HELIX Environmental Planning

Alvarado 2nd Pipeline Extension Project

Cultural Resources Technical Report

March 2020 | KJC-29

Prepared for:

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National Archaeological Database Information

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Report Date:	March 2020
Report Title:	Cultural Resources Technical Report for the Alvarado 2nd Pipeline Extension Project, City of San Diego, California
Submitted to:	City of San Diego and State Water Resources Control Board
Type of Study:	Cultural Resources Survey and Assessment
New Sites:	None
Updated Sites:	CA-SDI-11722 (P-37-011722), CA-SDI-11766 (P-37-011766), CA-SDI-11767 (P-37-011767), CA-SDI-12862 (P-37-012862), P-37-014963, P-37-023996, P-37-036520, and P-37-036521
USGS Quad:	La Jolla 7.5' Quadrangle
Acreage:	Approximately 73 acres
Key Words:	San Diego County; Township 16 South, Range 2 and 3 West; City of San Diego; Mission Valley; CA-SDI-11722, CA-SDI-11766, CA-SDI-11767, CA-SDI-12862; prehistoric habitation.

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AC	asbestos-cement
AMSL	above mean sea level
APE	Area of Potential Effect
BP	before present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DPR	Department of Parks and Recreation
EIR	Environmental Impact Report
FAR	fire-affected rock
HELIX	HELIX Environmental Planning, Inc.
HGL	hydraulic grade line
HRB	Historical Resources Board
HRG	Historical Resources Guidelines
I	Interstate
MTS	Metropolitan Transit System
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PRC	Public Resources Code
PRS	Pressure Regulating Station
PVC	polyvinyl chloride
SCIC	South Coastal Information Center
SR	State Route
SRF	State Revolving Fund
STP	shovel test pit
SWRCB	State Water Resources Control Board

TCP	Traditional Cultural Properties
TCR	Tribal Cultural Resources
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator

EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) was contracted by Kennedy/Jenks Consultants, Inc. to provide cultural resources services for the Alvarado 2nd Pipeline Extension Project (project) in the City of San Diego, California. The project, proposed by the City of San Diego Public Works Department (City), includes an approximately 7-mile extension of the existing Alvarado 2nd Pipeline. A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project Area of Potential Effect (APE). This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA), as amended.

The records search conducted at the South Coastal Information Center (SCIC) on July 3, 2018, January 13, 2020, and February 5, 2020 indicated that 52 previous cultural resources studies which overlap with the project APE. The records search results also indicated that a total of 457 cultural resources have been previously recorded within one mile of the project APE; eight of which have been documented within the APE. The eight cultural resources that have been previously recorded within the project APE consist of three multi-component archeological sites (CA-SDI-11722 [P-37-011722], CA-SDI-11766 [P-37-011766], and CA-SDI-12862 [P-37-012862]); a prehistoric habitation site (CA-SDI-11767 [P-37-011767]); a historic freeway (P-37-023996); and three isolated prehistoric artifacts, P-37-014963, P-37-036520, and P-37-036521.

The field investigations included intensive pedestrian survey of the APE by a HELIX archaeologist and a Native American monitor on January 29, 2020. During the survey, a prehistoric mano fragment was observed within the APE in proximity to previously recorded archaeological site CA-SDI-12862. In addition, a piece of fire-affected rock (FAR) was observed within the APE in proximity to previously recorded prehistoric archaeological site CA-SDI-11767. Another piece of FAR was observed in the APE in proximity to the location of previously recorded prehistoric isolate P-37-014963. No cultural material was observed within the APE at the locations of the remaining archaeological resources, CA-SDI-11722, CA-SDI-11766, P-37-036520, and P-37-036521. Further, it was noted that the Cabrillo Freeway (P-37-023996) is a raised freeway, with the pipeline alignment traveling under it.

No evidence of intact features or deposits was observed or has been previously noted within the APE, and as indicated by the disturbed nature of the project alignment in this area, the prehistoric resources located along the proposed pipeline alignment contain little integrity within the APE, which is situated within a paved bike lane portion of Friars Road.

Based on the results of the current study, no historic properties will be affected by the project, and no impacts to cultural resources are anticipated.

However, as indicated by the Sacred Lands File Search results provided by the Native American Heritage Commission (NAHC) on July 12, 2018 and March 9, 2020, there are known Native American cultural sites present within the project vicinity, and based on the results of the background research and the alluvial environmental setting, there is a potential for buried subsurface cultural material to be present under the paved portion of the project alignment, in particular, along the portion of the APE north of the Riverwalk Golf Club, within the vicinity of the previously recorded prehistoric archaeological sites.

Based on this, it is recommended that an archaeological and Native American monitoring program be implemented for trenching activities occurring within or near previously recorded prehistoric cultural resources within areas of young alluvial flood-plain deposits.

Should the project limits change to incorporate new areas of proposed disturbance, archaeological survey of these areas will be required.

1.0 INTRODUCTION

HELIX Environmental Planning, Inc. (HELIX) was contracted by Kennedy/Jenks Consultants, Inc. to provide cultural resources services for the Alvarado 2nd Pipeline Extension Project (project), which is proposed by the City of San Diego Public Works Department (City). A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project Area of Potential Effect (APE). This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

1.1 PROJECT LOCATION AND DESCRIPTION

The project is located in the City of San Diego in western San Diego County (Figure 1, *Regional Location*). The project is located in unsectioned portions (Pueblo Lands of San Diego) of Township 16 South, Ranges 2 and 3 West, on the U.S. Geological Survey (USGS) 7.5' La Jolla quadrangle (Figure 2, *Project Vicinity [USGS Topography]*). The approximately 7-mile long project alignment is located north of Interstate (I-) 8 within Mission Valley between I-805 and West Mission Bay Drive, primarily along the northern boundary of the San Diego River valley within the paved City right-of-way along Friars Road and Sea World Drive (Figure 3, *Aerial Photograph*).

The proposed project involves the extension of the existing Alvarado 2nd Pipeline through construction of a new 48-inch and 24-inch diameter transmission main (Figure 4, *Project Overview*). The new water pipeline alignment will occur along Friars Road from the east side of the I-805 continuing west where it will head south on Mission Center Road. The alignment will turn west on Hazard Center Drive, pass under State Route (SR) 163, and continue onto Riverwalk Drive where it will meet Fashion Valley Road and head north to Friars Road. The pipeline will then reconnect to Friars Road and continue west along the road to its intersection with Sea World Drive where it will head southwest to West Mission Bay Drive. The 48-inch diameter pipeline will consist of a cement-mortar-lined and coated steel pipe running for approximately 4.2 miles between I-805 and Friars Road to Napa Street. The 24-inch diameter pipeline will also consist of a cement-mortar lined and coated steel pipe, and polyvinyl chloride (PVC) pipe, and will run for approximately 2.2 miles from the intersection of Napa Street and Friars Road west to West Mission Bay Drive.

A 390- to 536-foot hydraulic grade line (HGL) Pressure Regulating Station (PRS) will be built at the Friars Road and Napa Street intersection to regulate the pressure feeding the University Heights 390 Zone. An approximately 1,470-foot existing 12-inch diameter asbestos-cement (AC) pipe located northwest of the West Mission Bay Drive bridge will be relocated along Sea World Drive for approximately 2,241 feet where it will then connect into the new 20-inch dimeter Pacific Beach Pipeline along West Mission Bay Drive. The existing 12-inch AC pipe will be abandoned in place and a new 12-inch PVC pipe will be constructed along Sea World Drive from Friars Road to a turn-off location approximately 1,700 feet north of the Friars Road and Sea World Drive Intersection. The 12-inch pipeline will be located in the same trench as the 24-inch Alvarado pipeline for the length of the alignment where they run parallel to each other along Sea World Drive between West Mission Bay Drive and Friars Road (Figure 4).

The alignment is primarily located within heavily traveled public road rights-of-way. Exceptions to this include the section of the alignment within Fashion Valley Mall between Hazard Center Drive and

Riverwalk Drive, and a section along Friars Road to the east of Mission Center Drive. The portion of the alignment within Fashion Valley is located just south of Hazard Center Drive and Riverwalk Drive in an unpaved disturbed area and in paved areas north of the San Diego River. The portion of the alignment along Friars Road to east of Mission Center Drive is located just north of Friars Road in a sidewalk area within the right-of-way for approximately 1,400 feet.

The project will incorporate open-cut trench and trenchless construction methods. A section of the pipe that crosses under the Metropolitan Transit System (MTS) rail tracks at Napa Street will utilize an abandoned 66-inch sewer pipeline as a conductor casing. A total of nine laydown yards/staging areas will be used by the project; these will be located within existing parking lots or disturbed areas (Figure 4). Work areas will be restored to pre-project conditions following project completion.

1.2 REGULATORY FRAMEWORK

The project would be funded in part by the State Water Resources Control Board (SWRCB) Clean Water State Revolving Fund (SRF) Program, which receives federal financial support. Therefore, the project has CEQA-Plus requirements, including compliance with Section 106 of the NHPA. The City is the lead agency for compliance with CEQA.

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Significant resources are those resources which have been found eligible to the California Register of Historical Resources (CRHR) or National Register of Historic Places (NRHP), as applicable.

Federal regulations that would be applicable to the project consist of the NHPA and its implementing regulations (16 United States Code 470 et seq., 36 Code of Federal Regulations [CFR] Part 800). Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on "historic properties", that is, properties (either historic or archaeological) that are eligible for the NRHP. To be eligible for the NRHP, a historic property must be significant at the local, state, or national level under one or more of the following four criteria:

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

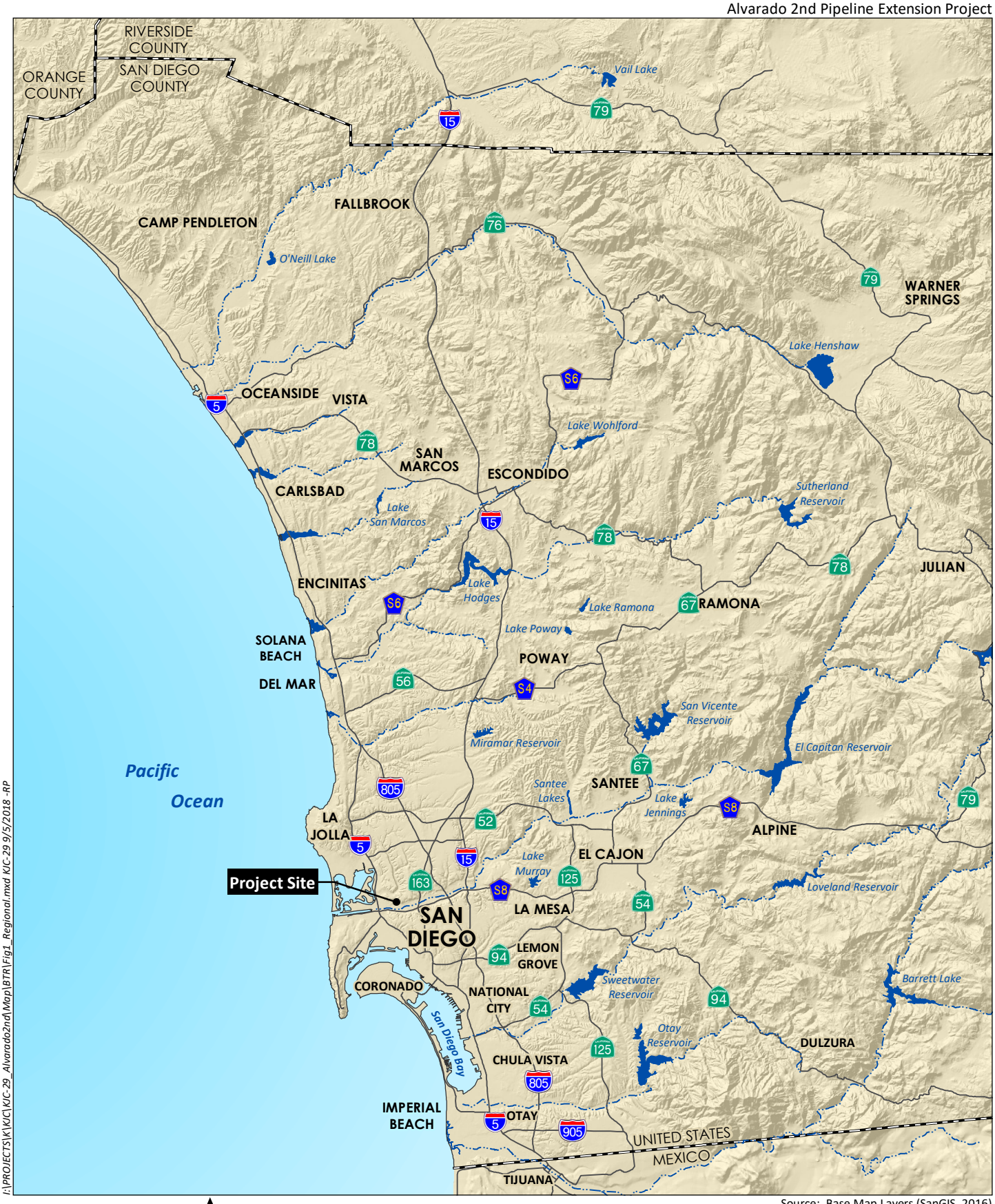
B. associated with the lives of persons significant in our past;

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

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

CEQA, Public Resources Code (PRC) 21084.1, and California Code of Regulations (CCR) Title 14 Section 15064.5, address determining the significance of impacts to archaeological and historic resources and discuss significant cultural resources as "historical resources," which are defined as:

- resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the CRHR (14 CCR Section 15064.5[a][1])



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Source: Base Map Layers (SanGIS, 2016)

