wormer, Stephen R., Susan Walters, and Dennis R. Gallegos
- 2005 (Remember the Indian School Children) Monitoring and Data Recovery Program for Casa de Aguirre and St. Anthony's Industrial School for Indians (CA-SDI-14527H): 1853-1914 Old Town, San Diego, California. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.
- Wallace, William J.
- 1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214–230.
- Warren, Claude N. (editor)
- 1968 Cultural Tradition and Ecological Adaptation on the Southern Coast. In *Archaic Prehistory in the Western United States*, C.I. Williams, editor. *Eastern New Mexico University Contributions in Anthropology* 1(3):1–14.

Warren, Claude N. and M.G. Pavesic

- 1963 Shell Midden Analysis of Site SDI-603 and Ecological Implications for Cultural Development of Batiquitos Lagoon, San Diego County, Los Angeles. University of California, Los Angeles, Archaeological Survey Annual Report, 1960-1961:246–338.

Warren, Claude N. and D.L. True

- 1961 The San Dieguito Complex and its Place in California Prehistory, In *Archaeological Survey Annual Report 1960-1961*. University of California Press, Los Angeles, California.

Wirths, Todd A.

- 2022 Paleontological Assessment for the 119 South Arrowhead Avenue Project, City of San Bernardino County, California. Brian F. Smith and Associates, Inc. Unpublished report on file at Brian F. Smith and Associates, Inc., Poway, California.

APPENDIX A

Qualifications of Key Personnel

Brian F. Smith, MA

Owner, Principal Investigator

Brian F. Smith and Associates, Inc.
14010 Poway Road • Suite A •
Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: bsmith@bfsa-ca.com



Education

Master of Arts, History, University of San Diego, California	1982
Bachelor of Arts, History, and Anthropology, University of San Diego, California	1975

Professional Memberships

Society for California Archaeology

Experience

Principal Investigator Brian F. Smith and Associates, Inc.	1977–Present Poway, California
---	-----------------------------------

Brian F. Smith is the owner and principal historical and archaeological consultant for Brian F. Smith and Associates. Over the past 32 years, he has conducted over 2,500 cultural resource studies in California, Arizona, Nevada, Montana, and Texas. These studies include every possible aspect of archaeology from literature searches and large-scale surveys to intensive data recovery excavations. Reports prepared by Mr. Smith have been submitted to all facets of local, state, and federal review agencies, including the US Army Corps of Engineers, the Bureau of Land Management, the Bureau of Reclamation, the Department of Defense, and the Department of Homeland Security. In addition, Mr. Smith has conducted studies for utility companies (Sempra Energy) and state highway departments (CalTrans).

Professional Accomplishments

These selected major professional accomplishments represent research efforts that have added significantly to the body of knowledge concerning the prehistoric life ways of cultures once present in the southern California area and historic settlement since the late 18th century. Mr. Smith has been principal investigator on the following select projects, except where noted.

Downtown San Diego Mitigation and Monitoring Reporting Programs: Large numbers of downtown San Diego mitigation and monitoring projects, some of which included Broadway Block (2019), 915 Grape Street (2019), 1919 Pacific Highway (2018), Moxy Hotel (2018), Makers Quarter Block D (2017), Ballpark Village (2017), 460 16th Street (2017), Kettner and Ash (2017), Bayside Fire Station (2017), Pinnacle on the Park (2017), IDEA1 (2016), Blue Sky San Diego (2016), Pacific Gate (2016), Pendry Hotel (2015), Cisterra Sempra Office Tower (2014), 15th and Island (2014), Park and G (2014), Comm 22 (2014), 7th and F Street Parking (2013), Ariel Suites (2013), 13th and Marker (2012), Strata (2008), Hotel Indigo (2008), Lofts at 707 10th Avenue Project (2007), Breeza (2007), Bayside at the Embarcadero (2007), Aria (2007), Icon (2007), Vantage Pointe (2007), Aperture (2007), Sapphire Tower (2007), Lofts at 655 Sixth Avenue (2007), Metrowork (2007), The Legend (2006), The Mark (2006), Smart Corner (2006), Lofts at 677 7th Avenue (2005), Aloft on Cortez Hill (2005), Front and Beech Apartments (2003), Bella Via Condominiums (2003), Acqua Vista Residential Tower (2003), Northblock Lofts (2003), Westin Park Place Hotel (2001), Parkloft

Apartment Complex (2001), Renaissance Park (2001), and Laurel Bay Apartments (2001).

1900 and 1912 Spindrift Drive: An extensive data recovery and mitigation monitoring program at the Spindrift Site, an important prehistoric archaeological habitation site stretching across the La Jolla area. The project resulted in the discovery of over 20,000 artifacts and nearly 100,000 grams of bulk faunal remains and marine shell, indicating a substantial occupation area (2013-2014).

San Diego Airport Development Project: An extensive historic assessment of multiple buildings at the San Diego International Airport and included the preparation of Historic American Buildings Survey documentation to preserve significant elements of the airport prior to demolition (2017-2018).

Citracado Parkway Extension: A still-ongoing project in the city of Escondido to mitigate impacts to an important archaeological occupation site. Various archaeological studies have been conducted by BFSa resulting in the identification of a significant cultural deposit within the project area.

Westin Hotel and Timeshare (Grand Pacific Resorts): Data recovery and mitigation monitoring program in the city of Carlsbad consisted of the excavation of 176 one-square-meter archaeological data recovery units which produced thousands of prehistoric artifacts and ecofacts, and resulted in the preservation of a significant prehistoric habitation site. The artifacts recovered from the site presented important new data about the prehistory of the region and Native American occupation in the area (2017).

The Everly Subdivision Project: Data recovery and mitigation monitoring program in the city of El Cajon resulted in the identification of a significant prehistoric occupation site from both the Late Prehistoric and Archaic Periods, as well as producing historic artifacts that correspond to the use of the property since 1886. The project produced an unprecedented quantity of artifacts in comparison to the area encompassed by the site, but lacked characteristics that typically reflect intense occupation, indicating that the site was used intensively for food processing (2014-2015).

Ballpark Village: A mitigation and monitoring program within three city blocks in the East Village area of San Diego resulting in the discovery of a significant historic deposit. Nearly 5,000 historic artifacts and over 500,000 grams of bulk historic building fragments, food waste, and other materials representing an occupation period between 1880 and 1917 were recovered (2015-2017).

Archaeology at the Padres Ballpark: Involved the analysis of historic resources within a seven-block area of the "East Village" area of San Diego, where occupation spanned a period from the 1870s to the 1940s. Over a period of two years, BFSa recovered over 200,000 artifacts and hundreds of pounds of metal, construction debris, unidentified broken glass, and wood. Collectively, the Ballpark Project and the other downtown mitigation and monitoring projects represent the largest historical archaeological program anywhere in the country in the past decade (2000-2007).

4S Ranch Archaeological and Historical Cultural Resources Study: Data recovery program consisted of the excavation of over 2,000 square meters of archaeological deposits that produced over one million artifacts, containing primarily prehistoric materials. The archaeological program at 4S Ranch is the largest archaeological study ever undertaken in the San Diego County area and has produced data that has exceeded expectations regarding the resolution of long-standing research questions and regional prehistoric settlement patterns.

Charles H. Brown Site: Attracted international attention to the discovery of evidence of the antiquity of man in North America. Site located in Mission Valley, in the city of San Diego.

Del Mar Man Site: Study of the now famous Early Man Site in Del Mar, California, for the San Diego Science Foundation and the San Diego Museum of Man, under the direction of Dr. Spencer Rogers and Dr. James R. Moriarty.

Old Town State Park Projects: Consulting Historical Archaeologist. Projects completed in the Old Town State Park involved development of individual lots for commercial enterprises. The projects completed in Old Town include Archaeological and Historical Site Assessment for the Great Wall Cafe (1992), Archaeological Study for the Old Town Commercial Project (1991), and Cultural Resources Site Survey at the Old San Diego Inn (1988).

Site W-20, Del Mar, California: A two-year-long investigation of a major prehistoric site in the Del Mar area of the city of San Diego. This research effort documented the earliest practice of religious/ceremonial activities in San Diego County (circa 6,000 years ago), facilitated the projection of major non-material aspects of the La Jolla Complex, and revealed the pattern of civilization at this site over a continuous period of 5,000 years. The report for the investigation included over 600 pages, with nearly 500,000 words of text, illustrations, maps, and photographs documenting this major study.

City of San Diego Reclaimed Water Distribution System: A cultural resource study of nearly 400 miles of pipeline in the city and county of San Diego.

Master Environmental Assessment Project, City of Poway: Conducted for the City of Poway to produce a complete inventory of all recorded historic and prehistoric properties within the city. The information was used in conjunction with the City's General Plan Update to produce a map matrix of the city showing areas of high, moderate, and low potential for the presence of cultural resources. The effort also included the development of the City's Cultural Resource Guidelines, which were adopted as City policy.

Draft of the City of Carlsbad Historical and Archaeological Guidelines: Contracted by the City of Carlsbad to produce the draft of the City's historical and archaeological guidelines for use by the Planning Department of the City.

The Mid-Bayfront Project for the City of Chula Vista: Involved a large expanse of undeveloped agricultural land situated between the railroad and San Diego Bay in the northwestern portion of the city. The study included the analysis of some potentially historic features and numerous prehistoric

Cultural Resources Survey and Test of Sites Within the Proposed Development of the Audie Murphy Ranch, Riverside County, California: Project manager/director of the investigation of 1,113.4 acres and 43 sites, both prehistoric and historic—including project coordination; direction of field crews; evaluation of sites for significance based on County of Riverside and CEQA guidelines; assessment of cupule, pictograph, and rock shelter sites, co-authoring of cultural resources project report. February- September 2002.

Cultural Resources Evaluation of Sites Within the Proposed Development of the Otay Ranch Village 13 Project, San Diego County, California: Project manager/director of the investigation of 1,947 acres and 76 sites, both prehistoric and historic—including project coordination and budgeting; direction of field crews; assessment of sites for significance based on County of San Diego and CEQA guidelines; co-authoring of cultural resources project report. May-November 2002.

Cultural Resources Survey for the Remote Video Surveillance Project, El Centro Sector, Imperial County: Project manager/director for a survey of 29 individual sites near the U.S./Mexico Border for proposed video surveillance camera locations associated with the San Diego Border barrier Project—project coordination and budgeting; direction of field crews; site identification and recordation; assessment of potential impacts to cultural resources; meeting and coordinating with U.S. Army Corps of Engineers, U.S. Border Patrol, and other government agencies involved; co-authoring of cultural resources project report. January, February, and July 2002.

Cultural Resources Survey and Test of Sites Within the Proposed Development of the Meniffee West GPA, Riverside County, California: Project manager/director of the investigation of nine sites, both prehistoric and historic—including project coordination and budgeting; direction of field crews; assessment of sites

for significance based on County of Riverside and CEQA guidelines; historic research; co-authoring of cultural resources project report. January-March 2002.

Cultural Resources Survey and Test of Sites Within the Proposed French Valley Specific Plan/EIR, Riverside County, California: Project manager/director of the investigation of two prehistoric and three historic sites—including project coordination and budgeting; survey of project area; Native American consultation; direction of field crews; assessment of sites for significance based on CEQA guidelines; cultural resources project report in prep. July-August 2000.

Cultural Resources Survey and Test of Sites Within the Proposed Development of the Menifee Ranch, Riverside County, California: Project manager/director of the investigation of one prehistoric and five historic sites—including project coordination and budgeting; direction of field crews; feature recordation; historic structure assessments; assessment of sites for significance based on CEQA guidelines; historic research; co-authoring of cultural resources project report. February-June 2000.

Salvage Mitigation of a Portion of the San Diego Presidio Identified During Water Pipe Construction for the City of San Diego, California: Project archaeologist/director—including direction of field crews; development and completion of data recovery program; management of artifact collections cataloging and curation; data synthesis and authoring of cultural resources project report in prep. April 2000.

Enhanced Cultural Resource Survey and Evaluation for the Tyrian 3 Project, La Jolla, California: Project manager/director of the investigation of a single-dwelling parcel—including project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. April 2000.

Enhanced Cultural Resource Survey and Evaluation for the Lamont 5 Project, Pacific Beach, California: Project manager/director of the investigation of a single-dwelling parcel—including project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. April 2000.

Enhanced Cultural Resource Survey and Evaluation for the Reiss Residence Project, La Jolla, California: Project manager/director of the investigation of a single-dwelling parcel—including project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. March-April 2000.

Salvage Mitigation of a Portion of Site SDM-W-95 (CA-SDI-211) for the Poinsettia Shores Santalina Development Project and Caltrans, Carlsbad, California: Project archaeologist/ director—including direction of field crews; development and completion of data recovery program; management of artifact collections cataloging and curation; data synthesis and authoring of cultural resources project report in prep. December 1999-January 2000.

Survey and Testing of Two Prehistoric Cultural Resources for the Airway Truck Parking Project, Otay Mesa, California: Project archaeologist/director—including direction of field crews; development and completion of testing recovery program; assessment of site for significance based on CEQA guidelines; authoring of cultural resources project report, in prep. December 1999-January 2000.

Cultural Resources Phase I and II Investigations for the Tin Can Hill Segment of the Immigration and Naturalization Services Triple Fence Project Along the International Border, San Diego County, California: Project manager/director for a survey and testing of a prehistoric quarry site along the border—NRHP eligibility assessment; project coordination and budgeting; direction of field crews; feature recordation; meeting and coordinating with U.S. Army Corps of Engineers; co-authoring of cultural resources project report. December 1999-January 2000.

Mitigation of a Prehistoric Cultural Resource for the Westview High School Project for the City of San Diego, California: Project archaeologist/ director—including direction of field crews; development and completion of data recovery program including collection of material for specialized faunal and botanical analyses; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; co-authoring of cultural resources project report, in prep. October 1999-January 2000.

Mitigation of a Prehistoric Cultural Resource for the Otay Ranch SPA-One West Project for the City of Chula Vista, California: Project archaeologist/director—including direction of field crews; development of data recovery program; management of artifact collections cataloging and curation; assessment of site for significance based on CEQA guidelines; data synthesis; authoring of cultural resources project report, in prep. September 1999-January 2000.

Monitoring of Grading for the Herschel Place Project, La Jolla, California: Project archaeologist/ monitor—including monitoring of grading activities associated with the development of a single- dwelling parcel. September 1999.

Survey and Testing of a Historic Resource for the Osterkamp Development Project, Valley Center, California: Project archaeologist/ director—including direction of field crews; development and completion of data recovery program; budget development; assessment of site for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report. July-August 1999.

Survey and Testing of a Prehistoric Cultural Resource for the Proposed College Boulevard Alignment Project, Carlsbad, California: Project manager/director —including direction of field crews; development and completion of testing recovery program; assessment of site for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report, in prep. July-August 1999.

Survey and Evaluation of Cultural Resources for the Palomar Christian Conference Center Project, Palomar Mountain, California: Project archaeologist—including direction of field crews; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report. July-August 1999.

Survey and Evaluation of Cultural Resources at the Village 2 High School Site, Otay Ranch, City of Chula Vista, California: Project manager/director —management of artifact collections cataloging and curation; assessment of site for significance based on CEQA guidelines; data synthesis; authoring of cultural resources project report. July 1999.

Cultural Resources Phase I, II, and III Investigations for the Immigration and Naturalization Services Triple Fence Project Along the International Border, San Diego County, California: Project manager/director for the survey, testing, and mitigation of sites along border—supervision of multiple field crews, NRHP eligibility assessments, Native American consultation, contribution to Environmental Assessment document, lithic and marine shell analysis, authoring of cultural resources project report. August 1997- January 2000.

Phase I, II, and III Investigations for the Scripps Poway Parkway East Project, Poway California: Project archaeologist/project director—including recordation and assessment of multicomponent prehistoric and historic sites; direction of Phase II and III investigations; direction of laboratory analyses including prehistoric and historic collections; curation of collections; data synthesis; coauthorship of final cultural resources report. February 1994; March-September 1994; September-December 1995.

APPENDIX B

Site Record Form

(Deleted for Public Review; Bound Separately)

APPENDIX C

Archaeological Records Search Results

(Deleted for Public Review; Bound Separately)

APPENDIX D

NAHC Sacred Lands File Search Results

(Deleted for Public Review; Bound Separately)

APPENDIX E

Artifact Catalog

Cat No	Unit Type	Unit No	Feature	Depth (ft)	Object Type	Object Subtype	Material Type	Material Subtype	Functional Category	Mold Manu.	Mold Style	Finish Manu.	Finish Style	Product	Diagnostic Elements	Maker's Mark / Backstamp	Manufacturer	Company	Place of Origin	Date (min)	Date (Max)	Dating Source	Condition	Portion	Qty	Wgt (g)
001	TR	01	-	0.0-5.0	Architecture	Brick	Brick	Yellow	Building Materials	-	-	-	-	Fire Brick	-	GM 70-D / 1	Gladding, McBean & Co.	-	Lincoln, Placer County, CA	1875	1943	California Bricks	Complete	-	4	10654.9
002	TR	01	-	0.0-5.0	Architecture	Brick	Brick	Yellow	Building Materials	-	-	-	-	Fire Brick	-	GM 70-D / 1	Gladding, McBean & Co.	-	Lincoln, Placer County, CA	1875	1943	California Bricks	Complete	-	1	4100
003	TR	01	-	0.0-5.0	Architecture	Brick	Brick	Yellow	Building Materials	-	-	-	-	Fire Brick	-	(GM 70-D / 1)	Gladding, McBean & Co.	-	Lincoln, Placer County, CA	1875	1943	California Bricks	Complete	-	1	3384.2
004	TR	01	-	0.0-5.0	Hardware	Indeterminate	Metal	Ferrous	Hardware Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	1	957.6
005	TR	01	-	0.0-5.0	Jar	Druggist	Glass	Green	Household Items	ABM	-	-	Wide External Thread	-	-	-	-	-	-	1905	2022	Lindsey 2020	Fragment	Finish	1	9.4
006	TR	02	-	0.0-5.0	Architecture	Brick	Brick	Yellow	Building Materials	-	-	-	-	Fire Brick	-	(GM 70-D / 1)	Gladding, McBean & Co.	-	Lincoln, Placer County, CA	1875	1943	California Bricks	Complete	-	1	4059.9
007	TR	02	-	0.0-5.0	Hardware	Wire	Metal	Ferrous	Hardware Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	1	62
008	TR	02	-	0.0-5.0	Hardware	Washer	Metal	Ferrous	Hardware Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	28
009	TR	02	-	0.0-5.0	Nail	Hand Wrought	Metal	Ferrous	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	13
010	TR	02	-	0.0-5.0	Container	Indeterminate	Glass	Amber	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	3.6
011	TR	02	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	14.2
012	TR	02	-	0.0-5.0	Bottle	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	Small External Thread	-	-	-	-	-	-	1905	2022	Lindsey 2020	Fragment	Finish	1	3.3
013	TR	02	-	0.0-5.0	Bottle	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	-	-	Stippled	-	-	-	-	1940	2022	Lindsey 2020	Fragment	Base	1	11.5
014	TR	04	-	0.0-5.0	Bottle	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	-	-	Stippled	23 (I) ... / 18	Owens-Illinois Glass Co.	-	-	1954	2013	Lindsey 2020	Fragment	Base	1	23.7
015	TR	04	-	0.0-5.0	Architecture	Brick	Brick	Red	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	25-50%	1	895.3
016	TR	06	-	0.0-5.0	Fauna	Bone	Bone	Medium Mammal	Food Items	-	-	-	-	-	MNI=1	-	-	-	-	-	-	-	Fragment	-	-	27.5
017	TR	08	-	0.0-5.0	Hardware	Rasp (File)	Metal	Ferrous	Tools	-	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	796.1
018	TR	10	-	0.0-5.0	Architecture	Window	Glass	Aqua Tint	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	-	71.6
019	TR	10	-	0.0-5.0	Tableware	Vessel	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Clear glaze	-	-	-	-	-	-	-	Fragment	Foot	1	3.5
020	TR	10	-	0.0-5.0	Fauna	Bone	Bone	Medium Mammal	Food Items	-	-	-	-	-	MNI=1	-	-	-	-	-	-	-	Fragment	Rib	-	5.9
021	TR	10	-	0.0-5.0	Electrical Insulator	Nail Knob	Ceramic	Porcelain	Building Materials	-	-	-	-	-	Clear glaze	illegible	-	-	-	-	-	-	Fragment	Top	1	22.3
022	TR	11	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	41.8
023	TR	11	-	0.0-5.0	Container	Indeterminate	Glass	Amber	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	1.8
024	TR	11	-	0.0-5.0	Container	Indeterminate	Glass	Green	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	25
025	TR	11	-	0.0-5.0	Architecture	Window	Glass	Aqua Tint	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	-	28.8
026	TR	11	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	-	-	Stippling	-	-	-	-	1940	2022	Lindsey 2020	Fragment	Body	1	18.9
027	TR	11	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	-	-	-	-	-	-	-	1905	2022	Lindsey 2020	Fragment	Neck	1	11.1
028	TR	11	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	-	-	-	-	-	-	-	1905	2022	Lindsey 2020	Fragment	Base	1	9.6
029	TR	11	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	-	-	-	-	-	-	-	1905	2022	Lindsey 2020	Fragment	Base	1	16.8
030	TR	11	-	0.0-5.0	Bottle	Druggist	Glass	Colorless	Household Items	ABM	-	-	-	-	-	20 <(I)> 3 / H 352 / 20A	Owens-Illinois Glass Co.	-	Backenridge, PA	1933	1933	Lockhart and Hoening 2015	Fragment	-	1	12.8
031	TR	11	-	0.0-5.0	Tableware	Saucer	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Clear glaze	illegible	-	-	-	-	-	-	Fragment	Foot	1	15.4
032	TR	11	-	0.0-5.0	Architecture	Brick	Brick	Red	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	2205
033	TR	11	-	0.0-5.0	Hardware	Pliers	Metal	Ferrous	Tools	-	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	213.6
034	TR	12	-	0.0-5.0	Hardware	Bolt	Metal	Ferrous	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	652
035	TR	12	-	0.0-5.0	Hardware	Metal Strap	Metal	Ferrous	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	86.3
036	TR	12	-	0.0-5.0	Architecture	Brick	Brick	Yellow	Building Materials	-	-	-	-	Fire Brick	-	(GM 70-D / 1)	Gladding, McBean & Co.	-	Lincoln, Placer County, CA	1875	1943	California Bricks	Complete	-	1	2666.7
037	TR	12	-	0.0-5.0	Architecture	Brick	Brick	Yellow	Building Materials	-	-	-	-	Fire Brick	-	...CO / ...LBERHILL / <crescent>	Los Angeles Brick and Clay Products Co.	-	Alberhill, Riverside County, CA	1936	1963	California Bricks	Complete	-	1	1640.7
038	TR	13	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	25.8
039	TR	13	-	0.0-5.0	Container	Indeterminate	Glass	Amber	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	22
040	TR	13	-	0.0-5.0	Container	Indeterminate	Glass	Green	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	0.6
041	TR	13	-	0.0-5.0	Architecture	Window	Glass	Aqua Tint	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	-	5.4
042	TR	13	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	-	-	Stippling	-	-	-	-	1940	2022	Lindsey 2020	Fragment	Heel	1	31.7
043	TR	13	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	-	-	EMB; illegible	-	-	-	-	1905	2022	Lindsey 2020	Fragment	Body	1	11.4
044	TR	13	-	0.0-5.0	Tableware	Vessel	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Clear glaze	-	-	-	-	-	-	-	Fragment	Foot	1	3.4
045	TR	03	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	25.8
046	TR	03	-	0.0-5.0	Architecture	Window	Glass	Aqua Tint	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	-	52.6
047	TR	03	-	0.0-5.0	Container	Indeterminate	Glass	Colorless	Consumer Items	ABM	-	-	-	-	-	R-286	-	-	-	1905	2022	Lindsey 2020	Fragment	Base	1	49.4
048	TR	03	-	0.0-5.0	Bottle	Condiment	Glass	Colorless	Consumer Items	ABM	-	-	-	-	Molded ridges along body	-	-	-	-	1905	2022	Lindsey 2020	Fragment	Body	1	6.9
049	TR	03	-	0.0-5.0	Bottle	Druggist	Glass	Colorless	Household Items	ABM	-	-	-	-	Paneled body	-	-	-	-	1905	2022	Lindsey 2020	Fragment	Heel	1	5.6
050	TR	03	-	0.0-5.0	Bottle	Alcohol	Glass	Amber	Consumer Items	ABM	-	-	-	Beer	-	[N]	Obeur-Nester Glass Co.	-	-	1905	1978	Whitten 2005	Fragment	Base	1	37.2
051	TR	03	-	0.0-5.0	Tableware	Mug	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Blue glaze	-	-	-	-	-	-	-	Fragment	Rim	1	8.4
052	TR	05	-	1.0-3.0	Stake	Railroad	Metal	Ferrous	Transportation Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	195
053	TR	05	-	1.0-3.0	Tableware	Bowl	Ceramic	Porcelain	Kitchen Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Rim	1	120.3
054	TR	05	-	1.0-3.0	Tableware	Vessel	Ceramic	Porcelain	Kitchen Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Rim	1	12.7
055	TR	05	-	1.0-3.0	Architecture	Brick	Brick	Yellow	Building Materials	-	-	-	-	Fire Brick	-	(CARNEGIE)	Gladding, McBean & Co.	-	Pittsburgh, Contra Costa County, CA	1943	1962	California Bricks	Complete	-	1	3084.2
056	TR	07	D	1.0-3.0	Bottle	Indeterminate	Glass	Amber	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	1	18.14

Cat No	Unit Type	Unit No	Feature	Depth (ft)	Object Type	Object Subtype	Material Type	Material Subtype	Functional Category	Mold Manu.	Mold Style	Finish Manu.	Finish Style	Product	Diagnostic Elements	Maker's Mark / Backstamp	Manufacturer	Company	Place of Origin	Date (min)	Date (Max)	Dating Source	Condition	Portion	Qty	Wgt (g)	
057	TR	07	D	1.0-3.0	Bottle	Alcohol	Glass	Amber	Consumer Items	-	-	-	-	Beer	-	-	-	-	-	-	-	-	Fragment	Shoulder	1	61.63	
058	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Amber	Household Items	ABM	Owens Scar	-	-	-	-	-	-	-	-	-	1905	1959	Lindsey 2020	Fragment	Base	1	22.63
059	TR	07	D	1.0-3.0	Bottle	Indeterminate	Glass	Olive	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	1	7.12	
060	TR	07	D	1.0-3.0	Bottle	Alcohol	Glass	Aqua	Consumer Items	BIM	Post-bottom	Tooled	Crown	Beer	-	partial /f/	-	-	-	-	1870	1910	Lindsey 2020	Fragment	Base, Body, Finish	1	250.29
061	TR	07	D	1.0-3.0	Bottle	Alcohol	Glass	Aqua	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Heel	1	25.1	
062	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Cobalt	Household Items	BIM	Cup-bottom	Tooled	Bead	Headache Remedy (Bromo-Seltzer)	EMB: "BROMO SELTZER / EMERSON / DRUG CO / BALTIMORE MD	7	Maryland Glass Corp.	Emerson Drug Co.	Baltimore, MD	1907	1911	Lockhart et al.	Complete	-	1	42.23	
063	TR	07	D	1.0-3.0	Bottle	Cosmetic	Glass	Cobalt	Personal Items	BIM	Cup-bottom	-	-	Lotion (Camelline)	EMB: "WAKELEE'S CAMELLINE"	-	-	Wakelee & Co.	San Francisco, CA	1895	1919	Fike 1987	Fragment	Body, Base	1	87.96	
064	TR	07	D	1.0-3.0	Jar	Cosmetic	Glass	Milk	Personal Items	S-ABM	Press and Blow	-	-	-	-	-	-	-	-	1890	1919	Lindsey 2020	Fragment	75%	1	194.6	
065	TR	07	D	1.0-3.0	House Décor	Light Fixture	Glass	Milk	Household Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	1	20.96	
066	TR	07	D	1.0-3.0	House Décor	Light Fixture	Glass	Milk	Household Items	-	-	-	-	-	Painted green floral motif	-	-	-	-	-	-	-	Fragment	75-100%	1	259.66	
067	TR	07	D	1.0-3.0	Architecture	Window	Glass	Aqua	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	-	238.72	
068	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	Tooled	Patent	-	Rectangular	-	-	-	-	1880	1919	Lindsey 2020	Complete	-	1	47.38	
069	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	Tooled	Patent with neck ring	-	Rectangular	-	-	-	-	1880	1919	Lindsey 2020	Complete	-	1	84.5	
070	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	Tooled	Patent	-	Rectangular	Rex (script)	Obear-Nester Glass Co.	-	East St. Louis, MO	1896	1910	Whitten 2005	Complete	-	1	25.35	
071	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	Tooled	Flared	-	Rectangular	-	-	-	-	1880	1919	Lindsey 2020	Complete	-	1	192.37	
072	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	-	-	-	Rectangular	5	-	-	-	1880	1919	Lindsey 2020	Fragment	Base	1	78.84	
073	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	-	-	-	Rectangular	Rex (script)	Obear-Nester Glass Co.	-	East St. Louis, MO	1896	1910	Whitten 2005	Fragment	Base	1	42.38	
074	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	-	-	-	Rectangular	A	-	-	-	1880	1919	Lindsey 2020	Fragment	Base	1	30.74	
075	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	-	-	-	Rectangular	-	-	-	-	1880	1919	Lindsey 2020	Fragment	Heel	1	10.08	
076	TR	07	D	1.0-3.0	Bottle	Cosmetic	Glass	Colorless	Personal Items	BIM	Cup-bottom	-	-	-	Square	-	-	-	-	1880	1919	Lindsey 2020	Fragment	Base	1	36.01	
077	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	-	-	-	Rectangular	(O. G.) / (CO.)	Olean Glass Co.	-	Olean, NY	1880	1913	Lockhart et al.	Fragment	Base	1	78.14	
078	TR	07	D	1.0-3.0	Bottle	Alcohol	Glass	Colorless	Consumer Items	BIM	Cup-bottom	-	-	-	Flask style	-	-	-	-	1880	1919	Lindsey 2020	Fragment	Base	1	141.33	
079	TR	07	D	1.0-3.0	Bottle	Indeterminate	Glass	Colorless	Consumer Items	BIM	Cup-bottom	-	-	-	Rectangular	MONARC...	-	-	-	1880	1919	Lindsey 2020	Fragment	Base	1	138.01	
080	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	-	Tooled	Prescription	-	-	-	-	-	-	1870	1919	Lindsey 2020	Fragment	Finish	1	20.44	
081	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	-	Tooled	Prescription	-	-	-	-	-	-	1870	1919	Lindsey 2020	Fragment	Finish	1	32.58	
082	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	-	Tooled	Straight Brandy	-	-	-	-	-	-	1870	1919	Lindsey 2020	Fragment	Finish	1	13	
083	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	-	Tooled	Collared Ring	-	-	-	-	-	-	1870	1919	Lindsey 2020	Fragment	Finish	1	30.14	
084	TR	07	D	1.0-3.0	Bottle	Alcohol	Glass	Colorless	Consumer Items	-	-	-	-	Spirits	EMB: "M. &..."	-	-	-	-	-	-	-	Fragment	Body	1	16.6	
085	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	BIM	Cup-bottom	-	-	-	-	< >	Illinois Glass Co.	-	Alton, IL	1910	1919	Lindsey 2020	Fragment	Base	1	5.2	
086	TR	07	D	1.0-3.0	Bottle	Dairy	Glass	Colorless	Kitchen Items	ABM	Owens Scar	-	Capestat	-	EMB: "...NE PL..."	-	-	-	-	1905	1959	Lindsey 2020	Fragment	75-100%	1	349.56	
087	TR	07	D	1.0-3.0	Bottle	Druggist	Glass	Colorless	Household Items	ABM	Owens Scar	-	Collared Ring	Laxative (Baby Brand Castoria)	EMB: "BABY BRAND , TRADE MARK / CASTORIA // BABY BRAND // BABY BRAND"	<156>	Illinois Glass Co.	Baby's Own Laboratories	Alton, IL	1910	1929	Lindsey 2020	Complete	-	1	170.2	
088	TR	07	D	1.0-3.0	House Décor	Oil Lamp	Glass	Colorless	Household Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Chimney	5	342.13	
089	TR	07	D	1.0-3.0	House Décor	Light Fixture	Glass	Colorless	Household Items	-	-	-	-	-	Cut glass motif	-	-	-	-	-	-	-	Fragment	-	1	158.26	
090	TR	07	D	1.0-3.0	House Décor	Light Fixture	Glass	Colorless	Household Items	-	-	-	-	-	Cut glass motif	-	-	-	-	-	-	-	Fragment	-	1	170.78	
091	TR	07	D	1.0-3.0	Bottle	Indeterminate	Glass	Colorless	Consumer Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	Body	-	121.68	
092	TR	07	D	1.0-3.0	Jar / Glassware	Preserves / Tumbler	Glass	Colorless	Kitchen Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	1	48.82	
093	TR	07	D	1.0-3.0	Jar / Glassware	Preserves / Tumbler	Glass	Colorless	Kitchen Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	7	697.38	
094	TR	07	D	1.0-3.0	Jar / Glassware	Preserves / Tumbler	Glass	Colorless	Kitchen Items	-	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	3	332.52	

Cat No	Unit Type	Unit No	Feature	Depth (ft)	Object Type	Object Subtype	Material Type	Material Subtype	Functional Category	Mold Manu.	Mold Style	Finish Manu.	Finish Style	Product	Diagnostic Elements	Maker's Mark / Backstamp	Manufacturer	Company	Place of Origin	Date (min)	Date (Max)	Dating Source	Condition	Portion	Qty	Wgt (g)
095	TR	07	D	1.0-3.0	Glassware	Tumbler	Glass	Colorless	Kitchen Items	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	1	388.07	
096	TR	07	D	1.0-3.0	Glassware	Tumbler	Glass	Colorless	Kitchen Items	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	1	73.54	
097	TR	07	D	1.0-3.0	Glassware	Tumbler	Glass	Colorless	Kitchen Items	-	-	-	-	-	-	-	-	-	-	-	-	Fragment	-	1	38.51	
098	TR	07	D	1.0-3.0	Jar / Glassware	Preserves / Tumbler	Glass	Colorless	Kitchen Items	-	-	-	-	-	PAT. FEB 10 03	-	-	-	-	1903	-	-	Fragment	-	1	107.09
099	TR	07	D	1.0-3.0	Tableware	Vessel	Ceramic	Porcelain	Kitchen Items	-	-	-	-	-	Clear glaze	-	-	-	USA / Europe	-	-	-	Fragment	Body	1	3.08
100	TR	07	D	1.0-3.0	Tableware	Tea Cup	Ceramic	Porcelain	Kitchen Items	-	-	-	-	-	Clear glaze	-	-	-	USA / Europe	-	-	-	Fragment	Rim	1	8.92
102	TR	07	D	1.0-3.0	Tableware	Tea Cup	Ceramic	Porcelain	Kitchen Items	-	-	-	-	-	Gold gilding along handle and rim over clear glaze	-	-	-	USA / Europe	-	-	-	Fragment	Rim	1	30.78
103	TR	07	D	1.0-3.0	Tableware	Tea Cup	Ceramic	Porcelain	Kitchen Items	-	-	-	-	-	TP: Pink and green floral motif under clear glaze, gold gilded handle and molded rim	ELITE / L / FRANCE	-	Bawo & Dotter / Elite	Limoges, France	1900	1914	Kovels' 1986	Fragment	Rim	1	41.92
104	TR	07	D	1.0-3.0	Tableware	Saucer	Ceramic	Porcelain	Kitchen Items	-	-	-	-	-	TP: Pink and green floral motif under clear glaze, gold gilded gilding and molded rim	-	-	-	USA / Europe	-	-	-	Fragment	Rim	1	28.1
105	TR	07	D	1.0-3.0	Tableware	Saucer	Ceramic	Earthenware	Kitchen Items	-	-	-	-	-	Clear glaze	ROYAL IRONSTONE CHINA / <LION AND UNICORN CREST > WOOD & SON / ENGLAND	-	Wood and Son	Burslem, England	1865	-	Kovels' 1986	Fragment	Base	1	54.96
106	TR	07	D	1.0-3.0	Tableware	Vessel	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Clear glaze	-	-	-	USA / Europe	-	-	-	Fragment	Rim	3	43.31
107	TR	07	D	1.0-3.0	Tableware	Vessel	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Clear glaze	-	-	-	USA / Europe	-	-	-	Fragment	Body	-	7.73
108	TR	07	D	1.0-3.0	Tableware	Saucer	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Clear glaze, gold gilded floral motif over clear glaze with molded rim	E...SIOR / PORCELAIN	-	-	USA / Europe	-	-	-	Fragment	Base	1	93.24
109	TR	07	D	1.0-3.0	Tableware	Saucer	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Clear glaze with molded rim	...P. Co. / ...HINA	-	-	USA / Europe	-	-	-	Fragment	Base	1	92.02
110	TR	07	D	1.0-3.0	Tableware	Plate	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Clear glaze	EXTRA QUALITY / IRONSTONE CHINA / <lion with unicorn crest>	-	-	USA / Europe	-	-	-	Fragment	Base	1	295.86
111	TR	07	D	1.0-3.0	Tableware	Plate	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Flow blue motif with molded rim	-	-	-	USA / Europe	1825	1950	Gaston 1983	Fragment	Base	1	106.95
112	TR	07	D	1.0-3.0	Tableware	Bowl	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Flow blue motif with molded rim	-	-	-	USA / Europe	1825	1950	Gaston 1983	Fragment	Rim	1	10.42
113	TR	07	D	1.0-3.0	Tableware	Plate	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Flow blue stripe along rim	-	-	-	USA / Europe	1825	1950	Gaston 1983	Fragment	Rim	1	7.83
114	TR	07	D	1.0-3.0	Tableware	Plate	Ceramic	Stoneware	Kitchen Items	-	-	-	-	-	Flow blue motif with molded rim	...USSIA	-	-	USA / Europe	1825	1950	Gaston 1983	Fragment	Base	1	163.94
115	TR	07	D	1.0-3.0	Stake	Railroad	Metal	Ferrous	Transportation Items	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	248.44	
116	TR	07	D	1.0-3.0	Hardware	Metal Strap	Metal	Ferrous	Building Materials	-	-	-	-	-	-	-	-	-	-	-	-	Complete	-	1	43.89	
117	TR	07	D	1.0-3.0	Graniteware	Sauce Pan	Metal	Enameled	Kitchen Items	-	-	-	-	-	Blue and white swirl motif	-	-	-	-	-	-	-	Complete	-	1	-
118	TR	07	D	1.0-3.0	Fauna	Bone	Bone	Medium Mammal	Food Items	-	-	-	-	-	Saw cut; MNI=1	-	-	-	-	-	-	-	Fragment	-	-	3.25

APPENDIX F

**Archaeological Test Plan for the
119 South Arrowhead Avenue Project**

(Prepared by Brian F. Smith and Associates, Inc. 2022)

ARCHAEOLOGICAL TEST PLAN FOR THE 119 SOUTH ARROWHEAD AVENUE PROJECT

CITY OF SAN BERNARDINO

APNs 136-014-10 and 136-051-54

Prepared for:


City of San Bernardino
290 North D Street
San Bernardino, California 92401

And:

119 South Arrowhead, LLC
11777 San Vicente Boulevard, Suite 780
Los Angeles, California 90049

Prepared by:

Brian F. Smith, Principal Investigator

Signature: 

Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064



August 1, 2022

Archaeological Database Information

Authors: Jillian L.H. Conroy and Brian F. Smith

Consulting Firm: Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064

Report Date: August 1, 2022

Report Title: Archaeological Test Plan for the 119 South Arrowhead Avenue Project, City of San Bernardino (APNs 136-014-10 and 136-051-54)

Submitted to: City of San Bernardino
290 North D Street
San Bernardino, California 92401

Prepared for: 119 South Arrowhead, LLC
11777 San Vicenta Boulevard, Suite 780
Los Angeles, California 90049

Submitted by: Brian F. Smith and Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064

USGS Quadrangle: San Bernardino South, California Quadrangle

Study Area: APNs 136-014-10 and 136-051-54

Key Words: Archaeological Test Plan; City of San Bernardino.

Table of Contents

<u>Section</u>	<u>Page</u>
1.0 MANAGEMENT SUMMARY/ABSTRACT	1.0–1
2.0 INTRODUCTION	2.0–1
3.0 SETTING	3.0–1
3.1 Natural Setting	3.0–1
3.2 Cultural Setting	3.0–1
3.2.1 Prehistoric Period	3.0–1
3.2.2 Historic Period	3.0–5
3.2.3 General History of the City of San Bernardino	3.0–7
4.0 RESEARCH DESIGN	4.0–1
4.1 Historical Archival Results	4.0–1
4.1.1 Archaeological Records Search Results	4.0–1
4.1.2 Historical Background	4.0–2
4.2 Research Goals	4.0–14
4.2.1 Research Questions and Data Needs	4.0–19
5.0 ARCHAEOLOGICAL TEST PLAN	5.0–1
5.1 Field Methodology	5.0–2
5.2 Laboratory Analysis	5.0–8
5.2.1 Prehistoric Artifact Sorting and Analysis	5.0–8
5.2.2 Historic Artifact Functional Categories	5.0–8
5.3 Provisions for the Discovery of Human Remains	5.0–10
5.4 Archival Research	5.0–11
5.5 Recordation and Curation	5.0–11
6.0 BIBLIOGRAPHY	6.0–1

Appendices

Appendix A – Qualifications of Key Personnel

List of Figures

<u>Figure</u>	<u>Page</u>
Figure 1.0–1 General Location Map	1.0–2
Figure 1.0–2 Project Location Map	1.0–3
Figure 1.0–3 Conceptual Site Plan.....	1.0–4
Figure 3.2–1 1887 Lithograph Map	3.0–10
Figure 4.1–1 Project Location Shown on the 1887 Lithograph Map	4.0–3
Figure 4.1–2 1894 Sanborn Map	4.0–4
Figure 4.1–3 Historic USGS Maps	4.0–6
Figure 4.1–4 1906 Sanborn Map	4.0–9
Figure 4.1–5 1930, 1938, and 1953 Aerial Photographs	4.0–11
Figure 4.1–6 1950 Sanborn Map	4.0–12
Figure 4.1–7 1951 Sanborn Map	4.0–13
Figure 4.1–8 1956 Sanborn Map	4.0–15
Figure 4.1–9 1958 Sanborn Map	4.0–16
Figure 4.1–10 1959 Sanborn Map	4.0–17
Figure 4.1–11 1959, 1968, and 1990 Aerial Photographs	4.0–18
Figure 5.1–1 Proposed Trenches Shown on the 1894 Sanborn Map.....	5.0–3
Figure 5.1–2 Proposed Trenches Shown on the 1906 Sanborn Map.....	5.0–4
Figure 5.1–3 Proposed Trenches Shown on the 1950 Sanborn Map.....	5.0–5
Figure 5.1–4 Proposed Trenches Shown on a Current Aerial Photograph.....	5.0–6

List of Plates

<u>Plate</u>	<u>Page</u>
Plate 2.0–1 Aerial overview of the 119 South Arrowhead Avenue Project	2.0–1
Plate 3.2–1 Engraving depicting the Mormon settlement in the San Bernardino Valley	3.0–8
Plate 3.2–2 Amasa Lyman	3.0–8
Plate 3.2–3 Charles Rich.....	3.0–8
Plate 3.2–4 1925 view of Third Street in San Bernardino, facing F Street.....	3.0–11
Plate 4.1–1 J.J. Hanford	4.0–5
Plate 4.1–2 View of the Hanford Foundry Company building from the intersection of Arrowhead Avenue and the railroad tracks, facing northeast	4.0–7
Plate 4.1–3 Demolition of the Hanford Foundry Company facility from the intersection of Arrowhead and Rialto avenues, facing southeast.....	4.0–8

1.0 MANAGEMENT SUMMARY/ABSTRACT

At the direction of the project applicant, Brian F. Smith and Associates, Inc. (BFSA) was retained to provide historical and archaeological consulting services for the 119 South Arrowhead Avenue Project. The project is located southeast of West Rialto and South Arrowhead avenues at 119 South Arrowhead Avenue in the city of San Bernardino, San Bernardino County, California (Figures 1.0–1 and 1.0–2). The Area of Potential Effect (APE) is identified as Assessor's Parcel Numbers (APNs) 136-041-10 and 136-051-54 (Blocks 101, 102, 103, and 104 of Water's Addition). The proposed project will involve the construction of three industrial warehouses with associated parking and infrastructure (Figure 1.0–3). An archaeological survey of the property and records research have identified evidence of extensive historical use of this property. Potentially important historic resources could be buried at the property. Based upon this potential, archaeological investigations have been proposed to determine if archaeological deposits or features exist that might be affected by the proposed development.

This Archaeological Test Plan (ATP) has been prepared to inform the City of San Bernardino Planning Department of the process to be employed by BFSA to explore the potential for buried archaeological deposits or features within the development envelope. Should archaeological resources be identified through the implementation of this testing program, the features or deposits would require significance evaluations to determine if the project represents a source of impacts to potentially California Environmental Quality Act (CEQA)-significant resources. This study is being conducted as part of the cultural resources study needed as part of the CEQA review process by the City of San Bernardino.

The subject property has been in use since at least the 1880s, as shown on the 1887 Lithograph Map, as the western half of the property contained a fruit tree grove until 1892, before the Hanford Foundry Company was built. The Hanford Foundry Company was one of the major businesses operating in the city from 1892 until 1986. Historically, the eastern half of the property was a mix of residential and commercial activities, with dwellings and outbuildings located in the center of the property as early as 1887. The far eastern half of the property was utilized as a fruit packing house by the early 1890s, and later as a fertilizer company. Given the extent of historical use of this property since the 1880s, the potential exists that historically significant features or deposits could exist that could represent important elements of the city's history. This ATP is intended to characterize the subsequent historic potential and project potential constraints to development.