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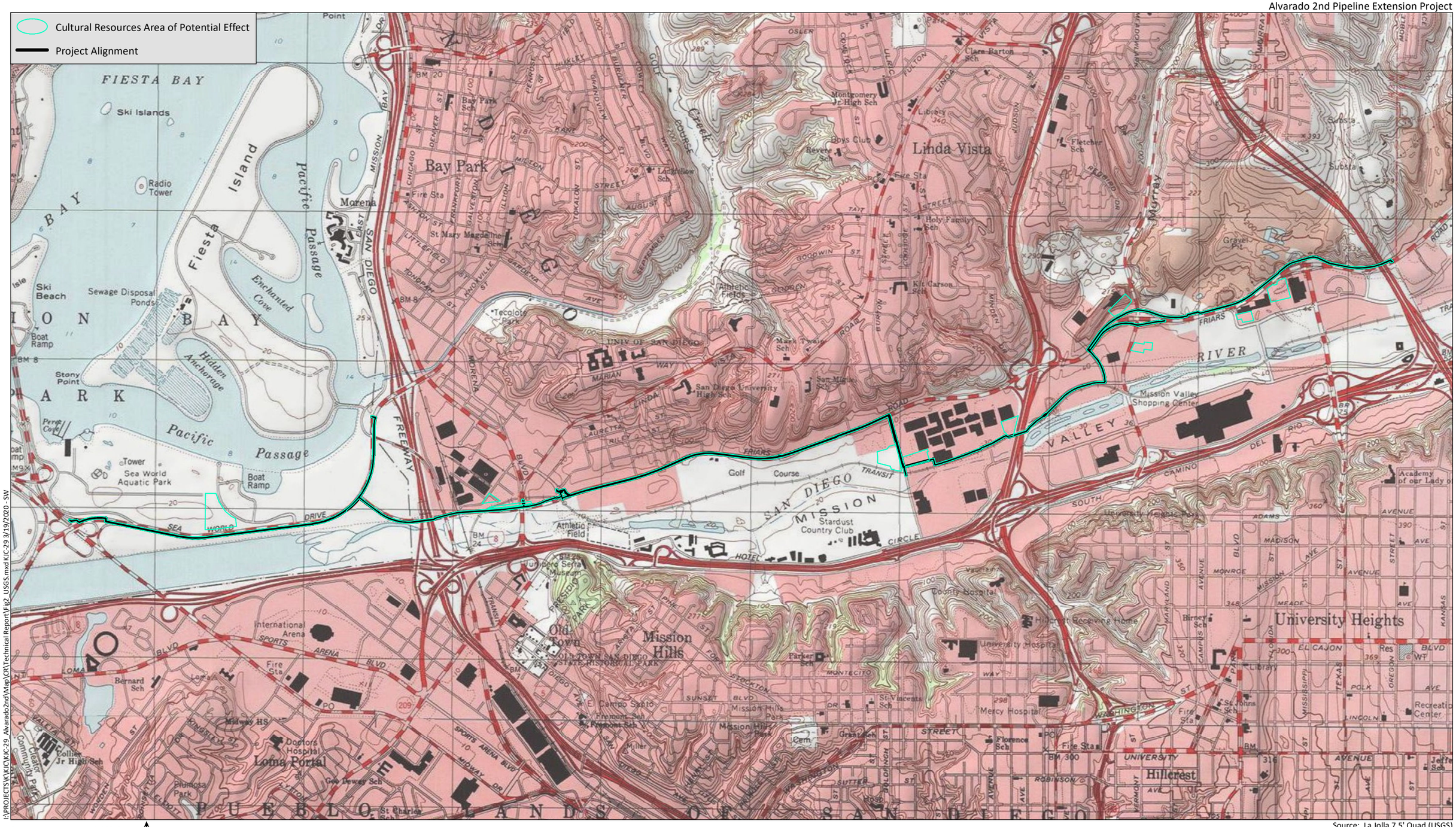
Regional Location

Figure 1

Cultural Resources Area of Potential Effect

Project Alignment



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Source: La Jolla 7.5' Quad (USGS)

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USGS Topography

Figure 2

Alvarado 2nd Pipeline Extension Project

Project Alignment
Cultural Resources Area of Potential Effect
Laydown Yard/Staging Area

Clairemont Dr
Genesee Ave
Murray Ridge Rd
Morena Blvd
East Mission Bay Dr
805
Friars Rd
Qualcomm Way
Ulric St
Linda Vista Rd
Camino Del Rio North
Camino De La Reina
Camino Del Rio South
Mission Valley Mall
Fashion Valley Mall
Friars Rd
163
Via Las Cumbres
Fashion Valley Rd
Texas St
Ingraham St
SeaWorld Park
5
Morena Blvd
Riverwalk Golf Club
Adams Ave
West Mission Bay Dr
Sea World Dr
Sefton Park
Taylor St
8
Mission Ave
Bachman Pl
El Cajon Blvd
Sports Arena Blvd
Camino Del Rio West
Juan St
West Point Loma Blvd
Midway Dr
Fort Stockton Dr
Washington St
Rosecrans St
San Diego Ave
5th Ave
University Ave
Pacific Hwy

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0 2,000 Feet

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Source: Aerial (SanGIS, 2017)

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Aerial Photograph

Figure 3

Project Components

- 12 inch Pipeline
- 16 inch Pipeline
- 24 inch Pipeline
- 48 inch Pipeline
- Pressure Regulating Station (PRS)
- Laydown Yard/Staging Areas

Clairemont Dr
Genesee Ave
Morena Blvd
East Mission Bay Dr
Murray Ridge Rd
805
Friars Rd
Qualcomm Way
Ulric St
Linda Vista Rd
Camino Del Rio North
Camino De La Reina
Camino Del Rio South
Via Las Cumbres
Friars Rd
163
Fashion Valley Mall
Mission Valley Mall
Ingraham St
SeaWorld Park
5
Morena Blvd
Fashion Valley Rd
Texas St
Riverwalk Golf Club
Adams Ave
West Mission Bay Dr
Sea World Dr
Sefton Park
Taylor St
8
Mission Ave
Bachman Pl
El Cajon Blvd
Sports Arena Blvd
Camino Del Rio West
Juan St
West Point Loma Blvd
Midway Dr
Fort Stockton Dr
Washington St
Rosecrans St
San Diego Ave
5th Ave
University Ave
Pacific Hwy

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0 2,000 Feet

N

Source: Aerial (SanGIS, 2017)

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Project Overview

Figure 4

- resource(s) either listed in the NRHP or in a "local register of historical resources" or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, unless "the preponderance of evidence demonstrates that it is not historically or culturally significant" (14 CCR Section 15064.5[a][2])

- resources determined by the Lead Agency to meet the criteria for listing on the CRHR (14 CCR Section 15064.5[a][3])

For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

A. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

B. It is associated with the lives of persons important to local, California, or national history;

C. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; and/or

D. It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a "historical resource" for the purposes of CEQA at the discretion of the lead agency.

All resources that are eligible for listing in the NRHP or CRHR must have integrity, which is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial relationships. A resource must also be judged with reference to the particular criteria under which it is proposed for nomination. Under Section 106 of the NHPA, actions that alter any of the characteristics that qualify a property for eligibility for listing in the NRHP "in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association" (36 CFR 800.5[a]) constitute an adverse effect to the historic property.

1.2.1 City's Historical Resources Regulations

The purpose of the City's Historical Resources Regulations (Land Development Code Chapter 14, Division 3, Article 2) is to protect, preserve and, where damaged, restore the historical resources of San Diego, which include historical buildings, historical structures or historical objects, important archaeological sites, historical districts, historical landscapes, and traditional cultural properties (City of San Diego 2018). These regulations are intended to assure that development occurs in a manner that protects the overall quality of historical resources. It is further the intent of these regulations to protect the educational, cultural, economic, and general welfare of the public, while employing regulations that are consistent with sound historical preservation principles and the rights of private property owners.

The regulations apply to proposed development when the following historical resources are present on the site, whether or not a Neighborhood Development Permit or Site Development Permit is required: designated historical resources; historical buildings; historical districts; historical landscapes; historical objects; historical structures; important archaeological sites; and traditional cultural properties. Where any portion of a premises contains historical resources, the regulations shall apply to the entire premises.

The property owner or applicant shall submit required documentation and obtain a construction permit, a Neighborhood Development Permit, or a Site Development Permit, as required pursuant to this division before any development activity occurs on a premises that contains historical resources. The regulations delineate which types of permits are required for a project, based on the type of development proposal and the types of historical resources that would potentially be affected by the project.

1.2.1.1 City of San Diego Historical Resources Guidelines

The purpose and intent of the City's Historical Resources Guidelines (HRG), located in the City's Land Development Manual (City of San Diego 2001) is to protect, preserve and, where damaged, restore the historical resources of San Diego. The HRG states that if a project will potentially impact a resource, the resource's significance must be determined, even if it is not listed in or previously considered eligible for the California Register or a local register (Section II.D.5).

In order to be designated as historic and potentially listed in the City's Historical Resources Register, one or more of the following criteria must be met:

(A) Exemplifies or reflects special elements of the City's, a community's or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development.

(B) Is identified with persons or events significant in local, state or national history.

(C) Embodies distinctive characteristics of a style, type, period or method of construction or is a valuable example of the use of indigenous materials or craftsmanship.

(D) Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist or craftsman.

(E) Is listed or has been determined eligible by the National Park Service for listing on the NRHP or is listed or has been determined eligible by the California Office of Historic Preservation for listing on the CRHR.

(F) Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

Eligible resources, which may include an improvement, building, structure, sign, interior element and fixture, feature, site, place, district, area or object, are designated to the City's Register of Designated Historical Resources by the City's Historical Resources Board (HRB) at a publicly noticed hearing.

The City's HRG also states that if a project will potentially impact a resource, the resource's significance must be determined, even if it is not listed in or previously considered eligible for the CRHR or a local register (Section II.D.5). The City has established baseline resource significance criteria based upon CEQA as follows:

> An archaeological site must consist of at least three associated artifacts/ecofacts (within a 50-square meter area) or a single feature and must be at least 45 years of age. Archaeological sites containing only a surface component are generally considered not significant, unless demonstrated otherwise. Such site types may include isolated finds, bedrock milling stations, sparse lithic scatters, and shellfish processing stations. All other archaeological sites are considered potentially significant. The determination of significance is based on a number of factors specific to a particular site including site size, type and integrity; presence or absence of a subsurface deposit, soil stratigraphy, features, diagnostics, and datable material; artifact and ecofact density; assemblage complexity; cultural affiliation; association with an important person or event; and ethnic importance (City of San Diego 2001:15).

Non-significant resources are addressed in Section II.D.6 as including sites with no subsurface component, such as isolates, lithic scatters, isolated bedrock milling stations, and shellfish processing stations.

1.2.2 Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties (TCP) in discussions of cultural resource management performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Cultural resources can include TCPs, such as gathering areas, landmarks, and ethnographic locations, in addition to archaeological districts. Generally, a TCP may consist of a single site, or group of associated archaeological sites (district or traditional cultural landscape), or an area of cultural/ethnographic importance.

In California, the Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American Tribes during the project planning process, specifically before adopting or amending a General Plan or a Specific Plan, or when designating land as open space for the purpose of protecting Native American cultural places. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. State Assembly Bill (AB) 52, effective July 1, 2015, introduced the Tribal Cultural Resource (TCR) as a class of cultural resource and additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally defined TCP; however, it incorporates consideration of local and state significance and required mitigation under CEQA. A TCR

may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in PRC §5024.1; or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resource described PRC §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

1.3 AREA OF POTENTIAL EFFECT

Pursuant to 36 CFR 800.4(a)(1), the APE is the geographic area within which an undertaking may directly or indirectly alter the character or use of historic properties. The APE for the project includes the proposed pipeline alignments and a 50-foot buffer on either side, for a minimum 100-foot corridor, and the nine laydown yards/staging areas located within existing parking lots or disturbed areas (Figure 3). Trenching for the pipeline alignment will occur to depths of between 4.5 feet and 18 feet. The typical trench depth will be between 4.5 feet and 6.5 feet for the 12-inch pipeline, between 5 feet and 7 feet for 16-inch pipeline, between 7.5 feet and 10.5 feet for the 24-inch pipeline, and between 9.5 feet and 12.5 feet for the 48-inch pipeline. Adjacent to the golf course the trench will be as deep as 12 to 18 feet at some utility crossings, and as deep at 25 feet at the MTS crossing.

1.4 PROJECT PERSONNEL

Stacie Wilson, M.S., RPA, served as principal investigator and is coauthor of this technical report. Theodore Cooley, M.A., RPA, is primary author of this report. Ms. Wilson and Mr. Cooley both meet the qualifications of the Secretary of Interior's Standards and Guidelines for archaeology. Mary Robbins-Wade, M.A, RPA, provided senior technical review. Julie Roy, B.A., conducted the field survey and served as report contributor. Gabe Kitchen (Kumeyaay Native American monitor) from Red Tail Environmental. participated in the pedestrian survey. Resumes for key project personnel are presented in Appendix A.

2.0 PROJECT SETTING

2.1 NATURAL SETTING

The project area is situated within the coastal plain of western San Diego County, west of the mountains of the Peninsular Ranges where the climate is characterized as semi-arid steppe, with warm, dry summers and cool, moist winters (Hall 2007; Pryde 2004). The project alignment is located within Mission Valley, primarily along the northern boundary of the San Diego River valley. The elevation of the proposed project alignment ranges from 20 feet above mean sea level (AMSL) to 80 feet AMSL. The project alignment is characterized predominantly by urban development comprised mostly of freeway and other paved transportation infrastructure. Areas immediately surrounding the project alignment include residential, large-scale recreational/commercial, and industrial development. The San Diego River is located immediately adjacent to the south.

Geologically, the project area is in the western portion of the Peninsular Ranges geomorphic province of southern California. Situated along the San Diego River Valley, the project alignment along most of its extent is underlain, either by young alluvial flood-plain and/or slopewash deposits of mostly Holocene age, deposited from the adjacent bluffs and by the San Diego River, or by historical or modern age artificial fills. Where the alignment encounters the base of the bluffs along the river valley, however, several older geologic formations occur, including the middle Eocene-age Stadium Conglomerate

Formation, the middle Pleistocene-age Bay Point Formation, and Late Pleistocene-age stream-terrace deposits (Kennedy 1975a, 1975b; Kennedy and Tan 2008). Both the Bay Point Formation and Stadium Conglomerate formations can be fossiliferous (Kennedy 1975a; Kennedy and Tan 2008). Several soil series are mapped along the alignment, including Huerhuero-Urban land complex, Grangeville fine sandy loam, Olivenhain-Urban land complex, Tujunga sand, Terrace escarpments, and Riverwash, as well as inundated lagoon water areas, and highly disturbed urban land (completely developed), made land (fill), and modern (non-prehistoric) quarries (Web Soil Survey n.d.). The Huerhuero-Urban land complex occurs on marine terraces and consists of unconsolidated sandy marine sediments. The Grangeville series consists of deep, well-drained sandy loams and the Tujunga series consists of very deep sands, both derived from granitic alluvium and situated on alluvial fans or plains. The Olivenhain series consists of well-drained, moderately deep to deep cobbly loams that have a very cobbly clay subsoil. Terrace escarpments consist of steep to very steep escarpments and escarpment-like landscapes which occur between narrow flood plains and adjoining uplands and the very steep sides of drainageways that are encroaching into level uplands (Bowman 1973).

Recent botanical surveys conducted by HELIX identified a total of 13 vegetation communities/land cover types within the project area and vicinity including arundo-dominated riparian, coastal salt marsh, mud flat, non-native riparian, open water, saltgrass grassland, southern cottonwood-willow riparian forest, southern willow scrub, baccharis scrub (including disturbed), Diegan coastal sage scrub (including disturbed), non-native vegetation, disturbed habitat, and developed land. The most common of these were large areas containing non-native vegetation, disturbed habitat, and developed land. The largest areas of native vegetation contained Diegan coastal sage scrub (including disturbed) and southern cottonwood-willow riparian forest (HELIX 2020).