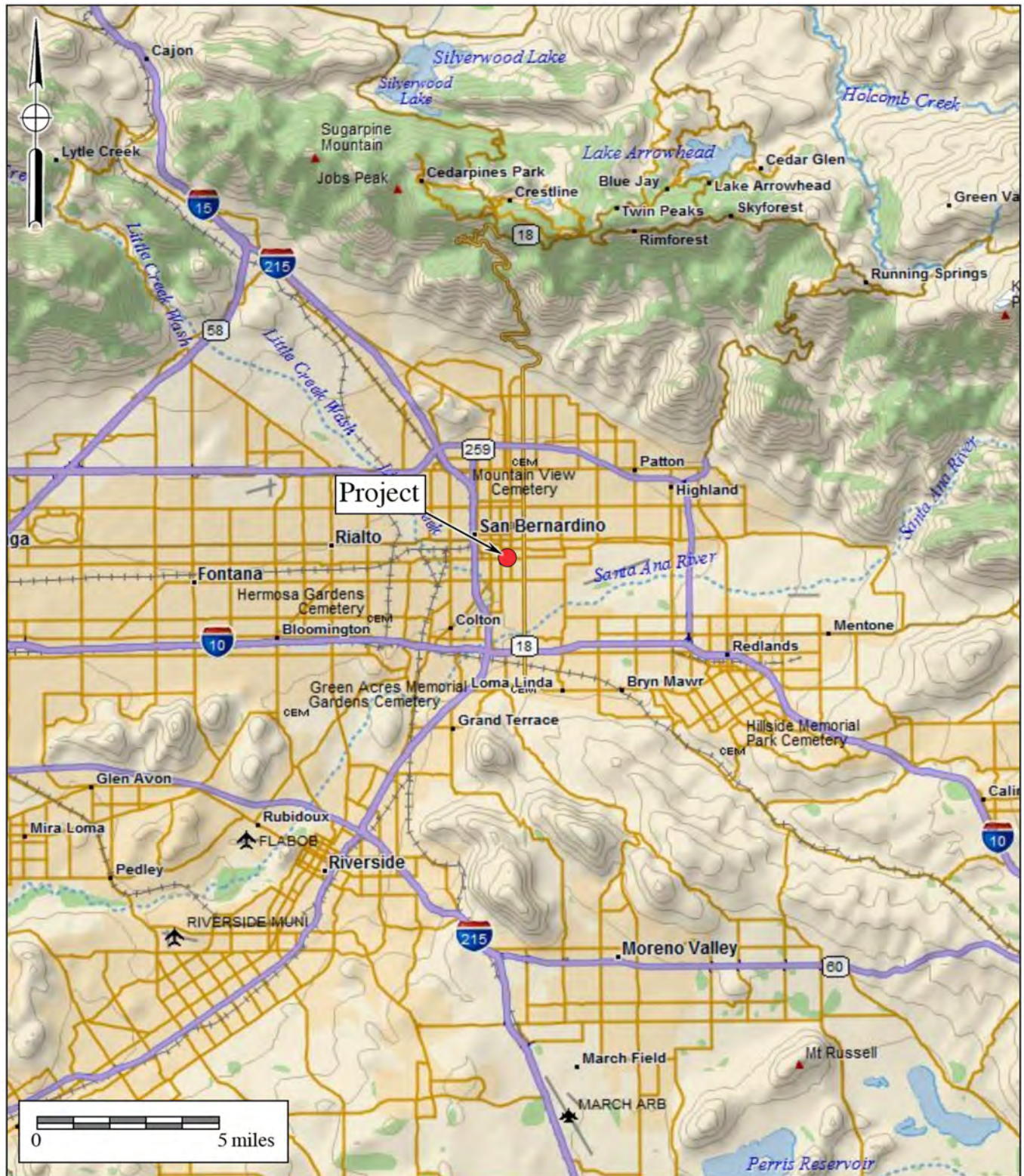


Figure 1.0-1
General Location Map

The 119 South Arrowhead Avenue Project

DeLorme (1:250,000)



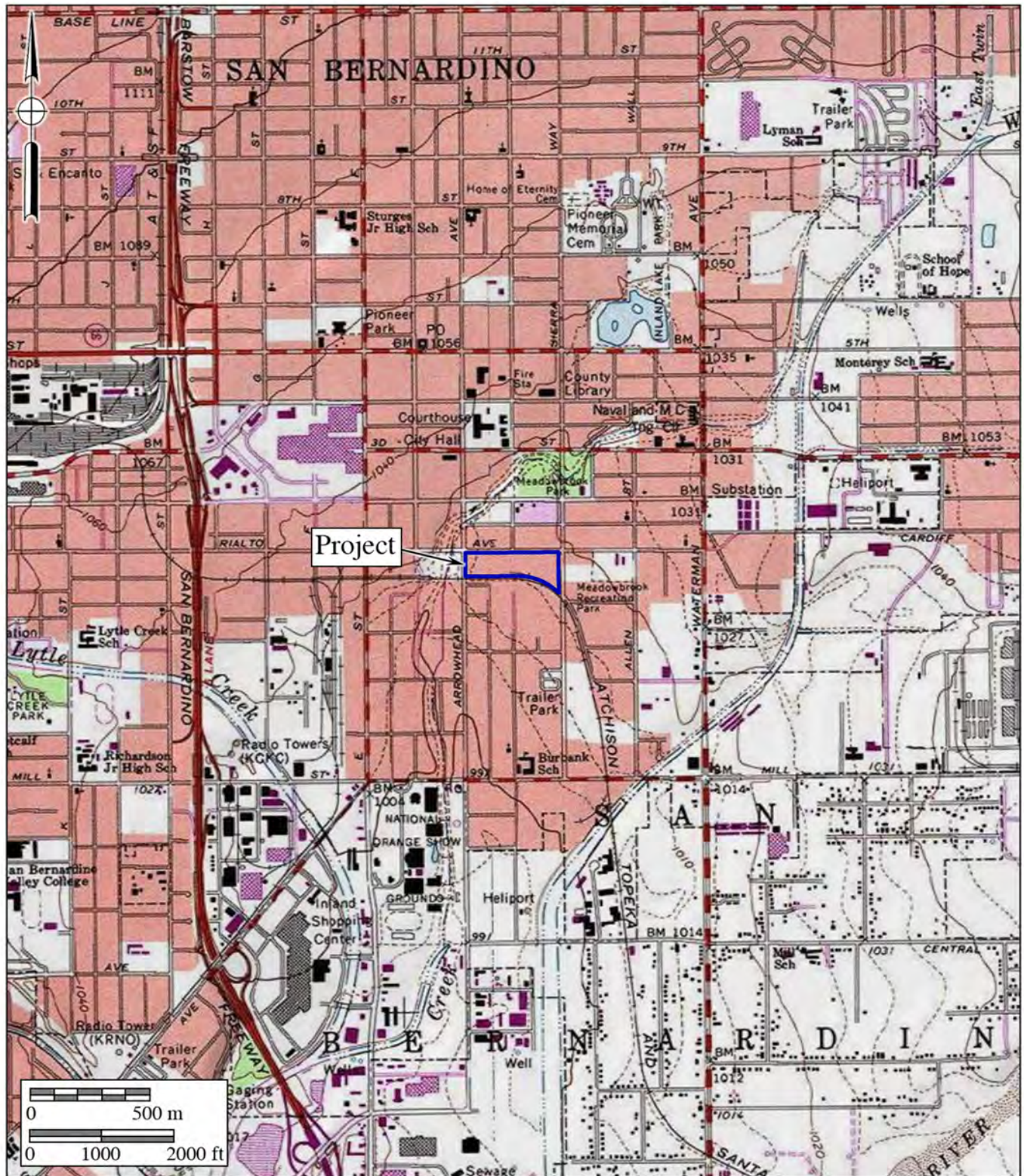
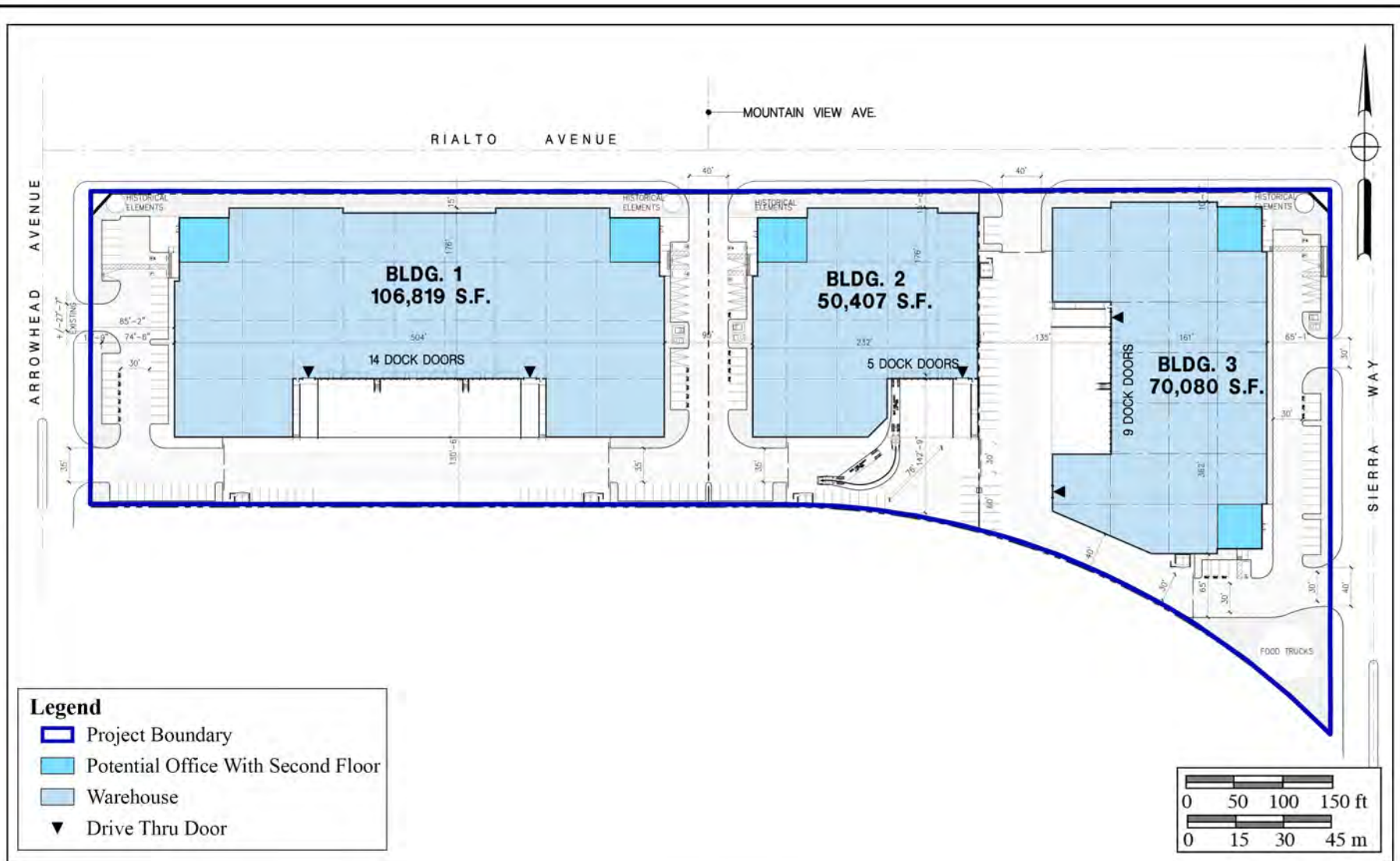


Figure 1.0-2
Project Location Map

The 119 South Arrowhead Avenue Project

USGS San Bernardino South Quadrangle (7.5-minute series)





While no prehistoric cultural resources have been identified on or within the vicinity of the project, the early development of the property as an orchard and later a foundry could have affected the potential to identify prehistoric Native American resources on the surface of the property. Generally speaking, the city of San Bernardino has been identified by representatives of the Gabrieleño Band of Mission Indians – Kizh Nation (Kizh Nation) and the San Manuel Band of Mission Indians as an area of tribal interest. Further, the close proximity of the property to freshwater resources indicates a potential for the presence of prehistoric resources within the property. Given the tribal interest in this general area and the potential that prehistoric Native American artifacts or sites could be encountered during trenching, all subsurface investigations and ground-disturbing activities will be available to be monitored by Native American representatives from Kizh Nation and the San Manuel Band at their discretion.

Additionally, the property has been identified as an area of human health risk due to the history of the property as an industrial foundry. Because of this, a Deed Restriction was developed for the property that precludes it from being used for residential purposes. As a result of the Final Judgment Pursuant to Stipulation (Judgment) between Kenneth C. Bussey Trust and Caston Family LP (Trust/LP) and the Department of Toxic Substances Control (DTSC), a soil management plan (SMP) was developed for all future development on the property (Shaw 2006). The SMP was approved by the DTSC and indicates that no special personal protective equipment (PPE) is needed for general excavation and handling of the soil. All fieldwork will be conducted in accordance to the health and safety measures stipulated by the SMP. Further, Hazard Management Consulting (HMC) will be retained to monitor and sample all soil excavated as a result of the archaeological testing program in order to determine which soils can remain on-site and which soils must be disposed of elsewhere.

This ATP will address the City's requirements related to development projects and the CEQA review process. The ATP will present the procedures and protocols to conduct investigations of potential historic or prehistoric deposits and features located within the areas of proposed development within the property. If the testing program identifies significant resources, the testing report will potentially need to provide mitigation measures to reduce potential impacts to any significant cultural resources identified by the testing program.

2.0 INTRODUCTION

This ATP for the 119 South Arrowhead Avenue Project is presented to the City of San Bernardino in anticipation of the CEQA review process in conformance with Section 21083.2 of the California Public Resources Code and CEQA. The project proposes the construction of three industrial warehouses with associated parking and infrastructure.

The 10.34-acre project is identified as APNs 136-041-10 and 136-051-54 and is located southeast of West Rialto and South Arrowhead avenues at 119 South Arrowhead Avenue in the city of San Bernardino, San Bernardino County, California. The APE is currently vacant (Plate 2.0–1). No previous archaeological surveys have been conducted for the project. An archaeological records search of the property revealed that no previously recorded archaeological sites are located within the APE.

Historical background research indicates that the subject property has been continuously occupied since at least the 1880s with a mixture of residential and commercial/industrial structures and businesses. The western half of the property contained a fruit tree grove until 1892, before the Hanford Foundry Company was built. The Hanford Foundry Company closed in 1986 and the buildings were demolished between 1988 and 1989. A parking lot was constructed on the west side of the property in 2013. The eastern half of the property was a mix of residential and commercial activities, with dwellings and outbuildings located in the center of the property as early as 1887. The far eastern half of the property was being utilized as a fruit packing house by the early 1890s, and later as a fertilizer company. What appears to be a concrete slab parking lot with two commercial buildings was located on the eastern half of the property by 1968, and by 1989, the entire property was vacant.

The potential for additional buried resources will be examined through this ATP, which will satisfy the requirements of the City related to development projects in this area. The ATP will include the completion of a site testing program to determine the presence of potentially significant cultural resources. Testing will include trenching and controlled excavations by archaeologists to determine if cultural resources are present and, if so, the evaluation of those resources for significance in accordance with CEQA and City of San Bernardino guidelines. The testing will also include the presence of representatives from Kizh Nation and the San Manuel Band to monitor all ground-disturbing activities at the project. In the event that the ATP leads to the identification of any significant features or deposits, a data recovery program would typically be required prior to the initiation of grading.



Plate 2.0–1: Current aerial overview of the 119 South Arrowhead Avenue Project.

3.0 SETTING

The project setting includes both physical and biological contexts of the proposed project, as well as the cultural setting of prehistoric and historic human activities in the general area.

3.1 Natural Setting

The 119 South Arrowhead Avenue Project is located in the Peninsular Ranges Geologic Province of southern California. The range, which lies in a northwest to southeast trend through the county, extends some 1,000 miles from the Raymond-Malibu Fault Zone in western Los Angeles County to the southern tip of Baja California. The subject property lies within the broad, fault-bounded alluvial valley of the Santa Ana River channel between the San Bernardino Mountains to the north and the San Timoteo Badlands to the south (Morton and Miller 2006). The project is just east of Warm Creek, a tributary to the Santa Ana River. Stratigraphically, the project overlies late Holocene-aged, young axial channel deposits (Morton and Miller 2006). These sedimentary deposits are characterized as fine to coarse-grained sands and pebbly sands that coarsen eastward (Wirths 2022). Active wash deposits of unconsolidated sand and gravel characterize the path of Warm Creek (Morton and Miller 2006). Soils within the project consist of Grangeville fine sandy loam, warm MAAT, MLRA 19 and Tujunga gravelly loamy sand, 0 to 9 percent slopes (NRCS 2019). Elevations within the project range from approximately 1,008 to 1,012 feet above mean sea level.

3.2 Cultural Setting

3.2.1 Prehistoric Period

Paleo Indian, Archaic Period Milling Stone Horizon, and the Late Prehistoric Shoshonean groups are the three general cultural periods represented in San Bernardino County. The following discussion of the cultural history of San Bernardino County references the San Dieguito Complex, Encinitas Tradition, Milling Stone Horizon, La Jolla Complex, Pauma Complex, and San Luis Rey Complex, since these culture sequences have been used to describe archaeological manifestations in the region. The Late Prehistoric component in San Bernardino County was represented by the Cahuilla, Serrano, and potentially the Vanyume Indians.

Absolute chronological information, where possible, will be incorporated into this discussion to examine the effectiveness of continuing to use these terms interchangeably. Reference will be made to the geological framework that divides the culture chronology of the area into four segments: late Pleistocene (20,000 to 10,000 years before the present [YBP]), early Holocene (10,000 to 6,650 YBP), middle Holocene (6,650 to 3,350 YBP), and late Holocene (3,350 to 200 YBP).

Paleo Indian Period (Late Pleistocene: 11,500 to circa 9,000 YBP)

The Paleo Indian Period is associated with the terminus of the late Pleistocene (12,000 to 10,000 YBP). The environment during the late Pleistocene was cool and moist, which allowed for glaciation in the mountains and the formation of deep, pluvial lakes in the deserts and basin lands (Moratto 1984). However, by the terminus of the late Pleistocene, the climate became warmer, which caused the glaciers to melt, sea levels to rise, greater coastal erosion, large lakes to recede and evaporate, extinction of Pleistocene megafauna, and major vegetation changes (Moratto 1984; Martin 1967, 1973; Fagan 1991). The coastal shoreline at 10,000 YBP, depending upon the particular area of the coast, was near the 30-meter isobath, or two to six kilometers further west than its present location (Masters 1983).

Paleo Indians were likely attracted to multiple habitat types, including mountains, marshlands, estuaries, and lakeshores. These people likely subsisted using a more generalized hunting, gathering, and collecting adaptation while utilizing a variety of resources including birds, mollusks, and both large and small mammals (Erlandson and Colten 1991; Moratto 1984; Moss and Erlandson 1995).

Archaic Period (Early and Middle Holocene: circa 9,000 to 1,300 YBP)

Archaeological data indicates that between 9,000 and 8,000 YBP, a widespread complex was established in the southern California region, primarily along the coast (Warren and True 1961). This complex is locally known as the La Jolla Complex (Rogers 1939; Moriarty 1966), which is regionally associated with the Encinitas Tradition (Warren 1968) and shares cultural components with the widespread Milling Stone Horizon (Wallace 1955). The coastal expression of this complex appeared in southern California coastal areas and focused upon coastal resources and the development of deeply stratified shell middens that were primarily located around bays and lagoons. The older sites associated with this expression are located at Topanga Canyon, Newport Bay, Agua Hedionda Lagoon, and some of the Channel Islands. Radiocarbon dates from sites attributed to this complex span a period of over 7,000 years in this region, beginning over 9,000 YBP.

The rising sea level during the early Holocene created rocky shorelines and bays along the coast by flooding valley floors and eroding the coastline (Curry 1965; Inman 1983). Shorelines were primarily rocky with small littoral cells, as sediments were deposited at bay edges but rarely discharged into the ocean (Reddy 2000). These bays eventually evolved into lagoons and estuaries, which provided a rich habitat for mollusks and fish. The warming trend and rising sea levels generally continued until the late Holocene (4,000 to 3,500 YBP).

At the beginning of the late Holocene, sea levels stabilized, rocky shores declined, lagoons filled with sediment, and sandy beaches became established (Gallegos 1985; Inman 1983; Masters 1994; Miller 1966; Warren and Pavesic 1963). Many former lagoons became saltwater marshes surrounded by coastal sage scrub by the late Holocene (Gallegos 2002). The sedimentation of the lagoons was significant in that it had profound effects upon the types of resources available to

prehistoric peoples. Habitat was lost for certain large mollusks, namely *Chione* and *Argopecten*, but habitat was gained for other small mollusks, particularly *Donax* (Gallegos 1985; Reddy 2000). The changing lagoon habitats resulted in the decline of larger shellfish, loss of drinking water, and loss of Torrey Pine nuts, causing a major depopulation of the coast as people shifted inland to reliable freshwater sources and intensified their exploitation of terrestrial small game and plants, including acorns (originally proposed by Rogers 1929; Gallegos 2002).

The Archaic Period in southern California is associated with several different cultures, complexes, traditions, periods, and horizons, including San Dieguito, La Jolla, Encinitas, Milling Stone, Pauma, and Intermediate.

Late Prehistoric Period (Late Holocene: 1,300 YBP to 1790)

Around approximately 1,350 YBP, a Shoshonean-speaking group from the Great Basin region moved into San Bernardino County, marking the transition to the Late Prehistoric Period. This period has been characterized by higher population densities and elaborations in social, political, and technological systems. Economic systems diversified and intensified during this period, with the continued elaboration of trade networks, the use of shell-bead currency, and the appearance of more labor-intensive, yet effective, technological innovations. Technological developments during this period included the introduction of the bow and arrow between A.D. 400 and 600 and the introduction of ceramics. Atlatl darts were replaced by smaller arrow darts, including the Cottonwood series points. Other hallmarks of the Late Prehistoric Period include extensive trade networks as far reaching as the Colorado River Basin and cremation of the dead.

Protohistoric Period (Late Holocene: 1790 to Present)

Prior to the arrival of the Spanish missionaries, the San Bernardino area was inhabited by the Cahuilla, Serrano, and potentially the Vanyume Indians. The territory of the Vanyume was covered by small and relatively sparse populations focused primarily along the Mojave River, north of the Serrano and southeast of the Kawaiisu. It is believed that the southwestern extent of their territory went as far as Cajon Pass and portions of Hesperia. Bean and Smith (1978) noted that it was uncertain if the Vanyume spoke a dialect of Serrano or a separate Takic-based language. However, King and Blackburn (1978) suggest that the Vanyume and other Kitanemuk speakers once occupied most of Antelope Valley. In contrast to the Serrano, the Vanyume maintained friendly social relations with the Mohave and Chemehuevi to the east and northeast (Kroeber 1976). As with the majority of California native populations, Vanyume populations were decimated around the 1820s by placement in Spanish missions and *asistencias*. It is believed that by 1900, the Vanyume had become extinct (Bean and Smith 1978). However, given the settlement patterns reported for the Vanyume, it is more probable that the population was dispersed rather than completely wiped out.

At the time of Spanish contact in the sixteenth century, the Cahuilla occupied territory that included the San Bernardino Mountains, Orocopia Mountain, and the Chocolate Mountains to the

west, Salton Sea and Borrego Springs to the south, Palomar Mountain and Lake Mathews to the west, and the Santa Ana River to the north. The Cahuilla are a Takic-speaking people closely related to their Gabrielino and Luiseño neighbors, although relations with the Gabrielino were more intense than with the Luiseño. They differ from the Luiseño and Gabrielino in that their religion is more similar to the Mohave tribes of the eastern deserts than the Chingichngish cult of the Luiseño and Gabrielino. The following is a summary of ethnographic data regarding this group (Bean 1978; Kroeber 1976).

Cahuilla villages were typically permanent and located on low terraces within canyons in proximity to water sources. These locations proved to be rich in food resources and afforded protection from prevailing winds. Villages had areas that were publicly owned as well as areas that were privately owned by clans, families, or individuals. Each village was associated with a particular lineage and series of sacred sites that included unique petroglyphs and pictographs. Villages were occupied throughout the year; however, during a several-week period in the fall, most of the village members relocated to mountain oak groves to take part in acorn harvesting (Bean 1978; Kroeber 1976).

The Serrano and Vanyume, however, were primarily hunters and gatherers. Individual family dwellings were likely circular, domed structures. Vegetal staples varied with locality; acorns and piñon nuts were found in the foothills, and mesquite, yucca roots, cacti fruits, and piñon nuts were found in or near the desert regions. Diets were supplemented with other roots, bulbs, shoots, and seeds (Heizer 1978). Deer, mountain sheep, antelopes, rabbits, and other small rodents were among the principal food packages. Various game birds, especially quail, were also hunted. Bows and arrows were used for large game, while smaller game and birds were killed with curved throwing sticks, traps, and snares. Occasionally, game was hunted communally, often during mourning ceremonies (Benedict 1924; Drucker 1937; Heizer 1978). In general, manufactured goods included baskets, some pottery, rabbit-skin blankets, awls, arrow straighteners, sinew-backed bows, arrows, fire drills, stone pipes, musical instruments (rattles, rasps, whistles, bull-roarers, and flutes), feathered costumes, mats, bags, storage pouches, and nets (Heizer 1978). Food acquisition and processing required the manufacture of additional items such as knives, stone or bone scrapers, pottery trays and bowls, bone or horn spoons, and stirrers. Mortars, made of either stone or wood, and metates were also manufactured (Strong 1971; Drucker 1937; Benedict 1924).

Much like the Vanyume, the Serrano suffered large population decreases during the early 1800s. While the missionaries are credited with developing the first stable water supply in the area by diverting water from Mill Creek into a zanja that terminated at the Asistencia de Mission San Gabriel on Barton Road, the task was completed through labor provided by the Serrano. The zanja, known as the Mill Creek Zanja, is located in Redlands, California. It has been listed on the National Register of Historic Places since 1976.

3.2.2 Historic Period

Traditionally, the history of the state of California has been divided into three general periods: the Spanish Period (1769 to 1821), the Mexican Period (1822 to 1846), and the American Period (1848 to present) (Caughey 1970). The American Period is often further subdivided into additional phases: the nineteenth century (1848 to 1900), the early twentieth century (1900 to 1950), and the Modern Period (1950 to present). From an archaeological standpoint, all of these phases can be referred to together as the Ethnohistoric Period. This provides a valuable tool for archaeologists, as ethnohistory is directly concerned with the study of indigenous or non-Western peoples from a combined historical/anthropological viewpoint, which employs written documents, oral narrative, material culture, and ethnographic data for analysis.

European exploration along the California coast began in 1542 with the landing of Juan Rodriguez Cabrillo and his men at San Diego Bay. Sixty years after the Cabrillo expeditions, an expedition under Sebastian Viscaíno made an extensive and thorough exploration of the Pacific coast. Although the voyage did not extend beyond the northern limits of the Cabrillo track, Viscaíno had the most lasting effect upon the nomenclature of the coast. Many of his place names have survived, whereas practically every one of the names assigned by Cabrillo have faded from use. For instance, Cabrillo named the first (now) United States port he stopped at “San Miguel”; 60 years later, Viscaíno changed it to “San Diego” (Rolle 1969). The early European voyages observed Native Americans living in villages along the coast but did not make any substantial, long-lasting impact. At the time of contact, the Luiseño population was estimated to have ranged from 4,000 to as many as 10,000 individuals (Bean and Shipek 1978; Kroeber 1976).

The historic background of the project area began with the Spanish colonization of Alta California. The first Spanish colonizing expedition reached southern California in 1769 with the intention of converting and civilizing the indigenous populations, as well as expanding the knowledge of and access to new resources in the region (Brigandi 1998). As a result, by the late eighteenth century, a large portion of southern California was overseen by Mission San Luis Rey (San Diego County), Mission San Juan Capistrano (Orange County), and Mission San Gabriel (Los Angeles County), who began colonizing the region and surrounding areas (Chapman 1921).