Prehistorically, the natural vegetation in the project area and vicinity likely consisted mostly of southern cottonwood-willow riparian forest along the San Diego River, with coastal sage scrub (Diegan coastal sage scrub) and native grassland in adjacent areas, along with chamise chaparral, baccharis scrub, southern willow scrub, saltwater and freshwater marsh, and vernal pool communities. Prior to historic and modern activities, more extensive stands of the riparian community than today would have been present along the San Diego River as well as adjacent major drainages such as Rose Canyon, Tecolote Creek, and possibly Murray Canyon, with plants such as western sycamore (*Platanus racemosa*), willow (*Salix* sp.), Fremont cottonwood (*Populus fremontii*), and coast live oak (*Quercus agrifolia*) (Beauchamp 1986; Munz 1974). Plants of the coastal sage scrub community, including California sagebrush (*Artemisia californica*), white sage *(Salvia apiana*), flat-top buckwheat (*Eriogonum fasiculatum*), broom baccharis (*Baccharis sarothroides*), wild onion (*Allium haematochiton*), laurel sumac (*Malosma laurina*), San Diego sunflower (*Bahiopsis laciniata*), golden-yarrow (*Eriophyllum confertiflorum*), sawtooth goldenbush (*Hazardia squarrosa*), yucca (*Yucca schidigera*, *Hesperoyucca whipplei*), prickly pear cactus (*Opuntia* sp.), and scrub oak (*Quercus dumosa*) would likely have covered most of the adjacent mesas and canyons in the area, interspersed with areas of native grasslands (*Stipa, Elymus, Poa, Muhlenbergia*) (Beauchamp 1986; Munz 1974). Major wildlife species found in this environment prehistorically include mammals such as coyote (*Canis latrans*); mule deer (*Odocoileus hemionus*); grizzly bear (*Ursus arctos*); mountain lion (*Puma concolor*); desert cottontail (*Sylvilagus audubonii*); jackrabbit (*Lepus californicus*); reptiles such as western pond turtle (*Actinemys marmorata*), southern pacific diamondback rattlesnake (*Crotalus oreganus helleri*), gopher snake (*Pituophis melanoleucus catenifer*) and several lizard species; and various rodents, the most notable of which are the valley pocket gopher (*Thomomys bottae*), California ground squirrel (*Otospermophilus beecheyi*), and dusky footed woodrat (*Neotoma fuscipes*) (Head 1972).

Many of the native plant species found in these vegetation communities are known to have been used by native populations for food, medicine, tools, and ceremonial and other uses (Christenson 1990; Hedges and Beresford 1986; Luomala 1978). Many of the animal species living within these vegetation communities (such as rabbits, deer, small mammals, and pond turtles, as well as birds and fish) would have been used by native inhabitants as well. Desert cottontails, jackrabbits, and rodents were very important to the prehistoric diet; deer were somewhat less significant for food, but were an important source of leather, bone, and antler (Christenson 1990; Luomala 1978).

2.2 CULTURAL SETTING

2.2.1 Prehistoric Period

The project area is located along the southern San Diego coast, within the Southern Coast Archaeological Region of California (Moratto 1984). The following culture history outlines and briefly describes the known prehistoric cultural traditions in the vicinity of the study area. The approximately 10,000 years of documented prehistory of the San Diego region has often been divided into three periods: Early Prehistoric Period (San Dieguito tradition/complex), Archaic Period (Milling Stone Horizon, Encinitas tradition, and La Jolla and Pauma complexes), and Late Prehistoric Period (Cuyamaca and San Luis Rey complexes).

2.2.1.1 Early Prehistoric Period Traditions/Complexes

The Early Prehistoric Period represents the time period of the first known inhabitants in California. In some areas of California, it is referred to as the Paleo-Indian period and is associated with the Big-Game-Hunting activities of the peoples of the last Ice Age occurring during the Terminal Pleistocene (pre-10,000 years ago) and the Early Holocene, beginning circa 10,000 years ago (Erlandson 1994, 1997; Erlandson et al. 2007). In the western United States, most evidence for the Paleo-Indian or Big-Game-Hunting peoples during this time period derives from finds of large fluted spear and projectile points (Fluted-Point Tradition) at sites outside of California in places such as Clovis and Folsom in the Great Basin and the Desert southwest (Moratto 1984:79–88). In California, most of the evidence for the Fluted-Point Tradition derives from less substantial sites in the southeastern areas of the state along the margins of the Great Basin and adjacent Mojave Desert and from isolated fluted point occurrences scattered elsewhere in the state (Dillon 2002; Rondeau et al. 2007). Some of these isolated finds, however, have occurred along the southern California coast (Erlandson et al. 1987; Fitzgerald and Rondeau 2012), including some finds on the Baja Peninsula (Des Lauriers 2008; Hyland and Gutierrez 1995).

While an isolated fluted point has recently been found in the eastern mountains of San Diego County, approximately 50 miles to the northeast of the project area (Kline and Kline 2007), the most well-documented sites in the San Diego area dating to the Early Prehistoric Period, belong to the San Dieguito Tradition, now documented to be over 9,000 years old (Warren et al. 1998; Warren and Ore 2011). The San Dieguito Tradition, with an artifact assemblage distinct from that of the Fluted-Point Tradition, has been documented mostly in the coastal area in San Diego County, as well as in the southeastern California deserts (Carrico et al. 1993; Rogers 1966; Warren 1967; Warren and True 1961), with only sparse evidence for it discovered in the coastal area north of San Diego County (e.g., Sutton and Grenda 2012). The content of the earliest component of the C.W. Harris Site (CA SDI-149/316/4935B), located along the San Dieguito River, approximately 18 miles to the north of the project area, formed the basis upon which Warren and others (Vaughan 1982; Warren 1967; Warren and True 1961; Rogers 1966)

identified the "San Dieguito complex," and which Warren later reclassified as the San Dieguito Tradition (1968). This tradition is characterized by an artifact inventory consisting almost entirely of flaked stone biface and scraping tools, but lacking the fluted points associated with the Fluted-Point Tradition. Diagnostic artifact types and categories associated with the San Dieguito Tradition include elongated bifacial knives, scraping tools, crescentics, and leaf-shaped projectile points (Rogers 1939; Warren 1967).

The subsistence system or emphasis of the San Dieguito Tradition, while not as yet entirely agreed upon, is suggested by Warren as having an orientation toward a hunting rather than gathering economy, based on an artifact assemblage of primarily hunting associated tools, in contrast to the more gathering-oriented complexes that were to follow in the Archaic Period (Warren 1967, 1968, 1987; Warren et al. 1998). Other researchers have interpreted the San Dieguito subsistence system to be possibly ancestral to, or a developmental stage for, the predominantly gathering-oriented "La Jolla/Pauma complex" of the subsequent Archaic Period (e.g., Bull 1983; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991). Based on uncalibrated radiocarbon dates, Warren originally indicated this tradition to have begun sometime prior to 9,000 years before present (BP) and to have ended sometime between 8500 and 7500 BP (1967; 1968:4). Recent calibrations, however, have indicated these dates to be significantly earlier, extending to circa 10,000 BP (Warren et al. 1998:II-25; Warren and Ore 2011).

2.2.1.2 Archaic Period Traditions/Complexes

In the southern coastal region, the Archaic Period dates from circa 8600 BP to circa 1300 BP (Warren et al. 1998). A large number of archaeological site assemblages dating to this period have been identified at a range of coastal and inland sites. This appears to indicate that a relatively stable, sedentary hunting and gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of what is now San Diego County for more than 7,000 years. These assemblages, designated as the La Jolla/Pauma complexes, are considered part of Warren's (1968) "Encinitas tradition" and Wallace's (1955) "Early Milling Stone Horizon." In general, the content of these site assemblages includes manos and metates; shell middens; terrestrial and marine mammal remains; burials; rock features; bone tools; doughnut stones; discoidals; stone balls; plummets; biface points/ knives; beads made of stone, bone, or shell; and cobble-based tools at coastal sites and increased hunting equipment and quarry-based tools at inland sites (True 1958, 1980). As originally defined by True (1958), the "Pauma complex" aspect of this culture is associated with sites located in inland areas that lack shellfish remains but are otherwise similar in content to the La Jolla complex. The Pauma complex may, therefore, simply represent a non-coastal expression of the La Jolla complex (True 1980; True and Beemer 1982). Additional radiometric dating in the archaeological record has indicated that an increase in hunting activity and the gathering and processing of acorns may have begun during the latter half of the Archaic Period, with artifacts such as dart points and mortars and pestles becoming increasingly present in site assemblages dating after circa 5500 BP and being essentially absent during the early Archaic Period. This evidence in the archaeological record indicative of an increase in hunting activity and the gathering and processing of acorns for subsistence represents a major shift in the Encinitas/La Jolla/Pauma complex subsistence system in the southern coastal region at this time (Warren et al. 1998; Warren 2012).

While sites dating to the Archaic Period are numerous along the coast, including several in proximity to the study area, evidence in the archaeological record for sites associated with the Archaic Period in upper-elevation inland foothill and mountain areas of San Diego County is less common relative to the Late Prehistoric complexes that succeed them. McDonald (1995:14) has observed that "most sites in the Laguna Mountains can be expected to date from late prehistoric or ethnohistoric occupation of the

region, and Archaic Period remains, while not unknown, are relatively rare." While inland archaeological sites containing Archaic Period assemblages are not unknown in the central area of San Diego County area (e.g., Cooley 1995; Cooley and Barrie 2004; Raven-Jennings and Smith 1999; Warren et al. 1961:10;), similar to the sites associated with San Dieguito complex during the Early Prehistoric Period, most of the substantiating archaeological evidence for Archaic Period sites in present-day San Diego County is derived from sites located in near-coastal valleys, and around estuaries, and/or embayments that are present along the San Diego coast south of the San Luis Rey River. One such site, dated to the Archaic Period, CA-SDI-11767, is located within the current project area. Subsurface investigations and other research previously conducted at the site documented an artifact and feature assemblage typical of the La Jolla complex and produced three uncalibrated radiocarbon dates spanning a period from circa 2,690 BP to 2,310 BP (Cooley et al. 1996). Other well-documented Archaic Period site sites in proximity to the project area are sites CA SDI-48 (Gallegos and Kyle 1998) and CA-SDI-10945 (Pigniolo et al. 1991) on Point Loma and northern San Diego Bay, respectively. Other southern and central San Diego County coastal sites radiocarbon dated to the Archaic Period include the Scripps Estate Site, CA-SDI-525, in La Jolla (Moriarty et al. 1959; Shumway et al. 1961); site CA SDI-4629 (SDM-W-20) along Peñasquitos Lagoon (Smith and Moriarty 1985); site CA SDI-10238 on San Dieguito Lagoon, (Cooley et al. 2000; Smith 1986); site CA-SDI-603 (Crabtree et al. 1963) on Batiquitos Lagoon; and sites CA SDI-210/UCLJ-M-15 (Moriarty 1967), CA SDI-10965/SDM-W-131 (Gallegos 1991; Gallegos and Carrico 1984), and the Allen O. Kelly Site, CA SDI-9649 (Koerper et al. 1991) around Agua Hedionda Lagoon. Results from research already conducted at a site in the project area (CA-SDI-11767), and the location of the project in proximity to these and other early archaeological sites along the coast, place it within an area where sites that can be definitely dated to the Archaic Period and that contain La Jolla or Pauma complex assemblages are the most common (Warren et al. 1998).

2.2.1.3 Late Prehistoric Period Traditions/Complexes

The beginning of the Late Prehistoric Period is marked by evidence of a number of new tool technologies and subsistence shifts in the archaeological record. Compared to those shifts noted for the middle and late Archaic Period, those occurring at the onset of the Late Prehistoric Period were rather abrupt changes. The magnitude of these changes and the short period of time within which they took place seem to indicate a significant alteration in subsistence practices in what is now San Diego County circa 1500 to 1300 BP The changes observed in the archaeological record during the Late Prehistoric Period include shifts in settlement patterning indicative of population increases; shifts in subsistence practices such as a reduction, in some areas, of shellfish gathering (possibly due to silting of the coastal lagoons), and an increase in the storage of foodstuffs such as acorns; new technologies such as the production of pottery and the use of the bow and arrow for hunting instead of atlatl and dart; and new traits such as the cremation of the dead instead of burial by inhumation (Gallegos 2002; McDonald and Eighmey 1998).

Movements of people during the last 2,000 years can account for at least some of these changes. Yuman-speaking people had occupied the Gila/Colorado River drainages of what is now western Arizona by 2,000 years ago (Moriarty 1968) and then continued to migrate westward. An analysis by Moriarty (1966, 1967) of materials recovered from the Spindrift site in La Jolla indicated a preceramic Yuman phase. Based on this analysis and a limited number of radiocarbon samples, Moriarty concluded that the Yuman speakers, lacking ceramic technology, penetrated into and occupied what is now the San Diego coastline circa 2000 BP. Subsequently, approximately 1200 to 1300 BP, ceramic technology diffused into the coastal area from the eastern deserts. Although these Yuman speakers may have shared cultural traits with the people occupying what is now eastern San Diego County before 2000 BP, their influence

is better documented throughout present-day San Diego County after 1300 BP, with the introduction of small points, ceramics, Obsidian Butte obsidian, and the practice of cremation of the dead.

Early research by Meighan (1954) and True (1970), defined two distinct archaeological complexes for the Late Prehistoric Period in what is now San Diego County. True (1970) defined a Late Prehistoric Period complex for southern San Diego County, the Cuyamaca complex that was distinct from one defined by Meighan (1954), the San Luis Rey complex in the northern county area. The presence or absence, or differences in the relative occurrence, of certain diagnostic artifacts in the archaeological assemblages at sites provide the principal distinctions between these archaeological complexes. Cuyamaca complex sites, for example, generally contain both Cottonwood Triangular-style points and Desert Side-notched arrow points, while Desert Side-notched points are uncommon in San Luis Rey complex sites (Pigniolo 2001). Other examples include Obsidian Butte obsidian, which is far more common in Cuyamaca complex sites than in San Luis Rey complex sites, and ceramics. While ceramics are present during the Late Prehistoric Period throughout what is now San Diego County, they are more common in the southern or Cuyamaca complex portions of San Diego County where they occur earlier in time and appear to be somewhat more specialized in form. Both complexes have produced a variety of vessel types, along with rattles, straight and bow-shaped pipes, and effigies. Interment of the dead at Cuyamaca complex sites is almost exclusively by cremation, often in special burial urns for interment, while archaeological evidence from San Luis Rey complex sites indicates both inhumation and cremation. Based on ethnographic data, including the areas defined for the Hokan-based Yuman-speaking peoples (Diegueño/Kumeyaay) and the Takic-speaking peoples (Luiseño) at the time of contact, it is generally accepted that the Cuyamaca complex is associated with the Diegueño/Kumeyaay and the San Luis Rey complex with the Luiseño/Juaneño. Based on archaeological data, the proposed project lies within the area defined for the Cuyamaca complex.

Compared to Archaic Period sites, substantial Late Prehistoric Period sites attributable to the San Luis Rey or Cuyamaca complexes, while not absent (see below), are less common in the near-coastal areas of the county. Gallegos (1995:200) stated that “for San Diego County, there is temporal patterning, as the earliest sites are situated in coastal valleys and around coastal lagoons. Late Prehistoric Period sites are also found in coastal settings but are more common along river valleys and interior locations.” It has also been observed at some coastal sites with substantial Archaic Period occupations that evidence for Late Prehistoric occupation, when present, is often minimal in comparison to earlier occupations (e.g., Crabtree et al. 1963: 343). In contrast, numerous Late Prehistoric Period sites, attributable to the San Luis Rey or Cuyamaca complexes have been identified for the near-coastal inland foothill areas of the County through diagnostic artifacts and/or radiocarbon dating (e.g., Chace and Hightower 1979; Cooley and Barrie 2004; McCown 1945; Ravens-Jennings and Smith 1999; Willey and Dolan 2004).

Three coastal sites located in proximity to the project area that have produced varying levels of archaeological evidence of Late Prehistoric Period occupation are also thought to be the locations of ethnographic Kumeyaay villages that were inhabited when they were visited by the Spanish during the Portolá expedition in 1769 (Carrico 1977a). At the Kumeyaay village of *Cosoy* [CA-SDI-41], located near the Spanish Presidio, Carrico (1998) indicates that “Little archaeological documentation of this settlement has occurred because of the highway construction, commercial development, and river channeling that took place without benefit of archaeological study” (1998:V-15). Another archaeologically documented site near the project area with more archaeological evidence of Late Prehistoric Period occupation is site CA-SDI-5017, located at the mouth of the Rose Canyon drainage on Mission Bay (Winterrowd and Cardenas 1987). This site, which has been radiocarbon dated to the Late Prehistoric Period, is also generally recognized as the location of the ethnographic village of *Jamo*

(Rinconada) (Carrico 1977b; 1998). Perhaps the most well documented archaeological site with evidence of substantial Late Prehistoric Period occupation is site CA SDI-4513/4609/5443, also known as the ethnohistoric village of *Ystagua*, located approximately 9 miles to the north of the project area on the Peñasquitos Lagoon (Carrico and Taylor 1983; Gallegos et al. 1989). A total 38 radiocarbon dates spanning from approximately 5040 BP to circa 220 BP are associated with the site (Byrd and Reddy 2002). Sites such as CA-SDI-4513/4609/5443 indicate a pattern of settlement connected with the repeated occupation of a location and the surrounding vicinity that extended from the middle Archaic Period through to the Late Prehistoric Period and into ethnohistoric times. Another coastal site, near the project area that is dated to the Late Prehistoric Period is CA-SDI-14152, located along the lower San Diego River in proximity to the project alignment. This site, which was discovered during construction excavations, was buried beneath more than three meters of river-deposited alluvium (Schaefer 1996).

Based on archaeological as well as ethnographic data, subsistence in the Late Prehistoric Period is thought to have been focused on the utilization of acorns and grass seeds, with small game serving as a primary protein resource and big game as a secondary resource. Fish and shellfish were also secondary resources, except immediately adjacent to the coast, where they assumed primary importance (Bean and Shipek 1978; Sparkman 1908; Luomala 1978). The settlement system is characterized by seasonal villages where people used a central-based collecting subsistence strategy.

2.2.2 Ethnohistory

The cultural history in San Diego County presented above is based on documentation from both the archaeological and ethnographic records and represents a continuous human occupation in the region spanning the last 10,000 years. While this information comes from the scientific reconstructions of the past, it does not necessarily represent how the Kumeyaay people see themselves. While the material culture of the Kumeyaay is contained in the archaeological record, their history, beliefs and legends have persevered and are retained in the songs and stories passed down through the generations.

The Ethnohistoric Period, sometimes referred to as the ethnographic present, commences with the earliest European arrival in what is now San Diego and continued through the Spanish and Mexican periods and into the American period. Based on ethnographic data, at the time of European contact the southern area of San Diego County is in the traditional territory of the Hokan-based Yuman-speaking people (Kumeyaay). The Kumeyaay people have also been known as Ipai, Tipai, or as the Diegueño (named for Mission San Diego de Alcala). Agua Hedionda Creek is often described as the division between the territories of the Luiseño to the north and the Kumeyaay people to the south (Bean and Shipek 1978; Luomala 1978), although various ethnographers (e.g., Kroeber 1925) have defined slightly different boundaries. Traditional stories and songs of the Native people also describe the extent of traditional use areas.

The founding of Mission San Diego de Alcalá in 1769 brought about profound changes in the lives of the Kumeyaay. The coastal Kumeyaay died from introduced diseases or were brought into the mission system. Earliest accounts of Native American life in what is now San Diego were recorded as a means to salvage scientific knowledge of native lifeways. These accounts were often based on limited interviews or biased data collection techniques. Later researchers and local Native Americans began to uncover and make public significant contributions in the understanding of native culture and language. These studies have continued to the present day, and involve archaeologists and ethnographers working in conjunction with Native Americans to address the continued cultural significance of sites and landscapes across San Diego County.

The population of the Kumeyaay people in San Diego in 1770 was estimated by Kroeber (1925:883) to be 3,000, but Luomala (1978:596) believes it was likely double or triple that estimate. At the time of Spanish contact, Kumeyaay bands occupied southern San Diego and southwestern Imperial counties and northern Baja California. The Kumeyaay are a group of exogamous, patrilineal territorial bands who lived in semi-sedentary, politically autonomous villages or rancherias. Most rancherias were the seat of a clan, although it is thought that, aboriginally, some clans had more than one rancheria and some rancherias contained more than one clan (Bean and Shipek 1978; Luomala 1978). Several sources indicate that large Kumeyaay villages or rancherias were located in river valleys and along the shoreline of coastal estuaries (Bean and Shipek 1978; Kroeber 1925). They subsisted on a hunting and foraging economy, exploiting San Diego's diverse ecology throughout the year; coastal bands exploited marine resources while inland bands might move from the desert, ripe with agave and small game, to the acorn-and pine nut-rich mountains in the fall (Cline 1984; Kroeber 1925; Luomala 1978).

Several major Kumeyaay villages were located along the San Diego River including the village of *Cosoy* near the location of the San Diego Presidio and the first location of the Mission de Alcalá, and adjacent to the western end of the project alignment. *Cosoy* (also known as *Kosaii, Kosa'aay, or Kosoi*) has primarily been documented as site P-37-000041/CA-SDI-41, primarily based on the research conducted by N. C. Nelson (n.d.) and A.L. Kroeber (1925) in the early 1900s. *Kosaii* is a Kumeyaay word for dry place or drying place (Dumas 2011, cited in AECOM 2015). While the exact location of Cosoy remains unclear, it may have encompassed the area from the San Diego River on the north to southwest of Presidio Hill, where the golf course in Old Town is currently located (Carrico 1998; Mogilner 2016).

Upriver, at the second and final location of the San Diego Mission de Alcalá, was the village of *Nipaquay*, 1.75 miles from the eastern end of the project area (Carrico 1998). The presence of these Kumeyaay villages at, or near, the locations of these early Spanish facilities was not accidental. The Spaniards chose these locations because there were native villages present in proximity (Carrico 1998). A third village, indicated by Kroeber (1925), to also be located along the lower San Diego River, was the village of *Sinyeweche* to the east of the village of *Nipaquay*. Another village located in proximity, approximately 2.5 miles to the north of the western end of the project area, where the Rose Canyon drainage enters Mission Bay, was the village of *Jamo* (Rinconada) (Carrico 1998). Some native speakers referred to river valleys as *oon-ya*, meaning trail or road, describing one of the main routes linking the interior of San Diego with the coast; the floodplain from the San Diego Mission de Alcalá to the ocean was *hajir* or *qajir* (Harrington 1925).

2.2.3 Historical Background

2.2.3.1 Spanish Period

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769. In the mid-eighteenth century, Spain had escalated its involvement in California from exploration to colonization (Weber 1992) and in that year, a Spanish expedition headed by Gaspar de Portolá and Junípero Serra established the Royal Presidio of San Diego. A small pueblo, now known as Old Town San Diego, developed below the presidio. Portolá then traveled north from San Diego seeking suitable locations to establish military presidios and religious missions in order to extend the Spanish Empire into Alta California.

Initially, both a mission and a military presidio were located on Presidio Hill overlooking the San Diego River. The Mission San Diego de Alcalá was constructed in its current location five years later. The

missions and presidios stood, literally and figuratively, as symbols of Spanish colonialism, importing new systems of labor, demographics, settlement, and economies to the area. Cattle ranching, animal husbandry, and agriculture were the main pursuits of the missions.

2.2.3.2 Mexican Period

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past, and laws governing the distribution of land were also retained in the 1820s. Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with the society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities. These ranches put new pressures on California's native populations, as grants were made for inland areas still occupied by the Kumeyaay, forcing them to acculturate or relocate farther into the back-country. In rare instances, former mission neophytes were able to organize pueblos and attempt to live within the new confines of Mexican governance and culture. The most successful of these was the Pueblo of San Pasqual, located inland along the San Dieguito River Valley, founded by Kumeyaay who were no longer able to live at the Mission San Diego de Alcalá (Carrico 2008; Farris 1994).

Land was also granted to pueblos with locally elected town councils. In 1833, San Diego submitted a petition to Governor Figueroa asking for formal recognition as a pueblo, and in 1834, was granted permission to establish a municipal government. However, partially due to the establishment of the ranchos in the back-county areas and the subsequent population shift to the ranchos, San Diego's population shrunk from nearly 500 people in 1834 to 150 in 1841 (Crane 1991). Consequently, the town council was replaced by a justice of the peace in 1838. A few years later, in 1845, the town was allowed a governor-appointed sub-prefect, Santiago Arguello, who commissioned a survey of the pueblo lands; the resulting map was signed Governor Pio Pico in 1846, establishing the pueblo as over 48,000 acres of land.

2.2.3.3 American Period

American governance began in 1848, when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States at the conclusion of the Mexican–American War. A great influx of settlers to California and the San Diego region occurred during the American Period, resulting from several factors, including the discovery of gold in the state in 1848, the end of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The increase in American and European populations quickly overwhelmed many of the Spanish and Mexican cultural traditions, and greatly increased the rate of population decline among Native American communities.

While the American system required that the newly acquired land be surveyed prior to settlement, the Treaty of Guadalupe Hidalgo bound the United States to honor the land claims of Mexican citizens who were granted ownership of ranchos by the Mexican government. The Land Act of 1851 established a board of commissioners to review land grant claims, and land patents for the land grants were issued throughout the following years. In 1874, San Diego received a land patent for 47,323 acres, which was slightly less than the size of the original pueblo lands, due to 1,233 acres within Point Loma being assigned as a military reservation (Crane 1991).

In the early years of the American Period, Old Town remained the center of civic life in the area; however, the San Diego River was prone to major floods, and in the 1870s, downtown San Diego, then known as Horton's Addition, become the urban center (AECOM 2015). The San Diego River, however, remained a main source of water for the growing town (Papageorge 1971). While the first attempt to build a dike to route the San Diego River into what was then known as "False Bay" (now known as Mission Bay) occurred in the 1850s, it was not until the 1870s that a more permanent channel was constructed (Brodie 2013).

The 1880s saw "boom and bust" cycles that brought thousands of people to the area of San Diego County; however, Mission Valley retained its rural character during this time. Floods that washed out the valley were relatively common, and as a result, few "real property improvements" were established in the valley (Papageorge 1971).

By the end of the decade, many of the newcomers had left, although some remained to form the foundations of small communities based on dry farming, orchards, dairies, and livestock ranching. During the late nineteenth and early twentieth centuries, rural areas of San Diego County developed small agricultural communities centered on one-room schoolhouses. Such rural farming communities consisted of individuals and families tied together through geographical boundaries, a common schoolhouse, and a church. The influence of military development, beginning in 1916 and 1917 during World War I, moved much of the population away from this life, and the need to fight a two-ocean war during World War II resulted in substantial development in infrastructure and industry to support the military and accommodate soldiers, sailors, and defense industry workers.

Development of Mission Valley

This brief historic context is based on the *Draft Mission Valley Community Plan: Historical Context Statement* (Heritage Architecture & Planning 2019). Please refer to this report for a comprehensive historic context of Mission Valley.

Mission Valley features the San Diego River, which historically made it a prime location for homesteaders, farmers, and ranchers in the late nineteenth and early twentieth centuries. Dry farm crops in the valley included oats, barley, and alfalfa. Vegetable farms, poultry, and orchards were also cultivated in the valley. Large flat swaths of cheap land also made the valley ideal for dairy farming. By the 1950s Mission Valley featured twenty dairy farms. In addition to agricultural operations, sand and gravel plants were also prevalent in Mission Valley in the early and mid-twentieth century. Sand and gravel operations once occupied about 596 acres in the valley (Heritage Architecture & Planning 2019).

New highways and road and infrastructure improvements in the 1930s and 1940s, allowed for easier access to rural Mission Valley and primed it for major urban encroachment that occurred after World War II. A second wave of roadway and freeway expansion occurred in the 1950s and 1960s accompanied by large commercial and recreational developments. Mission Valley was considered an extension of Mission Bay as a major tourist attraction with golf courses, resort hotels, San Diego Stadium, and recreational open space. Multi-family housing developments occurred in the 1970s to accommodate the growing population of the valley and San Diego (Heritage Architecture & Planning 2019).

3.0 ARCHIVAL RESEARCH AND CONTACT PROGRAM

3.1 RECORDS SEARCH

HELIX staff conducted a record search of the California Historical Resources Information System (CHRIS) at the South Coastal Information Center (SCIC) on July 3, 2018, January 13, 2020, and February 5, 2020. The records search covered a one-mile radius around the project alignment and included the identification of previously recorded cultural resources and locations and citations for previous cultural resources studies. A review of the California Register of Historical Resources, the state Office of Historic Preservation (OHP) historic properties directories, and the City of San Diego Historical Resources Register (City of San Diego 2019) was also conducted. The records search summary and map are included as Appendix B (Confidential Appendices, bound separately).

3.1.1 Previous Surveys

The records search results identified 52 previous cultural resource studies which overlap with the project APE (Table 1, *Previous Studies Occurring Within the Project Area*). These studies consist of a variety of types including initial and constraints studies; cultural resource record searches, field surveys, inventories and assessments; testing and site evaluations; historic building and architectural evaluations; monitoring reports; and environmental impact reports. Numerous additional studies were identified within the one-mile radius around the project alignment; a complete list of the studies within the search area is provided in Appendix B (Confidential Appendices, bound separately).