Native Californians may have first coalesced with Europeans around 1769 when the first Spanish mission was established in San Diego. In 1771, Friar Francisco Graces first searched the California desert for potential mission sites. Interactions between local tribes and Franciscan priests occurred by 1774 when Juan Bautista De Anza made an exploration of Alta California.

Serrano contact with Europeans may have occurred as early as 1771 or 1772, but it was not until approximately 1819 that the Spanish directly influenced the culture. The Spanish established *asistencias* in San Bernardino, Pala, and Santa Ysabel. Between the founding of the *asistencia* and secularization in 1834, most of the Serranos in the San Bernardino Mountains were removed to the nearby missions (Beattie and Beattie 1951:366) while the Cahuilla maintained a high level of autonomy from Spain (Bean 1978).

Each mission gained power through the support of a large, subjugated Native American workforce. As the missions grew, livestock holdings increased and became increasingly vulnerable to theft. In order to protect their interests, the southern California missions began to expand inland to try and provide additional security (Beattie and Beattie 1939; Caughey 1970). In order to meet their needs, the Spaniards embarked upon a formal expedition in 1806 to find potential locations within what is now the San Bernardino Valley. As a result, by 1810, Father Francisco Dumetz of Mission San Gabriel had succeeded in establishing a religious site, or capilla, at a Cahuilla rancheria called Guachama (Beattie and Beattie 1939). San Bernardino Valley received its name from this site, which was dedicated to San Bernardino de Siena by Father Dumetz. The Guachama rancheria was located in present-day Bryn Mawr in San Bernardino County.

These early colonization efforts were followed by the establishment of estancias at Puente (circa 1816) and San Bernardino (circa 1819) near Guachama (Beattie and Beattie 1939). These efforts were soon mirrored by the Spaniards from Mission San Luis Rey, who in turn established a presence in what is now Lake Elsinore, Temecula, and Murrieta (Chapman 1921). The indigenous groups who occupied these lands were recruited by missionaries, converted, and put to work in the missions (Pourade 1961). Throughout this period, the Native American populations were decimated by introduced diseases, a drastic shift in diet resulting in poor nutrition, and social conflicts due to the introduction of an entirely new social order (Cook 1976).

Mexico achieved independence from Spain in 1822 and became a federal republic in 1824. As a result, both Baja and Alta California became classified as territories (Rolle 1969). Shortly thereafter, the Mexican Republic sought to grant large tracts of private land to its citizens to begin to encourage immigration to California and to establish its presence in the region. Part of the establishment of power and control included the desecularization of the missions circa 1832. These same missions were also located on some of the most fertile land in California and, as a result, were considered highly valuable. The resulting land grants, known as “ranchos,” covered expansive portions of California and by 1846, more than 600 land grants had been issued by the Mexican government. Rancho Jurupa was the first rancho to be established and was issued to Juan Bandini in 1838. Although Bandini primarily resided in San Diego, Rancho Jurupa was located in what is now Riverside County (Pourade 1963). A review of Riverside County place names quickly illustrates that many of the ranchos in Riverside County lent their names to present-day locations, including Jurupa, El Rincon, La Sierra, El Sobrante de San Jacinto, La Laguna (Lake Elsinore), Santa Rosa, Temecula, Pauba, San Jacinto Nuevo y Potrero, and San Jacinto Viejo (Gunther 1984). As was typical of many ranchos, these were all located in the valley environments within western Riverside County.

The treatment of Native Americans grew worse during the Rancho Period. Most of the Native Americans were forced off of their land or put to work on the now privately-owned ranchos, most often as slave labor. In light of the brutal ranchos, the degree to which Native Americans had become dependent upon the mission system is evident when, in 1838, a group of Native

Americans from Mission San Luis Rey petitioned government officials in San Diego to relieve suffering at the hands of the rancheros:

We have suffered incalculable losses, for some of which we are in part to be blamed for because many of us have abandoned the Mission ... We plead and beseech you ... to grant us a Rev. Father for this place. We have been accustomed to the Rev. Fathers and to their manner of managing the duties. We labored under their intelligent directions, and we were obedient to the Fathers according to the regulations, because we considered it as good for us. (Brigandi 1998:21)

Native American culture had been disrupted to the point where they could no longer rely upon prehistoric subsistence and social patterns. Not only does this illustrate how dependent the Native Americans had become upon the missionaries, but it also indicates a marked contrast in the way the Spanish treated the Native Americans as compared to the Mexican and United States ranchers. Spanish colonialism (missions) is based upon utilizing human resources while integrating them into their society. The ranchers, both Mexican and American, did not accept Native Americans into their social order and used them specifically for the extraction of labor, resources, and profit. Rather than being incorporated, they were either subjugated or exterminated (Cook 1976).

By 1846, tensions between the United States and Mexico had escalated to the point of war (Rolle 1969). In order to reach a peaceful agreement, the Treaty of Guadalupe Hidalgo was put into effect in 1848, which resulted in the annexation of California to the United States. Once California opened to the United States, waves of settlers moved searching for gold mines, business opportunities, political opportunities, religious freedom, and adventure (Rolle 1969; Caughey 1970). By 1850, California had become a state and was eventually divided into 27 separate counties. While a much larger population was now settling in California, this was primarily in the central valley, San Francisco, and the Gold Rush region of the Sierra Nevada mountain range (Rolle 1969; Caughey 1970). During this time, southern California grew at a much slower pace than northern California and was still dominated by the cattle industry that was established during the earlier rancho period.

3.2.3 General History of the City of San Bernardino

In 1851, 500 Mormons purchased the western portion of the San Bernardino Rancho from the Lugo family, erecting an over 50-building settlement (Fort San Bernardino) near the present-day location of the San Bernardino County Courthouse (Plate 3.2–1). The following year, the leaders of the Mormon colony, Amasa Lyman and Charles Rich (Plates 3.2–2 and 3.2–3), founded the new settlement (what would become the city of San Bernardino).



Plate 3.2–1: Engraving depicting the Mormon settlement in the San Bernardino Valley.
Engraved by N. Orr of New York.
(Image courtesy of the Bancroft Library at the University of California at Berkeley)



Plate 3.2–2: Amasa Lyman.
(Photograph courtesy of City of San Bernardino 2005)

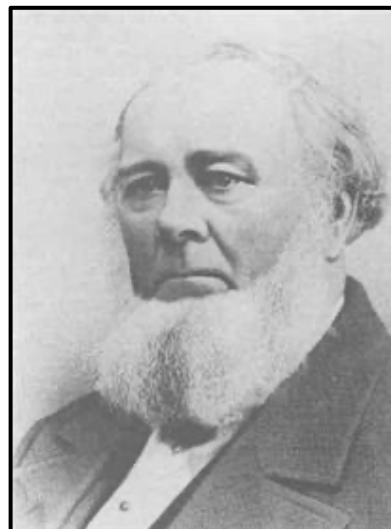


Plate 3.2–3: Charles Rich.
(Photograph courtesy of City of San Bernardino 2005)

Henry G. Sherwood surveyed the one-square-mile town site in 1853, which at that time consisted of a grid of wide streets in eight one-acre blocks. The city of San Bernardino was incorporated the following year, and in 1855, San Bernardino County was split from San Diego and Los Angeles counties (City of San Bernardino 2005). The settlement that the Mormons created within the rancho was short-lived, however, as in 1857, Brigham Young recalled all Mormons in San Bernardino back to Utah. Approximately 1,400 Mormons returned to Utah, while the remaining 45 percent stayed in San Bernardino, choosing “to forsake the church rather than leave their homes” (Lyman 1989).

The City of San Bernardino grew slowly throughout the 1860s and 1870s. The center of town boasted two churches, two hotels, several large businesses, a stagecoach that ran regularly between San Bernardino and Los Angeles, and mule-drawn freight wagons that arrived regularly from Salt Lake City, Utah, and other cities to the east. The stagecoach and freight wagon routes established San Bernardino as an early transportation and freight center, which was further cemented by the connection of southern California to the national railroad network in 1876 (City of San Bernardino 2005):

The arrival of the railroad provided better and faster access for the farmers to bring crops to market. Packing houses and warehouses were built along the railroad corridors. The railroads also provided access to the county for tourists and immigrants alike. With the completion of rail connections between the desert and Los Angeles in 1887 by the Santa Fe Railroad, San Bernardino soon developed into a railhead boomtown [Figure 3.2–1]. Commercial enterprises dominated the urban landscape, with emphases upon service and retail establishment, while industrial enterprises supported agricultural development.

The city’s development has been closely linked with that of the Santa Fe Railroad and its important railroad shops and yards. By 1900 more than 85 percent of the city’s population was directly employed by the railroad, despite increased industrial and agricultural development in the following decades. (City of San Bernardino 2005)

Population growth and 1880s tax revenue from the booming citrus industry prompted the official formation of Riverside County in 1893 out of portions of what was once San Bernardino and San Diego counties (Patterson 1971). Between 1900 and 1910, the population of the city of San Bernardino grew from 6,150 residents to 12,799 residents. By 1910, city hall, San Bernardino High School, and an opera house had been constructed. By 1930, the city’s population had reached approximately 50,000 residents.

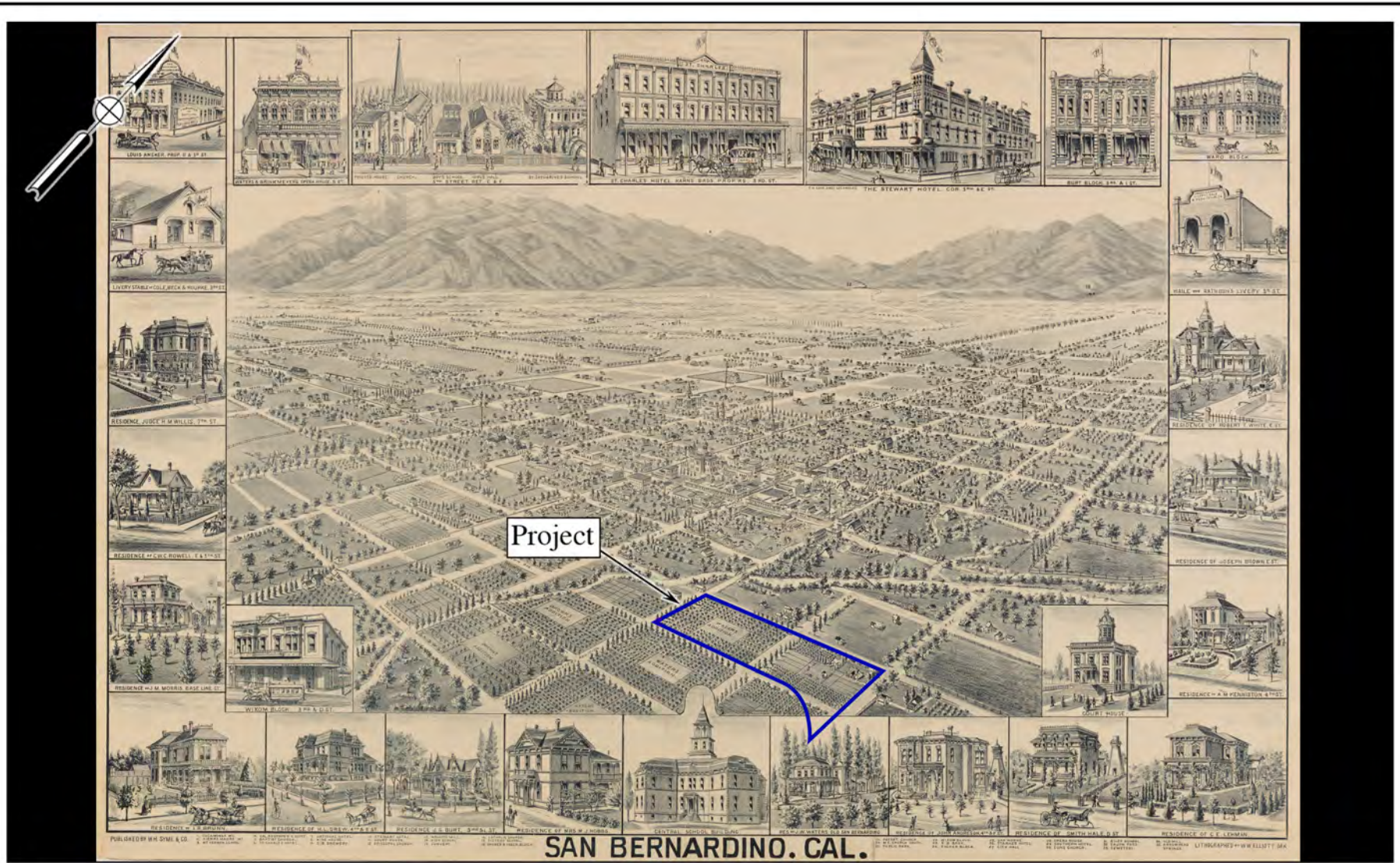


Figure 3.2-1

1887 Lithograph Map

The 119 South Arrowhead Avenue Project

(William W. Elliott [active ca. 1870 to ca. 1890], Lithographer; W.H. Syme & Co., Publisher)



A department store, the San Bernardino County Courthouse, the Heritage Building, the California Theater, the Ritz Theater, the Casa Ramona School, and San Bernardino College were all constructed in the latter half of the 1920s, reflecting an enormous population boom (Plate 3.2–4). This was bolstered by the construction of Route 66 through San Bernardino between 1926 and 1937 (City of San Bernardino 2005).

Prior to World War II, one-quarter of the city's residents were employed by the railroad. With the war came the development and expansion of the Army Airfield on the grounds of the San Bernardino Municipal Airport, "replacing the railroad as the city's leading economic contributor" (City of San Bernardino 2005). Following the war, the airfield became one of three maintenance facilities for jet engines. In 1948, the base was transferred to the United States Air Force and named the San Bernardino Air Force Base. The base was subsequently renamed the "Norton Air Force Base" in 1950 (City of San Bernardino 2005).

The city and surrounding areas continued to develop commercially through the 1940s and 1950s, effectively replacing agriculture in San Bernardino County. By the 1960s, the population of the city reached over 100,000 residents. Economic downturn would hit the city of San Bernardino in the 1990s, by 1991, the Santa Fe Railroad moved its offices out of the city, and in 1994, the Norton Air Force Base was closed (City of San Bernardino 2005).



Plate 3.2–4: 1925 view of Third Street in San Bernardino, facing F Street. (Image courtesy of the City of San Bernardino 2005)

4.0 RESEARCH DESIGN

The questions outlined in the research design include relevant topics that help facilitate a greater understanding of what the residents of the project area did during the historic period of the late nineteenth and early twentieth centuries, and how they changed throughout time. Questions of how these residents related to the environment, how they arranged themselves in space, and how they made a living all contribute details to the story of the history of the development of San Bernardino. These studies not only contribute to the reconstruction of local history, but also to broader research topics currently being pursued in the San Bernardino region and southern California in general. These questions help to answer the larger anthropological questions regarding how people historically adapt to and organize themselves under different social, economic, and environmental conditions.

The testing program for the 119 South Arrowhead Avenue Project will include historical research, test excavations (as outlined in Section 5.0), and the mapping of any features or artifacts and the locations of subsurface archaeological tests to be conducted. Primary objectives, such as the determination of the boundaries of any discoveries, depth of any archaeological deposits, stratigraphy, integrity, content, and spatial distribution of any subsurface artifacts and cultural ecofacts, is essential to the current testing phase of the program. Normally, a research orientation transcends these goals by expanding the meaning of information extracted from a site through the use of archaeological questions important in current scientific research. Regional and temporal research issues should be taken into consideration when posing such questions. However, because the presence of buried cultural resources is uncertain, the research design for the current project is limited in scope. The topics and associated research questions provided below address concerns specific to the project.

4.1 Historical Archival Results

The results of the preliminary archival research are primarily presented to provide the historical background for any deposits or features that may be encountered. Within the project area, the presence and contextual integrity of any potential deposits is unknown. However, based upon preliminary archival research, even disturbed samples can be verified and may be capable of supplying a reliable temporal range.

4.1.1 Archaeological Records Search Results

BFSA reviewed a records search completed by the South Central Coastal Information Center (SCCIC) at California State University, Fullerton (CSU Fullerton) for the project to determine the presence of any previously recorded cultural resources. The records search indicated that a total of 36 cultural resources are located within a one-half-mile radius of the subject property, none of which are located within the project boundaries. These resources are all historic and are associated with the residential and commercial development of this area of San Bernardino.

Specifically, the resources identified include historic residences, a hotel, commercial and industrial buildings, a railroad and railroad grades, historic building remains, portions of San Bernardino Chinatown, a historic military property, a former building location, schools, a government building, trash scatters, public utilities buildings, an artifact, and an opera house. The records search also indicates that a total of 30 cultural resource studies have been conducted within one-half mile of the project. Of these studies, one intersects the project boundaries (Hatheway 1998), which was a determination of eligibility for 50 buildings in the city of San Bernardino. None of these buildings are located within the 119 South Arrowhead Avenue Project.

BFSA also requested a Sacred Lands File search from the Native American Heritage Commission to search for the presence of any recorded Native American sacred sites or locations of religious or ceremonial importance within one mile of the project. However, as of the date of this report, no response has been received. However, representatives from Kizh Nation and the San Manuel Band have indicated to the City that areas within the city of San Bernardino are of interest due to the potential for prehistoric Native American sites. In light of the tribal interest in this area of the city, Native American representatives will be requested to monitor the archaeological investigations.

4.1.2 Historical Background

The following background information includes the entire subject property, beginning with the earliest available map for the area. According the 1887 lithograph map, the project comprised two whole blocks within the Waters Addition on the south side of First Street and between A and C streets (Figure 4.1–1). At that time, the entirety of the western block (between B and C streets) and most of the eastern block (between A and B streets) were comprised of a fruit tree grove. Depicted within the central portion of the eastern block are a residence with an outbuilding and a privy and depicted within the eastern portion of the eastern block is a large residence with an arbor. An artesian well is also labeled southwest of the intersection of A and First streets; however, its location is not specifically depicted.

By 1894, a portion of the property was mapped by the Sanborn Fire Insurance Company, the index of which indicates that the subject property was designated as blocks 101, 102, 103, and 104 (west to east). While no coverage is available for Block 101, portions of the western half of Block 102 and the southern third of blocks 103 and 104 are depicted on the 1894 Sanborn Map (Figure 4.1–2). The residence that was depicted at the northeast corner of the property on the 1887 lithograph map is located within Block 104 and is labeled as the C.P. (Charles Parker) Barrows Fruit Packing House with fruit drying racks located around the structure and a railroad spur leading to the structure from First Avenue. Barrows operated the fruit packing house at this location from at least 1891 through 1894 (*The Weekly Courier* 1891).

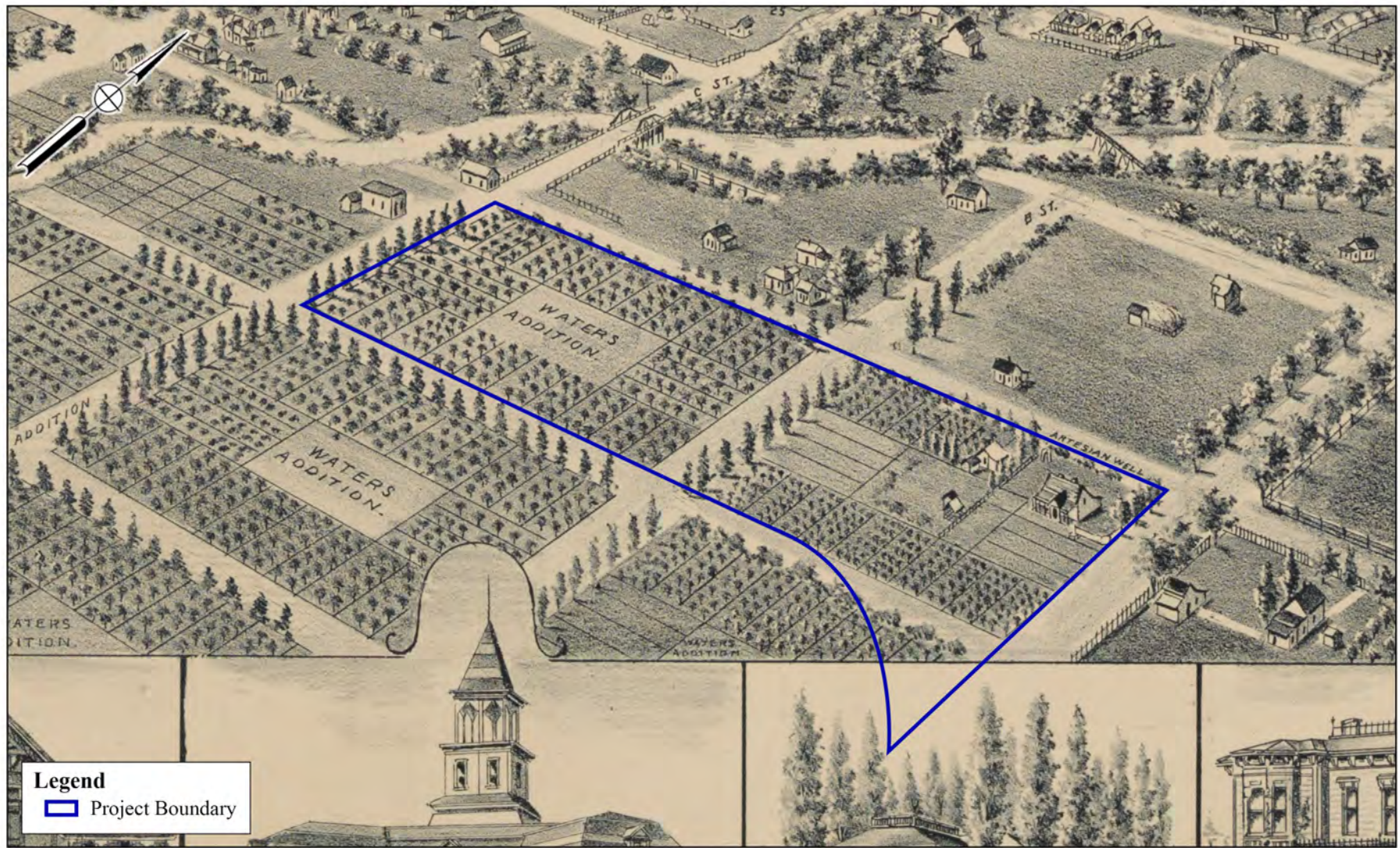


Figure 4.1-1

Project Location Shown on the 1887 Lithograph Map

The 119 South Arrowhead Avenue Project

(William W. Elliott [active ca. 1870 to ca. 1890], Lithographer; W.H. Syme & Co. Publisher)



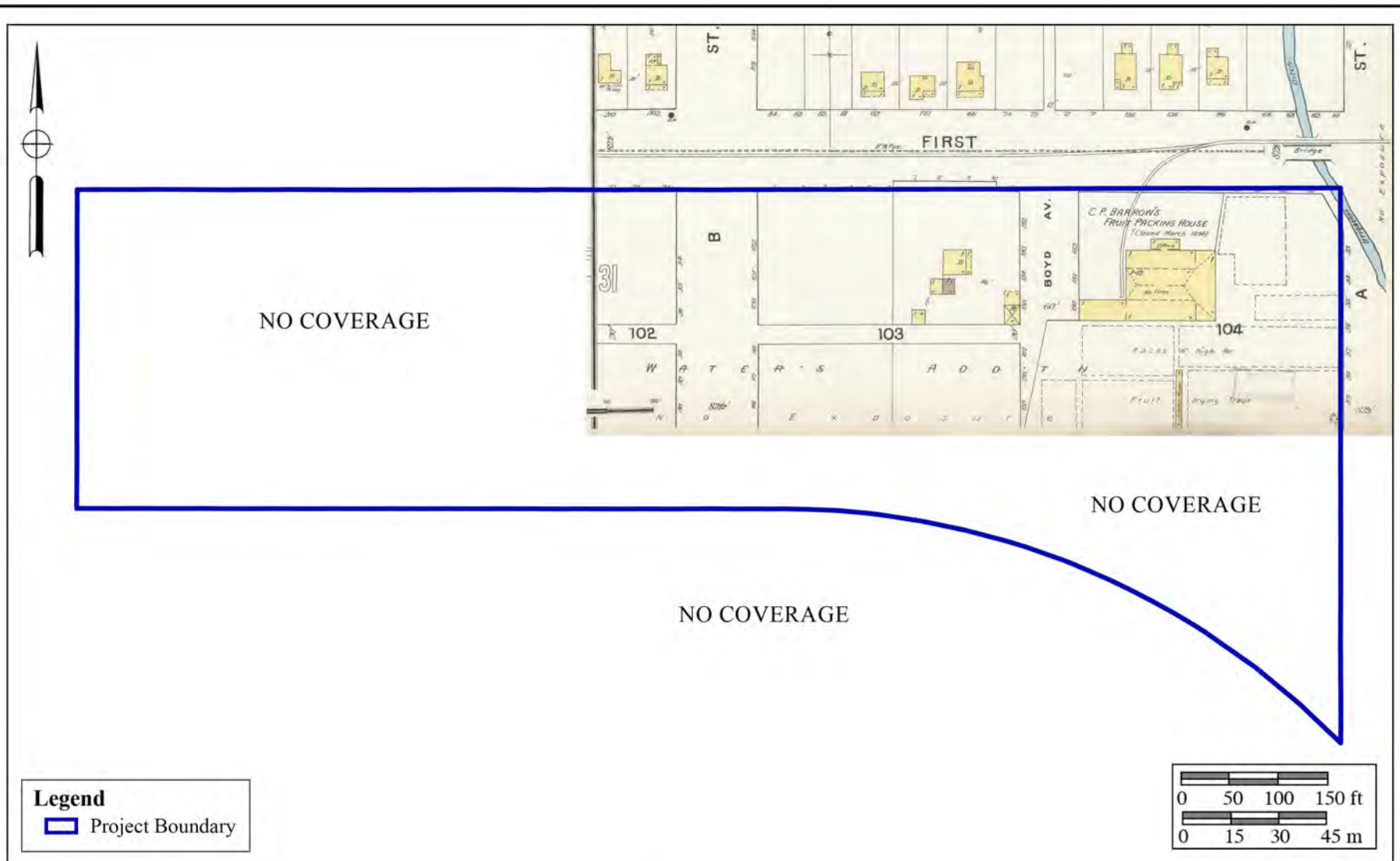


Figure 4.1-2
1894 Sanborn Map
 The 119 South Arrowhead Avenue Project

While no Sanborn map coverage is available for the western portion of the property until 1906, the 1896, 1898, and 1901 USGS *San Bernardino South* 15-minute scale maps depict one structure in the eastern portion of the project and one structure in the western portion (Figure 4.1–3). The eastern structure is likely the C.P. Barrows Fruit Packing House, as seen on the 1894 Sanborn Map (see Figure 4.1–2).