Table 1
PREVIOUS STUDIES OCCURRING WITHIN THE PROJECT AREA

SCIC Report Number	Year	Author	Report Title
SD-00368	1979	Carrico, Richard	Archaeological Survey of the Conrock Mission Valley CUP Extension and Reclamation Plant Area
SD-00546	1975	Cupples, Sue Ann	An Archaeological Survey of the San Diego River Valley
SD-00707	1989	Cheever, Dayle	Cultural Resources Significance Testing at SDi-6753, SDi-6754, SDi-6819, and SDi-2046: Four Prehistoric Sites Within the Aviaro Development Carlsbad, California
SD-02186	1992	Advanced Science Inc.	Cultural Resources Impact Survey for the San Diego River Outfall Project
SD-02825	1991	City of San Diego	Proposed Mitigated Negative Declaration for East Linda Vista Trunk Sewer, San Diego, California
SD-02916	1990	Peak & Associates, Inc.	Cultural Resources Assessment of AT&T's Proposed San Bernardino to San Diego Fiber Optic Cable, San Bernardino, Riverside and San Diego Counties, California
SD-02932	1994	Schaefer, Jerry	Cultural Resources Evaluation for the Proposed North Metro Interceptor Sewer Project, San Diego, California
SD-02960	1994	Caltrans	Negative Archaeological Survey Report, 11-SD-8, P.M. 3.9/4.9,11290-050021, 11-SD-805, P.M. 17.2/18/2, 11290-050031

Table 1 (cont.)
PREVIOUS STUDIES OCCURRING WITHIN THE PROJECT AREA

SCIC Report Number	Year	Author	Report Title
SD-02985	1995	Kyle, Carolyn, and Dennis Gallegos	Archaeological Testing of Seven Sites for the Stardust Golf Course Realignment Project, City of San Diego, California
SD-03000	1995	Kyle, Carolyn, and Dennis Gallegos	Archaeological Testing of Prehistoric Site CA-SDI-12126 for the North Mission Valley Interceptor Sewer Phase 2, City of San Diego, California
SD-03461	1998	Kyle, Carolyn, and Roxana L. Phillips	Cultural Resource Constraint Study for the North Bay Redevelopment Project City of San Diego, California
SD-03485	1999	Case, Robert P., and Richard L. Carrico	Cultural Resources Survey for the North Metro Interceptor Diversion 3a Pipeline Project (CIP No. 46-104.0), San Diego, California
SD-03556	1997	Gilmer, Jo Anne, and Dayle M. Cheever	Results of an Archaeological Monitoring of the North Mission Valley Interceptor Sewer Replacement- Phase II. San Diego, California
SD-03683	1999	Alter, Ruth	Results of the Historic Building Assessment for 1128 Oliver Avenue, San Diego, California
SD-04690	1996	Brown, Joan	Archaeological Monitoring of Excavation During Construction of the East Linda Vista Trunk Sewer Project Dep. No 91-0684, Located in the City of San Diego, California
SD-04868	1996	Kinnetic Laboratories Incorporated	Environmental Assessment for the North Mission Valley Interceptor Sewer Phase II- City Contract
SD-05238	1997	Gilmer Joanne, and Dayle M. Cheever	Results of Archaeological Monitoring of the North Mission Valley Interceptor Sewer Replacement Phase II
SD-05674	1991	Pigniolo, Andrew	Cultural Resource Testing and Evaluation for the Mission Valley West Light Rail Transit Project San Diego, California
SD-05903	1992	City of San Diego	DEIR for Riverwalk
SD-06382	1995	City of San Diego	Public Notice of a Proposed Mitigated Negative Declaration-Stardust Golf Course Reconfiguration
SD-06644	1994	Rosen, Martin	Negative Archaeological Survey-Interstate 8 & 805 Mission Valley
SD-08852	1990	Wade, Sue A., Stephen R. Van Wormer, and Dayle M. Cheever	Historic Properties Inventory for North City Water Reclamation Facilities Clean Water Program for Greater San Diego, San Diego, California
SD-09367	2004	Ní Ghabhláin, Sinead	Cultural Resources Initial Study for the Boulevard at North Park Project
SD-09751	2004	Moslak, Ken	Cultural Resources Study for the Quarry Falls Project
SD-10012	2005	Robbins-Wade, Mary	Historic Property Survey Report SR 163/Friars Road Interchange San Diego, California
SD-10551	2006	Arrington, Cindy	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California
SD-11360	2006	Moslak, Ken	Quarry Falls Program EIR - Cultural Resources Study
SD-11810	2008	Price, Harry J. and Jackson Underwood	Results of a Historical Resources Survey of a Portion of the Hazard Center Redevelopment Project, San Diego, California
SD-11826	2008	Robbins-Wade, Mary	Archaeological Resources Analysis for the Master Stormwater System Maintenance Program, San Diego, California Project. No. 42891

Table 1 (cont.)
PREVIOUS STUDIES OCCURRING WITHIN THE PROJECT AREA

SCIC Report Number	Year	Author	Report Title
SD-12167	2009	Rosen, Martin	Bridge Maintenance Activities on 22 Structures on Routes 5, 125, 163, and 274 In San Diego County Historic Property Survey Report
SD-12200	2009	_	Draft Environmental Impact Report for the Master Storm Water System Maintenance Program (MSWSMP)
SD-12298	2009	Gallardo, Cecilia	Public Review Draft Environmental Impact Report for the Hazard Center Redevelopment Project
SD-12422	2001	Ní Ghabhláín, Sinead, and Drew Pallette	A Cultural Resources Inventory for the Route Realignment of the Proposed PF. Net / AT&T Fiber Optics Conduit Oceanside to San Diego, California
SD-12425	2009	Rosen, Martin	Historic Property Survey Report for the Construction of a Multiuse Bicycle and Pedestrian Path in Mission Valley, San Diego, California
SD-12426	2009	Case, Robert P.	Phase I Archaeological Survey for the San Diego River Multi-Use Bicycle and Pedestrian Path Project (Work Order No. 581910), Mission Valley Community Planning Area, City of San Diego, California
SD-12637	2010	Shearer-Nguyen, Elizabeth	State Route 163/Friars Road Interchange Project
SD-12818	2010	Bowden-Renna, Cheryl	Archaeological Monitoring Report for the Miramar Pipeline Repair Project, Naval Base Point Loma to Marine Corps Air Station Miramar, San Diego County, California
SD-13006	2011	_	Master Storm Water System Maintenance Program - Draft Recirculated Program Environmental Impact Report
SD-13202	2011	Rosen, Martin D.	Cultural Resources Technical Assessment for the Program Environmental Impact Report for the San Diego River Park Master Plan, City of San Diego, California
SD-13427	2012	City of San Diego	Water and Sewer Group 930
SD-13465	2002	Gross, G. Timothy	Archaeological Resources Survey, Sempra Mission Control Access Road, Mission Valley, San Diego, California
SD-13491	2011	U.S. Department of Transportation	Section 106 Consultation for the Mid Coast Corridor Transit Project, San Diego County, California
SD-13918	2012	ICF International	San Diego River Park Master Plan Project Draft Program Environmental Impact Report
SD-13956	2003	Robbins-Wade, Mary	Archaeological Resources Inventory for the Hazard Center Drive Extension Project, San Diego, California
SD-15065	2012	Denardo, Carole, Rachael Greenlee, and Caprice Harper	Mid-Coast Corridor Transit Project: Archaeological Survey Report, San Diego, California
SD-15066	2013	SANDAG	Mid-Coast Corridor Transit Project: Historic Property Effects Report
SD-16601	2015	Cogstone Resource Management, Inc.	San Diego River Bridge Double Track Project (CP Tecolote to CP Friar) Cultural Resources Technical Report
SD-16901	2017	Ports, Kyle	Letter Report: ETS 28829 - Cultural Resources Monitoring Report for C100, Old Town 12kv Extension, City of San Diego, California

Table 1 (cont.)
PREVIOUS STUDIES OCCURRING WITHIN THE PROJECT AREA

SCIC Report Number	Year	Author	Report Title
SD-17232	2017	Brunzell, David	San Diego 55 Fiber Project, San Diego County, California
SD-17234	2017	Brunzell, David	Cultural Resources Assessment of the Mission Control, Blue Cypress, Lake Murray and Caso Serra Project, San Diego County, California
SD-17397	2017	Garcia-Herbst, Arleen	Cultural Resources Inventory Report for the Riverwalk Project, City of San Diego, County of San Diego, California
SD-17810	2019	Bever, Michael R.	Sefton Field Mitigation Project, City of San Diego, California Archaeological Resources Report

3.1.2 Previously Recorded Resources

The SCIC has a record of 457 previously recorded cultural resources within a one-mile radius of the project alignment (Appendix B, Confidential Appendices, bound separately). Thirty-two of the previously recorded resources are located within a one-quarter mile radius of the project alignment, of which eight are within the project APE (Table 2, *Previously Recorded Resources within a Quarter-Mile of the Project Alignment)*. The eight cultural resources that have been recorded within the project APE consist of three multi-component archeological sites (CA-SDI-11722 [P-37-011722], CA-SDI-11766 [P-37-011766], and CA-SDI-12862 [P-37-012862]); a prehistoric habitation site (CA-SDI-11767 [(P-37-011767]); a historic freeway (P-37-023996); and three isolated prehistoric artifacts (P-37-014963, P-37-036520, and P-37-036521). These resources are shown on Figure 5 (Figure 5, *Cultural Resources Within the Project APE*; Appendix C, confidential), and described in further detail below.

Table 2
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN A QUARTER-MILE OF THE PROJECT ALIGNMENT

Resource Number (P-37-#)	Resource Number (CA-SDI-#)	Age	Description	Recorder, Date
000004	4	Unknown	Originally recorded as "Carter's Old Mission Site". No cultural resources, either historic or prehistoric, were observed during updates in 2001 and 2012.	Baumhoff, 1955; ASM Affiliates, 2001; ASM Affiliates, 2012
000041	41	Prehistoric	Former location of a protohistoric village site that potentially had a population of over 1,000 inhabitants. Research carried out by Malcom Rogers has indicated that this site location overlaps with the village of *Cosoi*; however, no cultural material has been observed during testing or surveying.	Nelson, n.d.; Rogers, n.d.; Greenlee and Letter, 2011
011056	11056	Prehistoric	Lithic material, low density shell content within midden.	Rogers, n.d.
*011722	11722	Multi-component	Historic trash scatter and lithic debitage.	Clevenger and Briggs, 1990; Huey and Baker, 1992

Table 2 (cont.)
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN A QUARTER-MILE OF THE PROJECT ALIGNMENT

Resource Number (P-37-#)	Resource Number (CA-SDI-#)	Age	Description	Recorder, Date
*011766	11766	Multi-component	Lithic and shell scatter with a light historic trash scatter.	Hedges, 1976; Clevenger and Baker, 1990; Huey and Baker, 1992
*011767	11767	Prehistoric	Large habitation site.	Hedges, 1975; Clevenger and Baker, 1990; Huey and Baker, 1992; Gallegos and Associates, 1995; Cooley et al., 1996; ASM Affiliates, 2012; Foglia, 2018
012126	12126	Prehistoric	Three areas of concentrated marine shell, ground stone, and flaked lithic artifacts.	Huey and Baker, 1992; Gilmer, 1996; RECON, 2007
012127	12127	Prehistoric	Small shell scatter.	Huey and Baker, 1992
012128	12128	Prehistoric	Shell midden.	Huey and Baker, 1992
012132	12132	Prehistoric	Moderate-sized shell scatter.	Huey and Baker, 1992
012220	12220	Prehistoric	Small shell scatter.	Pigniolo, 1991; Huey and Baker, 1992
*012862	12862	Prehistoric	Small shell scatter.	Huey and Baker, 1992
014380	14152	Prehistoric	Shell midden, marine shell, fire affected rock, flaked stone, burnt animal bone, and Tizon Brown Ware ceramics, with one possible cooking pit.	Schaefer, 1996
014958	--	Prehistoric	One volcanic flake.	Clevenger, 1990
*014963	--	Prehistoric	One quartzite flaked tool.	Clevenger, 1990
021901	--	Historic	Presidio Park, including site of San Diego Presidio built in 1769. Park dedicated in 1929. Designated as California Landmark #59 on March 07, 1968; designated by City Historical Site Board on February 29, 1968.	Compushare, 1981
023919	--	Historic	Presidio Park	2001 (N/A)
023921	--	Historic	2727 Presidio Drive	2001 (N/A)
*023996	--	Historic	Cabrillo Freeway National Register Historic District (P-37-016279).	Lortie, 1996; Bietz, 2013
024558	16288	Prehistoric	Late Period burial feature with associated grave goods.	Gilmer, 1996; Harris, 2002; RECON, 2007
024559	16289	Prehistoric	Sparse marine and fresh-water shell scatter.	Harris, 2002
029807	--	Historic	Reinforced, poured concrete bridge constructed in 1946; has been altered several times.	Robbins-Wade and Van Wormer, 2008
030929	--	Historic	Three plate fragments.	Davidson, 2009
030938	19631	Historic	Small trash deposit.	Davidson, 2008

Table 2 (cont.)
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN A QUARTER-MILE OF THE PROJECT ALIGNMENT

Resource Number (P-37-#)	Resource Number (CA-SDI-#)	Age	Description	Recorder, Date
031962	20233	Multi-component	Historic and prehistoric components. One prehistoric scatter, a brick feature, two historic deposits, two historic scatters.	Krafts, 2011
034320	--	Historic	Steel stringer multi-beam girder bridge that connects Pacific Highway over San Diego River.	Schultz et al., 2011
034321	--	Historic	Railroad Bridge #1 on the Burlington Northern Santa Fe (BNSF) Railway's mainline. Single track, steel pony girder (or floor-beam system) railroad bridge.	Schultz et al., 2011
035941	--	Historic	Commercial three-story building. Currently being used as an anchor retailer in the Fashion Valley mall.	Crawford, 2015
036318	--	Historic	Mission Substation and associated equipment.	Mello, 2017
*036520	--	Prehistoric	Hammerstone.	Howard, 2016
*036521	--	Prehistoric	Utilized metavolcanic flake.	Chasteen, 2016
037009	--	Historic	The eight original buildings of the Town and Country Hotel, constructed in 1953-55.	Meiser, 2016

*Within project APE.

3.1.3 Description of Resources within the Project APE

3.1.3.1 CA-SDI-11722 (P-37-011722)

CA-SDI-11722 consists of an archaeological site containing both a prehistoric component and a historic component. The historic component was originally recorded as two historic or modern trash pits, with the prehistoric component consisting of debitage and a possible hearth (Clevenger and Briggs 1990a). The trash pits were described as containing numerous bottles and bottle fragments dating to the 1940s, miscellaneous glass fragments of various colors and unknown age, whiteware ceramics, can and other metal fragments, and pieces of wood. The prehistoric component consisted of a hearth feature, one metavolcanic flake, and two quartzite flakes. Several pieces of animal bone were also observed. An update in 1992 described the site as a sparse scatter of prehistoric flaked stone debitage and marine shell, and historic-related animal bone and glazed ceramics (Huey and Baker 1992a). Also noted in 1992 was some destruction of portions of the site by construction associated with Friars Road and the adjacent golf course.

The site was tested in 1991 (Pigniolo and Huey 1991); Pigniolo (1994) describes the testing as consisting of the excavation of eight shovel test pits (STPs) and a single 1-meter-by-1-meter unit. The testing results confirmed the presence of both the historic and prehistoric components, with the depth of the cultural deposit determined to be approximately 0.5 meter. Seven of the eight STPs were positive, and along with the unit, contained both prehistoric and historic or modern materials. Prehistoric materials from the testing included 17 flakes, 29 pieces of angular waste debitage, 333 grams of faunal bone, and 40 grams of marine shell. The presence of 2,662 grams of fire-affected rocks (FAR) was attributed to

both prehistoric and historic origins. Historic materials predominated in the testing recovery, with 1,770 grams of historic materials recovered. The test unit was excavated over a historic trash burn-pit, which was also the source of a significant amount of the FAR recovered. Historic artifacts included items from several different activity groups, including kitchen materials, furniture, garment items, building materials, and munitions. These materials were interpreted to represent a residential occupation. The historic refuse included glass bottles, which were analyzed for time of origin with the results indicating that they were likely deposited at the site between 1945 and 1954 (Pigniolo 1994). Based on the results of this testing, Pigniolo (1994) indicated that the prehistoric component represented a small temporary camp, and the historic component was associated with use after 1950 and was less than 45 years of age (i.e., in 1994) and had no other special qualities that would qualify it as significant or important such as association with a significant figure in history. Consequently, based on these testing results, both components of the site were determined to not represent a significant resource under either CEQA or NRHP criteria (Pigniolo 1994).