Archival research indicates that the western portion of the property (blocks 101 and 102) remained vacant until 1895, when it was purchased by John Joseph (J.J.) Hanford (Plate 4.1–1). Hanford purchased the property to construct a building for the Hanford Iron Works, which was established in 1892 (Brown and Boyd 1922:916):

When Hanford learned that the California Southern Railway was still looking for someone to start a foundry in San Bernardino to make their work, he immediately went there and secured the contract from G. W. Prescott, the master mechanic of the road. This was February, 1892, and was the inception of the “Hanford Iron Works.”

Like everything which Mr. Hanford was connected, it was an instant success, growing rapidly in every line. Early in 1893 Mr. Hanford bought his partner’s interest, and from that time until he passed on he was the sole owner and proprietor of the Hanford Iron Works. So rapidly did the volume of his business increase that it outgrew the quarters in which it was started, and Mr. Hanford erected the foundry on its present site in the spring of 1895. In 1904 he erected the machine and pattern shop in front of the foundry.

In 1910 the Hanford Iron Works secured a patent for driving a nail on a slat, and proceeded to build and manufacture an orange box making machine. This is, of course, a side issue with the Works, as the foundry has nearly all the time had all it could handle producing castings for the Santa Fe Railway company and other business it has secured, much of it coming from Arizona and Nevada.

After the passing of Mr. Hanford on November 12, 1917, the business was conducted by his widow, Joan E. Hanford, and his son, William J. Hanford.

The Hanford Iron Works enjoys the distinction of being the second oldest foundry making castings for the Santa Fe Railroad in point of years and continuous service. (Brown and Boyd 1922:917–918)

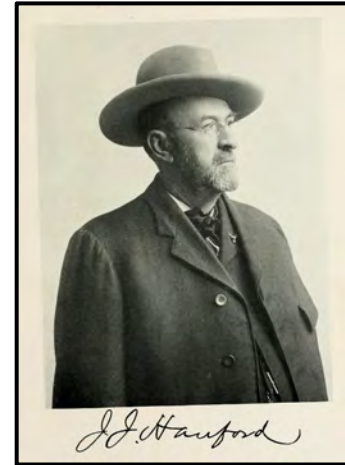
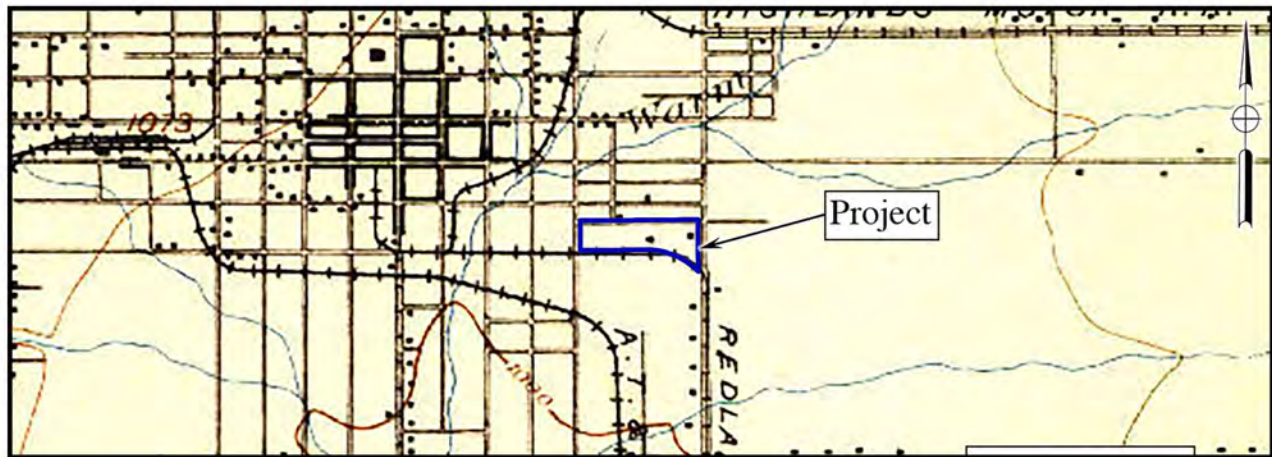
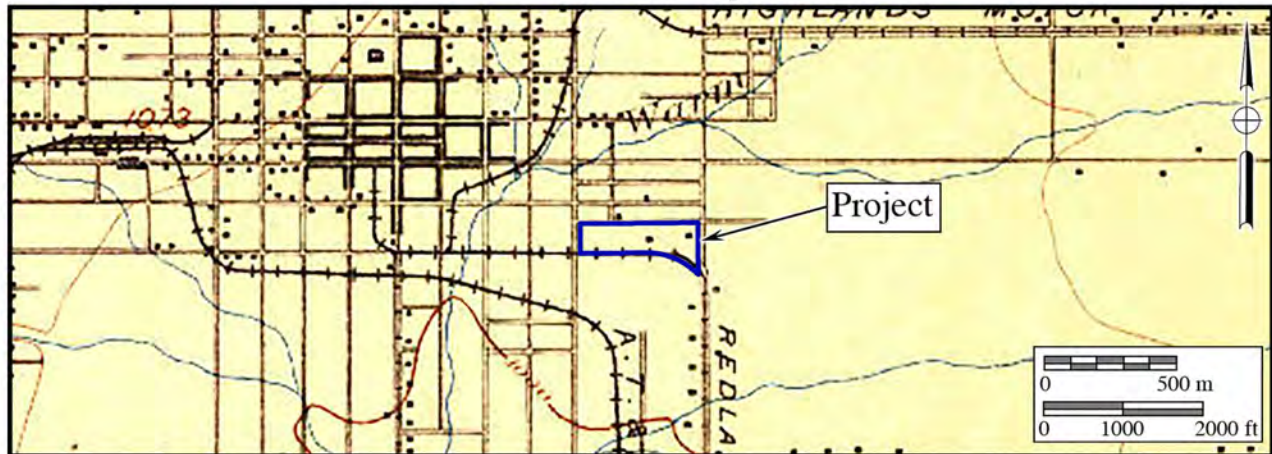


Plate 4.1–1: J.J. Hanford.
*Photograph courtesy of
(Brown and Boyd 1922)*

1896 USGS Map



1898 USGS Map



1901 USGS Map

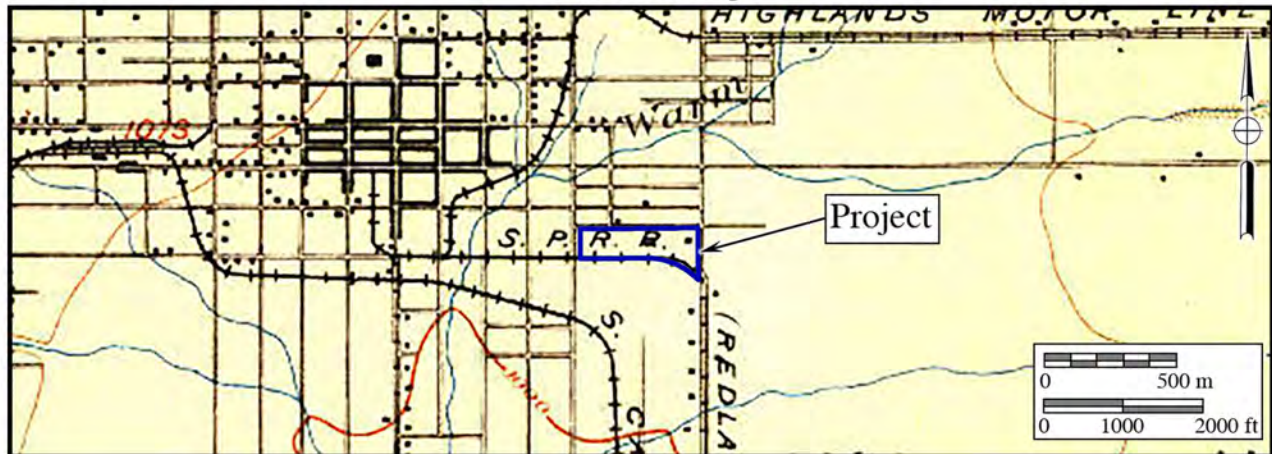


Figure 4.1–3

Historic USGS Maps

The 119 South Arrowhead Avenue Project

USGS San Bernardino South Quadrangle (15-minute series)



By 1918, the Hanford Iron Works (Hanford Foundry Company) included both iron and brass foundries, manufacturing structural steel (“I” beams, angles, channel irons, steel column, etc.), railroad, mining, milling, and engine castings. The Hanford Foundry Company also continued to secure the contract with the Santa Fe Railroad for all of the cast iron work “in the district between Seligman, Arizona, and San Diego, and for all the branch lines” (*San Bernardino County Sun* 1918). In 1919, W.J. Hanford announced plans to expand the plant and add a dedicated steel department (*San Bernardino County Sun* 1919). The Hanford Foundry Company continued to grow through the 1940s, employing over 200 people and securing contracts from the Southern Sierras Power Company (*San Bernardino County Sun* 1931) and the United States Navy (*San Bernardino County Sun* 1941). In 1953, the second story of the original Hanford Foundry Company building was removed due to safety issues (Plate 4.1–2).



Plate 4.1–2: View of the Hanford Foundry Company building from the intersection of Arrowhead Avenue and the railroad tracks, facing northeast.
(Photograph courtesy of the *San Bernardino County Sun* 1953)

By 1951, the Hanford Foundry Company employed over 400 people but by the late 1960s, they employed just under 300 people (*San Bernardino County Sun* 1968, 1989). In 1968, the Hanford Foundry Company was purchased by General Alloys Company of Boston, Massachusetts (*San Bernardino County Sun* 1968). Business did not improve, however, and in 1986, the Hanford Foundry Company shuttered its doors after filing for bankruptcy with just 30 employees left on its

payroll. Two years later, demolition began to remove all structures associated with the historic Hanford Foundry Company (*San Bernardino County Sun* 1988) (Plate 4.1–3).

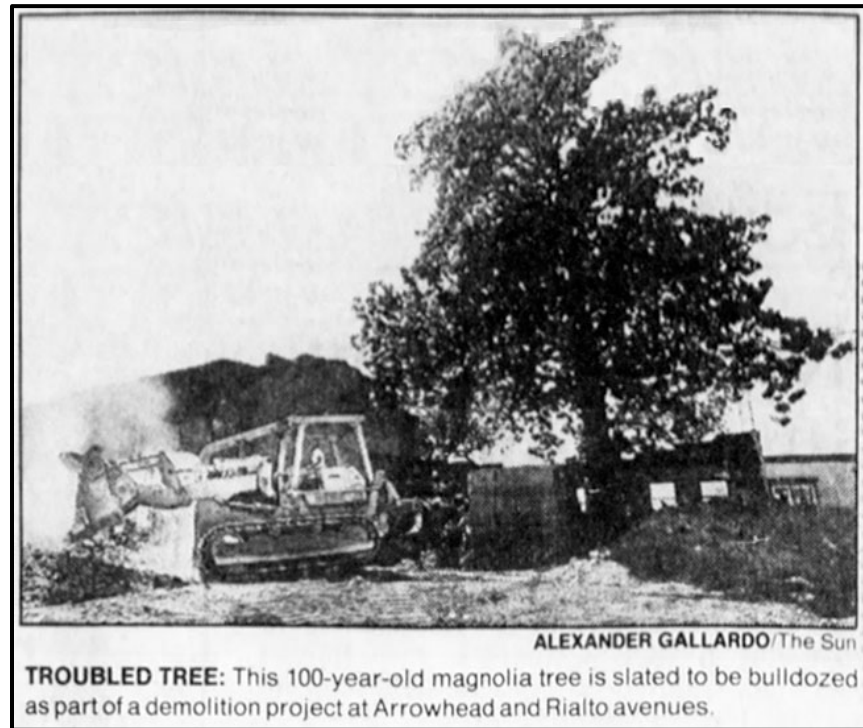


Plate 4.1–3: Demolition of the Hanford Foundry Company facility from the intersection of Arrowhead and Rialto avenues, facing southeast.
(*Photograph courtesy of the San Bernardino County Sun 1988*)

The 1906 Sanborn Map indicates that the C.P. Barrows Fruit Packing House structure was taken over by T.A. (Thomas A.) Blakeley's Fertilizer Works (Figure 4.1–4). T.A. Blakeley's Fertilizer Works added an office on Boyd Avenue, expanding an existing outbuilding on Block 103. Within the northeast portion of Block 102, one dwelling was constructed at 205 First Street and one dwelling with an outbuilding was constructed at 215 First Street. Within the northwest portion of Block 101, a dwelling with an outbuilding was constructed at 281 First Street. The southern half of Block 101 was purchased by J.J. Hanford, where he constructed one large residence in the northwest corner, a smaller residence in the northeast corner, five additional structures, and the Hanford Iron Works, which was comprised of a machine shop and foundry building with an earthen floor.

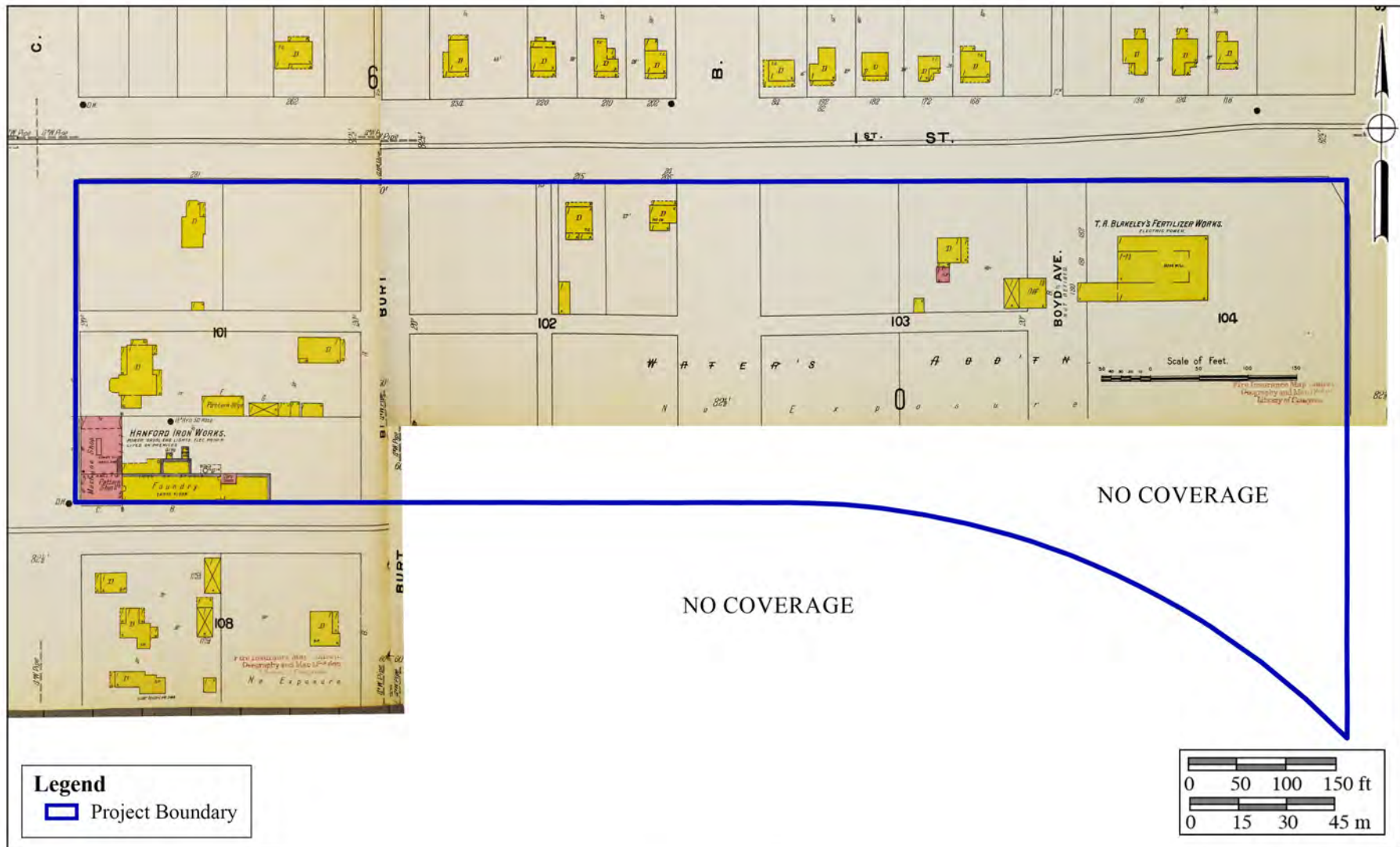


Figure 4.1-4
1906 Sanborn Map
 The 119 South Arrowhead Avenue Project

Archival research indicates that T.A. Blakeley's Fertilizer Works was established "in the old cannery on East First street" by 1901 (*San Bernardino County Sun* 1901). Residents of the area were unhappy with the presence of the plant, and in 1907, the city council gave "the Blakely fertilizer people 50 days to move their plant outside the city limits" (*San Bernardino County Sun* 1907). San Bernardino city directories between 1904 and 1906 indicate that T.A. Blakeley's Fertilizer Works was renamed the Woodbridge Chemical Works, although newspaper articles refer to the building as the Blakely Plant (Ancestry.com 2011).

In 1909, the name of the fertilizer company was changed to San Bernardino Fertilizer Works (*San Bernardino County Sun* 1909) and was still operating on the "southside of first between A and B" (Ancestry.com 2011). According to the city directories, after 1915, the fertilizer company was no longer in operation on Block 104. The directories also indicate that between 1912 and 1913, C Street was renamed South Arrowhead Avenue, and between 1919 and 1920, First Street was renamed Rialto Avenue (Ancestry.com 2011). The 1930 aerial photograph (Figure 4.1–5) depicts all of the structures seen on the 1906 Sanborn Map. Additionally, the Hanford Foundry Company had expanded by this time. By 1938, T.A. Blakeley's Fertilizer Works on Block 104 had been demolished. No changes are visible to blocks 101, 102, and 103 (see Figure 4.1–5).

The 1950 Sanborn Map indicates that a residence located at 147 Rialto Avenue replaced T.A. Blakeley's Fertilizer Works on Block 104 (Figure 4.1–6). The office that was constructed on Boyd Avenue was removed, as was the dwelling that was situated to the west of it on Block 103. Two new dwellings had been constructed on Block 103 at 169 and 195 Rialto Avenue. Blocks 101 and 102 were combined, and the residences at 215 and 205 Rialto Avenue (First Avenue) were demolished. A new residence was constructed at 205 Rialto Avenue. The dwellings that were located on Block 101 had been removed for the expansion of the Hanford Foundry Company facility.

The 1951 Sanborn Map depicts a new Hanford Foundry Company office at the corner of South Arrowhead and Rialto avenues and the removal of the old office (Figure 4.1–7). The dwelling located at 205 Rialto Avenue was removed, and the residence located at 147 Rialto Avenue was converted to a church. The 1950 and 1951 expansions of the Hanford Foundry Company facility are clearly visible on the 1953 aerial photograph (see Figure 4.1–5), which also indicates that the railroad spit located in the southern half of Block 104 was removed by this time and Boyd Avenue was formally punched through.