In 2017, an update on file at the SCIC based on survey during which poor visibility was indicated, historic saw-cut bone, historic glass fragments, and prehistoric shell were observed (Kandybowicz, 2017a).

3.1.3.2 CA-SDI-11766 (P-37-011766) [Mis-mapped at the SCIC as CA-SDI-12862]

CA-SDI-11766 was originally recorded as a multi component site consisting of a light historic trash scatter and a scatter of prehistoric debitage and marine shell located along the south side of Friars Road approximately 75 meters east of Via Las Cumbres (Clevenger and Briggs 1990b). Approximately a year later, however, Pigniolo and Huey (1991) tested a site, indicated as "CA-SDI-11766" at a different location, approximately 320 meters to the east, also along the south side of Friars Road. This location had not been previously recorded as a site. Subsequently, this error has resulted in considerable confusion at the SCIC in the recorded locations of site CA-SDI-11766 and another site number, CA-SDI-12862. This confusion occurred as a result of an attempt by the SCIC to correct the error; the SCIC issued a new number, CA-SDI-12862, to one of these locations; however, it was not clear to which location the new number was assigned. Accompanying the 1992 site update forms for each site was a notification from Lynne Christianson at the SCIC stating:

> CA-SDI-11766 is an area which was not previously recorded with this site number, but was tested and reported under this number. Since we were notified after the [Environmental Impact Report] EIR process has been completed, we allowed this number to stay on the site. CA-SDI-12862 (previously CA-SDI-11766) was not tested nor reported on in the previous project. We assigned it a new number. Both sites are mapped on the attached map in the currently approved locations. Please note: CA-SDI-12862 has not been tested (Christenson n.d.).

Consistent with this explanation would have been the assignment of the new number, CA-SDI-12862, to the site originally recorded by Clevenger and Baker as CA-SDI-11766, at the location approximately 75 meters east of the intersection of Via Las Cumbres and Friars Road, and then to have reassigned the number CA-SDI-11766 to the location tested by Pigniolo and Huey (1991). A map figure in a report by Pigniolo (1994: Figure 5-1) depicts the numbers assigned in this way. This reassignment would also be consistent with the statement by Christenson (above) in that she indicates that "CA-SDI-12862 (previously CA-SDI-11766) was not tested nor reported on in the previous project" and "Please note: CA-SDI-12862 has not been tested." Unfortunately, this is not how the sites are currently designated at the SCIC with the number assignments just reversed.

According to a site update for site CA-SDI-11766 by Huey and Baker (1992b), and as noted above, this site location is approximately 320 meters to the east of the original CA-SDI-11766 location; it was tested by Pigniolo and Huey (1991) and found to not be a significant resource (Huey and Baker 1992b). Pigniolo (1994), also indicates that the location currently mapped at the SCIC as CA-SDI-12862 was tested as site CA-SDI-11766 by Pigniolo and Huey (1991). Pigniolo (1994) describes the testing as consisting of the excavation of five STPs. Four of the five STPs were positive and contained both prehistoric and historic or modern materials. Prehistoric materials included one flake, 16 pieces of angular-waste debitage, one mano fragment, 0.2 grams of faunal bone, and 2.4 grams of marine shell. The historic or modern materials included concrete and asphalt that were mixed in throughout the deposit at the site. The site was described as highly disturbed and partially destroyed by Friars Road and golf course construction. Pigniolo (1994) indicates that due to this level of disturbance, the site was determined to not represent a significant resource under either CEQA or NRHP criteria.

As noted in the discussion, above, the site and testing descriptions given above apply to the resource currently mapped at the SCIC at the location of CA-SDI-12862.

3.1.3.3 CA-SDI-11767 (P-37-011767)

CA-SDI-11767 consists of a prehistoric habitation site. While the location appears to correlate with site SDM-W-175 (as recorded at the Museum of Man), this correlation it is not certain. The site was originally documented as CA-SDI-11767 by Clevenger and Baker (1990), consisting of a heavy concentration of marine shell including *Pecten*, *Chione*, *Ostrea*, and *Mytilus* genera. An update in 1992 described the site as a large habitation area with flakes, angular waste, one scraper, and one ceramic sherd (Huey and Baker 1992c). An update in 2017 that included the results of a survey of the eastern corner of the recorded site area was negative for cultural resources but observed that the area appeared to have possibly been capped in the past with imported fill (Foglia 2017).

While no other updates are on file at SCIC, in the 2017 update, Foglia indicates that at least four previous subsurface investigations have occurred at the site that are not documented by site form updates on file at the SCIC. Pigniolo (1994) describes one of these investigations, which occurred in 1991 (Pigniolo and Huey 1991) as testing for the Mission Valley West Light Rail Transit Project. This testing consisted of the excavation of 29 STPs and two 1-meter-by-1-meter test units and produced 1,184 artifacts, 14,720 grams of shell, 181 grams of faunal bone (including 11 fish otoliths), 3 grams of charcoal, 30 grams of historic material , and 24,591 grams of FAR (Pigniolo 1994). Based on the results of this testing, Pigniolo (1994) indicated that the site represented a significant resource under both CEQA and NRHP criteria (Pigniolo 1994). Another of these subsurface investigations at the site consisted of a limited data recovery program conducted for the 1995 Mission Valley West Light Rail Transit Project (Cooley et al. 1996). As summarized by Foglia (2017), the investigation consisted of a total of 11 1.5-meter-square test units that were excavated by Ogden Environmental during this program. This resulted in the recovery of six cores, 22 scraper planes, 16 chopping tools, 25 hammerstones, 11 scrapers, two biface fragments, 33 retouched flakes, 17 utilized flakes, 1,877 pieces of debitage, one metate fragment, 16 manos, one rubbing stone, one possible pestle, 15 stone beads, seven bone tool fragments, 52 whole shell beads, 45.62 kilograms of shell, 4,380 faunal bone fragments, six otoliths, and 10 kilograms of FAR. A rock feature and a flexed inhumation burial were also discovered and excavated. Most finds occurred between 0-50 centimeters of depth, but cultural material was found up to 100 centimeters deep in one of the test units. Five radiocarbon dates were acquired from samples taken during excavation. These samples gave a calibrated date range of occupation between 180 B.C. and 505 B.C., placing this site during the late Archaic Period (Cooley et al. 1996).

3.1.3.4 CA-SDI-12862 (P-37-012862) [Mis-mapped at the SCIC as CA-SDI-11766]

As described above for site CA-SDI-11766, there is some confusion at the SCIC regarding the recorded locations of sites CA-SDI-11766 and CA-SDI-12862 (see above discussion under site CA-SDI-11766). The site form on file at the SCIC for the initial recordation of this site (CA-SDI-12862) is the form by Clevenger and Briggs (1990b) for site CA-SDI-11766. Clevenger and Briggs originally recorded it as a multi component site consisting of a light historic trash scatter and a scatter of prehistoric debitage and marine shell located along the south side of Friars Road approximately 75 meters east of Via Las Cumbres (Clevenger and Briggs 1990b). In 2017, an update on file at the SCIC observed only a scatter marine shell with "no evidence of further prehistoric or historic surface cultural materials" (Kandybowicz, 2017b). Since it was originally recorded by Clevenger and Briggs, it does not appear that any subsurface investigation has occurred at the site.

3.1.3.5 P-37-014963

This resource is an isolated prehistoric artifact consisting of a quartzite flake tool. It was recorded and collected in 1990 by Clevenger from a location approximately 150 meters east of the intersection of Via Las Cumbres along the south side of Friars Road (Clevenger 1990). In 2017, an update on file at the SCIC documented that the location was revisited during a survey and no other cultural materials were observed (Kandybowicz, 2017c).

3.1.3.6 P-37-023996 (P-37-016279)

This resource consists of the Cabrillo Freeway Historic District. Resource P-37-023996, mapped as resource point on the SR 163 along the project alignment, is noted at the SCIC as being the same resource that is recorded as P-37-016279. According to the 2013 update form for P-37-016279:

> The resource was recorded in 1996 by Frank Lortie (CALTRANS) for a historic resource inventory that was submitted as part of the application for inclusion into the National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR). At the time of recordation in 1996, the Cabrillo Freeway was described as spanning an overall length of approximately 3 miles (4.8 kilometers), and containing elements including eleven overcrossings and grade separations, extensive landscaping, associated on-ramps and off-ramps, a divided four-lane roadway with two lanes in each direction, directional and informational signs, guard rails in part of the center median and at the on- and offramps, three interchanges, and a chain-link fence on the right-of-way boundaries (Bietz 2013).

The Cabrillo Freeway Historic District consists of the elements that are associated with the freeway dating to the District's period of significance, 1940-1948.

3.1.3.7 P-37-036520 and P-37-036521

P-37-036520 is recorded as an isolated prehistoric artifact consisting of a hammerstone. It was recorded and in 2016 by Howard (2016) during construction monitoring in a circumstance described as "out of context" in construction excavations between the Dana Landing Sign and South Shores Park Drive, about 30 meters west from the SeaWorld Park entrance.

P-37-036521 is recorded as an isolated prehistoric artifact consisting of a utilized metavolcanic flake. It was recorded in 2016 by Chasteen (2016) during construction monitoring in a circumstance described as

"5 inches below the surface in red silty soil near the merging lane of SeaWorld Drive and West Mission Bay Drive," approximately 250 meters east of P-37-036520.

The Universal Transverse Mercator (UTM) coordinates provided for isolates P-37-036520 and P-37-036521 are the same on both of the site forms, which has resulted in the two artifacts being mapped at the SCIC at the same location (Figure 5). Based on the locational descriptions provided on the forms and noted above, it is likely that P-37-0365520 was identified further to the east than mapped.

3.2 OTHER ARCHIVAL RESEARCH

Historical maps and aerial photographs were reviewed to assess the potential for historical structural resources and historical archaeological resources, including the 1903 USGS 15-minute La Jolla (revised 1930), the 1943 La Jolla (1:31,680), and the 1953 and 1967 La Jolla (1:24,000) topographic maps.

On the 1903 La Jolla map, two roads located at the northern and southern boundaries of the San Diego River valley travel through Mission Valley paralleling the river. A few structures are indicated in the valley, and the marsh area of False Bay is indicated as Duckville. On the 1943 La Jolla map, the conditions remain approximately the same in the valley, but by the 1950s the dike cutting the San Diego River off from what is now referred to as Mission Bay has been constructed, and several developments are present in Mission Valley, as shown on the 1953 La Jolla map. These include a racetrack, golf course, Valley View High School, and Highway 80. In addition, several roads and multiple structures are indicated.

3.3 NATIVE AMERICAN CONTACT PROGRAM

HELIX contacted the Native American Heritage Commission (NAHC) on July 11, 2018, and again on February 25, 2020, for a Sacred Lands File search and list of Native American contacts for the project area. The NAHC indicated in responses dated July 12, 2018 and March 9, 2020 that Native American cultural sites are present and that the Ipay Nation of Santa Isabel and the Viejas Band of Mission Indians should be contacted, as well as others on an enclosed list of Native American tribes who may also have knowledge of cultural resources in the project area. Letters were sent on March 13, 2020 to Native American representatives and interested parties identified by the NAHC. No responses have been received to date. If any responses are received, they will be forwarded to City staff. Native American correspondence is included as Appendix D (Confidential Appendices, bound separately).

4.0 SURVEY

4.1 METHODOLOGY

A pedestrian survey of the project alignment was conducted on January 29, 2020 by HELIX staff archaeologist Julie Roy and Kumeyaay Native American monitor Gabe Kitchen from Red Tail Environmental. Where feasible, the pedestrian survey focused on the entire APE, an approximately 100-foot-wide corridor centered on the proposed pipeline route and associated staging areas. However, due to the substantial amount of development along the project alignment, many of the areas within the APE corridor were either not visible, due to paving or vegetation such as lawns, or were inaccessible, due to obstacles such as private property fencing. Additionally, the pipeline installation is proposed to most often occur within paved roadways such as Friars Road. Consequently, a survey method utilizing

parallel transects at intervals, such as 5 meters or 10 meters, was generally infeasible. The survey was instead most often conducted using a reconnaissance method, where any areas within the corridor that were visible and/or accessible were examined.

The project alignment extends along Friars Road with an off-shoot traveling down Fashion Valley Road to the south side of Fashion Valley Mall and Hazard Mall and then back up to Friars Road. The project begins west of River Run Drive on the east and runs west to just east of I-5 at the west end (Figure 3). The project alignment is within a built environment that includes transportation infrastructure, single- and multi-family residences, a golf course, a gravel pit, parking lots, shopping structures, freeway access and egress, landscaping, and paved or concrete walkways and driveway entrances/exits (Plates 1 and 2). The landscape includes cliffs and mesas to the north, the San Diego River and flood plain to the south and man-made landscapes to the west. Vegetation included mostly non-native plants, shrubs, and trees with sparse native vegetation. Visibility was generally less than 20 percent along the sides of the concrete and paved roads and sidewalks, due to dense brush and leaf debris.

All the proposed staging areas were visually inspected and photographed; most were parking lots covered in asphalt. The yard along the west side of Fashion Valley Road is currently being used as a staging yard for construction. This area has had up to 12 inches of gravel laid on top of it, verified by Native American monitor Gabe Kitchen who was working on the project at the time. One other area proposed for a staging yard has been highly disturbed from the construction of an underpass below SR 163 between the Fashion Valley and Hazard malls. This area has been built up with fill material and is adjacent to a paved parking lot to the north.

Plate 1. Overview of project alignment along Friars Road, near Colusa Street; view to the west.

Plate 2. Overview of project alignment along Friars Road and Riverwalk Golf Club; view to the east.

4.1.1 Documentation

Previously recorded cultural resources identified during the records search and observed during the survey were updated on appropriate Department of Parks and Recreation (DPR) 523 forms. All completed DPR site forms were submitted to the SCIC and are included as Appendix E (Confidential Appendices, bound separately).

4.2 RESULTS

Results of the records search indicated that eight previously recorded cultural resources sites or isolates are located within the project APE (Table 3, *Cultural Resources Within the Project APE*). Five of these resources are located along the south and north sides of Friars Road, along the property of the Riverwalk Golf Club. The only cultural materials observed during the survey were located in proximity to the boundaries of three of these six previously recorded resources (Figure 6, *Cultural Resources Field Survey Observations*). No newly identified cultural resources were observed.