1930 Aerial Photograph



1938 Aerial Photograph



1953 Aerial Photograph

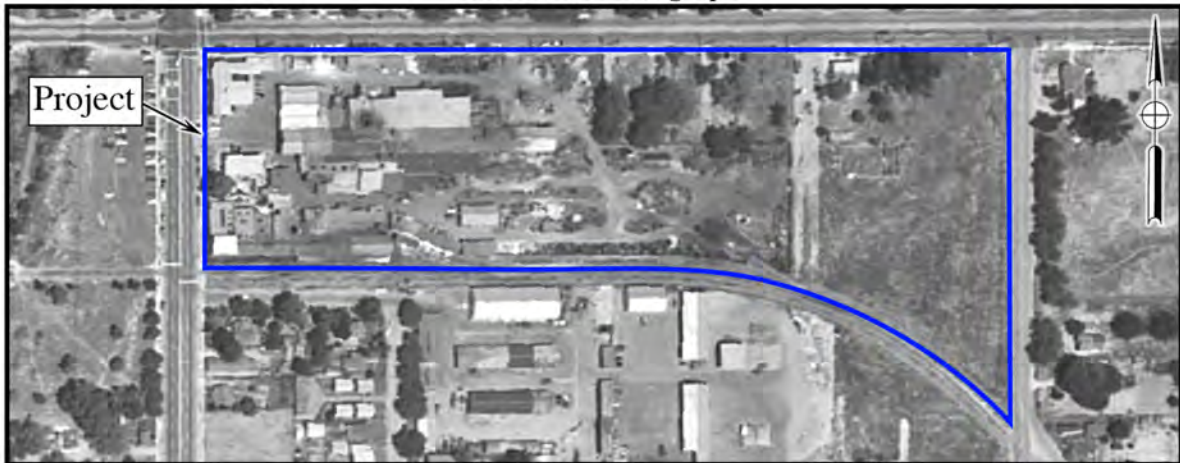


Figure 4.1-5
1930, 1938, and 1953 Aerial Photographs
The 119 South Arrowhead Avenue Project

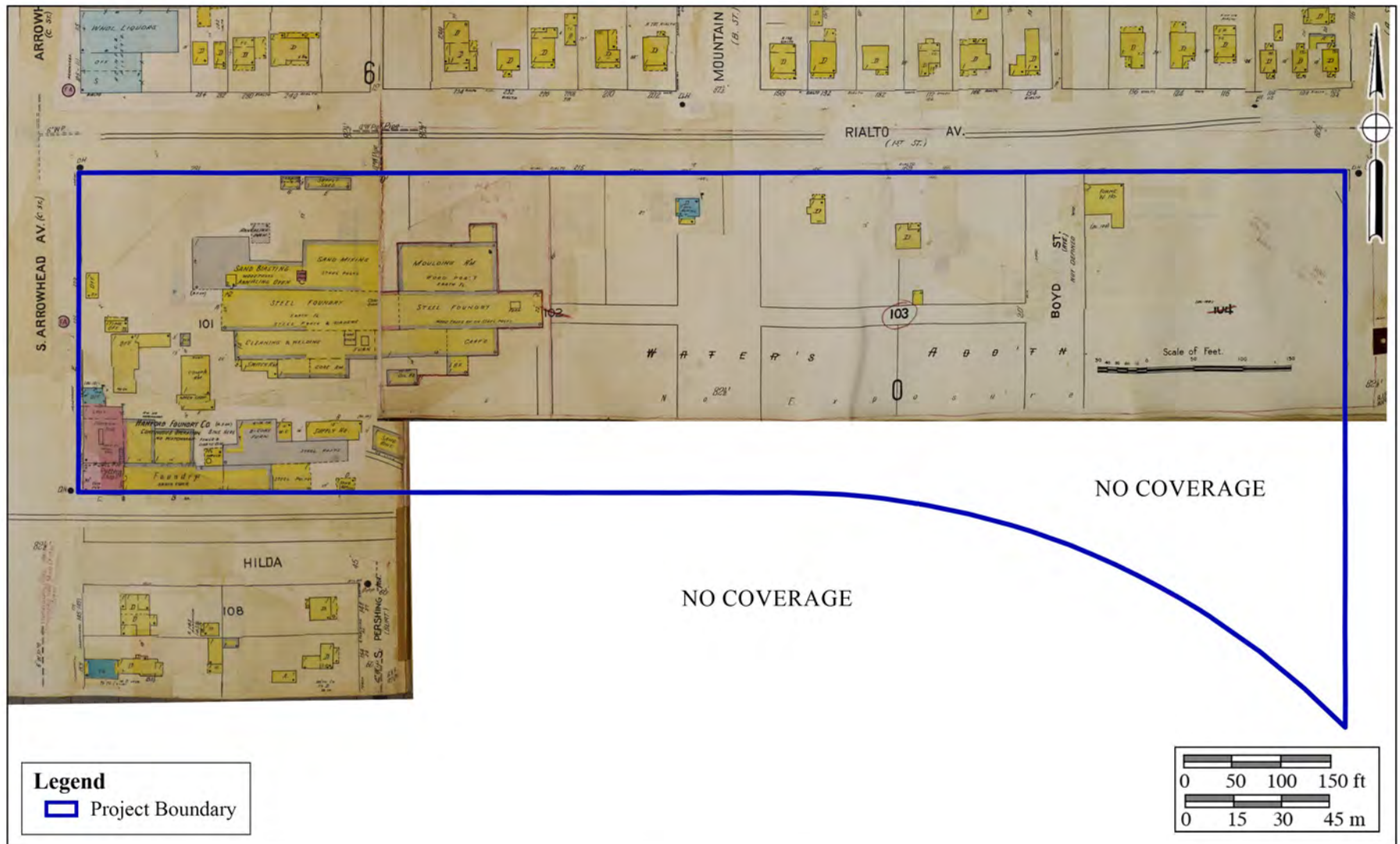


Figure 4.1-6
1950 Sanborn Map
 The 119 South Arrowhead Avenue Project

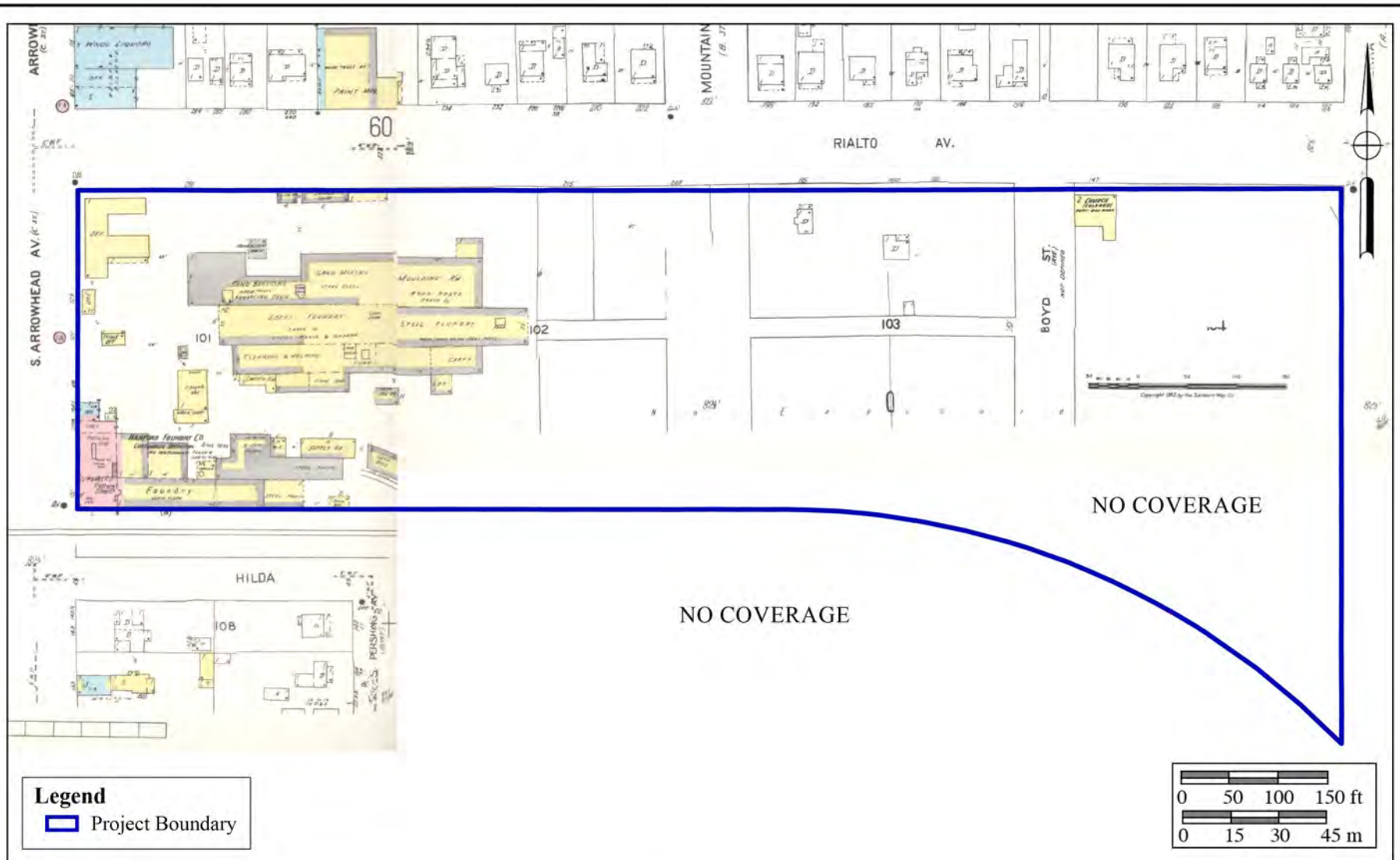


Figure 4.1-7
1951 Sanborn Map
 The 119 South Arrowhead Avenue Project

The 1956 Sanborn Map indicates that an office at 281 Rialto Avenue, a tool house at 205 Rialto Avenue, and a pattern shop building were added to the Hanford Foundry Company property (Figure 4.1–8). Another office was constructed at 195 Rialto Avenue and just east of the church, a news agency and a steel fabrication facility with an office were constructed at 131 and 115 Rialto Avenue, respectively. By 1958, the news agency was converted to a heater warehouse (Figure 4.1–9). The 1959 Sanborn Map indicates that the residence at 187 Rialto Avenue was removed between 1958 and 1959 (Figure 4.1–10). Also by 1959, the Hanford Foundry Company property had continued to expand eastward into Block 103 (Figure 4.1–11). By 1968, the remaining structure at 169 Rialto Avenue had been demolished for a parking lot and the steel fabricating facility had expanded southward. Few changes are visible on subsequent aerial photographs until 1988/1990, when the subject property was cleared of all structures (see Figure 4.1–11).

Historically, the locations of the structures within the APE and on the surrounding parcels suggest that the trash pits and privy pits are likely located along the center spine of the block and in the vacant areas of the project visible on the lithograph and Sanborn maps. Based upon the map data, a high probability exists for trash pits and privies to be located within eastern half of the APE. Typically, within city boundaries in southern California, on-site trash disposal and outdoor privies were abandoned following city ordinances and the availability of water and sewer piping. This led to indoor sanitary plumbing (toilets), which used septic systems before the development of the city sewage system. The gradual transition to indoor toilets began in the 1890s.

The map data and historical research also indicate that there is a potential for the discovery of prehistoric cultural resources. The close proximity of Warm Creek to the project indicates that this property would have been attractive to prehistoric inhabitants. Further, the early development of the property and surrounding area has likely masked surface cultural resources, inhibiting the ability to discover such resources in recent cultural resources studies.

4.2 Research Goals

The primary goal of the research design is to attempt to understand the way in which people have used the land and resources within the project area through time, as well as to aid in the determination of resource significance. As the main objective of the investigation is to identify the presence/absence and potential site significance of any cultural resources located within the designated impact areas, the goal of the research design is to investigate the role and importance of on-site cultural resources and determine if further mitigation measures are warranted. The discussion includes a consideration of the types of data necessary in order to address the relevant research questions pertaining to the historic and prehistoric use of the project area. Therefore, the ATP will focus upon determining the role of the project area and any identified cultural deposits within the context of the prehistoric occupation and early development of San Bernardino. Specifically, investigation of cultural remains will focus upon the origin, association, and content of the deposits as they relate to the known history and prehistory of the project area.

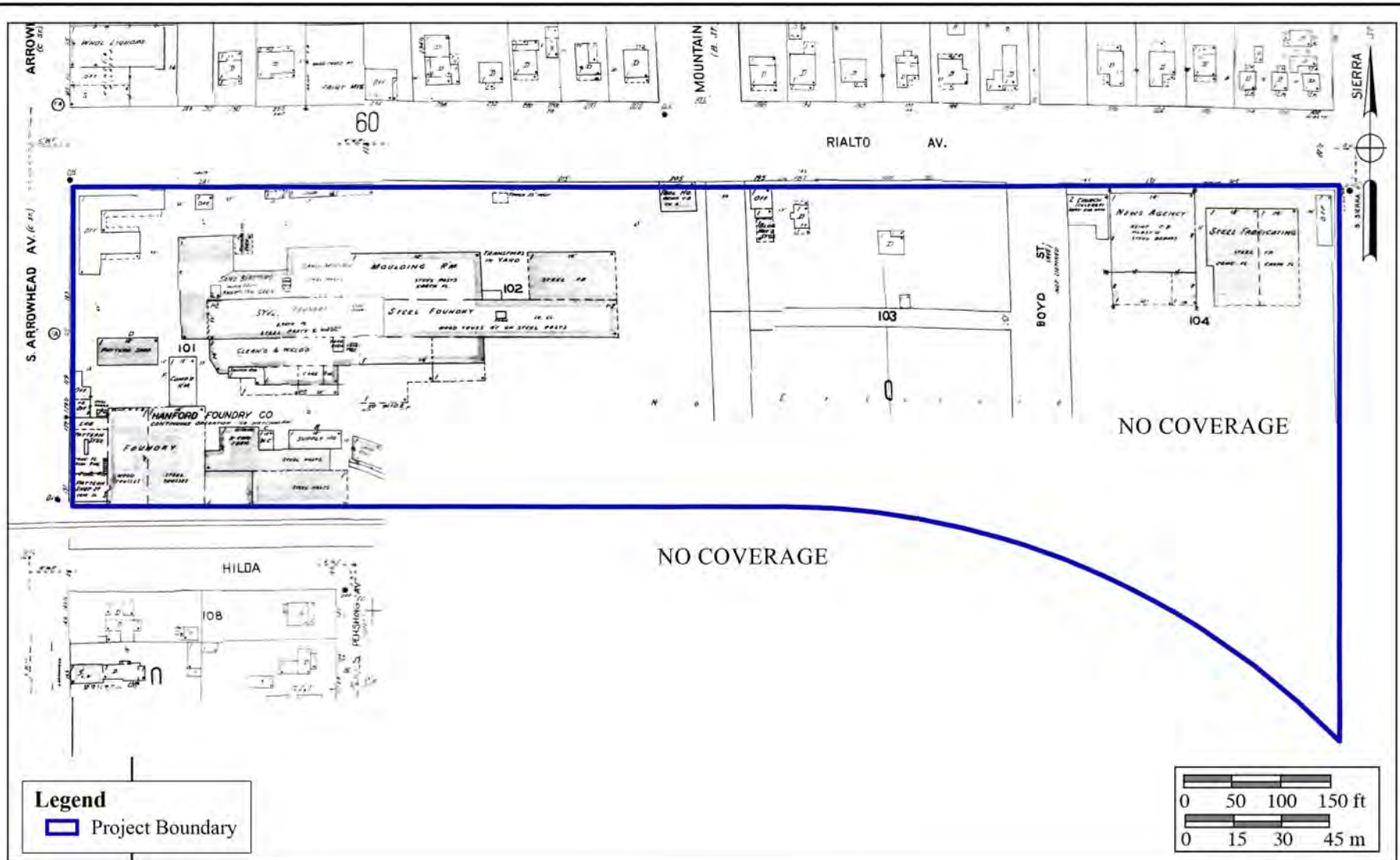


Figure 4.1-8
1956 Sanborn Map
 The 119 South Arrowhead Avenue Project

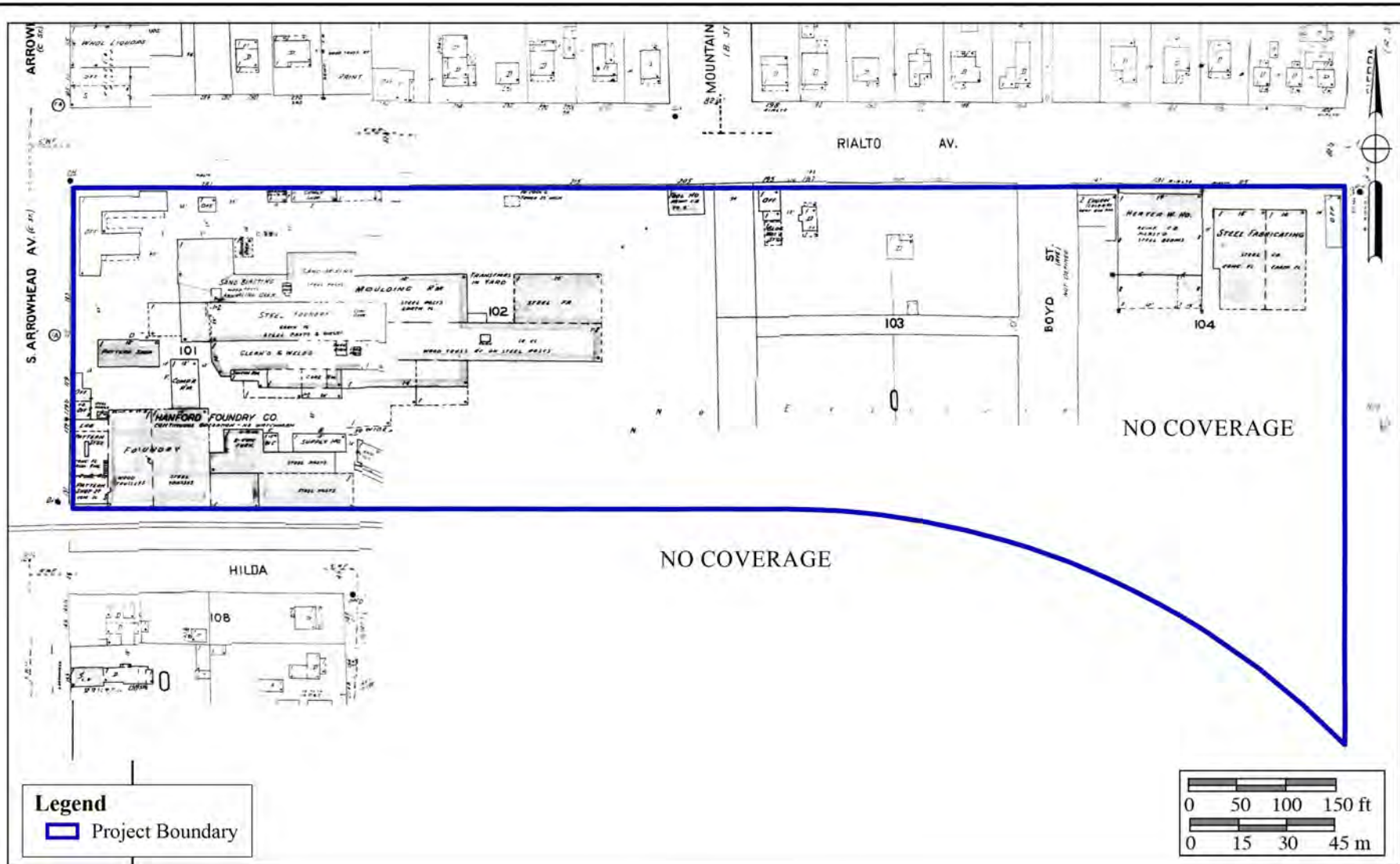


Figure 4.1-9
1958 Sanborn Map
 The 119 South Arrowhead Avenue Project

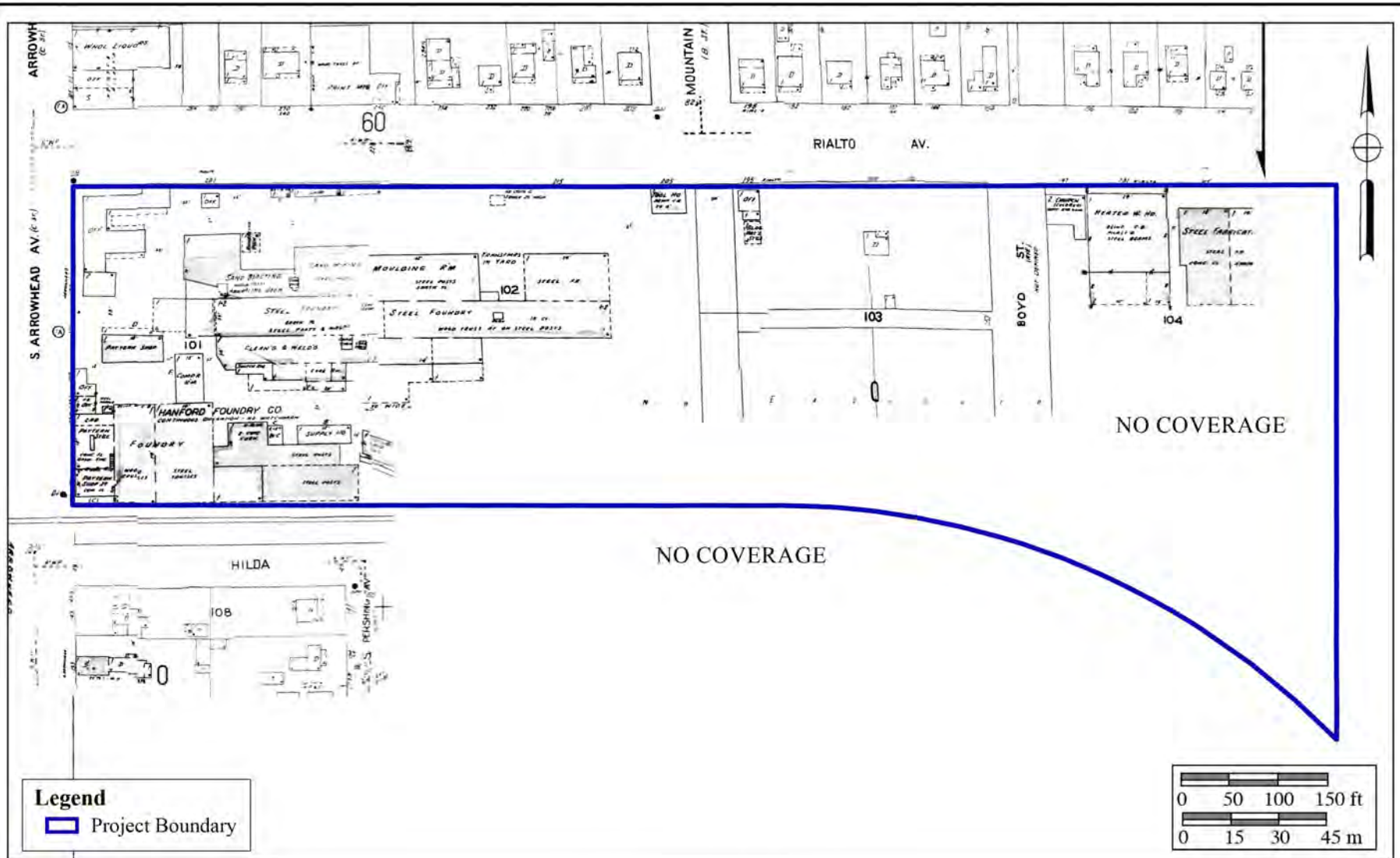


Figure 4.1-10
1959 Sanborn Map
 The 119 South Arrowhead Avenue Project

1959 Aerial Photograph



1968 Aerial Photograph



1990 Aerial Photograph



Figure 4.1–11
1959, 1968, and 1990 Aerial Photographs
The 119 South Arrowhead Avenue Project



4.2.1 Research Questions and Data Needs

For the current project, the study area under investigation is the southwest portion of San Bernardino County. Given the area involved and the narrow focus of the testing program, the research design for this project was necessarily limited and general in nature. Since the main objective of the investigation was to identify the presence of and potential impacts to cultural resources, the goal is not necessarily to answer wide-reaching theories regarding the development of early southern California, but to investigate the role and importance of the identified resources. Although testing-level investigations are limited in terms of the amount of information available, several specific research questions were developed that could be used to guide the initial investigations of any observed cultural resources.

Data Needs

At the preliminary testing level, the principal research objective is a generalized investigation of changing settlement patterns in both the prehistoric and historic periods within the study area. The overall goal is to understand settlement and resource procurement patterns of the project area occupants. Therefore, adequate information on site function, context, and chronology from an archaeological perspective is essential for the investigation. The fieldwork and archival research will be undertaken with these primary research goals in mind:

- 1) To identify cultural resources occurring within the project;
- 2) To determine, if possible, site type and function, context of the deposit, and chronological placement of each cultural resource identified;
- 3) To place each cultural resource identified within a regional perspective; and
- 4) To provide recommendations for the treatment of each of the cultural resources identified.

Prehistoric Research Questions:

- Can located cultural resources be situated with a specific time period, population, or individual?
- Do the types of located cultural resources allow a site activity/function to be determined from a preliminary investigation? What are the site activities? What is the site function? What resources were exploited?
- How do the located sites compare to others reported from different surveys conducted in the area?
- How do the located sites fit existing models of settlement and subsistence for valley environments of the region?

Historic Research Questions:

- If artifact deposits are identified, under what circumstances were the materials

- discarded, and can the deposition be attributed to residential or commercial site occupation?
- Do artifact deposits reflect specific information, such as gender, age, socioeconomic status, or ethnicity regarding the people who lived or worked in the area?
 - In terms of potential archaeological deposits identified within the APE impact areas, can a distinction be made between domestic and commercial deposition?
 - Can a distinction be made between any period of residential use of the property visible on lithograph and Sanborn maps between 1887 and the 1950s?
 - If deposits are present, do they reflect economic change through time or are they representative of a single economic level of deposition?

Integrity

In order for a site to be considered significant, it must be established that enough of the deposit remains within the impact areas in order for it to retain integrity. This is particularly true where previous construction across the project may have had impacts to site integrity. According to the California Register of Historical Resources, “integrity” is defined as “the authenticity of an historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.”

As the ground surface of the property is presently exposed, the area should be investigated for any evidence of previous grading or ground disturbances that perhaps resulted in uneven ground surfaces compared to adjacent lots, evidence of the movement of soil, or vehicle activity. All subsurface excavations should be thoroughly investigated and their profiles and soil descriptions compared to ascertain the existing state of the stratigraphy of the site. Any observed disturbances should be weighed against the quality and quantity of data that was gathered during the proposed testing program. Therefore, the following research questions must be addressed with regards to site integrity.

Integrity-Based Research Questions:

- How have the property and any historic deposits or features been disturbed?
- Does this portion of the site retain adequate integrity to yield important information?
- Are observed disturbances superficial or have they impacted the deposit to a greater depth?
- How does the existing topography compare to adjacent properties in terms of cut or fill?
- Have any disturbances compromised the ability to analyze material culture contextually?

The research questions presented herein will be used to guide the accumulation of data at both the archival and archaeological levels, as well as the subsequent analysis of any recovered material. The results of the archival research, field investigation, and laboratory analysis will then be used to evaluate the significance of the identified deposits. The basic data requirements for the study of historic economic practices include site features and site assemblages, as well as archival information on the time and type of occupation, origin of deposits, household composition, ethnicity of occupants, technology, and land ownership.

Should cultural deposits be encountered, archaeological field investigations will focus upon the following information:

- Integrity of the deposit or feature is critically important when determining significance, particularly in urban settings when continued development has a significant impact on previously accumulated deposits.