Table 3
CULTURAL RESOURCES WITHIN THE PROJECT APE

Resource Number	Age	Description	Status
CA-SDI-11722 (P-37-011722)	Multi-component	Historic trash scatter and lithic debitage.	Not reidentified within the APE.
CA-SDI-11766 (P-37-011766)	Multi-component	Lithic and shell scatter with a light historic trash scatter.	Not reidentified within the APE.
CA-SDI-11767 (P-37-011767)	Prehistoric	Large habitation site.	A piece of FAR observed during the field survey.
CA-SDI-12862 (P-37-012682)	Prehistoric	Small shell scatter.	A prehistoric mano fragment observed during the field survey.
P-37-014963	Prehistoric	One quartzite flaked tool.	Flaked tool was collected when discovered/initially recorded; a piece of FAR observed during the field survey.
P-37-023996	Historic	Cabrillo Freeway Historic District (P-37-016279).	Project APE travels underneath the freeway.
P-37-036520	Prehistoric	One prehistoric hammerstone.	Not reidentified within the APE.
P-37-036521	Prehistoric	One prehistoric worked flake	Not reidentified within the APE.

A prehistoric mano fragment was observed in the APE in the vicinity of previously recorded archaeological site CA-SDI-12862 (P-37-012862). The mano fragment was bifacial with shouldering evident along both faces as well as some shaping of the intact section of the perimeter. In addition, a piece of FAR was observed in the APE in proximity to previously recorded prehistoric archaeological site CA-SDI-11767 (P-37-011767). Another piece of FAR was observed in the survey corridor in proximity to the location of previously recorded prehistoric isolate P-37-014963. All three artifacts were identified along the fence line of the Riverwalk Golf Club (see Plate 2). The pipeline alignment within this portion of the APE is situated within the paved bike lane, to the north of a concrete sidewalk.

During the survey, it was also noted that the Cabrillo Freeway (SR 163) is a raised freeway at the intersection of the resource with the project APE, with the pipeline alignment traveling under the resource.

5.0 SUMMARY AND MANAGEMENT RECOMMENDATIONS

A study was undertaken to identify cultural resources that are present in the Alvarado 2nd Pipeline Extension Project APE and to determine the effects of the project on historical resources/historic properties. As described above, eight previously recorded cultural resource sites or isolates are located within the project APE, and the cultural resources survey identified one prehistoric artifact and two pieces of FAR in proximity to the locations of three of the previously recorded prehistoric resources: CA-SDI-12862, CA-SDI-11767, and P-37-014963 (Table 3 and Figure 6). Potential project effects to the cultural resources identified within the APE and their eligibility status or recommendations are provided in Table 4, *NRHP/CRHR Eligibility Recommendations of Cultural Resources*.

Table 4
NRHP/CRHR ELIGIBILITY RECOMMENDATIONS OF CULTURAL RESOURCES

Resource Number	Description	NRHP/CRHR Eligibility Recommendation
CA-SDI-11722 (P-37-011722)	Historic trash scatter and lithic debitage; a single mano fragment observed within APE.	Previously evaluated as not eligible.
CA-SDI-11766 (P-37-011766)	Lithic and shell scatter with a light historic trash scatter; not reidentified within the APE.	Previously evaluated as not eligible.
CA-SDI-11767 (P-37-011767)	Large habitation site; a piece of FAR observed within APE.	Previously evaluated as eligible, with a limited data recovery program undertaken for a portion of the site located to the south of the APE. The portion of the resource within the APE lacks integrity due to the construction of Friars Road, and therefore, is a non-contributing element to the eligibility of the resource.
CA-SDI-012862 (P-37-012862)	Small shell scatter; not reidentified within the APE.	Not evaluated. The portion of the resource within the APE lacks integrity due to the construction of Friars Road, and therefore, is a non-contributing element to the eligibility of the resource.
P-37-014963	One quartzite flaked tool (previously collected); a piece of FAR observed within APE.	Not eligible.
P-37-023996	Cabrillo Freeway Historic District (P-37-016279).	Previously determined eligible; will not be affected by the project.
P-37-036520	One prehistoric hammerstone; not reidentified within the APE.	Not eligible.
P-37-036521	One prehistoric worked flake; not reidentified within the APE.	Not eligible.

The portion of the proposed pipeline alignment along these three resource locations is situated under the paved surface of Friars Road. As explained above, confusion exists as to the actual (correct) location of CA-SDI-12862; however, it appears that the site has not been evaluated for eligibility for listing in the CRHR or NRHP. The portion of CA-SDI-12862 within the APE is highly disturbed by the construction of Friars Road. The identified mano fragment was observed in a distributed context, within the shoulder of the sidewalk along the Riverwalk Golf Club fence line, and as such, is not in situ. The integrity of the mano location, as well as the overall site location within the APE, is low.

While site CA-SDI-11767 has been previously tested and recommended to be a significant resource under both CEQA and NRHP criteria, with a limited data recovery program occurring for a portion of the site for the 1995 Mission Valley West Light Rail Transit Project (Cooley et al. 1996), only a single piece of FAR was observed in the APE, within a disturbed context along the sidewalk shoulder. As with CA-SDI-12862, the portion of CA-SDI-11767 within the APE has been highly disturbed by the construction of Friars Road, resulting in low integrity within the APE.

P-37-014963, where the second piece of FAR was identified, consisted of an isolated artifact that was collected in 1990 (Clevenger 1990).

No cultural material was observed within the APE at the locations of CA-SDI-11766 or CA-SDI-11722. As described above, CA-SDI-11722 has been previously tested and described as highly disturbed by the construction of Friars Road and the golf course and determined to not represent a significant resource under either CEQA or NRHP criteria (Pigniolo 1994). CA-SDI-11766 has been tested previously and noted as highly disturbed and partially destroyed by Friars Road and golf course construction and determined to not represent a significant resource under either CEQA or NRHP criteria (Pigniolo 1994).

Of the remaining cultural resources that have been previously recorded within the project APE, two are isolated artifacts (P-37-036520 and P-37-036521) that were documented at the western end of the pipeline alignment; isolates by definition do not possess the characteristics necessary to be considered resources eligible for listing on the CRHR or NRHP. The remaining resource, P-37-023996 (P-37-016279), is the Cabrillo Freeway (SR 163), which is elevated above the APE and would not be impacted by the proposed pipeline.

In summary, the previously recorded archaeological sites, as well as the mano and FAR pieces identified during the current survey within the APE, were observed within a disturbed context, along the sidewalk shoulder between Friars Road and the fenced Riverwalk Golf Club property. No evidence of intact features or deposits were observed or has been previously noted within the APE, and as indicated by the disturbed nature of the project alignment in this area, the prehistoric resources located along the proposed pipeline alignment contain little integrity within the APE. This lack of integrity detracts from any potential research value the resources might have had.

5.1 MANAGEMENT RECOMMENDATIONS

Based on the results of the current study, no historic properties will be affected by the project, and no impacts to significant cultural resources are anticipated.

However, as indicated by the NAHC, there are known Native American cultural sites present within the project area, and based on the results of the background research, as well as the alluvial environmental setting, there is a potential for buried subsurface cultural material to be present under the paved portion of the project alignment, in particular, along the portion of the APE north of the Riverwalk Golf Club, within the vicinity of the previously recorded prehistoric archaeological sites.

Based on this, it is recommended that an archaeological and Native American monitoring program be implemented for trenching activities occurring within or near previously recorded prehistoric cultural resources within areas of young alluvial flood-plain deposits. The portions of the pipeline located within artificial fill/ made land, modern (non-prehistoric) quarries, or other areas where little potential for buried cultural material to be present (e.g. cut hillsides), would not require monitoring.

In the event that human remains are encountered during ground-disturbing activities, all work shall cease, and the County Coroner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code §7050.5 and PRC §5097.98 shall be followed.

Should the project limits change to incorporate new areas of proposed disturbance, archaeological survey of these areas will be required.

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Appendix A

Resumes

Stacie Wilson, RPA

Senior Archaeologist

HELIX Environmental Planning

Summary of Qualifications

Ms. Wilson has been professionally involved in cultural resources management for 15 years and has more than 17 years of unique experience in both archaeology and GIS. She has served as principal investigator on numerous cultural resources management projects, and regularly coordinates with local, state, and federal agencies and Native American tribal representatives. She is skilled in project management, archaeological inventories and excavation, and report documentation and has broad experience with utility, municipal, federal, renewable energy, and private development projects. Her years of experience also encompass an understanding of CEQA and NEPA compliance regulations. She is proficient at creating, organizing, and analyzing GIS data; technical skills include ArcGIS 10.4, Spatial Analyst, Geostatistical Analyst, and working with datasets in Microsoft Word and Excel. Ms. Wilson is detail-oriented and has strong organizational and coordination capabilities.

Selected Project Experience

Eastern Municipal Water District As-Needed Environmental Services (2015 - 2019). Serving as Senior Archaeologist on several individual task orders for HELIX's as-needed environmental services agreement with EMWD, including Well 59 Wellhead Treatment Facilities (2018), Cactus II Feeder Transmission Pipeline (2017 – 2018), and Fox Tank Replacement (2017). Responsible for coordinating cultural resources studies including records searches, Sacred Lands File searches, Native American outreach, reviews of historic aerial photographs and maps, and pedestrian surveys. Authored cultural resources technical reports.

Crescent Drive Sewer Improvements Project (2018). Cultural Task Lead for a sewer improvements project in the City of Vista. The project proposes to conduct improvements to the sewer main and connecting sewer laterals within Crescent Drive. Duties included conducting a record search and a Sacred Lands File search; reviewing existing cultural resources information for the project site and immediate vicinity; coordinating a field visit; and preparing a constraints report. Work performed for KEH and Associates, Inc. with the City of Vista as the lead agency.

Padre Dam Municipal Water District East County Advanced Water Purification Program (2018). Senior Archaeologist for cultural resources inventory and assessment of approximately 10 miles of pipeline. The East County Advanced Water Purification project proposes to increase the region's supply of potable water. Duties included preparation of a cultural resources study, assisting with community outreach with regard to the historic resources, and working with the agencies and interested parties to develop appropriate measures to avoid or minimize impacts. Work performed for Kennedy/Jenks Consultants, Inc., with Padre Dam Municipal Water District as the lead agency and Helix Water District, the County of San Diego, and the City of El Cajon as participating agencies.

Education

Master of Science, Applied Geographical Information Science, Northern Arizona University, 2008

Bachelor of Arts, Anthropology, University of California, San Diego, 2001

Bachelor of Science, Biological Psychology, University of California, San Diego, 2001

Registrations/ Certifications

The Register of Professional Archaeologists #16436, 2008

Riverside County Approved Cultural Resources Consultant, 2017

Professional Affiliations

Society for California Archaeology

City of San Diego Water Group Job 939 (2018). Principal Investigator for the Water Group Job 939, located in the Sorrento Valley area of the City of San Diego. Conducted as part of an as-needed contract with the City of San Diego, Public Works Department, Project Implementation Division, the project proposes approximately 6,846 linear feet of water main replacement and installation. Duties included conducting background research, reviewing previous cultural resource surveys, and coordination of Native American and archaeological monitors.

Alvarado 2nd Pipeline Extension (2018 - 2019). Principal Investigator overseeing completion of cultural resource management services for the geotechnical investigations related to this approximately 8.5-mile pipeline project, which will include the extension of the existing Alvarado 2nd Pipeline along Friars Road between Interstate 805 and West Mission Bay Drive. Responsibilities included overseeing a record search and submitting a request for a Sacred Lands File search; reviewing environmental, geological, and existing cultural resources information for the project alignment; coordinating a field visit; and preparing a report that provided monitoring recommendations. Oversaw subsequent archaeological and Native American monitoring program. Work performed for Kennedy/Jenks Consultants, Inc., with the City of San Diego as the lead agency.

City of San Diego Sewer Group 806 (2017 - 2018). Principal Investigator for the Sewer Group Job 806, located in the College Area and Mid City Kensington-Talmadge community planning areas in the City of San Diego. Conducted as part of an as-needed contract with the City of San Diego, Public Works Department, Project Implementation Division, the project proposes both the replacement and rehabilitation of existing sewer mains, including replacing-in-place approximately 2,158 linear feet of existing vitrified clay pipe sewer mains. Duties included conducting background research, reviewing previous cultural resource surveys, conducting a field survey with a Native American monitor, and the preparation of a cultural resources technical report.

Quince Street Senior Housing Project (2017). Principal Investigator for the demolition of an existing warehouse complex within a developed property in order to construct affordable housing for seniors. Managed reconnaissance survey of the project area, which included photography of the built environment within the project site and documentation/evaluation of structures over 50 years of age. Assisted with cultural resources technical report preparation. Work performed for San Diego InterFaith Housing Foundation, with the City of Escondido as the lead agency.

City of San Diego Long-term Mitigation Strategy Development (2016). Principal Investigator for a cultural resources study of the Kearny Mesa East Mitigation Site, a 7.57-acre City of San Diego owned parcel located in Murphy Canyon. Conducted as part of an as-needed contract with the City of San Diego, Transportation & Storm Water Department, the project evaluated the potential mitigation opportunities for the parcel. Duties included conducting background research, a field survey and recording of cultural resources, Native American outreach and coordination, and report preparation. Work performed for the City of San Diego.

Theodore G. Cooley, RPA

Senior Archaeologist

HELIX Environmental Planning

Summary of Qualifications

Mr. Cooley has over 45 years of experience in archaeological resource management. He has directed test and data recovery investigations, monitoring programs, and archaeological site surveys of large and small tracts, and has prepared reports for various cultural resource management projects. He is well-versed in National Historic Preservation Act, National Environmental Policy Act (NEPA), and California Environmental Quality Act (CEQA) regulations and processes. Mr. Cooley's experience also includes Native American consultation for monitoring of archaeological field projects, including some with human remains and reburial-related compliance issues.

Selected Project Experience

8016 Broadway Self Storage Project (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the Lemon Grove Self-Storage project located in the City of Lemon Grove, San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the Summit Environmental Group, Inc.

Briggs Road Walton Development Project (Assessor's Parcel Number 461-170-001) (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the Briggs Road Residential project located in Riverside County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the Walton International Group, LLC.

Brown Field and Montgomery Field Airport Master Plans (2019 - Present). Senior Archaeologist for Phase I cultural resource inventory and pedestrian survey programs at the Brown Field Municipal Airport and the Montgomery-Gibbs Executive Airport, in the City of San Diego, in support of updating of the Airport Master Plan and its Programmatic Environmental Impact Report. Involvement included participation in the analysis of the results from the survey programs and co-authorship of the technical reports. Work performed as a subconsultant to C&S Companies, with the City of San Diego as the lead agency.

Cubic Redevelopment Environmental Consulting (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory and assessment program in support of a 20-acre redevelopment project, located in the community of Kearny Mesa, City of San Diego. Involvement included participation in the analysis of the results from the survey program and preparation of the technical report. Work performed for Cubic Redevelopment Environmental Consulting, with the City of San Diego as lead agency.