Archaeological laboratory investigations focus upon the following information:

- Are Native American artifacts present that reflect prehistoric use of this location?
- The presence of discrete clusters of functionally related items may indicate a variety of different economic activities such as mercantile enterprises, bootlegging, and general household refuse.
- The presence and relative density of non-local items such as Chinese coins (wens), ceramics with Asian maker's marks, ethnic-specific ornamental items, and religious jewelry such as crosses may suggest different ethnic groups.
- The presence and relative density of personal items such as women's jewelry, combs, brushes, curlers, needles, thimbles, and garter clips, or men's work boots and cufflinks, may indicate gender.
- The presence and relative density of subsistence items such as different types of tins, bottles, shell, and bone remains may suggest economic status, food availability, or personal preference.
- The presence and relative density of personal items such as marbles, porcelain doll fragments, toy cars, cap guns, toy china fragments, and toy banks may indicate the presence of children.
- The types and quantities of food bone may reflect consumer trends and economic status.
- The presence and relative density of luxury items such as ornamental lamps, fine china, silverware, and perfume bottles may indicate economic status.

5.0 ARCHAEOLOGICAL TEST PLAN

The ATP for the 119 South Arrowhead Avenue Project will include testing the property to search for archaeological features or deposits. If archaeological features, deposits, or artifacts are discovered during testing, these shall be evaluated for significance in accordance with City of San Bernardino guidelines and the Public Resources Code. Significant cultural resources would require the implementation of mitigation measures if additional construction work represents a source of adverse impacts to any significant historic or prehistoric components of the property. The ATP will include:

1. The testing program will consist of up to 16 mechanical trenches to be excavated where historical data suggests the greatest potential to encounter historic deposits.
2. Should features be encountered that merit more intense investigations, hand-excavated test units will be included in the program to provide detailed information needed to address research potential and significance evaluations.
3. The archaeological fieldwork will include detailed mapping and recordation of all historic elements encountered during the investigations, as required by City of San Bernardino guidelines.
4. Any artifacts recovered during the field investigations will be returned to the consultant's laboratory for analysis. All historic and prehistoric artifacts will be cleaned and cataloged, and all information will be included in the project's database. Unless the Native American representatives request the prehistoric artifacts to be repatriated to the tribes, all artifacts, or a representative sample of the collection, from the project will be prepared for permanent curation at the Western Science Center (WSC) in Hemet, California.
5. If historic or prehistoric features or deposits are discovered, the discovery will be recorded as a cultural site and will be registered at the SCCIC at CSU Fullerton.
6. A report of findings will be submitted to the City to detail the results of the field investigations and, if historic or prehistoric resources are identified, significance evaluations and recommendations for mitigation of impacts. Mitigation of impacts to any significant cultural resources could include data recovery excavations targeted to recover archaeological samples from important cultural deposits or features. Statutory requirements of CEQA (Section 15064.5) will be followed in evaluating the significance of each cultural resource. Specific definitions for archaeological resource type(s) are established by the State Historic Preservation Office (SHPO 1995). All reporting will follow the Office of Historic Preservation's Archaeological Resource Management Report Guidelines (OHP 1990).

5.1 Field Methodology

The methodology to be employed for the test program follows standard archaeological field procedures and should provide sufficient information to determine the presence or absence of subsurface deposits, assess site significance if resources are present, and evaluate potential impacts to those resources. The areas of high potential for subsurface deposits were defined based upon review of historic maps and the limits of the property. Figures 5.1–1 to 5.1–3 illustrate the evolving pattern of the historic structures from 1894, 1906, and 1950, respectively. Proposed trenches targeted to explore recorded physical structures or features that appear on the 1894, 1906, and 1950 Sanborn maps are illustrated in these figures. Figure 5.1–4 shows the targeted trench locations on a current aerial photograph. Up to 16 trenches are planned as part of the archaeological investigation.

Based upon the uncertainty of buried deposits within the project, areas of potential impacts cannot be determined at this time. Rather, the excavation of trenches across the property will serve to identify buried deposits that may then be evaluated for significance. For the archaeological testing component, the locations of the trenches correlate to original structure locations identified on the lithograph and Sanborn maps, which are potential locations for buried trash deposits. Based upon the noted considerations, the protocol for the implementation of this ATP includes the following procedures:

- Any surface artifacts exposed by earthwork or trenching will be mapped, recorded, and collected. A map will provide the general surface expressions of the site and the site boundaries. All mapping to be conducted will be accomplished using Global Positioning System units and data applicable to the project base maps.
- The field investigation will include the excavation of mechanical trenches at locations determined to have a high potential for historic deposits. Mechanical trenching will serve to identify the composition of any subsurface archaeological deposits encountered. Trenches will be placed in or near areas of estimated historic deposit locations. The positions of the historic buildings on the 1888, 1906, and 1950 Sanborn maps have been overlain on the project's aerial photograph to illustrate the rationale for the selected trench locations (see Figures 5.1–1 to 5.1–3). Excavation trenches will be approximately 18 inches (45 centimeters) wide, 20 to 60 feet (six to 18 meters) long, and averaging five feet (1.5 meters) in depth (based upon extent of the deposit). Trench length and depth may also be dependent upon the area available for trenching, the archaeological materials encountered, and general safety concerns. Soil profiles and notes will be completed for the excavation trenches.

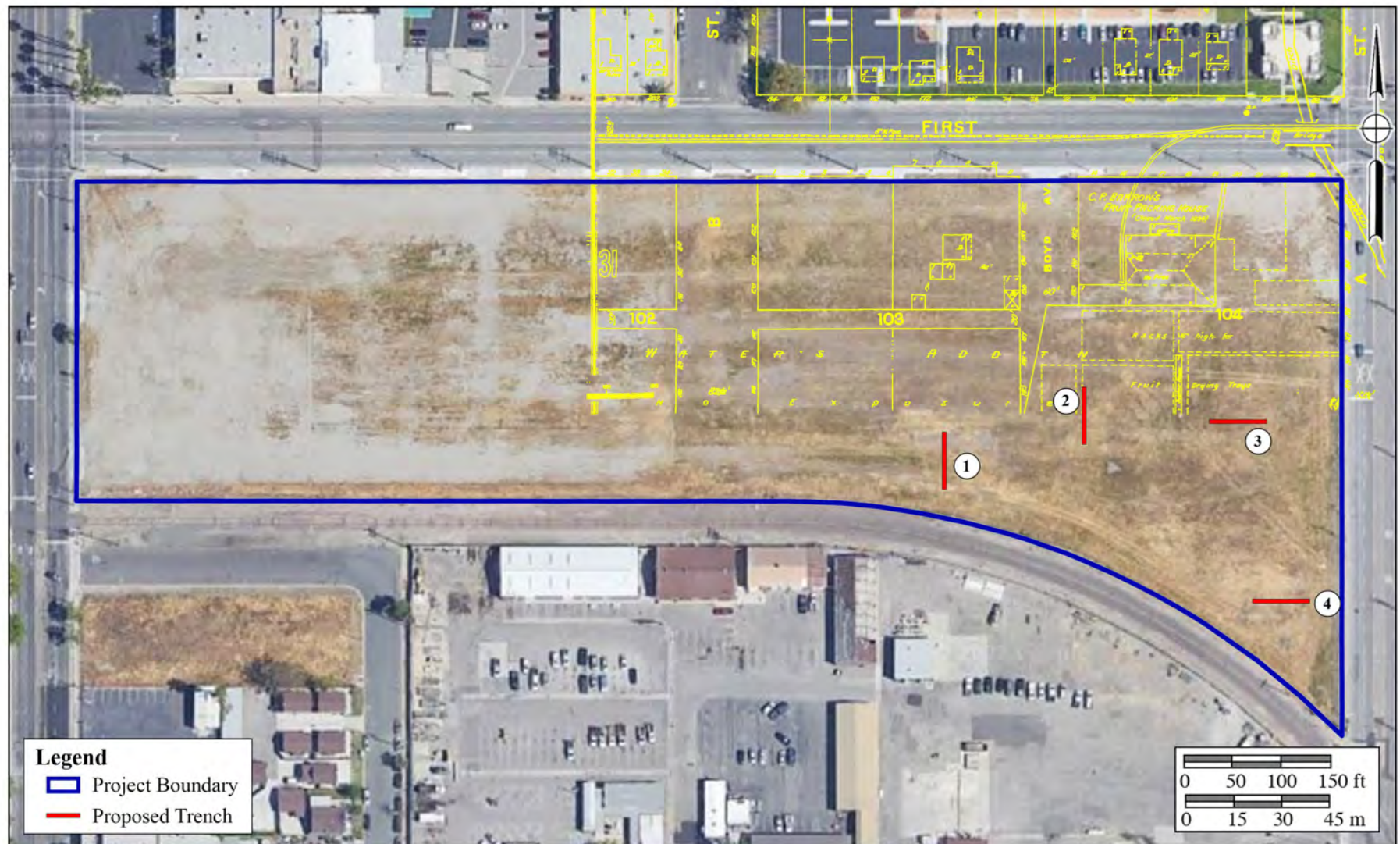


Figure 5.1-1
Proposed Trenches Shown on the 1894 Sanborn Map
 The 119 South Arrowhead Avenue Project



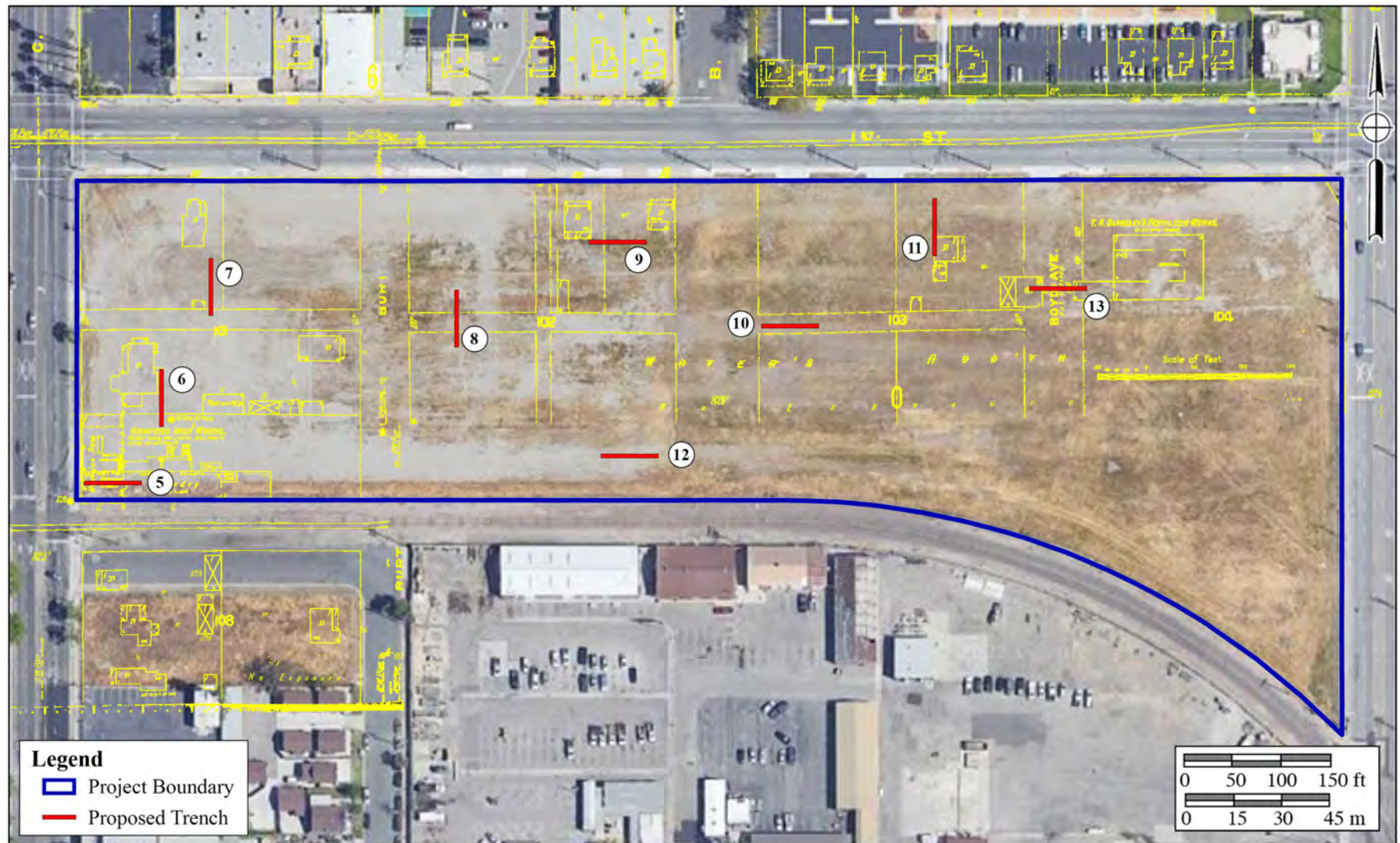


Figure 5.1-2
Proposed Trenches Shown on the 1906 Sanborn Map
 The 119 South Arrowhead Avenue Project



Figure 5.1-3
Proposed Trenches Shown on the 1950 Sanborn Map
 The 119 South Arrowhead Avenue Project

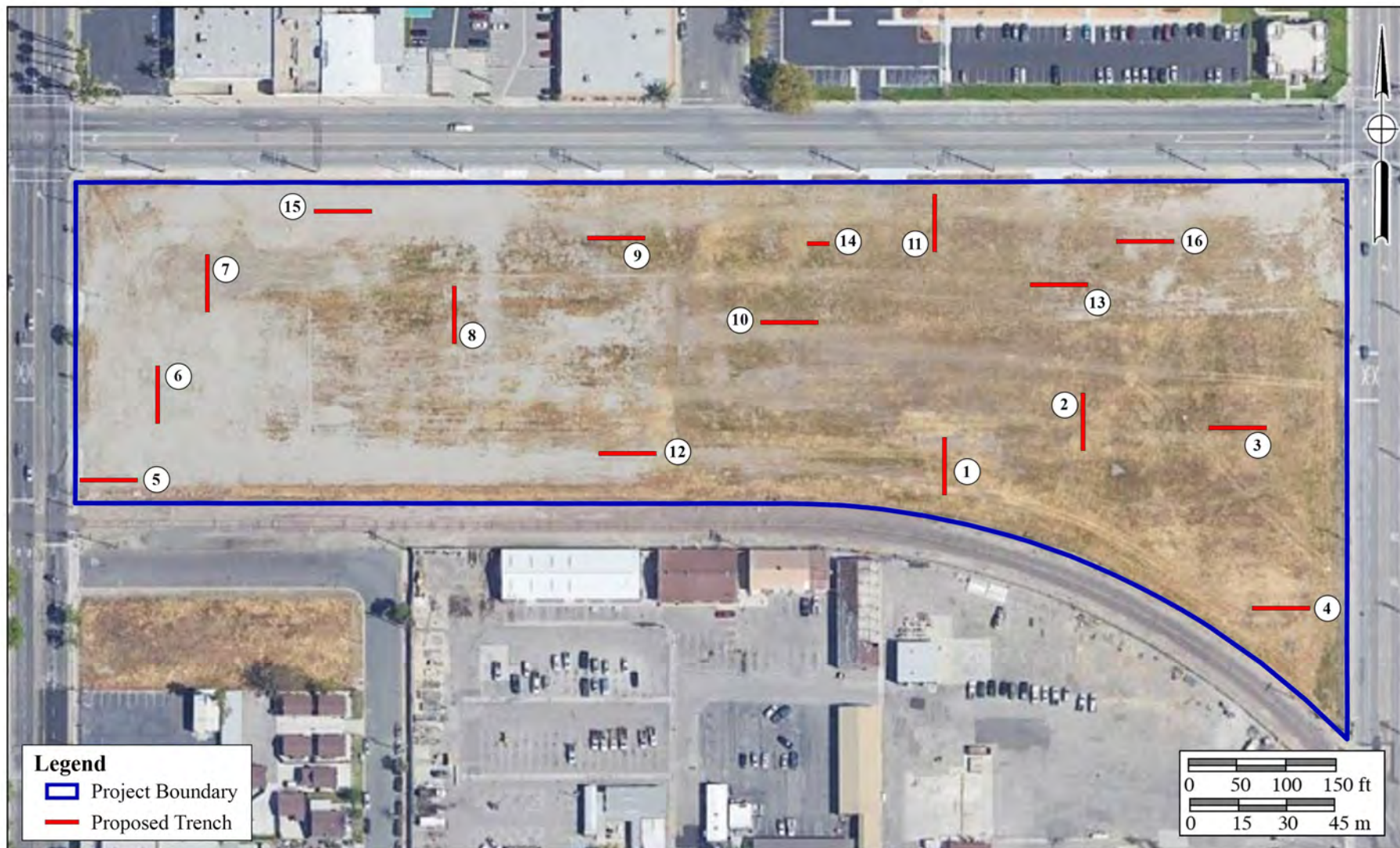


Figure 5.1-4
Proposed Trenches Shown on a Current Aerial Photograph
 The 119 South Arrowhead Avenue Project

- Soils from the trench excavations will be sampled at regular horizontal and vertical intervals and sifted through one-eighth-inch screens to recover artifacts. In addition, representative diagnostic artifacts will also be collected from non-screened mechanical excavation soil piles to further characterize the sample. The quantity of soil sampled will be dependent upon factors of artifact density, disturbance, cobbles and fill, and depth.
- If the trenching program identifies intact and potentially significant historic or prehistoric deposits, a more focused investigation will be initiated. Standard one-square-meter test unit excavations will be used to gather detailed information regarding potentially important cultural deposits. All test unit excavations will follow standard archaeological protocols for excavation, screening, recovery, and recordation of test unit results.
- If archaeological features or deposits are discovered, the discovery will be recorded, and Department of Parks and Recreation (DPR) forms will be registered at the SCCIC at CSU Fullerton.
- All subsurface investigations and ground-disturbing activities at the project will be monitored by Native American representatives from Kizh Nation and the San Manuel Band.
- The trenching program will be conducted in accordance with the approved SMP, including all health and safety measures stipulated therein (Shaw 2006).
- All earthmoving activities will be monitored by HMC to determine which soils can remain on-site and which soils must be disposed of elsewhere.
- Any cultural materials recovered from during the archaeological excavations will be returned to the BFSa laboratory for cleaning, cataloging, and analysis. Any artifacts that require special treatment for preservation will be handled in a manner consistent with standard archaeological techniques. All prehistoric artifacts and/or a sample of the historic artifacts will be prepared for permanent curation according to the guidelines of the WSC.
- In the event that human remains are discovered, State of California law and City of San Bernardino guidelines require that a very specific set of steps be taken to manage the remains. The procedures include contacting the Native American Heritage Commission (NAHC), the county medical examiner, city representatives, and all project managers. In addition, a Native American representative will be present during all laboratory processing dealing with any recovered Native American human remains.
- All information gathered from the fieldwork, laboratory analysis, and research will be incorporated into a technical report following City of San Bernardino guidelines and requirements. The report will be submitted as a draft to the City for comment and review. A final report will be prepared incorporating all comments and will be submitted to the City at the conclusion of the site study.

5.2 Laboratory Analysis

Laboratory analysis of the collected material will be initiated by taking an inventory of the collection. The collection will then be subjected to wet screening to remove as much of the dirt as possible from the artifacts. This process will help to facilitate the laboratory sorting and cataloging process. The sorting technique will include the sorting, identification, and cataloging of all materials returned to the BFSa laboratory. Bulk items such as fragments of concrete, slag, and nondescript glass and metal will be weighed and cataloged en masse, by material type, for each level. All remaining artifacts will be separated by class and type, identified to the most specific level possible, and sorted and cataloged by totals, materials, condition, weight, provenience, and unique artifact identification numbers.

5.2.1 Prehistoric Artifact Sorting and Analysis

If prehistoric lithic artifacts are recovered from the project, they will be subjected to an in-house analysis that will include recordation of lithic material, critical measurements and weight, and inspection for evidence of use wear, retouch, patination, or stains. The recovered flakes will be subjected to technologically-based lithic studies. Non-lithic materials, such as ecofacts (shell, bone, or wood), will be subjected to specialized analyses. The laboratory analysis of the column samples will include flotation procedures to remove seeds and other microfaunal remains from the soil, followed by screening the remainder through a one-sixteenth-inch mesh sieve. The recovered materials, such as animal bone, fish bone, seeds, and charred plant remains, will be sorted and subjected to further analysis by the appropriate personnel. Other specialized studies, which will be conducted if the appropriate materials are encountered, include marine shell species identification, faunal analysis, otolith analysis (for seasonality), radiocarbon dating, obsidian sourcing and hydration, and blood residue and phytolith studies.

5.2.2 Historic Artifact Functional Categories

Artifacts will be prepared for cataloging according to standard laboratory practices. Items covered in dirt to the point of obscuring relevant characteristics will be dry brushed or wiped with a damp cloth in order to enhance the artifact description. Each catalog entry will be bagged in a two-millimeter-thick, archival-quality bag labeled with location and catalog number information. Information recorded about cataloged artifacts will include provenience and depth, material, quantity and/or weight, functional category, artifact type, and a brief description of the artifact(s), including any diagnostic information about manufacturing methods, brand or product marks, and manufacturers' marks. Artifacts sharing the same provenience, material, and color characteristics, but that are fragmentary, will be assigned a single catalog number. Artifacts were classified by functional category for purposes of analysis. These functional categories have been outlined by Van Wormer et al. (2005) and include:

- *Consumer Items* – Consumer items consist of packaged items purchased and consumed on a regular basis. Generally, these include groceries such as condiments, other preserved foods, and beverages. Under most conditions, consumer items recovered from archaeological deposits came in containers that do not deteriorate over time, such as glass or ceramic bottles and jars, and in some instances, tin cans.
- *Kitchen Items* – Kitchen items are defined as objects used in tasks of food preparation, serving, and consumption. These types of artifacts may include ceramic kitchen and tableware, glass tableware, canning jars, canning jar lids and related items, dairy bottles, cooking utensils, and flatware.
- *Food Items* – Food items include butchered bone, fish bone, shellfish, and seeds.
- *Household Items* – Household items are mainly related to a house structure and its furnishings, as well as non-food-related items used by the inhabitants. Artifact classes and types considered part of this category include lamps, medicines, cleaning products, household ceramics and glassware, household plant pots, and batteries.
- *Garment Items* – Garment items include all items related to clothing, including objects such as buckles, buttons, beads, shoe parts, and fabric fragments.
- *Personal Items* – Personal items are associated with an individual rather than a household and are therefore not generally shared. Artifact classes and types in this category include grooming and hygiene products, some medicines, cosmetic/beauty products, clothing items, personal adornment items such as jewelry, eyeglasses, and hair adornment, keys, pocket tools, purses, smoking-related items, and portable musical instruments.
- *Toys and Games* – Toys and games are items that include doll parts, marbles, toy jacks and jars, and candy containers.
- *Currency Items* – Currency items include coins and tokens.
- *Livery Items* – Livery items are primarily concerned with the use and maintenance of horses and horse-drawn vehicles. This may include a range of items from common horseshoes to saddle and buggy parts.
- *Transportation Items* – Transportation items are related to the use of automobiles and bicycles instead of horses and horse-drawn vehicles. This may include bicycles,

tricycles, and automobile hitches.

- *Munitions Items* – Munitions items are related to the use, maintenance, and repair of firearms. This may include a range of items from the firearm itself, spent cartridges, gunflints, musket balls, and fragmented parts.
- *Hardware Items* – Hardware items are manufactured items used in the construction or maintenance of a residence that include screws, bolts, washers, brackets, hinges, handles, wire fragments, and plumbing.
- *Building Materials* – Building materials include all items related to the construction and maintenance of buildings and structures. This includes items such as door and lock parts, nails, window glass, brick fragments, milled wood fragments, electrical hardware, etc.
- *Machinery Items* – Machinery items include all machine parts that are not directly related to agricultural activities.
- *Tools* – Tools generally include any hand tool used to build or maintain a structure or operate a business. Axes, shovels, chisels, and pencils are all common tools.
- *Unidentifiable Items* – Unidentifiable items are too small or fragmentary to identify to artifact type.

5.3 Provisions for the Discovery of Human Remains

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county medical examiner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The medical examiner must be notified of the find immediately. If the remains are determined to be prehistoric, the medical examiner would notify the NAHC, who would 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 24 hours of notification by the NAHC and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Adherence to State Health and Safety Code Section 7050.5 would occur as a matter of course to ensure that impacts are less than significant.

5.4 Archival Research

Archival research will also be conducted in order to supplement the information generated by the archaeological testing program. Historical research for this phase will primarily be conducted at the BFSa reference library. These resources will be used to gather data regarding the history of the property, its place in the region, and general trends in land use history within the project area.

5.5 Recordation and Curation

Any cultural resources identified as part of the testing program will be recorded on the appropriate DPR site record forms and submitted to the SCCIC at CSU Fullerton. After cataloging, identification, and analysis, each cataloged entry will be marked with the appropriate provenience and catalog information. As stated in the required mitigation measures, any archaeological assemblage, or a sample of the collection, recovered from the 119 South Arrowhead Avenue Project will be permanently curated at the WSC. All notes, photographs, and documents associated with the project will be housed at the office of BFSa in Poway, California.