Education

Master of Arts, Anthropology, California State University, Los Angeles, 1982

Bachelor of Arts, Anthropology, California State College, Long Beach, 1970

Registrations/ Certifications

Register of Professional Archaeologists #10621, 2019

City of San Diego, Certified Principal Investigator for Monitoring Projects

County or Riverside, Certified Cultural Resources Consultant Principal Investigator

County of Orange, Certified Cultural Resources Consultant Principal Investigator

County of San Diego, Approved Consultant for Archaeological Resources

Los Angeles, Ventura, San Luis Obispo, and Santa Barbara Approved Consultant

Theodore G. Cooley, RPA

Senior Archaeologist

French Valley 303 Project (2019 - Present). Senior Archaeologist for an archaeological construction monitoring program for the French Valley 303 Site residential development project, located in the French Valley area of unincorporated Riverside County. Involvement included participation in the analysis of the results from the monitoring program and co-authorship of the technical report. Work performed for Pulte Home Co., LLC.

Hiser Property Project (2019 - Present). Senior Archaeologist for a due diligence study prepared to summarize potential cultural resources constraints to the 9.2-acre Hiser Property development project, located in the Mission Gorge area of the City of Santee, San Diego County. The study consisted of background research including a record search and limited archival study, a field survey, and a review of the Sacred Lands File from the Native American Heritage Commission (NAHC). Involvement included participation in the analysis of the results and preparation of a summary letter report of the potential cultural resources-related constraints to the planned development. Work performed for KB Home.

Ponto Hotel Technical Studies (2019 - Present). Senior Archaeologist for a cultural resources assessment study for the Ponto Hotel development project in the City of Carlsbad, San Diego County, California. Involvement included participation in the analysis of the results from the assessment program and preparation of the technical report. Work performed for Kam Sang Company, with the City of Carlsbad as the lead agency.

R.M. Levy Water Treatment Plant Sewer Replacement (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory and assessment program in support of a water treatment plant, sewer pipeline, replacement project, located in the community of Lakeside, San Diego County. Involvement included participation in the analysis of the results from the survey program and preparation of the technical report. Work performed for HELIX Water District.

Salt Bay District Specific Plan EIR (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program in support of the 46.6-acre Salt Bay Design District Specific Plan mixed-use wholesale/retail shopping and light industrial development project, in the cities of San Diego and Chula Vista. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for M. & A. Gabaee, with the City of San Diego as lead agency.

San Jacinto Property Project (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the 214 residential project located in Riverside County. Involvement included participation in the analysis

of the results from the survey program and co-authorship of the technical report. Work performed for the Walton International Group, LLC.

San Elijo Joint Powers Authority Roadway and Trail Addendum and Permitting (2019 - Present). Senior Archaeologist for Phase I cultural resource inventory, pedestrian survey, and resource testing at the San Elijo Water Reclamation Facility adjacent to San Elijo lagoon, in San Diego County, in support of the preparation by the San Elijo Joint Powers Authority of a Roadway and Trail Addendum for upgrades to the facility requiring verification of Nationwide Permit authorization from the U.S. Army Corps of Engineers (USACE). Involvement included participation in the analysis of the results from the survey and testing program and co-authorship of the technical report. Work performed as a subconsultant to Kimley-Horn & Associates, with the San Elijo Joint Powers Authority as lead agency.

Sycamore & Watson Project (2019 - Present). Senior Archaeologist for an archaeological construction monitoring program for the Sycamore & Watson residential development project, located in City of Vista, San Diego County. Involvement included participation in the analysis of the results from the monitoring program and preparation of the technical report. Work performed for Meritage Homes.

Sycamore Canyon/Goodan Ranch Public Access Plan IS/MND (2019 - 2019). Senior Archaeologist for Phase I pedestrian survey and cultural resource inventory in support of the preparation by the County of San Diego County Parks Department of a Public Access Plan for the Sycamore Canyon/Goodan Ranch Preserve located in coastal foothills of unincorporated west-central San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the County of San Diego.

Sycuan/Sloane Canyon Trail IS/MND (2019). Senior Archaeologist for Phase I pedestrian survey and cultural resource inventory in support of the preparation by the County of San Diego County Department of a Parks and Recreation for the Sycuan/Sloane Canyon Trail project located in the coastal foothills of unincorporated southwestern San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the County of San Diego.

The Enclave at Delpy's Corner Project (2019 - Present). Senior Archaeologist for a cultural resources monitoring and data recovery program in support of a proposed 124-unit townhome development project, in the City of Vista, San Diego County. Involvement included participation in the analysis of the prehistoric lithic artifacts and preparation of technical report sections containing the results of these analyses. Work performed for CalAtlantic Homes.

Theodore G. Cooley, RPA

Senior Archaeologist

Previous Project Experience

NextEra Energy Genesis Solar Project (2012 - 2014). Archaeologist for a 2,000-acre solar project west of the City of Blythe, Riverside County. The work involved identification, evaluation, and treatment of unanticipated discoveries encountered during survey and construction monitoring, for compliance with Section 106 regulations through the Bureau of Land Management (BLM)and CEQA through the California Public Utilities Commission (CPUC). Performed analyses of 1,238 prehistoric flaked lithic and ground stone artifacts produced from survey and monitoring conducted as part of compliance for construction. Wrote technical report results sections from analyses. Work performed for NextEra Energy.

Sacramento Municipal Utility District Upper American River Project (2015 - 2016). Archaeologist performing analyses of 1,143 prehistoric flaked lithic artifacts produced from investigations conducted at 16 archaeological sites, located in the Sierra Nevada Mountains in the Eldorado National Forest, Eldorado County. Work was conducted as part of treatment program of archaeological sites in the Eldorado National Forest in compliance with Section 106 regulations through a Programmatic Agreement with the Federal Regulatory Commission (FERC) and State Historic Preservation Office (SHPO). Wrote technical report results sections from analyses. Work performed for Sacramento Municipal Utility District (SMUD).

Sycamore Canyon/Goodan Ranch Preserve, Cielo and Wu Additions (2016). Supervisory Archaeologist for Phase I pedestrian survey and cultural resource inventory of 139 acres of proposed parcel additions to the existing Sycamore Canyon/Goodan Ranch natural park preserve located in coastal foothills of unincorporated west-central San Diego County. Participated in the field survey for prehistoric and historic archaeological resources within the parcel additions and was senior co-author of the technical report of results from the survey program. Work performed for County of San Diego Department of Parks and Recreation.

Moosa Canyon Pipeline Protection (2014 - 2015). Supervisory Archaeologist for Phase I pedestrian survey and cultural resources inventory of a 7.2-acre area for proposed protective measures for three parallel underground pipelines at their crossing of the Moosa Canyon drainage, in the coastal foothills of north-central San Diego County. Conducted preparation of the field survey for prehistoric and historic archaeological resources within the survey area and co-authored of the technical report of results from the survey program. Work performed for San Diego County Water Authority.

University Heights Parcel Additions to the Escondido Creek Preserve (2015) Supervisory Archaeologist for Phase I pedestrian survey and cultural resource inventory 262 acres of proposed parcel additions to the existing of the Escondido Creek Open Space Preserve located in coastal foothills in unincorporated west-central San Diego County. Participated in the field survey for prehistoric and historic archaeological resources and was senior co-author of the technical report of results

from the survey program. Work performed for the County of San Diego Department of Parks and Recreation.

Mesa Trail Restoration and Dairy Mart Pond Overlook Projects (2014). Supervisory Archaeologist for Phase I pedestrian survey and cultural resources inventory of 281 acres of proposed restoration and trail construction within the Tijuana River Valley Regional Park located in coastal area of southwestern San Diego County. Participant in the field survey for prehistoric and historic archaeological resources within the survey area. Co-author of the technical report of results from the survey program. Work performed for the County of San Diego Department of Parks and Recreation.

NAVFAC Southwest Construction and Operation of Solar Photovoltaic Systems at Naval Weapons Station Seal Beach (2014 - 2015). Field Director for archaeological survey of an approximately 86-acre area of Naval Weapons Station Seal Beach in Orange County proposed for the construction of a solar project. Duties included direction of the field crew and participation in the analysis and report preparation. Work performed for U.S. Navy.

NAVFAC Southwest Conversion of Building H-100 for Administrative Reuse (MILCON P-1131)(2015). Field Director for archaeological survey for the proposed renovation of Building H-100 and associated facilities, and of locations proposed for the demolition of 37 buildings and structures in various areas on Marine Corps Base (MCB) Camp Pendleton in San Diego County. Duties included direction of the field crew, and participation in the analysis and report preparation. Work performed for U.S. Navy.

RE Barren Ridge/Cinco Solar Project Cultural Resources (2014). Supervisory Archaeologist directing the field survey and site documentation for prehistoric and historic archaeological resources within 800 acres including a 600-acre plant facility site and three proposed Gen-Tie power electrical line corridor alternatives for a solar plant facility, located along the eastern base of the southern Sierra Nevada Mountains near Mojave, Kern County. Co-authored the technical reports of results from the survey program. The program was conducted under both Section 106 regulations due to the Gen-Tie lines on BLM land and CEQA for the solar facility site on private land. Work performed for Recurrent Energy.

Sacramento Area Flood Control Agency Natomas Levee Improvement Program Landslide Improvements Project (2012 - 2014). Archaeologist performing analyses of 4,085 prehistoric flaked lithic artifacts produced from investigations conducted at archaeological sites CA-SAC-1142, CA-SAC-15 , and CA-SAC-16, located along the Sacramento River as part of a treatment program of archaeological sites in compliance with Section 106 regulations administered by the United States Army Corps of Engineers (USACE) for levee improvements along the Sacramento River.

Theodore G. Cooley, RPA

Senior Archaeologist

Wrote technical report results sections of the analyses. Work performed for Sacramento Area Flood Control Agency (SAFCA).

MCB Camp Pendleton Section 110 Resource Delineation and Evaluation Study (2011 - 2013). Archaeologist participating in the investigations conducted for resource delineation and evaluation of National Register of Historic Places-eligible prehistoric archaeological site CA-SDI-1313/14791 on MCB Camp Pendleton, San Diego County. Involved conducting archaeological excavations for the delineation of the site to allow the base to successfully plan, under Section 110, for the protection of this significant resource from potential future adverse affects. Involvement included artifact analysis of 1,280 flaked lithic artifacts, preparation of results sections of the lithic analysis, and co-authorship of technical report. Work performed for U.S. Navy.

Archaeological Data Recovery for the Topanga Library (2011 - 2013). Archaeologist participating in the data recovery investigations conducted at prehistoric archaeological site CA-LAN-8 in the community of Topanga in the Santa Monica Mountains, Los Angeles County. Work involved conducting archaeological excavations for data recovery within the Area of Potential Effects (APE) for pipeline construction associated with construction of a new public library. Responsibilities included field work participation, lithic artifact analyst, and co-authorship of technical report. Work performed for Los Angeles County Department of Public Works.

MCB Camp Pendleton Geomorphological Investigations (2009 - 2013). Field Supervisory Archaeologist on a project to conduct geomorphological investigations along three drainages within MCB Camp Pendleton in San Diego County to assess the potential for the presence of deeply buried prehistoric archaeological deposits. Duties included the design, coordination, and execution of the field geomorphological investigations; participation in the analysis of the results; and co-authorship of the technical report. Work performed for U.S. Navy.

California High-Speed Rail Authority, High Speed Rail Project (2011 - 2013). Field Director for a Phase I Cultural Resources Survey and Inventory of three alternative high-speed train alignment corridors, extending from Merced to Fresno in the San Joaquin Valley. Duties included direction of the field crew, participation in the analysis of results, and report preparation. Work performed for the State of California.

NAVFAC Southwest San Nicolas Island Archaeological Evaluations (2010 - 2012). Field Director for archaeological test investigations for the delineation an d evaluation of prehistoric site CA-SNI-41 on San Nicolas Island in the Channel Islands of the California Bight, Ventura County. The project involved testing for depth and horizontal extent, as well as significance evaluation of this Middle and Late Holocene site. Duties included direction of the field crew, participation in the analysis, and report preparation. Work performed for U.S. Navy.

Theodore G. Cooley, RPA

Senior Archaeologist

MCB Camp Pendleton Compliance Documentation Support Services for Environmental Security Section (2010 - 2012).Archaeologist providing compliance documentation support services to the MCB Camp Pendleton Cultural Resources Branch Head in San Diego County for several large construction projects. Duties included the preparation of documentation and correspondence for agency submittal for federal NEPA and Section 106 compliance requirements, principally to the State Historic Preservation Office (SHPO) and Advisory Council for Historic Preservation. Work performed for U.S. Navy.

Solar Millennium Ridgecrest Solar Project Cultural Resources Inventory Program (2009 - 2011). Co-Field Director of field survey for prehistoric and historic archaeological resources within a proposed 1,757-acre solar facility in the Mojave Desert, Kern County. Participated in the preparation of the Department of Parks and Recreation site forms and contributing author of the technical report of results from the survey program. Work performed for Solar Millennium.

NAVFAC Southwest Seal Beach Naval Weapons Station Archaeological Evaluations (2010 - 2011). Field Director for archaeological test investigations for the delineation and evaluation of prehistoric site P-30-1503 within the Seal Beach Naval Weapons Station along the margin of the Anaheim Creek drainage wetlands system in Orange County. The project involved testing for the depth and horizontal extent, as well as a significance evaluation of this Late Holocene site. Duties included direction of the field crew, participation in the analysis, and report preparation. Work performed for U.S. Navy.

NAVFAC Southwest San Nicolas Island Archaeological Evaluations (2009 - 2011). Field Archaeologist for archaeological evaluation of prehistoric sites CA-SNI-316, CA-SNI-361, and CA-SNI-550 on San Nicolas Island in the Channel Islands of the California Bight, Ventura County. The project involved significance testing and evaluation of these Middle and Late Holocene sites, and the analysis and synthesis of results with existing island-wide archaeological data. Duties included field crew member, participation in the analysis, and report preparation. Work performed for U.S. Navy.

Olivenhain Municipal Water District Raw Water Pipeline (2009 - 2010). Archaeologist and Principal Investigator for a Phase I Cultural Resources Survey and Inventory of two alternative pipeline alignment corridors in San Diego County totaling approximately 9 miles in length. Author of the technical report of results from the survey and inventory program. Work performed for Olivenhain Municipal Water District.

Sage Hill Open Space Preserve Cultural Resources Inventory (2009 - 2010). Supervisory Archaeologist for Phase I pedestrian survey and cultural resource inventory of the Sage Hill Open Space Preserve in unincorporated west-central San Diego County. Directed the field survey for prehistoric and historic archaeological

resources within the proposed 234-acre natural park preserve located in coastal foothills. Co-authored the technical report of results from the survey program. Work performed for County of San Diego Department of Parks and Recreation.

RRG Weldon Solar Project (2009 - 2010). Supervisory Archaeologist directing the field survey and site documentation for prehistoric and historic archaeological resources within a proposed 425-acre solar facility near Lake Isabella in the southern Sierra Nevada Mountains, Kern County. Co-author of the technical report of results from the survey program. The program was conducted under CEQA and local guidelines of the County of Kern for the implementation of CEQA. Work performed for RRG Weldon.

Abengoa Mojave Solar Project (2009 - 2010) Supervisory Archaeologist overseeing the survey of a proposed 1,765-acre solar facility in the Mojave Desert, San Bernardino County. Supervised the archaeological documentation and Phase II testing efforts and co-authored the technical reports of results from the survey and testing programs. Work performed for Abengoa.