6.0 **BIBLIOGRAPHY**

Ancestry.com

- 2011 *U.S., City Directories, 1822-1995* (database online). Provo, UT, USA: Ancestry.com Operations, Inc.

Bean, Lowell John

- 1978 Cahuilla. In *California*, edited by R.F. Heizer, pp. 575–587. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Bean, Lowell John and Charles R. Smith

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

Bean, Lowell John and Florence C. Shipek

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

Beattie, George W. and Helen P. Beattie

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

Benedict, Ruth Fulton

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

Brigandi, Phil

- 1998 *Temecula: At the Crossroads of History*. Heritage Media Corporation, Encinitas, California.

Brown, John Jr. and James Boyd

- 1922 *History of San Bernardino and Riverside Counties*. The Lewis Publishing Company, Chicago, Illinois.

Caughey, John W.

- 1970 *California: A Remarkable State's Life History*. 3rd ed. Prentice-Hall, Englewood Cliffs, New Jersey.

Chapman, Charles E.

- 1921 *A History of California: The Spanish Period*. The Macmillan Company, New York.

City of San Bernardino

- 2005 San Bernardino General Plan. Electronic document, <http://www.ci.san-bernardino.ca.us/pdf/DevSvcs/General%20Plan%20Document.pdf>, accessed January 5, 2022.

Cook, Sherburne F.

- 1976 *The Conflict Between the California Indian and White Civilization*. University of California Press, Berkeley and Los Angeles, California.

Curry, Joseph R.

- 1965 Late Quaternary History: Continental Shelves of the United States. *Quaternary of the United States*, edited by H.E. Wright Jr. and D.G. Frey, pp. 723–735. Princeton University Press, New Jersey.

Drucker, Philip

- 1937 Culture Element Distributions: V. Southern California. *Anthropological Records* 1(1):1–52. University of California, Berkeley.

Erlandson, John M. and Roger H. Colten (editors)

- 1991 An Archaeological Context for Archaeological Sites on the California Coast. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by J.M. Erlandson and R.H. Colten. Perspectives in California Archaeology, Volume 1, Institute of Archaeology, University of California, Los Angeles.

Fagan, Brian M.

- 1991 *Ancient North America: The Archaeology of a Continent*. Thames and Hudson, London.

Gallegos, Dennis

- 1985 Batiquitos Lagoon Revisited. In *Cultural Resource Management Casual Papers* 2(1). Department of Anthropology, San Diego State University.
- 2002 Southern California in Transition: Late Holocene Occupation of Southern San Diego County. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry Jones. Cotsen Institute of Archaeology, University of California, Los Angeles.

Gunther, Jane Davies

- 1984 *Riverside County, California, Place Names: Their Origins and Their Stories*. Rubidoux Printing, Riverside, California.

Hatheway, Roger

- 1998 Determination of Eligibility Report for 50 Buildings in the City of San Bernardino. Hatheway & Associates. Unpublished report on file at the South Central Coastal Information Center at California State University, Fullerton, Fullerton, California.

Heizer, Robert F.

- 1978 Trade and Trails. In *California*, edited by Robert F. Heizer, pp. 690–693. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Inman, Douglas L.

- 1983 Application of Coastal Dynamics to the Reconstruction of Paleocoastlines in the Vicinity of La Jolla, California. *Quaternary Coastlines and Marine Archaeology*, edited by Patricia M. Masters and N.C. Flemming, pp. 1–49. Academic Press, Inc., Orlando, Florida.

King, Chester DeWitt and Thomas C. Blackburn

- 1978 Tataviam. In *California*, edited by Robert F. Heizer. Handbook of North American Indians, Vol. 8. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Kroeber, Alfred L.

- 1976 *Handbook of the Indians of California*. Reprinted. Dover Editions, Dover Publications, Inc., New York. Originally published 1925, Bulletin No. 78, U.S. Government Printing Office, Washington, D.C.

Lyman, Edward Leo

- 1989 The Rise and Decline of Mormon San Bernardino. *Brigham Young University Studies* 29(4):43–63. Brigham Young University, Provo, Utah.

Martin, Paul S.

- 1967 Prehistoric Overkill. In *Pleistocene Extinctions: The Search for a Cause*, edited by Paul S. Martin and H.E. Wright. Yale University Press, New Haven, Connecticut.
- 1973 The Discovery of America. *Science* 179(4077):969–974.

Masters, Patricia M.

- 1983 Detection and Assessment of Prehistoric Artifact Sites off the Coast of Southern California. In *Quaternary Coastlines and Marine Archaeology: Towards the Prehistory of Land Bridges and Continental Shelves*, edited by Patricia M. Masters and Nicholas C. Fleming, pp. 189–213. Academic Press, London.
- 1994 *Archaeological Investigations at Five Sites on the Lower San Luis Rey River, San Diego County, California*, edited by Michael Moratto, pp. A1-A19. INFOTEC Research, Inc., Fresno, California and Gallegos and Associates, Pacific Palisades, California.

Miller, Jaquelin Neva

- 1966 *The Present and Past Molluscan Faunas and Environments of Four Southern California Coastal Lagoons*. Master's Thesis, Scripps Institution of Oceanography,

University of California at San Diego.

Moratto, Michael J.

1984 *California Archaeology*. Academic Press, New York.

Moriarty, James R., III

1966 Culture Phase Divisions Suggested by Topological Change Coordinated with Stratigraphically Controlled Radiocarbon Dating in San Diego. *Anthropological Journal of Canada* 4(4):20–30.

Morton, D.M. and F.K. Miller

2006 Geologic Map of the San Bernardino and Santa Ana 30' x 60' Quadrangles, California, v. 1.0. U.S. Geological Survey Open-File Report 2006-1217.

Moss, Madonna L. and Jon M. Erlandson

1995 Reflections on North American Pacific Coast Prehistory. *Journal of World Prehistory* 9(1):1–46.

Natural Resources Conservation Service (NRCS)

2019 Web Soil Survey. Electronic document, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>, accessed January 5, 2022.

Office of Historic Preservation (OHP)

1990 *Archaeological Resource Management Reports: Recommended Contents and Format*. Department of Parks and Recreation, Sacramento, California.

Patterson, Tom

1971 *A Colony for California: Riverside's First Hundred Years*. Press-Enterprise, Riverside, California.

Pourade, Richard F.

1961 *Time of the Bells*. The History of San Diego Volume 2. Union-Tribune Publishing Company, San Diego, California.

1963 The Silver Dons. In *The History of San Diego* (Volume 3). Union-Tribune Publishing Company, San Diego, California.

Reddy, Seetha

2000 Settling the Highlands: Late Holocene Highland Adaptations on Camp Pendleton, San Diego County California. Prepared for the Army Corps of Engineers by ASM Affiliates. Manuscript on file at South Coastal Information Center at San Diego State University, San Diego, California.

Rogers, Malcolm

1929 Archaeological Field Work in North America During 1928, California. *American*

Anthropologist 31(2):340–341.

Rolle, Andrew F.

1969 *California: A History*. 2nd ed. Thomas Y. Crowell Company, New York.

San Bernardino County Sun

1901 Don't Like, The Oder. 22 December:1. San Bernardino, California.

1907 The City Council last night. 20 August:1. San Bernardino, California.

1909 Notice. 30 April:8. San Bernardino, California.

1918 Hanford Iron Works—One of the City's Big Industrial Enterprises. 24 February:35. San Bernardino, California.

1919 Hanford Iron Works Reorganized; Reveal Plans for Expansion. 1 June:1. San Bernardino, California.

1931 First Business of Boulder Dam's Golden Stream Reaches City to Aid Many Firms. 20 March:13. San Bernardino, California.

1941 Plant Runs on 24-Hour Bases; 200 Employed. 12 October:14. San Bernardino, California.

1953 Hanford Foundry Company Removal Job. San Bernardino, California.

1968 Agreement for the sale of Hanford Foundry Co. 19 November:3. San Bernardino, California.

1988 100-year-old S.B. tree may be bulldozed. 29 March:1. San Bernardino, California.

1989 Century-old magnolia rolls to a new home. 23 April:1. San Bernardino, California.

Shaw Environmental, Inc. (Shaw)

2006 Soil Manahement Plan, Former Hanford Foundry Company Site, 119 South Arrowhead Avenue, San Bernardino, California. Prepared for and on file with the California Environmental Protection Agency, Department of Toxic Substances Control.

State Historic Preservation Office (SHPO)

1995 *Instructions for Recording Historical Resources*. Office of Historic Preservation, Sacramento.

Strong, William Duncan

1971 Aboriginal Society in Southern California. Reprint of 1929 *Publications in American*

Archaeology and Ethnology No. 26, University of California, Berkeley.

The Weekly Courier

1891 C.P. Barrows Fruit Co. 28 November:3. San Bernardino, California.

Van Wormer, Stephen R., Susan Walters, and Dennis R. Gallegos

2005 (Remember the Indian School Children) Monitoring and Data Recovery Program for Casa de Aguirre and St. Anthony's Industrial School for Indians (CA-SDI-14527H): 1853-1914 Old Town, San Diego, California. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

Wallace, William J.

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

Warren, Claude N. (editor)

1968 Cultural Tradition and Ecological Adaptation on the Southern Coast. In *Archaic Prehistory in the Western United States*, C.I. Williams, editor. *Eastern New Mexico University Contributions in Anthropology* 1(3):1–14.

Warren, Claude N. and M.G. Pavesic

1963 Shell Midden Analysis of Site SDI-603 and Ecological Implications for Cultural Development of Batiquitos Lagoon, San Diego County, Los Angeles. University of California, Los Angeles, Archaeological Survey Annual Report, 1960-1961:246–338.

Warren, Claude N. and D.L. True

1961 The San Dieguito Complex and its Place in California Prehistory, In *Archaeological Survey Annual Report 1960-1961*. University of California Press, Los Angeles, California.

Wirths, Todd A.

2022 Paleontological Assessment for the 119 South Arrowhead Avenue Project, City of San Bernardino County, California. Brian F. Smith and Associates, Inc. Unpublished report on file at Brian F. Smith and Associates, Inc., Poway, California.

APPENDIX A

Qualifications of Key Personnel

Brian F. Smith, MA

Owner, Principal Investigator

Brian F. Smith and Associates, Inc.
14010 Poway Road • Suite A •
Phone: (858) 679-8218 • Fax: (858) 679-9896 • E-Mail: bsmith@bfsa-ca.com



Education

Master of Arts, History, University of San Diego, California	1982
Bachelor of Arts, History, and Anthropology, University of San Diego, California	1975

Professional Memberships

Society for California Archaeology

Experience

Principal Investigator Brian F. Smith and Associates, Inc.	1977–Present Poway, California
---	-----------------------------------

Brian F. Smith is the owner and principal historical and archaeological consultant for Brian F. Smith and Associates. Over the past 32 years, he has conducted over 2,500 cultural resource studies in California, Arizona, Nevada, Montana, and Texas. These studies include every possible aspect of archaeology from literature searches and large-scale surveys to intensive data recovery excavations. Reports prepared by Mr. Smith have been submitted to all facets of local, state, and federal review agencies, including the US Army Corps of Engineers, the Bureau of Land Management, the Bureau of Reclamation, the Department of Defense, and the Department of Homeland Security. In addition, Mr. Smith has conducted studies for utility companies (Sempra Energy) and state highway departments (CalTrans).

Professional Accomplishments

These selected major professional accomplishments represent research efforts that have added significantly to the body of knowledge concerning the prehistoric life ways of cultures once present in the southern California area and historic settlement since the late 18th century. Mr. Smith has been principal investigator on the following select projects, except where noted.

Downtown San Diego Mitigation and Monitoring Reporting Programs: Large numbers of downtown San Diego mitigation and monitoring projects, some of which included Broadway Block (2019), 915 Grape Street (2019), 1919 Pacific Highway (2018), Moxxy Hotel (2018), Makers Quarter Block D (2017), Ballpark Village (2017), 460 16th Street (2017), Kettner and Ash (2017), Bayside Fire Station (2017), Pinnacle on the Park (2017), IDEA1 (2016), Blue Sky San Diego (2016), Pacific Gate (2016), Pendry Hotel (2015), Cisterra Sempra Office Tower (2014), 15th and Island (2014), Park and G (2014), Comm 22 (2014), 7th and F Street Parking (2013), Ariel Suites (2013), 13th and Marker (2012), Strata (2008), Hotel Indigo (2008), Lofts at 707 10th Avenue Project (2007), Breeza (2007), Bayside at the Embarcadero (2007), Aria (2007), Icon (2007), Vantage Pointe (2007), Aperture (2007), Sapphire Tower (2007), Lofts at 655 Sixth Avenue (2007), Metrowork (2007), The Legend (2006), The Mark (2006), Smart Corner (2006), Lofts at 677 7th Avenue (2005), Aloft on Cortez Hill (2005), Front and Beech Apartments (2003), Bella Via Condominiums (2003), Acqua Vista Residential Tower (2003), Northblock Lofts (2003), Westin Park Place Hotel (2001), Parkloft

Apartment Complex (2001), Renaissance Park (2001), and Laurel Bay Apartments (2001).

1900 and 1912 Spindrift Drive: An extensive data recovery and mitigation monitoring program at the Spindrift Site, an important prehistoric archaeological habitation site stretching across the La Jolla area. The project resulted in the discovery of over 20,000 artifacts and nearly 100,000 grams of bulk faunal remains and marine shell, indicating a substantial occupation area (2013-2014).

San Diego Airport Development Project: An extensive historic assessment of multiple buildings at the San Diego International Airport and included the preparation of Historic American Buildings Survey documentation to preserve significant elements of the airport prior to demolition (2017-2018).

Citracado Parkway Extension: A still-ongoing project in the city of Escondido to mitigate impacts to an important archaeological occupation site. Various archaeological studies have been conducted by BFSa resulting in the identification of a significant cultural deposit within the project area.

Westin Hotel and Timeshare (Grand Pacific Resorts): Data recovery and mitigation monitoring program in the city of Carlsbad consisted of the excavation of 176 one-square-meter archaeological data recovery units which produced thousands of prehistoric artifacts and ecofacts, and resulted in the preservation of a significant prehistoric habitation site. The artifacts recovered from the site presented important new data about the prehistory of the region and Native American occupation in the area (2017).

The Everly Subdivision Project: Data recovery and mitigation monitoring program in the city of El Cajon resulted in the identification of a significant prehistoric occupation site from both the Late Prehistoric and Archaic Periods, as well as producing historic artifacts that correspond to the use of the property since 1886. The project produced an unprecedented quantity of artifacts in comparison to the area encompassed by the site, but lacked characteristics that typically reflect intense occupation, indicating that the site was used intensively for food processing (2014-2015).

Ballpark Village: A mitigation and monitoring program within three city blocks in the East Village area of San Diego resulting in the discovery of a significant historic deposit. Nearly 5,000 historic artifacts and over 500,000 grams of bulk historic building fragments, food waste, and other materials representing an occupation period between 1880 and 1917 were recovered (2015-2017).

Archaeology at the Padres Ballpark: Involved the analysis of historic resources within a seven-block area of the "East Village" area of San Diego, where occupation spanned a period from the 1870s to the 1940s. Over a period of two years, BFSa recovered over 200,000 artifacts and hundreds of pounds of metal, construction debris, unidentified broken glass, and wood. Collectively, the Ballpark Project and the other downtown mitigation and monitoring projects represent the largest historical archaeological program anywhere in the country in the past decade (2000-2007).

4S Ranch Archaeological and Historical Cultural Resources Study: Data recovery program consisted of the excavation of over 2,000 square meters of archaeological deposits that produced over one million artifacts, containing primarily prehistoric materials. The archaeological program at 4S Ranch is the largest archaeological study ever undertaken in the San Diego County area and has produced data that has exceeded expectations regarding the resolution of long-standing research questions and regional prehistoric settlement patterns.

Charles H. Brown Site: Attracted international attention to the discovery of evidence of the antiquity of man in North America. Site located in Mission Valley, in the city of San Diego.

Del Mar Man Site: Study of the now famous Early Man Site in Del Mar, California, for the San Diego Science Foundation and the San Diego Museum of Man, under the direction of Dr. Spencer Rogers and Dr. James R. Moriarty.

Old Town State Park Projects: Consulting Historical Archaeologist. Projects completed in the Old Town State Park involved development of individual lots for commercial enterprises. The projects completed in Old Town include Archaeological and Historical Site Assessment for the Great Wall Cafe (1992), Archaeological Study for the Old Town Commercial Project (1991), and Cultural Resources Site Survey at the Old San Diego Inn (1988).

Site W-20, Del Mar, California: A two-year-long investigation of a major prehistoric site in the Del Mar area of the city of San Diego. This research effort documented the earliest practice of religious/ceremonial activities in San Diego County (circa 6,000 years ago), facilitated the projection of major non-material aspects of the La Jolla Complex, and revealed the pattern of civilization at this site over a continuous period of 5,000 years. The report for the investigation included over 600 pages, with nearly 500,000 words of text, illustrations, maps, and photographs documenting this major study.

City of San Diego Reclaimed Water Distribution System: A cultural resource study of nearly 400 miles of pipeline in the city and county of San Diego.

Master Environmental Assessment Project, City of Poway: Conducted for the City of Poway to produce a complete inventory of all recorded historic and prehistoric properties within the city. The information was used in conjunction with the City's General Plan Update to produce a map matrix of the city showing areas of high, moderate, and low potential for the presence of cultural resources. The effort also included the development of the City's Cultural Resource Guidelines, which were adopted as City policy.

Draft of the City of Carlsbad Historical and Archaeological Guidelines: Contracted by the City of Carlsbad to produce the draft of the City's historical and archaeological guidelines for use by the Planning Department of the City.

The Mid-Bayfront Project for the City of Chula Vista: Involved a large expanse of undeveloped agricultural land situated between the railroad and San Diego Bay in the northwestern portion of the city. The study included the analysis of some potentially historic features and numerous prehistoric

Cultural Resources Survey and Test of Sites Within the Proposed Development of the Audie Murphy Ranch, Riverside County, California: Project manager/director of the investigation of 1,113.4 acres and 43 sites, both prehistoric and historic—including project coordination; direction of field crews; evaluation of sites for significance based on County of Riverside and CEQA guidelines; assessment of cupule, pictograph, and rock shelter sites, co-authoring of cultural resources project report. February- September 2002.

Cultural Resources Evaluation of Sites Within the Proposed Development of the Otay Ranch Village 13 Project, San Diego County, California: Project manager/director of the investigation of 1,947 acres and 76 sites, both prehistoric and historic—including project coordination and budgeting; direction of field crews; assessment of sites for significance based on County of San Diego and CEQA guidelines; co-authoring of cultural resources project report. May-November 2002.

Cultural Resources Survey for the Remote Video Surveillance Project, El Centro Sector, Imperial County: Project manager/director for a survey of 29 individual sites near the U.S./Mexico Border for proposed video surveillance camera locations associated with the San Diego Border barrier Project—project coordination and budgeting; direction of field crews; site identification and recordation; assessment of potential impacts to cultural resources; meeting and coordinating with U.S. Army Corps of Engineers, U.S. Border Patrol, and other government agencies involved; co-authoring of cultural resources project report. January, February, and July 2002.

Cultural Resources Survey and Test of Sites Within the Proposed Development of the Meniffee West GPA, Riverside County, California: Project manager/director of the investigation of nine sites, both prehistoric and historic—including project coordination and budgeting; direction of field crews; assessment of sites

for significance based on County of Riverside and CEQA guidelines; historic research; co-authoring of cultural resources project report. January-March 2002.

Cultural Resources Survey and Test of Sites Within the Proposed French Valley Specific Plan/EIR, Riverside County, California: Project manager/director of the investigation of two prehistoric and three historic sites—including project coordination and budgeting; survey of project area; Native American consultation; direction of field crews; assessment of sites for significance based on CEQA guidelines; cultural resources project report in prep. July-August 2000.

Cultural Resources Survey and Test of Sites Within the Proposed Development of the Meniffee Ranch, Riverside County, California: Project manager/director of the investigation of one prehistoric and five historic sites—including project coordination and budgeting; direction of field crews; feature recordation; historic structure assessments; assessment of sites for significance based on CEQA guidelines; historic research; co-authoring of cultural resources project report. February-June 2000.

Salvage Mitigation of a Portion of the San Diego Presidio Identified During Water Pipe Construction for the City of San Diego, California: Project archaeologist/director—including direction of field crews; development and completion of data recovery program; management of artifact collections cataloging and curation; data synthesis and authoring of cultural resources project report in prep. April 2000.

Enhanced Cultural Resource Survey and Evaluation for the Tyrian 3 Project, La Jolla, California: Project manager/director of the investigation of a single-dwelling parcel—including project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. April 2000.

Enhanced Cultural Resource Survey and Evaluation for the Lamont 5 Project, Pacific Beach, California: Project manager/director of the investigation of a single-dwelling parcel—including project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. April 2000.

Enhanced Cultural Resource Survey and Evaluation for the Reiss Residence Project, La Jolla, California: Project manager/director of the investigation of a single-dwelling parcel—including project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. March-April 2000.

Salvage Mitigation of a Portion of Site SDM-W-95 (CA-SDI-211) for the Poinsettia Shores Santalina Development Project and Caltrans, Carlsbad, California: Project archaeologist/ director—including direction of field crews; development and completion of data recovery program; management of artifact collections cataloging and curation; data synthesis and authoring of cultural resources project report in prep. December 1999-January 2000.

Survey and Testing of Two Prehistoric Cultural Resources for the Airway Truck Parking Project, Otay Mesa, California: Project archaeologist/director—including direction of field crews; development and completion of testing recovery program; assessment of site for significance based on CEQA guidelines; authoring of cultural resources project report, in prep. December 1999-January 2000.

Cultural Resources Phase I and II Investigations for the Tin Can Hill Segment of the Immigration and Naturalization Services Triple Fence Project Along the International Border, San Diego County, California: Project manager/director for a survey and testing of a prehistoric quarry site along the border—NRHP eligibility assessment; project coordination and budgeting; direction of field crews; feature recordation; meeting and coordinating with U.S. Army Corps of Engineers; co-authoring of cultural resources project report. December 1999-January 2000.

Mitigation of a Prehistoric Cultural Resource for the Westview High School Project for the City of San Diego, California: Project archaeologist/ director—including direction of field crews; development and completion of data recovery program including collection of material for specialized faunal and botanical analyses; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; co-authoring of cultural resources project report, in prep. October 1999-January 2000.

Mitigation of a Prehistoric Cultural Resource for the Otay Ranch SPA-One West Project for the City of Chula Vista, California: Project archaeologist/director—including direction of field crews; development of data recovery program; management of artifact collections cataloging and curation; assessment of site for significance based on CEQA guidelines; data synthesis; authoring of cultural resources project report, in prep. September 1999-January 2000.

Monitoring of Grading for the Herschel Place Project, La Jolla, California: Project archaeologist/ monitor—including monitoring of grading activities associated with the development of a single- dwelling parcel. September 1999.

Survey and Testing of a Historic Resource for the Osterkamp Development Project, Valley Center, California: Project archaeologist/ director—including direction of field crews; development and completion of data recovery program; budget development; assessment of site for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report. July-August 1999.

Survey and Testing of a Prehistoric Cultural Resource for the Proposed College Boulevard Alignment Project, Carlsbad, California: Project manager/director —including direction of field crews; development and completion of testing recovery program; assessment of site for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report, in prep. July-August 1999.

Survey and Evaluation of Cultural Resources for the Palomar Christian Conference Center Project, Palomar Mountain, California: Project archaeologist—including direction of field crews; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report. July-August 1999.

Survey and Evaluation of Cultural Resources at the Village 2 High School Site, Otay Ranch, City of Chula Vista, California: Project manager/director —management of artifact collections cataloging and curation; assessment of site for significance based on CEQA guidelines; data synthesis; authoring of cultural resources project report. July 1999.

Cultural Resources Phase I, II, and III Investigations for the Immigration and Naturalization Services Triple Fence Project Along the International Border, San Diego County, California: Project manager/director for the survey, testing, and mitigation of sites along border—supervision of multiple field crews, NRHP eligibility assessments, Native American consultation, contribution to Environmental Assessment document, lithic and marine shell analysis, authoring of cultural resources project report. August 1997- January 2000.

Phase I, II, and III Investigations for the Scripps Poway Parkway East Project, Poway California: Project archaeologist/project director—including recordation and assessment of multicomponent prehistoric and historic sites; direction of Phase II and III investigations; direction of laboratory analyses including prehistoric and historic collections; curation of collections; data synthesis; coauthorship of final cultural resources report. February 1994; March-September 1994; September-December 1995.

APPENDIX G

Confidential Maps

(Deleted for Public Review; Bound Separately)